

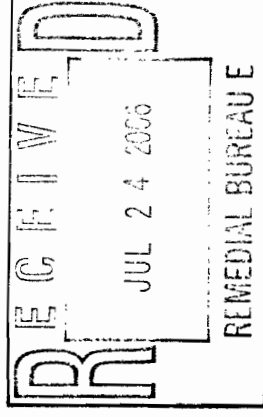


July 21, 2006

New York State Department of Environmental Conservation
Division of Environmental Remediation
Bureau of Construction Services
625 Broadway, 12th Floor
Albany, New York 12233-7013

Att: Jeffrey E. Trad, P.E.

Re: Sonia Road Landfill Remediation Program
Site Registry No. 152013
Post Closure Program



Dear Mr. Trad:

The Town of Islip (TOI) is currently implementing the NYSDEC approved Post Closure Monitoring and Maintenance Plan at the Sonia Road landfill. It is the TOI understanding that the start date for the monitoring period is August 2002 based on the commencement of the Post Closure Groundwater Monitoring Program. Attached to this correspondence are two copies of the Post Closure Monitoring and Maintenance Plan Supplement No. 1 to Volume 1 of 4. This supplement was prepared in order to modify the previously approved reporting forms and to summarize the entire post closure monitoring and maintenance program. The modification of the forms was necessary in order to utilize more site specific forms and for incorporation into a future Geographical Information System (GIS). This supplement only represents administrative modifications and descriptive site changes to the Post Closure Monitoring and Maintenance Plan.

If you require any additional information please contact me at my office.

Sincerely,

Paul J. DiMaria, P.E.
Chief Engineer

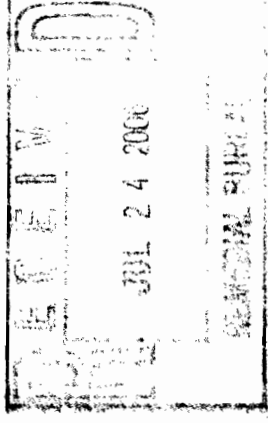
cc: Chris Andrade - IRRRA
Alan Sanchez - IRRRA w/attachment (two copies)
Francis D. Ribaud, PE - IRRRA
file



**TOWN OF ISLIP
SUFFOLK COUNTY, NEW YORK**

**SONIA ROAD LANDFILL
WEST BRENTWOOD, NEW YORK
SITE REGISTRY NO. 152013**

**POST CLOSURE
MONITORING AND MAINTENANCE PLAN
SUPPLEMENT NO. 1 TO
VOLUME 1 OF 4**



July 2006

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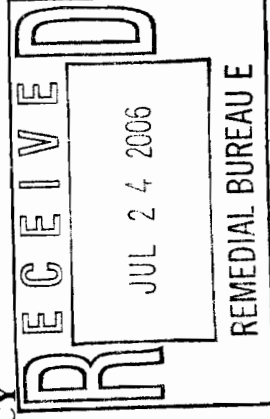
**DVIRKA AND BARTILUCCI
CONSULTING ENGINEERS
A DIVISION OF WILLIAM F. COSLICH ASSOCIATES, P.C.**

**POST CLOSURE MONITORING AND MAINTENANCE PLAN
SUPPLEMENT NO. 1 TO VOLUME 1 OF 4**

**SONIA ROAD LANDFILL
BRENTWOOD, NEW YORK
NYSDEC SITE NO. 152013**

Prepared for:

**TOWN OF ISLIP
ISLIP RESOURCE RECOVERY AGENCY**



Prepared by:

**DVIRKA AND BARTILUCCI CONSULTING ENGINEERS
330 CROSSWAYS PARK DRIVE
WOODBURY, NEW YORK**

JULY 2006



**POST CLOSURE MONITORING AND MAINTENANCE PLAN
SUPPLEMENT NO. 1 TO VOLUME 1 OF 4
SONIA ROAD LANDFILL
BRENTWOOD, NEW YORK**

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**TOWN OF ISLIP
SONIA ROAD LANDFILL
POST CLOSURE MONITORING AND MAINTENANCE PLAN
SUPPLEMENT NO. 1 TO VOLUME 1 OF 4**

Purpose and Introduction

A Post Closure Monitoring and Maintenance Plan (PCMMP), Volume 1 of 4, dated October 2000, was prepared for the capped and closed Sonia Road Landfill to reflect site conditions resulting from the construction of the Sonia Road Landfill Closure project (Contract No. IRRR 1-99). The PCMMP was submitted to the New York State Department of Environmental Conservation (NYSDEC) and was approved January 18, 2006. A copy of the NYSDEC approval letter is attached as Appendix A.

Subsequent to the construction of the landfill capping system, several modifications or improvements have been constructed at the site to address select issues or to accommodate the secondary use of the site. These changes include the following:

1. Installation of eight drainage rings in the area of the Sonia Road to address the need for additional storm water management.
2. Installation of a buried storage tank in the Landfill Gas Management compound to store the accumulation of landfill gas condensate for off-site disposal.
3. Operation of the landfill gas flare as a vent stack (no flame) during the operation of the landfill gas management system.
4. Installation of site improvements to address subsurface drainage in the area of the perimeter road along the northwest corner of the property.
5. Revisions to select landfill gas monitoring wellheads and groundwater monitoring wells.
6. Site improvements including, but not limited to, roads, drainage culverts, site lighting and two new entrances to the site to accommodate the secondary use of the site for the storage of automobiles.

This document is intended to serve as a supplement to the October 2000 PCMMP and should be used in conjunction with the October 2000 PCMMP. The reader should refer to both documents to identify the overall scope of the post closure monitoring and maintenance program. For convenience, new site inspection forms have been prepared to reflect the original landfill closure construction, as well as the above site changes. The site inspection forms are attached as Appendix B.

The following descriptions briefly describe each of the six site modifications and, where appropriate, the operation and/or maintenance requirements. It should be noted that no modifications, changes or repairs to the HDPE geomembrane were required in order to perform the above site modifications.

Additional Storm Water Capacity

Following construction of the landfill capping system, it was determined that additional storm water management capacity was required in order to address the northeast corner of the landfill site. The closure design provided for an inlet structure in the vee channel that conveyed storm water to two dry wells located adjacent to the capped area. Additional storage capacity was provided by the installation of eight additional dry well structures located in the right-of-way of Sonia Road in the area between Johnson Avenue and the landfill property. Three structures are 8 feet in diameter and have a leaching ring depth of 16 feet. The remaining five structures are 12 feet in diameter and have a leaching ring depth of 18 feet. Each structure is fitted with a manhole casting to allow access for maintenance.

The additional dry wells should not require routine maintenance unless there are signs that the drainage capacity of the basins has been compromised. Telltale signs will include slow draining or flooded conditions in the perimeter swales at the northeast corner of the landfill. The inlet structure should be examined to determine that debris has not clogged the inlet to the structure or the piping leading from the inlet structure to the dry wells.

Landfill Gas Condensate Storage

The landfill gas management system was constructed with three leaching rings to provide on-site disposal of the condensate that is generated during the extraction of landfill gas from the waste mass. The three leaching rings were located in the landfill gas management compound, on the east side of the blower pad. This disposal method was constructed as a temporary measure to allow the system to be placed in operation and permit the collection of condensate samples for analysis. An examination of the landfill gas condensate system was performed and presented in the report titled "Report to the NYSDEC for Landfill Gas Condensate Management" dated August 2001. Analytical results indicated that the landfill gas condensate would not be suitable for on-site discharge to the groundwater and that off-site disposal would be required.

The off-site disposal facility is the Suffolk County Bergen Point Water Pollution Control Facility (Suffolk County Sewer District #3 – Southwest). Off-site disposal is accomplished by the use of a vacuum-assisted tanker truck to remove condensate and deliver it to the Bergen Point WPCF. The Town of Islip has a permit (Discharge Certification No. 099-001-0059) to allow for disposal at the Bergen Point WPCF. A copy of the permit is attached as Appendix C.

In order to provide on-site storage, a 6,000-gallon, double-walled, fiberglass storage tank was installed under Contract No. IRRRA 2002-4 Landfill Gas Condensate Storage System. This system is in accordance with the requirements of Suffolk County Article 12.

The system consists of the buried storage tank, dual contained piping to deliver condensate to the tank, leak detection, liquid level monitoring, auto dialer and an interface with the landfill gas blower system.

Condensate is generated from the two water separators located in the landfill gas blower system that remove condensed liquid from the landfill gas flow stream. Each water separator is provided with a barometric drain to separate the vacuum conditions of the blower system from the atmospheric conditions of the discharge. Condensate flows under gravity from each barometric drain through dual contained piping to the tank inlet. Condensate accumulates in the storage tank until there is a sufficient quantity to warrant removal by the tanker truck. The liquid level in the tank is continuously monitored and displayed on the tank monitoring panel. The tank should be emptied when there is approximately 3,000 to 3,500 gallons in storage to allow for a tanker truck to be filled for off-site disposal. In the event that the tank volume reaches 75% full, an amber light is illuminated and an automatic dialer will proceed to call the following telephone numbers to alert operating personnel that the tank is becoming filled and arrangements should be made expeditiously to have the tank emptied. The telephone numbers are called in the following sequence until a phone is answered.

Person or Office	Telephone Number
Hauppauge Landfill	631-436-6162
Hauppauge Landfill answering machine	631-436-6160

If the tank volume is allowed to rise to the 90% full level, a red alarm light above the leak and level detection system will be illuminated and the automatic dialer will repeat the sequence of calls. Interlocks with the landfill gas blower system will prevent the blowers from operating until the tank contents have been lowered to a point below the 90% full level. The interstitial space between the double-walled tank is also monitored for the presence of a leak. If a leak is detected, the alarm light will be illuminated and the sequence of calls will be initiated.

The pH of the tank contents must be tested and approved by the Suffolk County Industrial Waste Unit (IWU) before the tank can be emptied and the condensate delivered to the Bergen Point WPCF. The pH of the condensate must be in the range of 5.5 to 9.5 in order to be accepted. The IWU should be contacted by pager (516-230-7551) to schedule the sample collection and testing. The pH of the stored condensate can be raised, if necessary, by adding a dilute solution of sodium hydroxide to the tank contents. The handling and use of sodium hydroxide should be performed with care and in accordance the material safety data sheets (MSDS) and the manufacturer's recommendations.

Condensate is removed from the buried tank by connecting the suction hose from the vacuum assisted tanker truck to the tank withdrawal connection within the marked manhole. After the truck is filled, any condensate remaining in the suction hose should be allowed to drain back into the buried tank before the suction hose is disconnected in order to avoid spills.

The level and leak detection system should be tested at least monthly and as part of the quarterly inspections of the site. Reference should be made to the Operation and Maintenance Manual for the Landfill Gas Condensate Storage System for additional information regarding the operation and maintenance of this system. The level and leak detection system and its sensors can be tested by depressing the “TEST” key on the panel.

The automatic dialer can be tested for each of the two alarm events by depressing the “AL-1” key or the “AL-2” key on the faceplate. Each alarm condition should be permitted to make the appropriate calls before proceeding with the second alarm test. The recipients should be forewarned before performing the automatic dialer tests.

Operation of the Landfill Gas Flare

The Landfill Gas Management System is intended to extract landfill gas from the waste mass and direct it to the elevated flare. Combustion of the gas at the flare provides for thermal destruction of the combustible components in the gas, primarily methane. In order for the flare to maintain a flame, a minimum methane concentration in excess of approximately 25% is required. The Sonia Road Landfill is an older landfill that is in a declining rate of methane production.

Operation of the Landfill Gas Management System has revealed that methane is still being generated at the site and warrants continued operation of the system. However, the generation rate for methane is insufficient to provide a quality of gas suitable to support combustion at the flare.

An application has been made to NYSDEC to request approval for the continued operation of the Landfill Gas Management System with discharge through the elevated flare as a vent stack. A copy of the correspondence, dated May 14, 2004, is attached as Appendix D. As of April 2006, the NYSDEC has not provided a determination regarding this application. Until such time that NYSDEC provides a determination or the landfill gas quality improves to the point of supporting combustion, the system will continue to be operated with the flare as a vent. There are no additional maintenance requirements associated with this method of operation.

Site Improvements – Perimeter Drainage

In the area of the northwest corner, a condition of subsurface drainage was found to be wetting the soils on the outboard side of the perimeter road and resulting in an erosive condition. In order to mitigate the lateral flow of subsurface, a perimeter drain detail was

constructed in the road area as part of the Miscellaneous Site Improvements contract (Contract No. IRRRA 2005-1). The drainage detail provides both a waterstop constructed with a geosynthetic clay liner (GCL) and a French drain constructed with 6-inch diameter perforated, corrugated HDPE pipe and drainage stone (pea gravel). The overall length of the drain is approximately 800 feet. The drain pipe is installed above the HDPE geomembrane and is located approximately 2 feet below grade.

The drain discharges at the north end of Recharge Basin No. 1. The pipe outlet is fitted with an animal guard. The drain is constructed parallel to the perimeter drainage swale (approximately 3 feet to the outboard side of the swale). Other than the pipe outlet, the drain is not visible. No routine maintenance of the drain is required. The upstream end of the drain pipe is fitted with a plug which can be removed to allow flushing of the pipe should it become necessary.

During site inspections, especially after storm events, care should be taken to note whether the area between the outboard side of the perimeter swale and the drain trench is perceived too soft under foot. This condition may indicate that there is clogging of the drain detail allowing the soils to become saturated.

Revisions to Landfill Gas Monitoring Wells and Groundwater Monitoring Wells

As part of the Miscellaneous Site Improvements contract, modifications were performed to select landfill gas monitoring wells and groundwater monitoring wells located within or adjacent to the footprint of the landfill. Following the completion of the landfill capping system, a limited number of wells began to reflect the impacts of settlement of the surrounding soils.

In the case of the landfill gas monitoring wells, landfill settlement resulted in the settlement of the protective steel casing/ concrete slab assembly relative to the monitoring well pipe and difficulty in closing and securing the hinged cover of the 8-inch diameter protective steel casing. This condition was experienced on wells GM-5, GM-7, GM-8 and GM-9. This condition was rectified by removing the original hinged covers from the protective steel casing and installing a second, 10-inch diameter protective steel casing over the original to serve as an adjustable sleeve. The outer protective steel casing is secured to the original casing with six set screws. No routine maintenance is required. If settlement of the landfill soil results in the well pipe contacting the cap of the protective steel casing, the 10-inch portion can be repositioned by loosening the set screws, repositioning the 10-inch portion and retightening the six set screws. The casing should be set so that it is plumb and centered on the 8-inch casing pipe.

Settlement of the landfill also affected the ability to secure groundwater monitoring wells MW-2S, MW-2I, MW-2D, MW-6S, MW-6I, MW-6D and MW-7I or the ability to properly sample the wells.

For wells MW-2I, MW-2D, AND MW-7I, settlement caused the well pipe to project above the grade level or flush protective cover. In each of these cases, the existing protective cover was removed, the upper portion of the well realigned, as necessary, and a new wellhead vault installed. No routine maintenance of the well vault is necessary other than lubrication of the hinges as required. Spray lubricants should be avoided in order to minimize the possibility of overspray coming in contact with the well. If continued settlement of the site necessitates repositioning of the vault, the vault and attached sideskirts can be excavated around the perimeter, readjusted and backfilled with the existing gravel backfill.

The modification to wells MW-6S, MW-6I and MW-6D involved reconstruction of the well heads to address misalignments of the well casing due to settlement or movement in the sideslope areas where these three wells are located. The wells are now located within a precast concrete structure with a locking hatch on top of the structure. No routine maintenance of the vault or hatch is required other than lubrication of the hinges as required. Spray lubricants should be avoided in order to minimize the possibility of overspray coming in contact with the well.

Groundwater monitoring well MW-2S was found to be damaged at a depth below the capping system and precluded rehabilitation. Monitoring well MW-2S has been abandoned in place and has been removed from the monitoring well array for the site. NYSDEC has approved the abandonment of MW-2S in their letter of January 18, 2006, which is attached as Appendix A.

The above revisions to the groundwater monitoring wells have resulted in changed reference elevations for the affected wells. The revised reference elevations are as follows and should be used for all measurements:

<u>Well</u>	<u>Reference Elevation (AMSL)</u>
MW-2S	Abandoned
MW-2I	78.24
MW-2D	78.43
MW-6S	74.45
MW-6I	74.52
MW-6D	75.02
MW-7I	73.43

Secondary Use of Site for Automobile Storage

The Town of Islip has entered into a lease agreement for the secondary use of the capped and closed Sonia Road Landfill. The lessee is an automobile dealer and the secondary use involves the storage of new automobiles awaiting distribution. The lease agreement provides for the use of approximately of 32 acres of the site, all within the area

encompassed by the perimeter road. The agreement provides for the on-site storage of approximately 5,000 new vehicles. Management of the inventory should provide for the movement of approximately 1,000 vehicles per month.

In order to accommodate the secondary use, the lessee has constructed certain infrastructure within or adjacent to the 32 acres. These improvements include two new entrances to the site located along the north property line. The entrances are accessed from South Fourth Street through an adjacent parcel of land arranged by the lessee. The adjacent parcel of land is not part of the Sonia Road Landfill and its care and maintenance are not addressed by this document.

Additional on-site improvements include the construction of road areas or aisles to access the stored vehicles, site lighting, a security trailer, fire stations and the installation of culvert pipes in areas where the new roads or aisles would otherwise impact the flow of surface drainage. All of these improvements have been installed at or above the top of the landfill capping system and should not directly impact the integrity of the cap.

Attached as Appendix E is a copy of the Maintenance Plan for Vehicle Storage on the Sonia Road Landfill. This document describes the ongoing maintenance and inspection frequencies and activities that will be performed by the lessee. Attached as Appendix F is a copy of the NYSDEC correspondence, dated September 25, 2003, approving the secondary use of the site for the storage of new automobiles.

The Town of Islip should obtain copies of any inspection forms prepared by the lessee or any documentation of repairs, maintenance or corrective action performed by the lessee to include, as appropriate, in the Town's documentation of post closure monitoring and maintenance.

The inspections and/or maintenance to be performed by the lessee should complement but not necessarily diminish the inspection activities to be performed by the Town as part of the post closure activities. The activities to be performed by the lessee are more focused towards the day-to-day activities at the site and predominantly address the top surface of the landfill capping system.

Clearly, the presence of a large number of vehicles on the landfill will preclude an examination of 100% of the site each time an inspection is performed. However, an inspection which looks for telltale signs of the integrity of the capping system would be a better approach than "looking under every vehicle" to observe the exposed surface of the system. Areas of the site, which are visible at the time of the inspection, should be examined. Areas of the site, which are not visible at the time of inspection, can adequately be assessed by a more global observation of the ground surface for signs such as:

1. The presence of significant surface rutting due to vehicle movements.
2. Failed vegetation.

3. Signs of erosion or the transport of sediments on the ground and in the associated storm water management facilities.
4. Inordinate amounts of dust as vehicles are moved around the site, suggesting that the surface vegetation has been compromised.
5. Surface depressions not observed previously or resulting in ponding water after a storm event.
6. Flooding or slow draining storm water management facilities.
7. Physical damage to facilities within the leased area such as monitoring wells or valve vaults.
8. Staining of the ground surface from the leakage of fluids from the vehicles. This condition should not normally be expected given that the vehicles are new.
9. Storage of vehicles in areas of the site identified as buffer zones in the Maintenance Plan for Vehicle Storage.

Inspections

Post closure inspections of the Sonia Road Landfill should be performed at least quarterly and after each storm event that exceeds a 5-year storm. A 5-year storm is an event with at least 4.5 inches of rain over a 24-hour period. The quarterly inspections should be thorough and address the entire site and all of its systems. The inspections performed in response to storm events should address the entire site and all of its systems and also focus on the condition of the site and whether there was any damage or erosion as a result of the storm event.

Attached as Appendix B is a set of Inspection Forms that should be utilized during the on-site inspections. Also included is an Index Map that will allow the inspector to identify the location of his/her observations by recording the grid where the observation was made.

The inspection forms will form the basis for reporting the status of Post Closure Monitoring and Maintenance to the NYSDEC. These forms should be combined with the Well Status Reports that are prepared by others as part of the ongoing groundwater and landfill gas monitoring programs.

All inspections should be performed in accordance with the site-specific Health and Safety Plan, Volume 2 of 4.

APPENDIX A

NYSDEC CORRESPONDENCE OF JANUARY 18, 2006

APPENDIX B

**INSPECTION FORMS
AND INDEX MAP**

**TOWN OF ISLIP
SONIA ROAD LANDFILL
POST CLOSURE MONITORING AND MAINTENANCE PLAN
SITE INSPECTION CHECKLIST**

VEGETATIVE COVER

DATE:

Quarterly Inspection _____

Storm Inspection _____

INSPECTION BY: _____

GRID I.D.	PROBLEM CODE	PRIORITY CODE	PHOTO TAKEN	COMMENTS
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	

PROBLEM CODE	
a	bare spots
b	dead areas
c	undesirable growth
d	unauthorized dumping
e	litter
f	

PRIORITY CODE	
1	Immediate
2	Correct within 1 week
3	Correct within 1 month
4	Correct within 3 months
5	Correct within 6 months
6	Correct within 1 year

Directions:
List only items or areas of the site where problems or deficiencies are noted or where repairs or rehabilitation are required.

If entire site Vegetative Cover is acceptable, check box and sign below.

Signature: _____

**TOWN OF ISLIP
SONIA ROAD LANDFILL
POST CLOSURE MONITORING AND MAINTENANCE PLAN
SITE INSPECTION CHECKLIST**

SOIL COVER

DATE: _____

Quarterly Inspection

Storm Inspection

INSPECTION BY:

GRID I.D.	PROBLEM CODE	PRIORITY CODE	PHOTO TAKEN	COMMENTS
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
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			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	

PROBLEM CODE		
a	erosion damage	g
b	slope movement	h
c	ponding (>10'x10')	l
d	holes	j
e	cracking	k
f	rutting of soils	l

PRIORITY CODE	
1	Immediate
2	Correct within 1 week
3	Correct within 1 month
4	Correct within 3 months
5	Correct within 6 months
6	Correct within 1 year

If entire site Soil Cover is acceptable, check box and sign below.

Directions:
List only items or areas of the site where problems or deficiencies are noted or where repairs or rehabilitation are required.

Signature: _____

**TOWN OF ISLIP
SONIA ROAD LANDFILL
POST CLOSURE MONITORING AND MAINTENANCE PLAN
SITE INSPECTION CHECKLIST**

REVETMENT MATTING (RIP RAP)

DATE: _____

INSPECTION BY: _____

Quarterly Inspection _____

Storm Inspection _____

GRID I.D.	PROBLEM CODE	PRIORITY CODE	PHOTO TAKEN	COMMENTS
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
Side Slopes				
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
Gabion Curb				
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	

PRIORITY CODE	
1	Immediate
2	Correct within 1 week
3	Correct within 1 month
4	Correct within 3 months
5	Correct within 6 months
6	Correct within 1 year

PROBLEM CODE		
a	vandalism	
b	slope movement	
c	vector infestation	
d	holes	
e	holes in wire fabric	
f	settlement	
g	waste breakthrough	
h	leachate breakthrough	
i	exposed geosynthetics	
j	damaged baskets	
k	loose ties	
l		

Directions:
List only items or areas of the site where problems or deficiencies are noted or where repairs or rehabilitation are required.

If all Revetment Matting (Rip Rap) and Gabion Curbs are acceptable, check box and sign below.

Signature: _____

**TOWN OF ISLIP
SONIA ROAD LANDFILL
POST CLOSURE MONITORING AND MAINTENANCE PLAN
SITE INSPECTION CHECKLIST**

ACCESS ROADS

Quarterly Inspection

Storm Inspection

INSPECTION BY: _____

DATE: _____

GRID I.D.	PROBLEM CODE	PRIORITY CODE	PHOTO TAKEN	COMMENTS
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	

PROBLEM CODE		
a	potholes	g
b	burrow holes	h
c	erosion gullies	i
d	loss of stone cover	j
e	exposed geotextile	k
f	obstructions/debris	l

PRIORITY CODE	
1	Immediate
2	Correct within 1 week
3	Correct within 1 month
4	Correct within 3 months
5	Correct within 6 months
6	Correct within 1 year

Directions:
List only items or areas of the site where problems or deficiencies are noted or where repairs or rehabilitation are required.

If all Access Roads are acceptable, check box and sign below.

Signature: _____

**TOWN OF ISLIP
SONIA ROAD LANDFILL
POST CLOSURE MONITORING AND MAINTENANCE PLAN
SITE INSPECTION CHECKLIST**

STORMWATER COLLECTION SYSTEM (1 of 4)

DATE: _____

INSPECTION BY: _____

Quarterly Inspection _____

Storm Inspection _____

GRID I.D.	PROBLEM CODE	PRIORITY CODE	PHOTO TAKEN	COMMENTS
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
Perimeter Swales				
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
Division Swales				
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	

PROBLEM CODE			
a	vandalism	g	erosion control fabric
b	slope movement	h	loss of topsoil
c	silt accumulation	i	exposed geosynthetics
d	ponded water	j	wash outs
e	vegetative cover	k	
f	debris / clogging	l	

PRIORITY CODE	
1	immediate
2	Correct within 1 week
3	Correct within 1 month
4	Correct within 3 months
5	Correct within 6 months
6	Correct within 1 year

Directions:
List only items or areas of the site where problems or deficiencies are noted or where repairs or rehabilitation are required.

If Perimeter Swales and Division Swales are acceptable, check box and sign below

Signature: _____

**TOWN OF ISLIP
SONIA ROAD LANDFILL
POST CLOSURE MONITORING AND MAINTENANCE PLAN
SITE INSPECTION CHECKLIST**

STORMWATER COLLECTION SYSTEM (2 of 4)

DATE: _____

Quarterly Inspection _____

Storm Inspection _____

INSPECTION BY: _____

GRID I.D.	PROBLEM CODE	PRIORITY CODE	PHOTO TAKEN	COMMENTS
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
Inlet Structures				
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
Rip Rap Drainway				
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	

PROBLEM CODE		
a	vandalism	g
b	slope movement	h
c	silt accumulation	i
d	ponded water	j
e	vegetative cover	k
f	debris / clogging	l
		woody vegetation

PRIORITY CODE	
1	Immediate
2	Correct within 1 week
3	Correct within 1 month
4	Correct within 3 months
5	Correct within 6 months
6	Correct within 1 year

Directions:
List only items or areas of the site where problems or deficiencies are noted or where repairs or rehabilitation are required.

If Inlet Structures and Rip Rap Drainway are acceptable, check box and sign below.

Signature: _____

**TOWN OF ISLIP
SONIA ROAD LANDFILL
POST CLOSURE MONITORING AND MAINTENANCE PLAN
SITE INSPECTION CHECKLIST**

STORMWATER COLLECTION SYSTEM (3 of 4)

DATE: _____

INSPECTION BY: _____

Quarterly Inspection _____

Storm Inspection _____

GRID I.D.	PROBLEM CODE	PRIORITY CODE	PHOTO TAKEN	COMMENTS
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
Energy Dissipators				
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
Downchutes				
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	

PROBLEM CODE		
a	vandalism	g soil erosion around
b	slope movement	h loss of stone
c	silt accumulation	i soil erosion beneath
d	ponded water	j loose ties on baskets
e	damage / instability	k slippage of gabion
f	debris / clogging	l woody vegetation

PRIORITY CODE	
1	Immediate
2	Correct within 1 week
3	Correct within 1 month
4	Correct within 3 months
5	Correct within 6 months
6	Correct within 1 year

Directions:
List only items or areas of the site where problems or deficiencies are noted or where repairs or rehabilitation are required.

If Energy Dissipators and Downchutes are acceptable, check box and sign below.

Signature: _____

**TOWN OF ISLIP
SONIA ROAD LANDFILL
POST CLOSURE MONITORING AND MAINTENANCE PLAN
SITE INSPECTION CHECKLIST**

STORMWATER COLLECTION SYSTEM (4 of 4)

DATE: _____

INSPECTION BY: _____ Quarterly Inspection _____ Storm Inspection

GRID I.D.	PROBLEM CODE	PRIORITY CODE	PHOTO TAKEN	COMMENTS
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	

Drywells

Culverts / Outlets

Directions:
List only items or areas of the site where problems or deficiencies are noted or where repairs or rehabilitation are required.

PRIORITY CODE	
1	Immediate
2	Correct within 1 week
3	Correct within 1 month
4	Correct within 3 months
5	Correct within 6 months
6	Correct within 1 year

PROBLEM CODE		
a	vandalism	g
b	slope movement	h
c	silt accumulation	i
d	ponded water	j
e	vegetative cover	k
f	debris / clogging	l

If Drywells and Culverts are acceptable, check box and sign below.

Signature: _____

**TOWN OF ISLIP
SONIA ROAD LANDFILL
POST CLOSURE MONITORING AND MAINTENANCE PLAN
SITE INSPECTION CHECKLIST**

RECHARGE BASINS

DATE:

INSPECTION BY:

 Quarterly Inspection

 Storm Inspection

GRID I.D.	PROBLEM CODE	PRIORITY CODE	PHOTO TAKEN	COMMENTS
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
Recharge Basin No. 1				
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
Recharge Basin No. 2				
			Y / N #	
			Y / N #	
			Y / N #	

PROBLEM CODE	
a	vegetation
b	sideslope erosion
c	sideslope failures
d	silt accumulation
e	overflow conditions
f	debris / clogging

PRIORITY CODE	
1	Immediate
2	Correct within 1 week
3	Correct within 1 month
4	Correct within 3 months
5	Correct within 6 months
6	Correct within 1 year

Directions:
List only items or areas of the site where problems or deficiencies are noted or where repairs or rehabilitation are required.

If both Recharge Basins are acceptable, check box and sign below.

Signature: _____

**TOWN OF ISLIP
SONIA ROAD LANDFILL
POST CLOSURE MONITORING AND MAINTENANCE PLAN
SITE INSPECTION CHECKLIST**

MONITORING WELLS

Quarterly Inspection

Storm Inspection

INSPECTION BY:

DATE:

ITEM I.D.	PROBLEM CODE	PRIORITY CODE	PHOTO TAKEN	COMMENTS
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
Landfill Gas Monitoring Wells				See well condition reports prepared by Town consultants.
			Y / N #	
			Y / N #	
			Y / N #	
Groundwater Monitoring Wells				See well condition reports prepared by Town consultants.
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	

PROBLEM CODE	
a	damage
b	vandalism
c	settlement
d	vector infestation
e	
f	

PRIORITY CODE	
1	Immediate
2	Correct within 1 week
3	Correct within 1 month
4	Correct within 3 months
5	Correct within 6 months
6	Correct within 1 year

Directions:
List only items or areas of the site where problems or deficiencies are noted or where repairs or rehabilitation are required.

If all Monitoring Wells are acceptable, check box and sign below.

Signature: _____

**TOWN OF ISLIP
SONIA ROAD LANDFILL
POST CLOSURE MONITORING AND MAINTENANCE PLAN
SITE INSPECTION CHECKLIST**

LANDFILL GAS COLLECTION SYSTEM

DATE: _____
INSPECTION BY: _____

Quarterly Inspection _____ Storm Inspection _____

ITEM I.D.	PROBLEM CODE	PRIORITY CODE	PHOTO TAKEN	COMMENTS
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
				LFG Recovery Wells / Valve Vaults
			Y / N #	
			Y / N #	
				LFG Collection Wells (GC1 - GC16)
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	

PRIORITY CODE	
1	Immediate
2	Correct within 1 week
3	Correct within 1 month
4	Correct within 3 months
5	Correct within 6 months
6	Correct within 1 year

PROBLEM CODE			
a	odor	g	broken valve
b	damage	h	broken piping
c	vandalism	i	exposed geosynthetics
d	settlement	j	damage / instability
e	vector infestation	k	soil erosion around
f	no vacuum	l	access restricted

Directions:
List only items or areas of the site where problems or deficiencies are noted or where repairs or rehabilitation are required.

If entire site Landfill Gas Collection System is acceptable, check box and sign below.

Signature: _____

**TOWN OF ISLIP
SONIA ROAD LANDFILL
POST CLOSURE MONITORING AND MAINTENANCE PLAN
SITE INSPECTION CHECKLIST**

LANDFILL GAS COMPOUND

Quarterly Inspection Storm Inspection INSPECTION BY: _____

DATE: _____

ITEM I.D.	PROBLEM CODE	PRIORITY CODE	PHOTO TAKEN	COMMENTS
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	
			Y / N #	

PROBLEM CODE				PRIORITY CODE		
a	odor	g	broken valve	1	Immediate	
b	damage	h	broken piping	2	Correct within 1 week	
c	vandalism	i	broken belts	3	Correct within 1 month	
d	mechanical noise	j	gauges	4	Correct within 3 months	
e	no vacuum	k		5	Correct within 6 months	
f	alarms	l		6	Correct within 1 year	

Directions:
List only items or areas
of the site where
problems or deficiencies
are noted or where
repairs or rehabilitation
are required.

If entire Landfill Gas Compound is acceptable, check box and sign below.

Signature: _____

**TOWN OF ISLIP
SONIA ROAD LANDFILL
POST CLOSURE MONITORING AND MAINTENANCE PLAN
SITE INSPECTION CHECKLIST**

SITE FACILITIES

DATE:

Quarterly Inspection _____

Storm Inspection _____

INSPECTION BY: _____

ITEM I.D.	PROBLEM CODE	PRIORITY CODE	PHOTO TAKEN	COMMENTS
			Y / N #	Electrical Panels and Control Panels
			Y / N #	Lights tested: Y / N
			Y / N #	
			Y / N #	Gates / Locks / Signs
			Y / N #	
			Y / N #	Fencing (identify location by Grid I.D.)
			Y / N #	
			Y / N #	Site Trailer
			Y / N #	

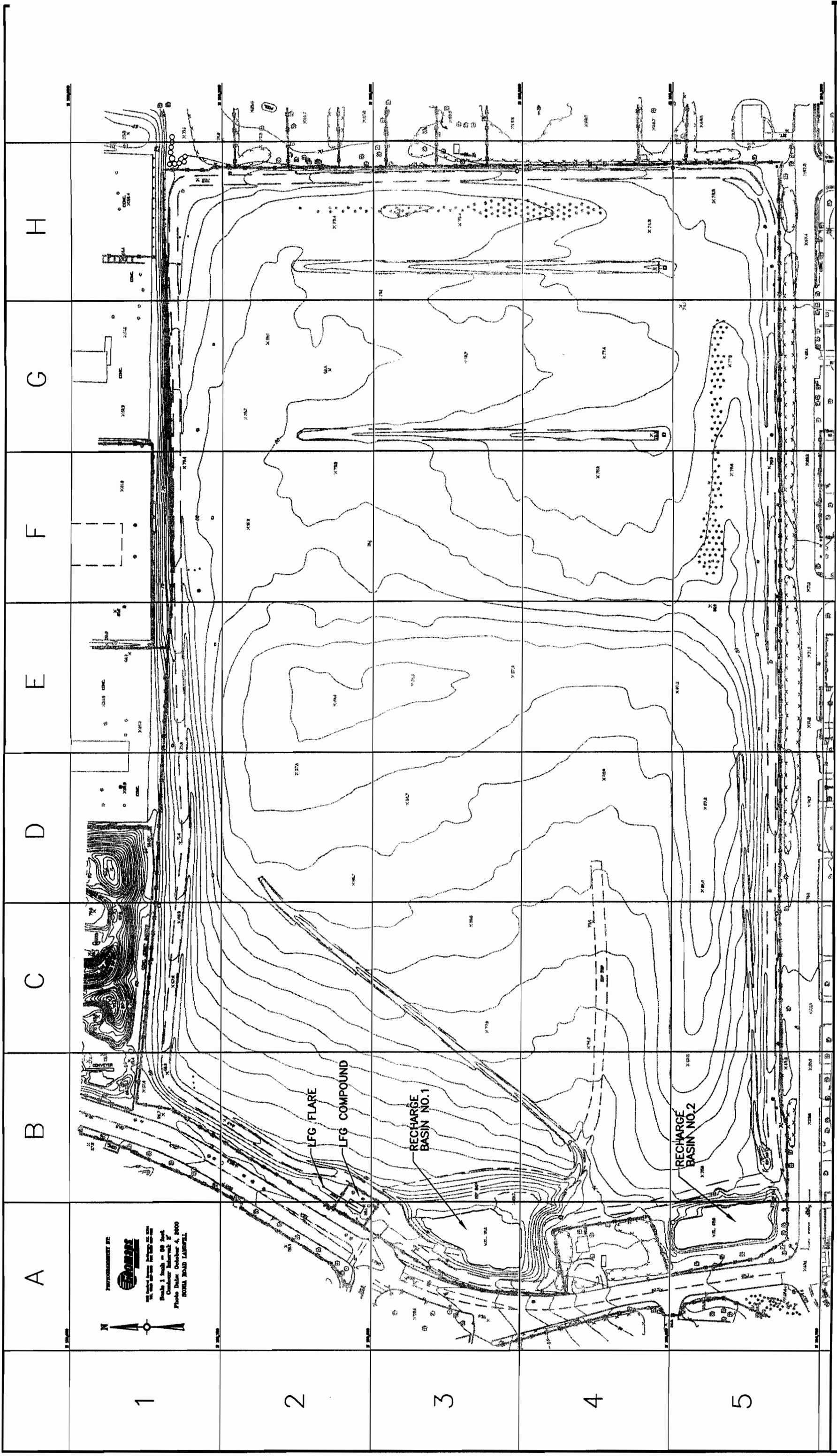
PROBLEM CODE		
a	damage	g
b	vandalism	h
c	alarms	i
d	missing locks	j
e	missing signs	k
f	hole in fence fabric	l

PRIORITY CODE	
1	Immediate
2	Correct within 1 week
3	Correct within 1 month
4	Correct within 3 months
5	Correct within 6 months
6	Correct within 1 year

Directions:
List only items or areas of the site where problems or deficiencies are noted or where repairs or rehabilitation are required.

If all Site Facilities are acceptable, check box and sign below.

Signature: _____





 CONSULTING ENGINEERS
 A DIVISION OF WILLIAM F. COSULICH ASSOCIATES, P.C.

Dvirka and Bartilucci
 CONSULTING ENGINEERS
 A DIVISION OF WILLIAM F. COSULICH ASSOCIATES, P.C.

TOWN OF ISLIP
 SONIA ROAD LANDFILL
 POST CLOSURE MONITORING AND MAINTENANCE PLAN
 INDEX MAP

SCALE: 1"=150'-0"

FIGURE 1

APPENDIX C

**SUFFOLK COUNTY INDUSTRIAL WASTE UNIT
DISCHARGE PERMIT NO. 099-001-0059**

COUNTY OF SUFFOLK



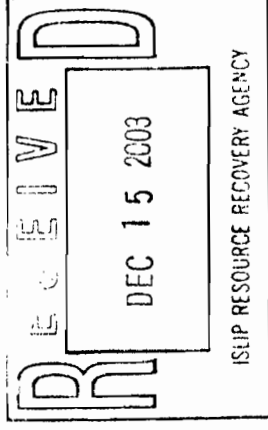
ROBERT J. GAFFNEY
SUFFOLK COUNTY EXECUTIVE

DEPARTMENT OF PUBLIC WORKS

RICHARD J. LAVALLE, P.E.
CHIEF DEPUTY COMMISSIONER

CHARLES J. BARTHA, P.E.
COMMISSIONER

LESLIE A. MITCHEL
DEPUTY COMMISSIONER



CERTIFIED MAIL

November 25, 2003

Islip Resource Recovery Agency
Sonia Road Landfill
Islip, NY 11751

Attention: Paul DiMaria

RE: Discharge Certification No. 099-001-0057
Conditions for Discharge to S.C.S.D. #03 – Southwest

Dear Mr. DiMaria:

Attached is an executed copy of the above-referenced "Discharge Certification" for your facility.

Please review this document and attached "General Conditions" carefully and note the following:

- 1) **Discharge Limitations:** Effluent characteristics/Discharge Limitations and/or sampling criteria are detailed on page 2.
- 2) **General Conditions:** This section details certain responsibilities relative to reporting accidental spills, monitoring requirements, prohibited discharges and your right to appeal. Paragraph 7 references the regulatory publications which state explicitly your responsibility as an industrial sewer user. These publications are available for review at most Public Libraries and can be purchased from the U.S. Government printing office.
- 3) **Reporting Requirements:** The Industrial Waste Unit will send you reporting forms semi-annually. Please use the forms to report sludge and/or chemical waste removal and flow information as required by the Discharge Certification.

Page 2
Islip Resource Recovery Agency-Sonia Road Landfill
November 25, 2003

- 4) **Expiration Date:** No later than 90 days prior to expiration of this Discharge Certification you must apply for renewal.

If you have any questions regarding your "Discharge Certification" or Industrial/Chemical Wastes Monitoring Report, do not hesitate to call me at 852-4160.

Very truly yours,



Richard E. Strzepek, P.E., Supervisor
Wastewater Management & Pretreatment
Industrial Waste Unit

RES:MS/am

Attachments: Discharge Certification
General Conditions
Concentration Limits

cc: File
Property Owner

Department of Public Works



Wastewater Management and Pretreatment Section
Industrial Waste Unit

Discharge Certification

Type "HB"

SCSD # 03-SOUTHWEST

D.C. No.: 099-001-0057

issued to:

**Islip Resource Recovery Agency
Sonia Road Landfill**

Islip, N.Y. 11751

Contact: Paul DiMaria, P.E., Chief Engineer (631) 224-5644

Effective Date: **November 25, 2003**

Expiration Date: **November 24, 2006**

Property Owner: Town of Islip – 401 Main Street – Islip, N.Y. 11751

The above described facility is authorized to discharge in accordance with all applicable regulations and discharge limitations contained within this "Discharge Certification". "In addition to the parameters specifically identified, all waste must meet the attached Local Limits and General Conditions. Only liquid wastes or wastewaters from this location may be the source of any waste load transported to the approved County Septage Disposal Site." All wastes will be sampled and analyzed at the discretion of the Department of Public Works.

This Special Permit "Discharge Certification" is issued in accordance with Suffolk County Code Chapter 424 – "Sewers". As such the permittee is required to adhere to all provisions of this Chapter although not reproduced entirely in this document.

Date: 12-1-03

Ben Wright, P.E., Chief Engineer
Division of Sanitation

ISLIP RESOURCE RECOVERY AGENCY – SONIA ROAD LANDFILL

During the period beginning on the effective date of this permit and lasting until **November 24, 2006** discharges to the Suffolk County Scavenger Waste Disposal Facility shall be limited, and/or controlled by the permittee and monitored by S.C.D.P.W. - Industrial Waste Unit as specified below:

Discharge Limitations

**Facility subject to 40 CFR Part 445.3
General Pretreatment Standards for Landfills Point Source Category**

<u>Sampling Point</u>	<u>Effluent Characteristic</u>	<u>Monthly Sample Avg. mg/L</u>	<u>Daily Max. mg/L</u>	<u>Sample Frequency</u>	<u>Sample Type</u>
001A	Landfill gas condensate				
	Point of entry into S.C.S.D. #3 of hauled landfill gas condensate is via Bergen Point Scavenger Waste Facility – S.C.D.P.W.–S.D. #3.				
001A	6,000 gallon holding tank sample port				
001A	pH	5.0 min.	12.5 max.	Annual	Grab

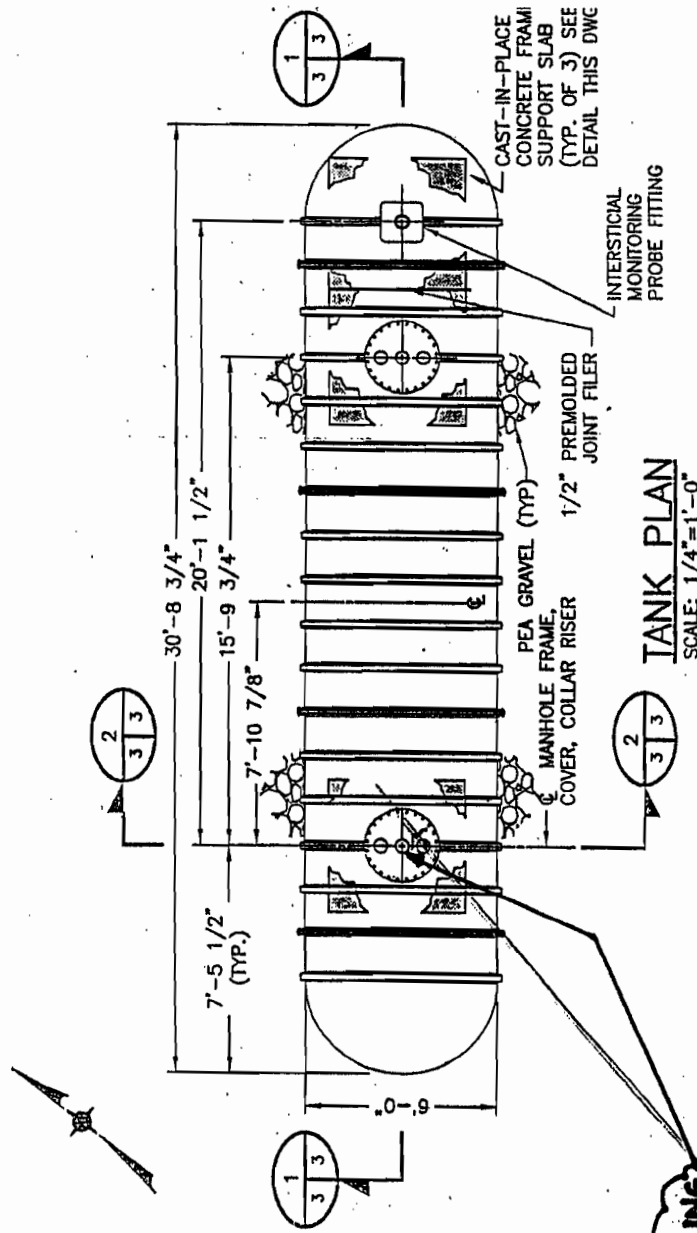
To satisfy self-monitoring requirements of this Discharge Certification, the Town of Islip must submit copies of analytical data from the landfill gas condensate (LFGC) sampling performed as part of the Town's Facility Groundwater Monitoring Program's quarterly reporting as regulated, and required, by the New York State Department of Environmental Conservation; 6NYCRR Part 360, Solid Waste Management Facilities Permit #1-4728-00628/00017.

Please mail reports to:

Industrial Waste Unit
Suffolk County Department of Public Works
335 Yaphank Avenue
Yaphank, New York 11980
Attn: Enforcement Coordinator

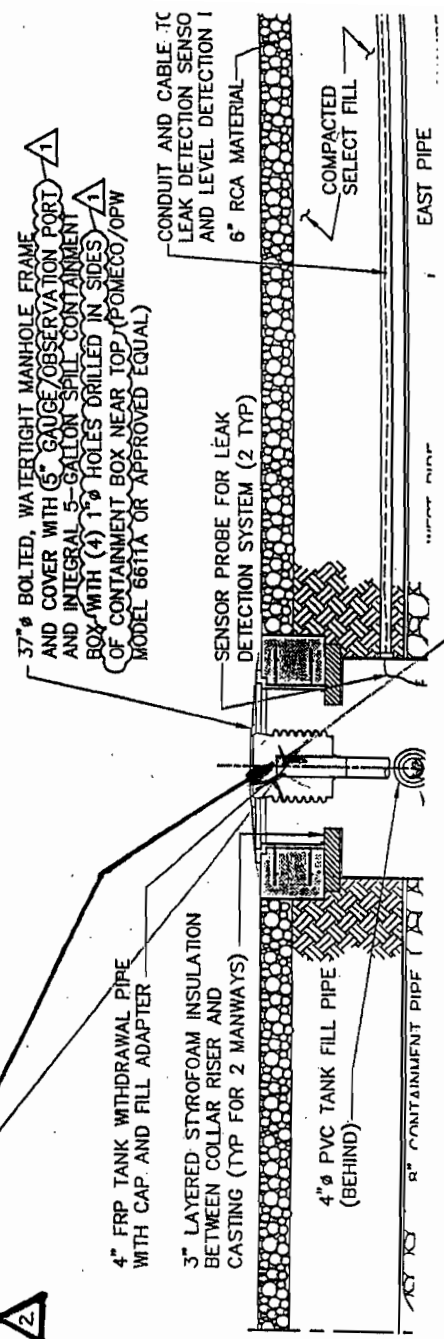
NOTES:

- 1) The Town of Islip Resource Recovery Agency must submit a copy of the quarterly LFGC analyses that are filed with NYSDEC. These reports are to be submitted to this office semi-annually with the "Suffolk County Objectionable/Prohibited Waste Removal Reporting Form".
- 2) The Industrial Waste Unit is to be notified in writing of any proposed changes to composition or sources of solid wastes received by the Town of Islip Resource Recovery Agency which might effect the quality and/or quantity of LFGC composition which would make it incompatible with a RCRA Subtitle D non-hazardous landfill designation.
- 3) Facility must comply with 40 CFR Part 403 "General Pretreatment Regulations".
- 4) The Town of Islip is to contact the County's Industrial Waste Unit (IWU), by pager # 516-230-7551, prior to LFG Condensate hauling so that the IWU may schedule a sample collection. Therefore, it is recommended that notification to the IWU is made when the holding tank's monitor level indicates the tank is at 75% full.



IRRA SAMPLING WITHDRAWAL POINT
001A

- NOTES:
1. TANK DIMENSIONS ARE SHOWN ON ABOVE PLAN ARE FOR A XERXES CORPORATION 6,000 GALLON DOUBLE WALL FRP UNDERGROUND STORAGE TANK. DIMENSIONS FOR AN EQUIVALENT TANK MAY VARY ACCORDING TO THE MANUFACTURER.
 2. REFER TO TYPICAL FRAME SUPPORT PLAN FOR SLAB REINFORCEMENT DETAILS.



Sampling Port
001A

40 CFR PART 403.5 (b) NATIONAL PRETREATMENT STANDARDS:

PROHIBITED DISCHARGES (1/28/82)

The following pollutants shall not be introduced into a POTW:

- (1) Pollutants which create a fire or explosion hazard in the POTW; including, but not limited to, wastestreams with a closed cup flashpoint of less than 140 degrees Fahrenheit or 60 degrees Centigrade using the test methods specified in 40 CFR 261.21.
- (2) Pollutants which will cause corrosive structural damage to the POTW, but in no case discharges with pH lower than 5.0.
- (3) Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW resulting in interference;
- (4) Any pollutant, including oxygen demanding pollutants (BOD, etc.) released in a discharge at a flow rate and/or pollutant concentration which will cause interference with the POTW;
- (5) Heat in amounts which will inhibit biological activity in the POTW resulting in interference, but in no case heat in such quantities that the temperature at the POTW treatment plant exceeds 40 degrees Centigrade (104 degrees Fahrenheit).
- (6) Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through.
- (7) Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems.
- (8) Any trucked or hauled pollutants, except at discharge points designated by the POTW.

NOTE: INDUSTRIAL/RESIDUAL WASTES AND FLOW MONITORING REPORTS
WILL BE PERIODICALLY MAILED TO PERMITTEE. REPORTS MUST BE
SUBMITTED WITHIN 30 DAYS OF RECEIPT.

The permittee shall return the original report form to:

Suffolk County Dept. Of Public Works
Division of Sanitation - Industrial Waste Unit
335 Yaphank Avenue
Yaphank, NY 11980-9744

Knowingly making any false statement on any report required by this certification may result in administrative, civil and/or criminal proceedings as allowed under "Suffolk County Sewer Use Rules and Regulations".

MONITORING, RECORDING AND REPORTING

1. General

- a. The permittee shall comply with all recording, reporting, and monitoring requirements herein and such other additional terms, provisions, requirements or conditions that the Department deems to be reasonable and necessary to achieve compliance with the intent of Suffolk County Sewer Use Rules and Regulations.
- b. The permittee shall periodically calibrate and perform maintenance of procedures on all monitoring and analytical instrumentation to ensure accuracy of measurements.

2. Monitoring Locations

- a. The SCDPW sampling crew shall take samples and measurements to meet the monitoring requirements at the locations specified.
- b. Unless specified otherwise, discharge samples shall be taken at the sampling manhole/chamber located at the top of the LFGC holding tank.

3. Recording of Monitoring Activities and Results

- a. The permittee shall compile and maintain records of all information resulting from the monitoring activities required by this permit.
- b. In the event that the permittee performs self-monitoring the permittee shall record for each measurement or sample taken the following information: (1) the date, exact place, and time of sampling; (2) The dates analyses were performed; (3) Who performed the analyses; (4) The analytical techniques or methods used; and (5) The results of all required analyses. (6) If those results indicate a violation, the Industrial User must notify the Industrial Waste Unit (IWU) immediately. The IWU shall repeat the sampling within 30 days after becoming aware of the violation. The records of all self-monitoring activities and results must be retained for a minimum of 3 years, subject to extension, and be made available to the USEPA, NYSDEC, and SCDPW upon request.”
- c. The permittee must notify (by telephone, fax or in person, followed in writing) the Administrative Head of Suffolk County Sewer Districts, within 24 hours, of any known violation/s of Suffolk County Code Chapter 424 relating to discharge/s to County Sewerage Works.
- d. The permittee shall retain for a minimum of three (3) years all records of self-monitoring activities and laboratory results including all records of calibration and maintenance of instrumentation and original strip chart recordings from continuous monitoring instrumentation. The period of retention shall be extended during the course of any unresolved litigation or other proceedings regarding the discharge of pollutants by the permittee or when requested by the Administrative Head of Suffolk County Sewer Districts.

4. Analytical Methods

Analytical methods used for sample analyses must be in accordance with the latest edition of Standard Methods for the Examination of Water and Waste Waters (latest edition); A.S.T.M. Standards, Part 31, Water Atmospheric Analysis (latest edition); USEPA Methods for Chemical Analysis of Water and Wastes; and/or 40 CFR Part 136 Guidelines Establishing Test Procedures for the Analysis of Pollutants; including amendments to any of the foregoing; or, at the option of the Administrator, such other standards he may designate. Analyses must be performed by a NYS Certified Wastewater Analysis Laboratory which has received certification(s) for all pollutants indicated on Page 2 of this document.

5. Discharge Certification Renewal

This "Discharge Certification" and the authorization to discharge shall expire on Midnight November 24, 2006. Permittee shall not discharge any wastes other than sanitary sewage after the above expiration date. To receive authorization to discharge beyond said date, permittee must submit a request for Discharge Certification renewal to Suffolk County Department of Public Works - Division of Sanitation - Industrial Waste Unit - 335 Yaphank Avenue, Yaphank, NY 11980 no later than ninety (90) days prior to the date of expiration.



Suffolk County Department of Public Works - Division of Sanitation
Industrial Waste Pretreatment Program

SEWER DISCHARGE CONCENTRATION LIMITS

(List as referred to by Suffolk County Code Chapter 424 – "Sewers" - Article V Section 424-25)

Maximum Concentration Limits (mg/l)

<u>Parameter</u>	<u>Daily Avg. (1)</u>	<u>Monthly Avg. (2)</u>
Acetone	50.0	50.0
Arsenic	0.4	0.2
Available Chlorine	100.0	50.0
Barium	8.0	4.0
Cadmium	0.8	0.4
Chromium, Hexavalent	0.4	0.2
Chromium, Total	8.0	4.0
Copper	1.6	0.8
(3) Cyanide, Total	3.2	1.6
Cyanide, Amenable	0.8	0.4
(4) Fluorides - to Fresh Waters	8.0	4.0
to Saline Waters	72.0	36.0
Gold	0.4	0.2
Lead	0.4	0.2
Manganese	8.0	4.0
Mercury	0.4	0.2
Nickel	8.0	4.0
Phenol	1.5	1.5
Selenium	0.4	0.2
Silver	0.4 (4.0)	0.2 (3.0) (Photographic wastes only)
Sulfide	12.0	6.0
Zinc	5.0	2.5
Petroleum Hydrocarbons	50.0	50.0
(5) Total Toxic Organics (TTO)	10.0	10.0
(6) Individual Toxic Organic Compounds		

pH - 5.0 Minimum to 12.5 Maximum

	<u>Concentration Levels (mg/l)</u>	
	<u>Daily</u>	<u>Monthly</u>
(7) BOD ^s	300	300
(7) Chlorine Demand	25	25
(7) Suspended Solids	300	300

Revised. 10/01

Note (1) : Daily Average Maximum concentration value shall be determined by analysis of one (1) or more grab samples or a time or flow proportional composite sample obtained within a 24 hour period divided by the number of sample values obtained over that 24 hour period.

Note (2) : Monthly Average Maximum concentration value shall be calculated as the sum of daily average maximum concentration values recorded over a calendar month, divided by the number of daily average maximum sample values obtained over that calendar month.

Note (3) : In accordance with Standard Methods for the Examination of Water and Wastewater 16th Edition - Method 412B (Total) and 412F (Amenable).

Note (4) : These values may be multiplied by a factor of 1.5, if the municipal water supply is not fluoridated.

Note (5) : Total Toxic Organics is defined below.

Note (6) : Individual Toxic Organic Compound Limits are specified on page 3.

Note (7) : Compatible wastes in excess of these concentration levels may be acceptable and will be subject to excess strength surcharge billing.

DEFINITION:

TOTAL TOXIC ORGANICS (TTO)

1) The term "TTO" shall mean total toxic organics, which is the summation of all quantifiable values greater than 0.01 milligrams per liter for the toxic organics listed on pages 3 and 4.

2) Monitoring:

A) In lieu of monitoring for total toxic organics (TTO), the Administrator may allow industrial users to make the following certification as a comment on any periodic reports required. "Based on my inquiry of the person or persons directly responsible for managing compliance with the pretreatment standard for TTO. I certify that to the best of my knowledge and belief no discharge of toxic organics into the wastewaters has occurred since filing the last discharge monitoring report. I further certify that this facility is implementing the solvent management plan submitted to the Administrator."

B) Industrial users may be required to submit a solvent management plan that specifies to the Administrator's satisfaction the toxic organic compounds used, the method of disposal used and the procedures for assuring that toxic organics do not routinely spill or leak into the wastewater discharged to the County sewage works.

Individual compounds in each group shall be limited as follows:

<u>Volatile Organic Compounds:</u>	2.5 mg/L
<u>Base Neutral Extractable Compounds:</u>	1.5 mg/L
<u>Acid Extractable Compounds:</u>	1.5 mg/L
<u>Pesticides and PCB's:</u>	1.0 mg/L

VOLATILE ORGANIC COMPOUNDS (28)

acrolein
acrylonitrile
benzene
carbon tetrachloride
chlorobenzene
1.1 dichloroethane
1.2 dichloroethane
1.1.1 trichloroethane
1.1.2 trichloroethane
1.1.2.2 tetrachloroethane
chloroethane
2-chloroethylvinyl ether
chloroform
1.1 dichloroethylene
1.2 trans-dichloroethylene
1.2 dichloropropane
1.3 dichloropropane
ethylbenzene
methylene chloride
methyl chloride
methyl bromide
bromoform
dichlorobromomethane
chlorodibromomethane
tetrachloroethylene
toluene
trichloroethylene
vinyl chloride

ACID EXTRACTABLE ORGANIC COMPOUNDS (11)

2.4.6 trichlorophenol
parachloromieta cresol
2-chlorophenol
nitrophenol
pentachlorophenol
2.4 dimethylphenol
4-nitrophenol
2.4 dinitrophenol
4.6 dinitro-o-cresol
2.4 dichlorophenol
phenol

BASE-NEUTRAL EXTRACTABLE ORGANIC COMPOUNDS (46)

acenaphthene
benzidine
1.2.3 trichlorobenzene
hexachlorobenzene
hexachloroethane
bis (2-chloroethyl) ether
2-chloronaphthalene
1.2 dichlorobenzene
1.3 dichlorobenzene
1.4 dichlorobenzene
3.3 dichlorobenzidine
2.4 dinitrotoluene
2.6 dinitrotoluene
1.2 diphenylhydrazine
fluoranthene
4-chlorophenyl phenyl ether
4-bromophenyl phenyl ether
bis (2-chloroisopropyl) ether
bis (2-chloroethoxy) methane
hexachlorobutadiene
hexachlorocyclopentadiene
isphoroen
naphthalene
nitrobenzene
n-nitrosodimethylamine
n-nitrosodiphenylamine
n-nitrosodi-n-propylamine
butyl benzyl phthalate
di-n-butyl phthalate
di-n-octyl phthalate
diethyl phthalate
dimethyl phthalate
benzo (a) anthracene
benzo (a) pyrene
3.4 benzofluoranthene
benzo (k) fluoranthene
chrysene
acenaphthylene
anthracene
benzo (ghi) perylene
fluorene
phenanthrene
dibenzo (a, h) anthracene
indeno (1.2.3-cd) pyrene
pyrene
bis (2-ethylhexyl) phthalate

PESTICIDES AND PCB'S (26)

aldrin
dieldrin
chlordane
4.4 - DDT
4.4 - DDE
4.4 - DDD
a-endosulfan
b-endosulfan
endosulfan sulfate
endrin
endrin aldehyde
heptachlor
heptachlor epoxide

a-bhc
B-bhc
q-BHC
w-BHC
PCB-1242
PCB-1254
PCB-1221
PCB-1232
PCB-1248
PCB-1260
PCB-1016
toxaphene
2.3.7.8 - (TCDD)

GENERAL CONDITIONS

I. GENERAL PROVISIONS

1. All discharges authorized by this Discharge Certification shall be consistent with the terms and conditions specified. Proposed facility expansions, production increases, or process modifications, which result in new or increased discharges of pollutants, must be reported in writing prior to proposed implementation. If such new or increased discharge would violate the effluent limitations specified in this document the SCDPW-Division of Sanitation may modify this Discharge Certification to specify effluent limitations for any pollutants not identified and limited therein. The discharge of any pollutant not identified and authorized or the discharge of any pollutant more frequently than or at a level in excess of that identified and authorized by this document shall constitute a violation of the terms and conditions of this Discharge Certification.
2. The provisions of this Discharge Certification are severable, and if any provision of this Discharge Certification, or the application of any provision to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this Discharge Certification shall not be affected thereby.
3. The discharger must comply with all conditions of this Discharge Certification. Any non-compliance constitutes a violation of the Suffolk County Sewer Ordinance and is grounds for enforcement action; for Discharge Certification termination, revocation and reissuance, or modification; or for denial of a Discharge Certification renewal application.
4. Where the discharger becomes aware that he failed to submit any and all relevant facts in a connection permit application or submitted incorrect information in any report to the Department, he shall promptly submit such facts or information.
5. In an enforcement action the fact that a discharger would have been required to halt or reduce the permitted activity to achieve compliance with the conditions of this permit, will not be entertained as a valid defense.
6. Upon reduction, loss, or failure of any pretreatment unit or facility, the permittee shall, to the extent necessary to maintain compliance with its permit, control production or all discharges or both until the facility is restored or an alternative method of treatment is provided. This requirement applies, for example, when the primary source of power of the treatment facility fails, is reduced, or lost.

7. The discharger shall comply with effluent standards, sewer discharge pretreatment standards or prohibitions established under section 307(a) of the Clean Water Act and 40 CFR Part 403 for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement, provided that proper notification of the requirements has been made to the discharger.
8. The filing of a request by a discharger for a Discharge Certification modification, revocation and reissuance, or termination, or notification of planned changes or anticipated non-compliance, does not override any existing Discharge Certification condition.
9. The discharger shall furnish to the SCDPW-Div. of Sanitation, within the required time, any information which the Division may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Discharge Certification, or to determine compliance with this Discharge Certification. The discharger shall also furnish to the Division, upon request, copies of records required to be kept as specified by the Discharge Certification.

II. INSPECTION AND ENTRY (Article VI, Section 424-27)*

1. The discharger shall allow the Administrator, Commissioner of NYSDEC, the EPA Regional Administrator, or their authorized representatives, upon the presentation of credentials and other documents as may be required by law, to:
 - a. Enter upon the discharger's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Discharge Certification.
 - b. Have access to and copy any records that must be kept under the conditions of this Discharge Certification;
 - c. Inspect any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Discharge Certification; and
 - d. Sample or monitor as required, for the purpose of assuring permit compliance or as otherwise authorized by the Suffolk County Sewer Use Ordinance, any substances or parameters at any location.

*Note: Refers to applicable section of "Suffolk County Code Chapter 424, Sewers"

III. SPECIAL CONNECTION PERMITS AND DISCHARGE CERTIFICATIONS

1. Special Permits for connection shall be issued to a specific property owner or an authorized agent for a specific operation. Such permits shall be assignable only with the written consent of the Administrator. (Article IV-Sec. 424-19 (b)).
2. In each instance where a Special Connection Permit is required, it shall be unlawful to undertake sewer construction or to connect or attach to sewage works, notwithstanding the fact that the person may have obtained a General Permit or a related permit from another municipal entity having some jurisdiction in the matter. If separate Discharge Certifications are issued to both a landlord and a lessee or occupant affecting the same premises, the landlord may assign his Discharge Certification to a subsequent owner of the premises without consent of the Administrator. Written notice of such assignment by certified or registered mail shall be sent to the Administrator by the subsequent owner within five (5) days of such assignment. Any succeeding owner of the premises shall be bound by and comply with the terms and conditions of the Discharge Certification so transferred. (Article IV-Section 424-19(c)).
3. Discharge Certifications may be issued for a specified time period not to exceed five (5) years. Application for Discharge Certification renewal shall be initiated not less than ninety (90) days prior to the expiration date of the existing Discharge Certification. The terms and conditions of the Discharge Certification shall be subject to modification by the Administrator during the term of the document if limitations, conditions, or requirements identified in Federal, State or Local Law are modified. The discharger shall be informed of any proposed changes in his permit at least thirty (30) days prior to the effective date of change unless a violation requires immediate termination. Any changes or new conditions in the permit shall include a schedule for compliance, if necessary, and an opportunity for the discharger to obtain a hearing on the proposed changes from the Administrator. (Article IV-Section 424 (d)).
4. A Discharge Certification may be declared suspended, invalid, revoked, or void upon the occurrence of any of the following:
 - (i) making a false or misleading statement on any application or monitoring report;
 - (ii) violation by the discharger of any of the conditions prescribed in his discharge certification;

- (iii) any change in either the discharger's business or processes which changes the quality or quantity of the discharger's effluent;
- (iv) violation by the discharger of any provision of the Suffolk County Sewer Use Ordinance. (Article IV-Section 424-19(e)).

5. If a discharger anticipates a change in either the quality or quantity of effluent discharge under a Discharge Certification, he shall, at least sixty (60) days prior to the anticipated change, inform the Administrator in writing and request an evaluation of the anticipated discharge and a modification of his Discharge Certification, if necessary. The Administrator may, after investigation, affirm the existing document, deny the request, or issue an amended Discharge Certification with additional conditions. In no event shall the discharger change the quality or quantity of the discharge prior to obtaining a modified Discharge Certification. (Article IV-Section 424-19(f)).

6. The discharger shall immediately notify the Administrator of any situation which may or does result in a discharge which is in non-compliance with or in violation of the provisions of this Discharge Certification of Suffolk County Sewer Ordinance or could result in a hazardous or dangerous condition in the sewage works. (Article IV-Section 424-19(g)).

7. The discharger shall report the results of all self-monitoring to the Administrator. (Article IV – Section 424-19 (h)).

8. The discharger shall retain records and results of all self-monitoring activities for a minimum of three (3) years and make such records available to the Administrator. (Article IV – Section 424-19 (i)).

9. If a connection to the sewage works is no longer needed or required, a Disconnect Permit shall be obtained by the owner and tenant of the premises before effectuating the disconnection or abandonment of the connection. (Article IV-Section 424-20).

10. Each Discharge Certification shall stipulate special conditions or limitations deemed necessary and imposed by the Administrator in the particular instance. The discharger may, within thirty (30) days of issuance of a Discharge Certification with special conditions, request a hearing upon any of such conditions or limitations imposed. After such hearing the Administrator may change, modify, amend, or affirm these special conditions or limitations. (Article IV-Section 424-22).

IV. UNLAWFUL DISCHARGES AND OBJECTIONABLE WASTES

- 1. It shall be unlawful to discharge objectionable wastes into the sewage works. (Article V-Section 424-23(a)).
- 2. It shall be unlawful, without the prior written consent of the Administrator, to mix objectionable or industrial waste with domestic waste. (Article V-Section 424-23(c)).

3. If any such objectionable wastes are discharged or proposed to be discharged, the Administrator may:

- a. reject such wastes, or
- b. require pretreatment of such wastes to an acceptable condition, standard, and level at the cost and expense of the discharger prior to discharge into the sewage works as elsewhere provided herein, or
- c. require flow equalization by way of control over the quantities and rates or discharge as elsewhere provided herein, or
- d. require that a suitable surcharge over and above other assessments be paid in lieu of pretreatment for compatible industrial wastes only and in no event shall a surcharge be applicable in lieu of conformance to Federal "General Pretreatment Regulations" (40 CFR part 403), Federal Categorical Pretreatment Standards, or Suffolk County Sewer Discharge Concentration Limits, or
- e. require that any discharger provide, at his own expense, chemical analyses, treatability studies, engineering reports, or other documentation from professional engineers or consulting laboratories for the purpose of determining the acceptability of a waste for discharge to county sewage works, such information shall be reviewed and approved by the Administrator, or
- f. bring such action and impose such penalties against the violator as may be lawfully permitted, or
- g. any combination of the above

(Article V-Section 424-24(a)).

4. When pretreatment or flow equalization facilities are required by the Administrator:

- a. A compliance time schedule shall be furnished by the Administrator to the discharger. Failure to meet the requirements of the compliance schedule shall, be a violation of this Discharge Certification and be subject to all penalties provided in the Suffolk County Code Chapter 424 Ordinance. The discharger shall retain, at his own cost and expense, a professional engineer, licensed in New York State, to prepare engineering reports and facility designs for the Administrator's review and approval and to certify the

compliant construction of the required pretreatment or flow equalization facilities.

b. Thereafter, approved facilities shall be maintained by the discharger to ensure effective and continuous operation.

c. The discharger shall, at his own cost and expense, modify, improve, or alter, as required, his pretreatment or flow equalization facility such that the discharge into a sewage works is in compliance with all applicable pretreatment and flow discharge standards as specified in this Discharge Certification. (Article V-Section 424-24(b)).

5. All measurements, tests, and analyses of the characteristics of waters, and discharges required or wastes called for under this Discharge Certification, when performed by or on behalf of applicants, shall be determined in accordance with 40 CFR Part 136 Guidelines Establishing Test Procedures for the Analysis of Pollutants, including amendments or, in addition at the option of the Administrator, such other additional testing procedures he may designate. (Article V-Section 424-24(c)).

V. OBJECTIONABLE AND TOXIC WASTES

1. The Administrator may, after notice and hearing, establish and keep current a list of objectionable wastes, including but not limited to a schedule of Sewer Discharge Concentration Limits. Objectionable wastes listed shall include:

a. "objectionable wastes" as defined in the Suffolk County Sewer Use Rules and Regulations;

b. any material having a corrosive property capable of causing damage or hazard to structures and equipment of the sewage works or to human beings;

c. solid, liquid, or viscous substances in such quantities, of such size, or of such chemical constituents or composition that they are capable of causing obstruction to the flow in sewers or other interference with the proper operation of the sewage works;

d. waters or wastes containing substances which are not amenable to treatment or reduction; will cause damage to or interfere with the sewage treatment processes employed; or are amenable to only such a degree that the County sewage works effluent cannot meet the requirements of other agencies having jurisdiction over discharge to the receiving waters;

- e. any storm drainage, surface water, groundwater, roof runoff, subsurface drainage, uncontaminated cooling water, unpolluted industrial process waters. (Article V-Section 424-25(a)).
- f. any waste, including business, commercial, industrial, institutional or governmental facility wastes, which exceeds allowable discharge levels as promulgated by the United States Environmental Protection Agency pursuant to S307 (b) and (c) of the Federal Water Pollution Control Act and amendments, entitled "Industrial Pretreatment Requirements" and such other liquids, substances or materials that may be enumerated by the Administrator to be objectionable or toxic. business, commercial, industrial, institutional or governmental facilities identified as categorical facilities pursuant to Federal Regulations contained in 40 CFR Part 403 and the National Categorical Standards, found in 40 CFR Chapter I. Subchapter N, Parts 405-471, and as may be amended which are hereby incorporated into these Rules and Regulations, and must comply with the previously indicated categorical pretreatment standards as promulgated by United States Environmental Protection Agency;

VI. PROHIBITED INFILTRATION AND EXFILTRATION

- 1. Any action, lack of action, or condition resulting from a facility's operation which results in groundwater infiltration into a sanitary sewer with a quality in excess of limitations elsewhere herein specified or increases or creates groundwater infiltration into the sanitary sewer is prohibited and unlawful. (Article V-Section 424-26(a)).
- 2. It shall be unlawful to discharge treated or untreated sewage, industrial wastes, or objectionable wastes into any natural outlet within a County sewer district. Non-contact cooling water and storm water run-off shall be discharged into a natural outlet through an adequately sized and maintained separate disposal system and under no circumstances shall such discharge be made into county sewage works. Dischargers of said non-contact cooling water must apply to NYSDEC for a SPDES permit as required. (Article V-Section 426(b)).

VII. ENFORCEMENT

- 1. No person shall maliciously, willfully, or through gross negligence break, damage, destroy, uncover, deface, or tamper with any structure, appurtenance, or equipment which is a part of the sewage works. Such acts shall be deemed to be a violation of the Suffolk County Code Chapter 424. (Article VI-Section 424-28).

2. Compliance with an order or decision of the Administrator to correct a violation or change a procedure shall be immediate and accomplished prior to making any appeals when the Administrator advises in his order or decision, whether oral or written, that an emergency exists or that it is a matter of public or individual safety. Upon failure of the owner, tenant, or occupant to so comply, the Administrator may make the required correction or change at the cost and expense of the alleged violator or the Administrator may avail himself of any or all of his other remedies. (Article VI-Section 424-29).
3. In addition to other provisions of the Suffolk County Code Chapter 424, a Discharge Certification may be suspended or revoked at any time by the Administrator without notice:
 - a. if he deems the surrounding facts and circumstances to constitute an emergency such that damage or injury might occur to person, property, or the facilities of the County or,
 - b. after prior written notice of violation has been given and failure thereafter, within a reasonable time, of the discharger, owner, or tenant to correct or cease and desist from continuing the violation. (Article VI-Section 424-30(a)).
4. Any discharger failing to comply with any provision of the Suffolk County Code Chapter 424, or failing to comply with any conditions or requirements in a Discharge Certification or in a compliance schedule shall be served by the Administrator with a written notice stating the nature of the violation and directing that such violation immediately cease or be corrected within a specified time. (Article VI-Section 424-31).
5. If a violation of this Discharge Certification occurs the Administrator shall have the right to either effectuate a disconnection at the violator's cost and expense or to order the violator to show cause before the Administrator, or a hearing officer designated by him, why service should not be terminated or penalties be imposed. (Article VI-Section 42432(a)).
6. A notice shall be served on the alleged violator, in person or by mail, specifying the time and place for a hearing to be held regarding the alleged violation and directing the alleged violator to show cause why penalties should not be imposed or an order should not be issued directing termination of service. (Article VI-Section 424-32(b)).
7. After reviewing the evidence, the Administrator may issue an order directing that penalties be imposed and/or sewer service be terminated unless adequate facilities are installed within a specified time or existing treatment facilities, devices, or appurtenances are properly operated. (Article VI-Section 424-32(c)).

8. If the Administrator determines that an emergency or public health hazard exists, may exist, or could develop, he may, without notice to the owner or occupant of a premises, repair, maintain, disconnect, or remove a building sewer and/or effectuate a disconnection from County sewage works. The Administrator may also take any reasonable action necessary to eliminate an emergency or public health hazard. If caused by the owner or occupant, it shall be done at the cost and expense of the owner or occupant or both. (Article VI-Section 424-32(d)).

9. The Administrator may assess civil penalties for violations of the Suffolk County Sewer Ordinance. (Article VI-Section 424-32(e)).

10. Subject to the requirements of Section 424-29, an aggrieved person may appeal a decision or order issued by the Administrator prior to compliance. Such appeal shall be taken by the aggrieved person within thirty (30) days of service of a copy of the decision, order, or notice. This appeal may be taken to a Hearing Officer or Appeals Board appointed by the Administrator. A petition for an appeal shall be filed in writing in the Office of the Administrator within said time specifying the matters appealed. (Article VI-Section 424-34).

11. A person who fails to comply with the terms of a notice of violation or provision of the Suffolk County Code Chapter 424 shall be guilty of a violation and, upon conviction, may:

- a. in the case of an individual, be fined in accordance with Section 80.05 of the PENAL LAW or imprisoned for not more than fifteen (15) days, or both for each such violation, and
- b. in the case of a corporation, be fined in accordance with the provisions of Section 80.10 of the PENAL LAW, except where specific provisions of other Articles of the Suffolk County Code Chapter 424 govern. (Article VI-Section 424-35(a)).

12. In addition to the foregoing, a violator shall be liable for a civil penalty in an amount of not less than \$ 300.00 nor more than \$1,000.00 for each day of each violation except where specific provisions of other Articles of the Suffolk County Code Chapter 424 govern. (Article VI-Section 424-35(b)).

13. If violations of any provision of Suffolk County Code Chapter 424 or a Discharge Certification issued pursuant to that Chapter results in a Significant

Industrial User (SIU) meeting criteria specified designating such SIU as being in Significant Non-Compliance. The Administrator shall annually publish the names of such users in Significant Non-Compliance in the largest circulation newspaper serving the County of Suffolk during the year said Significant Non-Compliance occurred.

14. If a violation of any provision of the Suffolk County Code Chapter 424 causes injury or damage to sewage works, a suit may be maintained by the Administrator to recover such damages in addition to any other civil or criminal remedies or penalties. (Article VI-Section 424-35(c)).

15. Each day of a continuing violation shall be subject to a separate fine, imprisonment, punishment, civil liability or penalty. (Article VI-Section 424-35(d)).

16. The Administrator may also maintain any other action or proceeding necessary to compel compliance with the provisions of Suffolk County Code Chapter 424 or to enjoin their violation. (Article VI-Section 424-35(e)).

17. Any discharge in violation of the provisions of the Suffolk County Code Chapter 424, of any order of the Administrator, or requirements contained in a Discharge Certification shall be deemed a public nuisance. (Article VI-Section 424-33).

18. All punishments, penalties, and other remedies provided for herein or under any other controlling law, rule, or regulation, civil or criminal, shall be deemed cumulative. (Article VI-Section 424-36).

VIII. SLUDGE, CONCENTRATED CHEMICALS AND/OR RESIDUALS DISPOSAL

1. The storage or disposal of concentrated chemicals, sludges, chemical wastes, or residuals separated from the permitted discharges by the discharger shall be done in such a manner as to prevent creation of nuisance conditions or entry of such materials into the sewer or to groundwater and in a manner approved by DPW-Division of Sanitation or Suffolk County Dept. of Health Services. The permittee shall maintain records of disposal on all concentrated chemicals, chemical waste sludges and other solids associated with the discharge(s) permitted. The following data shall be compiled and reported to the Division of Sanitation or its designated field office in accordance with schedules contained under Special Conditions of the Discharge Certification:

- a. The type of the materials to be disposed of;

- b. The approximate volumes and weights per reporting period;
- c. Name and NYSDEC/USEPA Industrial Waste Hauler Permit Number of waste hauler;
- d. The method by which they were removed and transported;
- e. Their final disposal locations.
- f. Copies of waste removal receipts from waste hauler including information required in Items a to e must be submitted as required.

IX. NATIONAL PRETREATMENT STANDARDS: PROHIBITED DISCHARGES

(Note: The following Section was published in the Federal Register, Vol. 55, Page 30128. The effective date of the regulation (Part 403) was July 24, 1990).
Section 403.5 National Pretreatment Standards: Prohibited Discharge.

a. General prohibitions:

Pollutants introduced into POTW's by a non-domestic source shall not Pass Through the POTW or Interfere with the operation or performance of the works. These general prohibitions and the specific prohibitions in paragraph (b.) of this section apply to all non-domestic sources introducing pollutants into a POTW whether or not the source is subject to other National Pretreatment Standards of any national, State or local Pretreatment Requirements.

b. Specific Prohibitions. In addition, the following pollutants shall not be introduced into a POTW:

- (1) Pollutants which create a fire or explosion hazard in the POTW; including, but not limited to, wastestream with a closed cup flashpoint of less than 140 degree Fahrenheit or 60 degrees Centigrade using the test methods specified in 40 CFR 261.21.
- (2) Pollutants which will cause corrosive structural damage to the POTW, but in no case Discharges with pH lower than 5.0, unless the works is specifically designed to accommodate such Discharges;
- (3) Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW resulting in Interference;

- (4) Any pollutant, including oxygen demanding pollutants (BOD, etc.) released in a Discharge at a flow rate and/or pollutant concentration which will cause Interference with the POTW.
- (5) Heat in amounts which will inhibit biological activity in the POTW resulting in Interference, but in no case heat in such quantities that the temperature at the POTW Treatment Plant exceeds 40 C (104 F) unless the Approval Authority, upon request of the POTW, approves alternate temperature limits.
- (6) Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through;
- (7) Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems;
- (8) Any trucked or hauled pollutants, except at discharge points designated by the POTW.

c. When specific limits must be developed by POTW.

- (1) POTW's developing POTW Pretreatment Programs pursuant to 403.8 shall develop and enforce specific limits to implement the prohibitions listed in paragraphs (a) and (b) of this section.
- (2) All other POTW's shall, in cases where pollutants contributed by User(s) result in Interference or PassThrough, and such violation is likely to recur, develop and enforce specific effluent limits for Industrial User(s), and all other users, as appropriate, which, together with appropriate changes in the POTW Treatment Plant's Facilities or operation, are necessary to ensure renewed and continued compliance with the POTW's SPDES permit or sludge use or disposal practices.

- (3) Specific effluent limits shall not be developed and enforced without individual notice to persons or groups who have requested such notice and an opportunity to respond.

- d. Local Limits. Where specific prohibitions or limits on pollutants or pollutant parameters are developed by a POTW in accordance with paragraph (c) above, such limits shall be deemed Pretreatment Standards for the purposes of section 307(d) of the Act.

APPENDIX D

**APPLICATION TO OPERATE
LANDFILL GAS FLARE AS A VENT**



**Dvirka
and
Bartilucci**
CONSULTING ENGINEERS

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May 14, 2004

Mr. Jeff Trad
New York State Department
of Environmental Conservation
Division of Environmental Remediation
Bureau of Eastern Remedial Action
625 Broadway
Albany, New York 12233

Re: Sonia Road Landfill
NYSDEC Site No. 152013
D&B No. 1594II

Dear Mr. Trad:

As you are aware, Dvirka and Bartilucci Consulting Engineers (D&B), on behalf of the Islip Resource Recovery Agency, submitted a Final Closure Plan for the Sonia Road Landfill, located in West Brentwood, New York, to the New York State Department of Environmental Conservation (NYSDEC) in January 1999. The Final Closure Plan was prepared for the site as a Presumptive Remedy for the remediation of the landfill. The Presumptive Remedy was identified as the construction of a landfill capping system in accordance with the appropriate provisions of 6 NYCRR Part 360. In addition, a landfill gas management system was deemed prudent to prevent the lateral migration of the landfill gas.

At this time, the operating history of the landfill gas management system indicates that continued, part-time operation of the system is essential to control the off-site migration of landfill gas. If the system is not operated, landfill gas will migrate in sufficient concentrations to create an issue at the property boundaries. However, the active withdrawal of landfill gas necessary to control off-site migration yields a composition of landfill gas which is either marginally combustible or insufficient to support combustion at the flare. The net result is that the system must be operated in order to protect the safety and welfare of the public with or without the presence of a flame.

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Dvirka and Bartilucci

CONSULTING ENGINEERS

Mr. Jeff Trad

New York State Department

of Environmental Conservation

Division of Environmental Remediation

May 14, 2004

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Toward that end, the purpose of this report will be to address the continued operation of the system by venting the landfill gas through the flare without the presence of the flame and the concentrations of non-methane organic compounds (NMOCs) present in the landfill gas. Landfill gas monitoring well data will be presented to demonstrate that the methane concentration of the landfill gas is significantly less than the 30% necessary to support the flare operation. In addition, landfill gas data collected through sampling and monitoring activities will serve to support this operation and will demonstrate that the New York State air quality standards will not be exceeded. It will also be demonstrated that continued, minimal operation of the blowers (20 hours per week) at the gas collection system will be sufficient to prevent buildup of landfill gas and to protect the health and safety of neighboring properties.

Background

The Sonia Road Landfill is an inactive municipal solid waste landfill owned and operated by the Town of Islip. The landfill is located in the western portion of the Town of Islip in the hamlet of Bay Shore and is in close proximity to the western town boundary between the Towns of Islip and Babylon. The landfill property is approximately 42.7 acres in area and is rectangular in shape. The landfill is bounded to the north by industrial properties, to the east by residential properties, to the south by Deer Park Street with residential properties beyond, and to the west by Howell's Road, Secatogue Road and Corbin Avenue with industrial properties beyond.

The footprint of the municipal solid waste mass covers an area of approximately 40 acres and is approximately equivalent to the boundaries of the properties. The Sonia Road Landfill had been identified by the NYSDEC as an inactive hazardous waste disposal site (NYSDEC Site No. 152013). The site was previously subject to a Phase I and Remedial Investigation/Feasibility Study (RI/FS) investigation and was categorized as a Class 2 site.

As previously mentioned, the Presumptive Remedy proposed for the site in the Final Closure Plan was identified as the construction of a landfill capping system. However, the installation of the proposed landfill capping system would promote the lateral migration of the landfill gas by mitigating the surface venting of the gas. As such, and given the extent to which the waste mass covered a majority of the property and the proximity of residential and commercial structures to the property, the Final Closure Plan also addressed the issue of landfill gas management and migration control by recommending the installation of a landfill gas management system as part of the landfill cap construction.

Historical monitoring data provided by the Town of Islip revealed a repeated observance of methane in the northeast corner of the site and sporadic positive readings at the southeast corner of the site. In addition, measurements taken during a bar hole examination conducted as part of

the Remedial Investigation clearly indicated measurable concentrations of methane below the ground surface and within the limits of the waste. This would suggest that methane was still being produced and that methane was being stored in the void volume of the waste and venting through the surface of the landfill site.

Given the age of the in-place waste mass at 20-plus years, it would normally be expected that the rate of methane gas generation for typical municipal solid waste has passed the peak and has entered the declining rate of generation phase. In addition, an appreciable percentage of waste lies below the water table. The mechanics for decomposition under these circumstances is not well documented in the literature since it is not representative of normal landfill construction.

Based on the monitoring data available, it was assumed that the landfill was still actively generating methane at a declining rate as a result of decomposition of organic waste materials. It was further assumed that this generation would continue for a period of time after the construction of the cap. Given these conditions, it was prudent to assume that the installation of the landfill cap would have the tendency to contain the existing vertical surface venting of landfill gas from the ground surface and promote lateral migration of landfill gas beyond the limits of the waste. In order to address this potential, a system of perimeter monitoring and a combination of center recovery and perimeter collection was proposed. A description of the landfill gas management system is provided in the following section.

Landfill Gas Management System

The design of the landfill gas management system was intended to address several issues. Recognizing that the Sonia Road Landfill site is an inactive, unmanned site. In the past, the site has experienced unauthorized and unsanctioned access by persons engaged in the use of off-road vehicles. Therefore, the potential for damage or vandalism to passive relief vents was considered high. In light of these conditions, a total of 37 landfill gas recovery wells were installed completely below grade in lieu of the relief vents. In addition to the 37 landfill gas recovery wells, a total of 16 landfill gas collection wells were included in the landfill gas management system to address the potential for off-site migration. In order to monitor the effectiveness of the landfill gas management system, a total of 17 landfill gas monitoring wells are spaced at intervals approximately equidistant to the landfill collection wells in order to monitor the effectiveness of the system at the site boundaries.

The landfill gas recovery wells and the landfill gas collection wells represent the active portions of the landfill gas management system. The landfill gas recovery wells are grouped into a total of eight piping manifolds. Each 4-inch diameter HDPE manifold services from three to seven

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landfill gas recovery wells and is connected to a perimeter landfill collection gas header by means of a 4-inch diameter butterfly valve suitable for throttling purposes.

The 16 landfill gas collection wells are individually connected to the perimeter collection header. Each collection well is fitted with a butterfly valve to allow throttling of the extracted gas. The perimeter collection header forms a continuous loop around the landfill property and terminates at the landfill gas management compound located along the western property boundary, adjacent to the main entrance gate. The ends of the perimeter collection header connect to a blower skid. One end of the collection header is identified as the "Northern Landfill Gas Collection Header" and the other end is identified as the "Southern Landfill Gas Collection Header."

The landfill gas management compound consists of a blower skid, an elevated (utility) flare and associated electrical controls and appurtenances. The blower skid is a prefabricated skid consisting of two water separators, two rotary lobe positive displacement blowers, discharge silencers and related piping, valves, fittings and appurtenances. The discharge from the blower skid is directed to the elevated flare for flaring or venting, as conditions may warrant.

When the landfill gas management system was first placed in operation, a sufficient quality (percent methane) of gas was present to provide for combustion at the flare tip. Over a period of a couple of months, the quality of gas was observed to decline to the point where combustion could not be sustained on a regular basis. Intermittent operation of the system, on a time clock, did not improve the opportunity to initiate and sustain a flame. These findings suggest that the initial operation of the landfill gas management system resulted in the withdrawal of landfill gas from the void volume of the waste mass.

Once the stored volume was depleted, the actual generation rate is not sufficient to support combustion at the flare tip.

In order to document the post closure issue of landfill gas at the Sonia Road Landfill, the Town undertook a comprehensive monitoring program. At the start of the program, the landfill gas management system was turned off. Landfill gas monitoring was performed at the site perimeter on a daily basis to establish when the uncontrolled lateral movement of landfill gas would approach the site property lines and pose a threat to health and safety. This study indicated that there is an identifiable period, after the system is turned off, when the landfill gas begins to recover and its presence can be measured at the site perimeter.

This information has resulted in the method of operation whereby the active landfill gas management system is operated intermittently for an average of 20 hours per week. Operating experience coupled with the results of routine landfill gas monitoring indicates that this approach

is adequate to mitigate the off-site migration of landfill gas and be protective of health and safety. Even at this reduced operating schedule, the quality of landfill gas extracted by the wells and delivered to the flare is insufficient to support combustion.

Clearly, the primary purpose of the landfill gas management system is to mitigate the off-site migration of landfill gas and to be protective of the health and safety of the occupants of the adjacent properties. To this end, the system must be operated whether or not combustible concentrations of landfill gas are experienced at the flare tip. Given the minimal concentrations of methane present in the extracted gas, the landfill gas must be vented to the atmosphere without combustion in order to allow the continued operation of the system.

NMOC Sampling and Analysis

In correspondence dated January 19, 1999, the NYSDEC requested that the landfill gas be sampled upon completion of construction of the landfill gas management system to confirm that significant concentrations of non-methane organic compounds (NMOCs) are present which the flare will be unable to destroy and which would contravene New York State air quality standards. The Sonia Road Landfill Gas Management System was placed in operation in the Summer of 2000. In August 2000, a sampling protocol was developed to provide analytical data for the landfill gas extracted by the Landfill Gas Management System for the purpose of determining the concentration of NMOCs prior to the combustion process. A copy of the sampling protocol can be found in Attachment 1.

In accordance with the sampling protocol, sampling was conducted in December 2000 and February 2001. Provided in Attachment 2 are the analytical results for that sampling program. Table 1 presents the total NMOCs from each of the three sampling ports (North and South Collection System and Combined Landfill Gas) and Table 2 presents the VOC results from the same three sampling data ports.

In order to determine the amount of NMOCs present at the flare, and whether or not the amount will cause a violation of New York State's air quality standard (i.e., 25 tons per year [tpy]), calculations are provided in Attachment 3 to present the total tons per year of NMOCs based on two possible scenarios. First, the "worst case" scenario involves the assumption that all NMOCs are represented by the constituent with the highest molecular weight. It should be noted that the calculations are based on the sampling data with the highest total NMOCs (i.e., 26,000 ppbv at the North Collection System, 12/04/2000) and that the constituent with the highest molecular weight was chosen based only on those constituents in the sample that were detected. It was also assumed that the NMOC constituents were those contained in the VOC analysis (from Attachment 2, Table 2). As shown on Table 2, the molecular weight for the constituent found in

the sample with highest NMOC value was 170.92 g/mol for Cryofluorane. Therefore, the “worst case” calculations assumed that all NMOCs were represented by Cryofluorane. If both blowers were to operate 24 hours per day and 7 days per week (8,760 hours per year), the “worst case” scenario will emit 10.8 tpy of NMOCs into the atmosphere. On the other hand, if the blowers were to operate at the recommended 20 hours per week, the “worst case” scenario would emit only 1.29 tpy of NMOCs into the atmosphere.

A second scenario is also presented in Attachment 3. This “alternate” scenario utilizes the weighted average of the molecular weights in the sample with highest NMOC value. Calculations for this “alternate” scenario are based on a constituent with a weighted molecular average of 82.63 g/mol. If both blowers were to operate 24 hours per day and 7 days per week (8,760 hours per year), the “alternate” scenario will emit 5.2 tpy of NMOCs into the atmosphere. On the other hand, if the blowers were to operate at the recommended 20 hours per week, the “alternate” scenario would emit only 0.62 tpy of NMOCs into the atmosphere.

As shown in the calculations in Attachment 3, the New York State NMOC air quality standard would not be exceeded, as conservatively demonstrated utilizing the “worst case” scenario. The “worst case” scenario provides support that the continuous operation of the blowers would not cause an exceedance of the air quality standards. In addition, it further validates that the recommended operation of the blowers for 20 hours per week would be sufficient to remove the build up of landfill gas, while contributing to only 20% of the total air quality standard.

Landfill Gas Monitoring Results

In addition to the actual sampling data provided in Attachment 2, the FPM Group, Ltd. (FPM) conducts landfill gas monitoring at the 17 gas monitoring wells and at the blower several times per year. The most recent monitoring results are provided in Attachment 4.

As shown in Attachment 4, the percent methane in the perimeter gas monitoring wells and at the blower indicates that the methane concentration is far below the 30% required to support a flame at the flare tip. However, elevated levels of methane, at times above the explosive limit, in the gas monitoring wells provides sufficient data to warrant continued monitoring to prevent gas build up and protect and health and safety of the neighboring properties.

Conclusions

Since it began its operation in the Summer of 2000, the operation of the Landfill Gas Management System has continuously indicated that methane is still being produced by portions of the landfill, but not in sufficient quantities to sustain a flame on a continuous basis. Based on

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the monitoring data presented above (Attachment 4), it was demonstrated that the methane concentration of the landfill gas at the flare is significantly less than the 25-30% routinely necessary to support the flare operation. Given the quality of the landfill gas, it is not practical to suggest the use of utility gas to supplement the operation of the flare. By introducing utility gas to support the flare operations, it would also introduce a source of emissions that would lead to an increase in the ambient air emissions that may compromise the New York State air quality standards. Therefore, it is proposed to continue the operation of the Landfill Gas Management System utilizing the flare stack as a vent stack. The blowers would operate at a schedule of 20 hours per week to remove the buildup of landfill gas in the system, as necessary.

The venting of the landfill gas will not provide for a reduction in the concentrations of NMOCs. However, as demonstrated by calculations provided in Attachment 3, the 25 tpy threshold would not be exceeded, even in a "worst case" scenario (8,760 hours of continuous blower operation). Therefore, the continued operation of the blowers at 20 hours per week should be sufficient to address the diminished generation of landfill gas, while protecting the health and safety of the neighboring properties.

We are confident that the data presented to support continued operation of the Landfill Gas Management System without the use of the flame will be sufficient for the NYSDEC to provide concurrence in this matter. It should also be noted that the Sonia Road Landfill will continue to operate in accordance with the provisions of 6 NYCRR Part 360.

In closing, we would request your written concurrence that the continued operation of the landfill gas management system, without the benefit of a flame, is prudent and necessary to protect the health and safety of the occupants of the neighboring properties.

If you have any questions and/or comments, please do not hesitate to contact me at (516) 364-9890.

Very truly yours,



Edward J. Reilly
Associate

EJR/PBCt/cmc

Attachment

cc/encl:

P. DiMaria (IRRA)

F. Ribaudo (IRRA)

J. Mirando (D&B)

◆1594EJR04014LTR.DOC(R02)

ATTACHMENT 1

LANDFILL GAS SAMPLING PROTOCOL

**TOWN OF ISLIP
SONIA ROAD LANDFILL
NYSDEC SITE NO. 152013**

**SAMPLING PROTOCOL
LANDFILL GAS**

Purpose:

To provide analytical data for the landfill gas extracted by the Landfill Gas Management System for the purpose of determining the concentrations of Non-Methane Organic Compounds (NMOC) prior to the combustion process.

Arrangements:

Make arrangements with the analytical laboratory under contract with the Town of Islip/Islip Resource Recovery Agency to obtain four certified 6-liter (6 L) sample canisters, four pressure gauges, four filters, 1/4 inch Teflon tubing, chain of custody forms, etc. (three of the canisters and appurtenances are required for sampling, one canister and appurtenances are spare). Field blanks and trip blanks are not required. Analysis to include:

- EPA Method TO-12 Determination of Non-Methane Organic Compounds (NMOCs) in Ambient Air Using Cryogenic Preconcentration and Direct Flame Ionization Detection, with CLP-like data validatable package.
- EPA Method TO-14A Determination of Volatile Organic Compounds (VOCs) in Ambient Air Using Summa Passivated Canister Sampling and Gas Chromatographic Analysis, with CLP-like data validatable package.

EPA Method TO-12 will provide a single value for Total NMOCs. EPA Method TO-14A will provide values for targeted VOCs, the sum of which will approximate the Total NMOCs.

The laboratory which performs the analysis must be recognized (certified) by New York State for the determination of VOCs in air.

Supplies:

The sampling of landfill gas from three sampling ports associated with the Landfill Gas Management System will be performed as grab sampling using certified clean and evacuated 6-liter stainless steel Summa canisters. The vacuum pressures present in the canisters will make the canisters self-filling during the sample retrieval process.

Canisters must be obtained from the laboratory. Canisters should be ordered, received and used for sampling as quickly as possible. In no event should an evacuated canister be stored more than 30 days (from date of evacuation).

Hand tools will be required to assemble canisters, filters, pressure gauges, Teflon tubing and hose connections. Hand tools may also be required to remove pressure gauges or plugs from the designated sampling port/pressure gauge connections.

The canisters are evacuated at the laboratory to a high vacuum (>28" Hg). Each canister must contain at least 26" Hg vacuum at the time of sampling. If the canister vacuum is less than 26" Hg, the canister should not be used, and it should be exchanged for another canister.

Frequency:

Sample each sample port twice per month for 2 months. Each sampling event will provide three grab samples of landfill gas; one from the 1/2 inch diameter sampling port/pressure gauge connection located on the suction side of the west blower (Blower 1) prior to the inlet water separator, one from the 1/2 inch diameter sampling port/pressure gauge connection located on the suction side of the east blower (Blower 2) prior to the inlet water separator, and one from the 1/2 inch diameter sampling port/pressure gauge connection located at the 10-inch diameter tee on the combined discharge from both blowers. See attached figure.

Procedures:

- 1) The Landfill Gas Management System must be in operation for at least two hours prior to the retrieval of landfill gas samples in order to provide representative samples. If the Landfill Gas Management System is not in operation at the time of sampling, the system must be placed in operation and allowed to operate for at least two hours.
- 2) The Landfill Gas Management System must be shut down at the time of retrieval of landfill gas samples. Sampling shall be performed from one sample location at a time.
- 3) The landfill gas sample canister for the sample port located on the west side of the blower pad should be labeled "Northern Landfill Gas Collection System – Landfill Gas." Record canister tag data and serial number.
- 4) The landfill gas sample canister for the sample port located on the east side of the blower pad should be labeled "Southern Landfill Gas Collection System – Landfill Gas." Record canister tag data and serial number.

- 5) The landfill gas sample canister for the sample port located at the 10-inch diameter stainless steel tee located on the discharge side of the blowers should be labeled "Combined Landfill Gas Sample." Record canister tag data and serial number.
- 6) Remove pressure gauges or plugs from the designated sampling port/pressure gauge connections and install brass or PVC 1/2" NPT x 1/4" hose barb fittings into each connection.
- 7) Remove brass shipping plug from canister. DO NOT OPEN VALVE.
- 8) Assemble canister and canister pressure gauge and install brass shipping plug in gauge connection.
- 9) Open canister valve then close to test canister vacuum. If vacuum is ≥ 26 " Hg, continue. If vacuum is < 26 " Hg, do not use canister for sampling and use spare canister instead or obtain a replacement canister, as appropriate. Record canister tag data and vacuum reading on Chain of Custody forms.
- 10) Remove plug, assemble filter to pressure gauge and Teflon tubing to filter. (Do not use tygon tubing.) Position canister as close to sampling port as possible to minimize length of Teflon tubing. Connect tubing to hose barb fitting at sampling port/pressure gauge connection. Swage lock fittings are finger-tight plus 1/16 turn.
- 11) Open 1/2" sample port valve then open valve on canister to retrieve sample from landfill gas management system piping. Estimated time to fill: 30 seconds to 1 minute.
- 12) Close valve on canister when canister pressure drops to 5" Hg. Do not allow canister to achieve ambient pressure. Record ending canister pressure on Chain of Custody form. Close sample port valve.
- 13) Disassemble canister, pressure gauge, filter, tubing, etc., and INSTALL BRASS SHIPPING PLUG IN CANISTER. MAKE CERTAIN CANISTER VALVE IS CLOSED.
- 14) Repeat Steps 8 through 13 for each sampling location using a dedicated canister, pressure gauge, filter, tubing, hose barb, etc.

- 15) Package canisters, pressure gauges, filters, etc., in shipping carton and deliver/ship to laboratory. There are no preservation or storage requirements for the canisters. Return all canisters, including spares and unused canisters.
- 16) Holding times should not exceed 14 days.
- 17) Reinstall pressure gauges or plugs into designated sampling port/pressure gauge connections on landfill gas management system piping.
- 18) If appropriate, restart the Landfill Gas Management System and return it to operation.

Analysis of Results:

- 1) Arrange for delivery of sample canisters to the Town of Islip/Islip Resource Recovery Agency's contracted analytical laboratory and preserve the chain of custody.
- 2) Analysis of each sample canister to include:
 - EPA Method TO-12 Determination of Non-Methane Organic Compounds (NMOCs) in Ambient Air Using Cryogenic Preconcentration and Direct Flame Ionization Detection. Results to be provided with CLP-like data validatable package.
 - EPA Method TO-14A Determination of Volatile Organic Compounds (VOCs) in Ambient Air Using Summa Passivated Canister Sampling and Gas Chromatographic Analysis. Results to be provided with CLP-like data validatable package.
- 3) Analytical reports will be forwarded by the laboratory to the Town of Islip/Islip Resource Recovery Agency after which the reports will be provided to Dvirka and Bartilucci Consulting Engineers for data validation and evaluation.

Evaluation of Results:

- 1) Perform data validation and data usability analysis.
- 2) Compare data to appropriate regulations to be discussed with NYSDEC.

Reporting of Results:

- 1) Compile analytical data for the four sampling events in one report.
- 2) Provide interpretation of data as appropriate.
- 3) Submit report to Town of Islip/Islip Resource Recovery Agency.

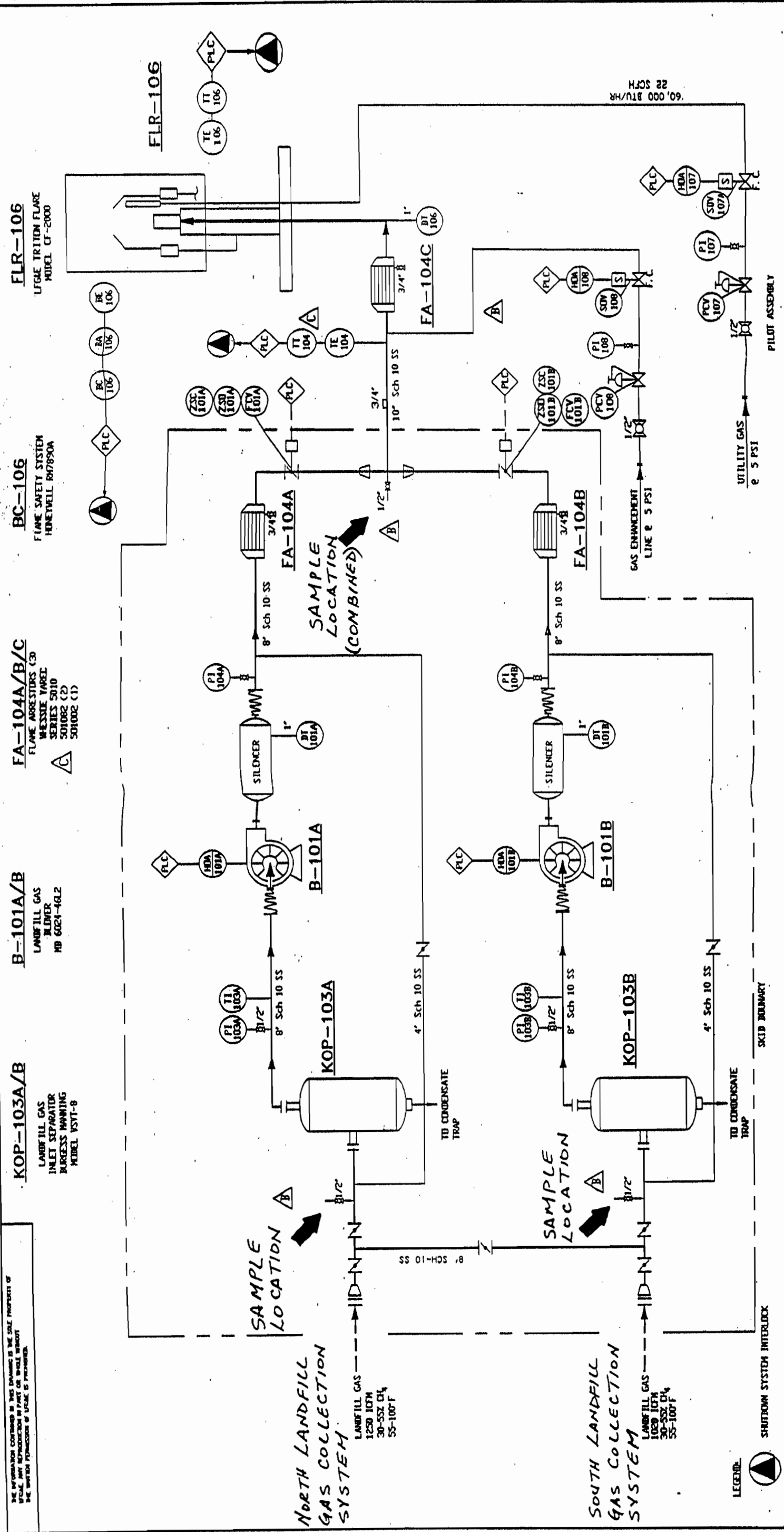
- 4) Town of Islip/Islip Resource Recovery Agency submission of report to NYSDEC - Central Office.

**SONIA ROAD LANDFILL
SUMMARY OF MONITORING PARAMETERS
FOR SAMPLING OF LANDFILL GAS**

Table 1

Sample Location (see attached figure)	Sample Type	Sample Matrix	Sample Fraction	Number of Samples per Event	Frequency	Container Type/Size/No.	Sample Preservation	Maximum Holding Time	Analytical Method
Landfill Gas Management System (see attached figure)	Grab	Landfill Gas	Non-Methane Organic Compounds (NMOCs)	3	2/month for 2 months	6-liter stainless steel Summa canister	None	14 days for analysis	EPA Method TO-12
	Grab	Landfill Gas	Volatile Organic Compounds (VOCs)	3	2/month for 2 months	6-liter stainless steel Summa canister	None	14 days for analysis	EPA Method TO-14A

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LEGEND:

- ▲ SHUTDOWN SYSTEM INTERLOCK
- ◇ PROGRAMMABLE LOGIC CONTROLLER
- CONTROL PANEL
- FIELD MOUNTED
- LG LEVEL GAUGE
- PCV PRESSURE REGULATOR
- LS LEVEL SWITCH
- SOV SOLENOID VALVE
- FVA HAND/OFF/AUTO
- PT PRESSURE TRANSMITTER
- BC BURNER CONTROLLER

- ZS LIMIT SWITCH
- SP SURGE PROTECTOR
- FE FLOW ELEMENT
- TE TEMPERATURE ELEMENT
- BE BURNER ELEMENT
- TI TEMPERATURE INDICATOR
- HV HAND VALVE
- FT FLOW TRANSMITTER
- FCV FLOW CONTROL VALVE
- BA FLAME FAIL ALARM
- BPI DIFFERENTIAL PRESSURE INDICATOR
- TI TEMPERATURE TRANSMITTER
- VS VALVE POSITION SWITCH
- AE ANALYZER
- TP ZLINDER THERMAL PROTECTION CIRCUIT
- BT BRIP TRAP

LFG&E
 LANDFILL GAS & ENVIRONMENTAL PRODUCTS INC.
 9605 PROSPECT AVE., SUITE 200, CA 94576
 TEL: (916) 946-4662, FAX: (916) 946-4660

TRITON™ FLARE
CF-2000

APPROVED BY: _____

DATE: _____

SHEET DESCRIPTION: _____

SCALE: _____

DATE: _____

SHEET 1 OF 1

DRAWING NO.: 70048-MO 1

REV.	DESCRIPTION	DATE	APPROVED
C	REVISED PER CUSTOMER COMMENTS	12/1/99	JH
B	REVISED PER CUSTOMER COMMENTS	11/16/99	JH
A	REVISED PER CUSTOMER COMMENTS - 497'S	10/17/99	JH
REV.	DESCRIPTION	DATE	APPROVED

ATTACHMENT 2

LANDFILL GAS SAMPLING RESULTS

**TOWN OF ISLIP RESOURCE RECOVERY AGENCY
SONIA ROAD LANDFILL
LANDFILL GAS SAMPLING RESULTS
EPA METHOD TO-12 TOTAL NON-METHANE ORGANIC COMPOUNDS (TNMOC)**

Table 1

SITE:	CONSTITUENT	UNITS	CLGAS/ Combined Landfill Gas	12/04/2000	CLGAS/ Combined Landfill Gas	02/12/2001	NLGAS/ North Collection System	12/04/2000	NLGAS/ North Collection System	02/08/2001	SLGAS/ South Collection System	12/04/2000	SLGAS/ South Collection System	02/08/2001
	TNMOC	(ppmv)	2.1	18	26	24	18,000	26,000	24,000	18,000	13,000			
		(ppbv)	2,100	18,000	26,000	24,000	18,000	26,000	24,000	18,000	13,000			

ppmv: parts per million by volume
ppbv: parts per billion by volume

**TOWN OF ISLIP RESOURCE RECOVERY AGENCY
SONIA ROAD LANDFILL
LANDFILL GAS SAMPLING RESULTS
EPA METHOD TO-14A VOLATILE ORGANIC COMPOUNDS (VOCs)**

Table 2

CONSTITUENT	MW (g/mol)	CLGAS/ Combined Landfill Gas 12/04/2000	CLGAS/ Combined Landfill Gas 02/12/2001	NLGAS/ North Collection System 12/04/2000	NLGAS/ North Collection System 02/08/2001	SLGAS/ South Collection System 12/04/2000	SLGAS/ South Collection System 02/08/2001
1,1,1-Trichloroethane	133	0.75 U	51	40	62	14	58
1,1,2,2-Tetrachloroethane		0.75 U	1.6 U	5 U	3.6 U	5 U	3.0 U
1,1,2-Trichloroethane		0.75 U	1.6 U	5 U	3.6 U	5 U	3.0 U
1,1-Dichloroethane	98.96	0.75 U	140	160	290	43	98
1,1-Dichloroethylene		0.75 U	1.6 U	5 U	3.6 U	5 U	3.0 U
1,2,4-Trichlorobenzene		0.75 U	1.6 U	5 U	3.6 U	5 U	3.0 U
1,2-Dichloroethane		0.75 U	1.6 U	5 U	3.6 U	5 U	3.0 U
1,2-Dichloropropane		0.75 U	1.6 U	5 U	3.6 U	5 U	3.0 U
1,3-Butadiene		3.0 U	6.3 U	20 U	15 U	20 U	12 U
1,4-Dioxane		3.0 U	6.3 U	20 U	15 U	20 U	12 U
2-Hexanone		3.0 U	6.3 U	20 U	15 U	20 U	12 U
2-Propanol,1-(1-methylpropoxy)-		3.0 U	6.3 U	20 U	15 U	20 U	12 U
4-Ethyltoluene	120	16	54	82	47	400	74
Acetone		8	6.3 U	20 U	15 U	22	12 U
Benzene	78.11	1.2	52	100	79	94	42
Benzene, 1,2,4-trimethyl-	120.19	42	93	200	96	730	100
Benzene, 1,3,5-trimethyl-	120.19	8.2	41	48	39	180	48
Bromodichloromethane		0.75 U	6.3 U	5 U	15 U	5 U	12 U
Bromoform		3.0 U	6.3 U	20 U	15 U	20 U	12 U
Carbon disulfide		3.0 U	(6.2)	20 U	15 U	20 U	12 U
Carbon tetrachloride		0.75 U	1.6 U	5 U	3.6 U	5 U	3.0 U
Chlorobenzene	112.56	2.7	61	110	82	80	48
Chloroethane	64.52	2.7	470	960	930	270	250
Chloroform		0.75 U	1.6 U	5 U	3.6 U	5 U	3.0 U
cis-1,2-Dichloroethylene	96.94	0.75 U	31	19	35	8	31

Table 2

TOWN OF ISLIP RESOURCE RECOVERY AGENCY
 SONIA ROAD LANDFILL
 LANDFILL GAS SAMPLING RESULTS
 EPA METHOD TO-14A VOLATILE ORGANIC COMPOUNDS (VOCs)

CONSTITUENT	MW (g/mol)	CLGAS/ Combined Landfill Gas 12/04/2000	CLGAS/ Combined Landfill Gas 02/12/2001	NLGAS/ North Collection System 12/04/2000	NLGAS/ North Collection System 02/08/2001	SLGAS/ South Collection System 12/04/2000	SLGAS/ South Collection System 02/08/2001
cis-1,3-Dichloropropene	0.75 U	1.6 U	5 U	3.6 U	5 U	3.0 U	
Cryofluorane	170.92	0.75 U	40	60	40	33	47
Cyclohexane	84.18	3.0 U	130	240	220	200	110
Dibromochloromethane		3.0 U	6.3 U	20 U	15 U	20 U	12 U
Dichlorodifluoromethane	120.91	0.75 U	180	90	150	62	100
1,2-Dibromoethane		0.75 U	1.6 U	5 U	3.6 U	5 U	3.0 U
Ethanol	46.07	4.6	9.1	26	23	20 U	12 U
Ethene, 1,2-dichloro-, (E)-		12	6.3 U	20 U	15 U	20 U	12 U
Ethylbenzene	106.16	1.6	17	46	28	35	9.4
Freon 113		0.75 U	1.6 U	5 U	3.6 U	5 U	3.0 U
Heptane	100.23	3.0 U	82	140	130	130	62
Hexachlorobutadiene		0.75 U	1.6 U	5 U	3.6 U	5 U	3.0 U
Isopropanol		NA	<20	20 U	<20	20 U	<20
m/p-xylene	106.17	7.9	54	200	83	130	32
m-Dichlorobenzene		0.75 U	1.6 U	5 U	3.6 U	5 U	3.0 U
Methyl bromide		0.75 U	1.6 U	5 U	3.6 U	5 U	3.0 U
Methyl chloride		5.1	1.6 U	5 U	3.6 U	5 U	3.0 U
Methyl ethyl ketone		3.0 U	6.3 U	20 U	15 U	20 U	12 U
Methyl isobutylketone (MIBK)		3.0 U	6.3 U	20 U	15 U	36	12 U
Methylene chloride		1	1.9	5 U	13	5 U	3.0 U
Methyltert-butylether		3.0 U	6.3 U	20 U	15 U	20 U	12 U
n-Hexane	86	3.0 U	430	920	900	330	270
2-Chloroluene		3.0 U	1.6 U	20 U	3.6 U	20 U	3.0 U
1,2-Dichlorobenzene	147	0.75 U	5.1	6.5	7.5	5 U	3.0 U
o-Xylene	106.17	1.6	12	33	24	44	8.6

**TOWN OF ISLIP RESOURCE RECOVERY AGENCY
SONIA ROAD LANDFILL
LANDFILL GAS SAMPLING RESULTS
EPA METHOD TO-14A VOLATILE ORGANIC COMPOUNDS (VOCs)**

Table 2

CONSTITUENT	MW (g/mol)	CLGAS/ Combined Landfill Gas 12/04/2000	CLGAS/ Combined Landfill Gas 02/12/2001	NLGAS/ North Collection System 12/04/2000	NLGAS/ North Collection System 02/08/2001	SLGAS/ South Collection System 12/04/2000	SLGAS/ South Collection System 02/08/2001
1,4-Dichlorobenzene	147	2.6	22	17	32	13	13
Propylene		3.0 U	6.3 U	20 U	15 U	20 U	12 U
Styrene		0.75 U	1.6 U	5 U	5.4	5 U	3.0 U
Tetrachloroethylene		0.75 U	6.6	5 U	9.2	5 U	4.8
Tetrahydrofuran		3.0 U	6.3 U	20 U	15 U	20 U	12 U
Toluene	92.14	22	180	93	250	88	150
trans-1,3-Dichloropropene		0.75 U	1.6 U	5 U	3.6 U	5 U	3.0 U
Trichloroethylene		0.75 U	66	5 U	22	6.1	94
Trichlorofluoromethane		0.75 U	15	5 U	13	5 U	18
Vinyl Acetate		3.0 U	6.3 U	20 U	15 U	20 U	12 U
Vinyl chloride	62.5	0.75 U	82	270	180	97	58
Max MW (g/mol) ¹	170.92	--	--	--	--	--	--
Weighted Avg. MW (g/mol) ¹	82.63	--	--	2,332	3,861	3,045	1,726
TOTAL NMOCS (ppbv)	--	139	2,332	3,861	3,790	3,045	1,726

The maximum and weighted average molecular weights are determined and/or calculated using the sampling data with the highest total NMOCS value (i.e., North Collection System, 12/04/2000).

ppbv: parts per billion by volume
 U: Analyzed for but not detected
 Bold font indicates constituent detected
 () : Less than Reporting Limit
 NA : Not analyzed
 The following qualifier(s) exist: CLP Q: U

ATTACHMENT 3

NMOC CALCULATIONS

**TOWN OF ISLIP RESOURCE RECOVERY AGENCY
SONIA ROAD LANDFILL
LANDFILL GAS CALCULATIONS**

The following calculations will determine the amount of NMOCs the flare would be unable to destroy. This calculated amount must be below the New York State air quality standard for NMOC (VOC), which is 25 tons per year (tpy).

Highest Total NMOC Value: 26,000 ppbv (from Attachment 2, Table 1)
@: 1000 cfm (assumed)

Ideal Gas Equation: $PV = nRT$

$$\begin{aligned} P &= 1 \text{ atm} \\ V &= 0.026 \text{ cf} \\ n &= (P \cdot V) / (R \cdot T) \text{ lbmol} \\ R &= 0.73 \text{ atm-cf/lbmol-R} \\ T &= 520 \text{ R} \end{aligned}$$

$$\begin{aligned} n &= (P \cdot V) / (R \cdot T) \\ &= (1 \text{ atm} \cdot 0.026 \text{ cf}) / (0.73 \text{ atm-cf/lbmol-R} \cdot 520 \text{ R}) \\ n &= 0.000068 \text{ lbmol} \end{aligned}$$

NMOC constituent with the highest molecular weight (MW):

Cryofluorane 170.92 lbmol

* assumes that the constituent with the highest MW is the only constituent (i.e., worst case scenario).

$$\begin{aligned} &= 0.000068 \cdot 170.92 \\ &= 0.01170685 \text{ lb/min} \\ &= \mathbf{6,153 \text{ lb/yr}} \end{aligned}$$

Assume blower operation at 24 hours/day, 7 days/week:

$$\begin{aligned} \text{Blower 1} &= 1250 \text{ cfm} = 7,691 \text{ lb/yr} \\ \text{Blower 2} &= 2270 \text{ cfm} = 13,968 \text{ lb/yr} \\ &= \mathbf{21,659 \text{ lb/yr}} \end{aligned}$$

10.8 tons/year

Assume blower operation at 20 hours/week:

$$\begin{aligned} \text{Blower 1} &= 1250 \text{ cfm} = 913 \text{ lb/yr} \\ \text{Blower 2} &= 2270 \text{ cfm} = 1,658 \text{ lb/yr} \\ &= \mathbf{2,571 \text{ lb/yr}} \end{aligned}$$

1.29 tons/year

Calculation based on the weighted average MW of all constituents:

82.63 lbmol

$$\begin{aligned} &= 0.000068 \cdot 82.63 \\ &= 0.00565972 \text{ lb/min} \\ &= \mathbf{2,975 \text{ lb/yr}} \end{aligned}$$

Assume blower operation at 24 hours/day, 7 days/week:

$$\begin{aligned} \text{Blower 1} &= 1250 \text{ cfm} = 3,718 \text{ lb/yr} \\ \text{Blower 2} &= 2270 \text{ cfm} = 6,753 \text{ lb/yr} \\ &= \mathbf{10,471 \text{ lb/yr}} \end{aligned}$$

5.2 tons/year

Assume blower operation at 20 hours/week:

$$\begin{aligned} \text{Blower 1} &= 1250 \text{ cfm} = 441 \text{ lb/yr} \\ \text{Blower 2} &= 2270 \text{ cfm} = 802 \text{ lb/yr} \\ &= \mathbf{1,243 \text{ lb/yr}} \end{aligned}$$

0.62 tons/year

Conclusion:

The New York State air quality standard for NMOCs (25 tpy) would not be exceeded in either case scenario.

ATTACHMENT 4

LANDFILL GAS MONITORING RESULTS

TABLE 1
 LANDFILL GAS MONITORING RESULTS
 SONIA ROAD LANDFILL
 ISLIP, NEW YORK

Gas Monitoring Wells

Location ID	Time & Date	CH ₄	CO ₂	O ₂	Atmospheric Pressure	Relative Pressure
SONIBLOW	2/5/04 12:31	11.4	13.8	7.0	30.7	-41.50
GM-01	2/5/04 12:34	0.0	0.7	20.2	30.7	0.00
GM-02	2/5/04 12:37	0.0	1.1	20.0	30.6	0.00
GM-03	2/5/04 12:41	0.0	0.1	20.9	30.6	0.00
GM-04	2/5/04 12:45	0.0	0.0	21.1	30.6	0.00
GM-05	2/5/04 12:49	0.0	0.2	20.6	30.6	-0.40
GM-06	2/5/04 12:53	0.0	0.0	21.1	30.6	0.00
GM-07	2/5/04 12:56	0.0	0.0	21.1	30.8	0.00
GM-08	2/5/04 12:59	0.0	0.2	20.8	30.6	0.00
GM-09	2/5/04 13:02	0.0	0.2	20.7	30.6	-0.10
GM-10	2/5/04 13:05	0.0	0.1	21.0	30.6	0.00
GM-11	2/5/04 13:35	0.0	0.3	19.8	30.6	0.00
GM-12	2/5/04 13:38	0.0	0.0	21.0	30.6	0.00
GM-13	2/5/04 13:41	0.0	0.3	20.6	30.6	0.00
GM-14	2/5/04 13:44	0.0	0.3	20.6	30.6	0.00
GM-15	2/5/04 13:47	0.0	0.3	20.3	30.6	0.70
GM-16	2/5/04 13:50	0.0	1.0	19.8	30.6	-0.10
GM-17	2/5/04 13:53	0.0	0.7	20.6	30.6	0.00

Notes:

CH₄, CO₂, and O₂ are reported in percent gas.

Relative well head pressure is reported in inches of water.

Atmospheric pressure is reported in inches of mercury.

Recovery System Status - On

Weather - Partly Cloudy, 35°F

TABLE 1
 LANDFILL GAS MONITORING RESULTS
 SONIA ROAD LANDFILL
 ISLIP, NEW YORK

Gas Monitoring Wells

Location ID	Time & Date	CH ₄	CO ₂	O ₂	Atmospheric Pressure	Relative Pressure
SONIBLOW	1/7/04 11:10	0.0	0.2	19.1	30.4	-2.30
GM-01	1/7/04 11:12	0.0	1.0	17.9	30.4	0.00
GM-02	1/7/04 11:16	0.0	1.9	16.4	30.3	0.00
GM-03	1/7/04 11:21	0.0	0.8	18.4	30.4	0.00
GM-04	1/7/04 11:24	0.0	2.7	15.5	30.3	0.00
GM-05	1/7/04 11:27	14.0	17.0	1.3	30.3	0.10
GM-06	1/7/04 11:31	0.0	4.4	11.4	30.3	0.00
GM-07	1/7/04 11:34	0.0	1.1	17.7	30.4	0.00
GM-08	1/7/04 11:44	0.0	5.4	12.4	30.4	0.00
GM-09	1/7/04 11:47	0.0	12.0	5.9	30.4	0.00
GM-10	1/7/04 11:50	0.0	2.9	13.6	30.4	0.00
GM-11	1/7/04 11:53	0.0	2.1	17.4	30.4	0.00
GM-12	1/7/04 11:56	0.0	2.4	16.6	30.4	0.00
GM-13	1/7/04 11:59	0.0	1.5	18.0	30.4	0.00
GM-14	1/7/04 12:02	0.0	1.8	16.9	30.4	0.00
GM-15	1/7/04 12:05	0.0	2.0	17.3	30.4	0.00
GM-16	1/7/04 12:09	0.0	5.2	13.6	30.4	0.00
GM-17	1/7/04 12:12	0.0	2.5	14.9	30.4	0.00

Notes:

CH₄, CO₂, and O₂ are reported in percent gas.

Relative well head pressure is reported in inches of water.

Atmospheric pressure is reported in inches of mercury.

Recovery System Status - Off

Weather - Sunny, 25°F

TABLE 1
LANDFILL GAS MONITORING RESULTS
SONIA ROAD LANDFILL
ISLIP, NEW YORK

Gas Monitoring Wells

Location ID	Time & Date	CH ₄	CO ₂	O ₂	Atmospheric Pressure	Relative Pressure
SONIBLOW	12/4/03 12:44	0.7	1.1	18.5	30.5	0.00
GM-01	12/4/03 12:46	0.0	1.6	17.4	30.5	0.00
GM-02	12/4/03 12:50	0.0	4.0	14.1	30.5	0.00
GM-03	12/4/03 12:54	0.0	0.6	16.7	30.5	0.00
GM-04	12/4/03 12:57	0.0	2.1	14.5	30.5	0.00
GM-05	12/4/03 13:01	5.6	18.3	0.0	30.5	0.00
GM-06	12/4/03 13:04	0.0	3.6	14.5	30.5	0.00
GM-07	12/4/03 13:08	0.0	0.6	18.7	30.5	0.00
GM-08	12/4/03 13:11	0.0	9.3	8.7	30.5	0.00
GM-09	12/4/03 13:14	0.0	12.1	6.3	30.5	0.00
GM-10	12/4/03 13:17	0.0	3.1	15.5	30.5	0.00
GM-11	12/4/03 13:20	0.0	2.4	16.8	30.5	0.00
GM-12	12/4/03 13:24	0.0	2.8	16.3	30.5	0.00
GM-13	12/4/03 13:28	0.0	6.0	11.9	30.5	0.00
GM-14	12/4/03 13:31	0.0	11.5	6.4	30.5	0.00
GM-15	12/4/03 13:34	0.0	5.5	12.5	30.5	0.00
GM-16	12/4/03 13:37	0.0	6.4	12.1	30.5	0.00
GM-17	12/4/03 13:40	0.0	1.4	17.6	30.5	0.00

Notes:

CH₄, CO₂, and O₂ are reported in percent gas.

Relative well head pressure is reported in inches of water.

Atmospheric pressure is reported in inches of mercury.

Recovery System Status - Off

Weather - Sunny, 35°F

TABLE 1
LANDFILL GAS MONITORING RESULTS
SONIA ROAD LANDFILL
ISLIP, NEW YORK

Gas Monitoring Wells

Location ID	Time & Date	CH ₄	CO ₂	O ₂	Atmospheric Pressure	Relative Pressure
SONIBLOW	11/6/03 10:26	0.0	0.0	20.0	30.0	1.50
GM-01	11/6/03 10:28	0.0	1.1	18.1	30.0	0.00
GM-02	11/6/03 10:32	0.0	5.9	12.4	30.0	0.00
GM-03	11/6/03 10:37	0.0	1.0	17.5	29.9	0.00
GM-04	11/6/03 10:40	0.0	2.6	16.5	29.9	0.00
GM-05	11/6/03 10:44	7.1	17.2	0.9	29.9	0.00
GM-06	11/6/03 10:48	0.0	8.5	6.4	29.9	0.00
GM-07	11/6/03 10:51	0.0	16.6	1.7	29.9	0.00
GM-08	11/6/03 10:55	0.8	17.7	0.0	29.9	0.00
GM-09	11/6/03 10:59	0.2	16.6	0.8	29.9	0.00
GM-10	11/6/03 11:03	0.0	2.8	16.0	29.9	0.00
GM-11	11/6/03 11:07	0.0	2.1	17.7	29.9	0.00
GM-12	11/6/03 11:11	0.0	4.8	14.0	29.9	0.00
GM-13	11/6/03 11:15	0.0	0.5	19.3	29.9	0.00
GM-14	11/6/03 11:19	0.0	7.5	6.5	29.9	0.00
GM-15	11/6/03 11:23	0.0	10.1	6.3	29.9	0.20
GM-16	11/6/03 11:26	0.0	8.6	6.3	29.9	0.00
GM-17	11/6/03 11:29	0.0	1.8	17.6	29.9	0.00

Notes:

CH₄, CO₂, and O₂ are reported in percent gas.

Relative well head pressure is reported in inches of water.

Atmospheric pressure is reported in inches of mercury.

Recovery System Status - Off

Weather - Overcast, 55°F

TABLE 1
 LANDFILL GAS MONITORING RESULTS
 SONIA ROAD LANDFILL
 ISLIP, NEW YORK

Gas Monitoring Wells

Location ID	Time & Date	CH ₄	CO ₂	O ₂	Atmospheric Pressure	Relative Pressure
SONIBLOW	9/4/03 10:38	0.0	1.5	18.9	29.7	0.10
GM-01	9/4/03 10:39	0.0	2.7	16.9	29.7	0.00
GM-02	9/4/03 10:44	0.0	12.6	8.0	29.7	0.00
GM-03	9/4/03 10:48	0.0	2.8	12.9	29.7	0.00
GM-04	9/4/03 10:53	0.0	2.4	15.1	29.6	0.00
GM-05	9/4/03 10:56	0.0	6.8	11.3	29.6	0.00
GM-06	9/4/03 11:01	0.0	2.4	17.1	29.6	0.00
GM-07	9/4/03 11:04	0.0	8.1	10.3	29.6	0.00
GM-08	9/4/03 11:07	0.0	3.3	15.6	29.6	0.00
GM-09	9/4/03 11:10	0.0	2.4	16.4	29.6	0.00
GM-10	9/4/03 11:13	0.0	0.9	18.3	29.5	0.00
GM-11	9/4/03 11:17	0.0	1.9	17.8	29.6	0.00
GM-12	9/4/03 11:22	0.0	1.4	17.9	29.6	0.00
GM-13	9/4/03 11:26	0.0	5.8	11.7	29.6	0.00
GM-14	9/4/03 11:30	0.0	7.2	10.8	29.6	0.00
GM-15	9/4/03 11:33	0.0	3.1	15.9	29.6	0.00
GM-16	9/4/03 11:37	0.0	5.3	12.9	29.6	0.00
GM-17	9/4/03 11:40	0.0	0.9	18.9	29.4	0.00

Notes:

CH₄, CO₂, and O₂ are reported in percent gas.

Relative well head pressure is reported in inches of water.

Atmospheric pressure is reported in inches of mercury.

Recovery System Status - Off

Weather - Overcast, 70°F

TABLE 1
 LANDFILL GAS MONITORING RESULTS
 SONIA ROAD LANDFILL
 ISLIP, NEW YORK

Gas Monitoring Wells

Location ID	Time & Date	CH ₄	CO ₂	O ₂	Atmospheric Pressure	Relative Pressure
SONIBLOW	8/6/03 11:11	7.7	12.8	7.4	29.7	0.00
GM-01	8/6/03 11:13	0.0	0.9	17.2	29.7	0.00
GM-02	8/6/03 11:16	0.0	11.9	2.7	29.7	0.00
GM-03	8/6/03 11:20	0.0	0.7	18.3	29.7	0.00
GM-04	8/6/03 11:25	0.0	0.8	18.1	29.7	0.00
GM-05	8/6/03 11:28	0.0	2.8	16.6	29.7	0.00
GM-06	8/6/03 11:32	0.0	2.7	16.6	29.7	0.80
GM-07	8/6/03 11:35	0.0	3.0	16.8	29.7	0.00
GM-08	8/6/03 11:39	0.0	3.0	15.9	29.7	0.00
GM-09	8/6/03 11:42	0.0	0.9	18.6	29.7	0.00
GM-10	8/6/03 11:45	0.0	0.9	18.7	29.7	0.00
GM-11	8/6/03 11:48	0.0	1.3	18.3	29.7	0.00
GM-12	8/6/03 11:52	0.0	1.2	18.4	29.7	0.00
GM-13	8/6/03 11:56	0.0	5.8	13.8	29.7	0.00
GM-14	8/6/03 12:00	0.0	4.4	14.9	29.6	0.00
GM-15	8/6/03 12:03	0.0	4.2	15.2	29.7	0.00
GM-16	8/6/03 12:06	0.0	4.2	14.9	29.7	0.00
GM-17	8/6/03 12:10	0.0	1.8	18.2	29.7	0.00

Notes:

CH₄, CO₂, and O₂ are reported in percent gas.

Relative well head pressure is reported in inches of water.

Atmospheric pressure is reported in inches of mercury.

Recovery System Status - Off

Weather - Partly Cloudy, 80°F

TABLE 1
 LANDFILL GAS MONITORING RESULTS
 SONIA ROAD LANDFILL
 ISLIP, NEW YORK

Gas Monitoring Wells

Location ID	Time & Date	CH ₄	CO ₂	O ₂	Atmospheric Pressure	Relative Pressure
SONIBLOW	7/7/03 11:26	20.9	18.4	2.2	29.9	0.20
GM-01	7/7/03 11:28	0.0	1.3	17.5	29.9	0.00
GM-02	7/7/03 11:32	0.0	7.4	1.3	29.9	0.00
GM-03	7/7/03 11:36	0.0	1.1	17.6	29.9	0.00
GM-04	7/7/03 11:42	0.0	2.0	17.1	29.9	-0.20
GM-05	7/7/03 11:45	0.0	5.2	12.3	29.9	0.00
GM-06	7/7/03 11:48	0.0	3.9	14.6	29.8	0.00
GM-07	7/7/03 11:51	0.0	4.2	15.0	29.8	0.00
GM-08	7/7/03 12:10	0.0	2.2	16.5	29.8	-0.10
GM-09	7/7/03 12:13	0.0	0.7	18.2	29.7	-0.10
GM-10	7/7/03 12:16	0.0	0.8	18.2	29.7	-0.10
GM-11	7/7/03 12:21	0.0	2.9	15.9	29.7	0.00
GM-12	7/7/03 12:27	0.0	1.7	17.0	29.7	-0.10
GM-13	7/7/03 12:30	0.0	7.3	11.5	29.7	-0.10
GM-14	7/7/03 12:35	0.0	5.4	13.5	29.7	0.00
GM-15	7/7/03 12:39	0.0	3.5	15.2	29.6	0.00
GM-16	7/7/03 12:42	0.0	3.0	14.8	29.7	-0.20
GM-17	7/7/03 12:46	0.0	2.1	17.7	29.7	0.00

Notes:

CH₄, CO₂, and O₂ are reported in percent gas.

Relative well head pressure is reported in inches of water.

Atmospheric pressure is reported in inches of mercury.

Recovery System Status - On

Weather - Partly Cloudy, 85°F

TABLE 1
 LANDFILL GAS MONITORING RESULTS
 SONIA ROAD LANDFILL
 ISLIP, NEW YORK

Gas Monitoring Wells

Location ID	Time & Date	CH ₄	CO ₂	O ₂	Atmospheric Pressure	Relative Pressure
SONIBLOW	6/5/03 11:05	17.2	17.0	2.7	29.7	-36.20
GM-01	6/5/03 11:08	0.0	0.9	17.8	29.7	0.00
GM-02	6/5/03 11:12	0.0	4.3	12.7	29.7	0.00
GM-03	6/5/03 11:16	0.0	0.5	20.2	29.7	-0.20
GM-04	6/5/03 11:21	0.0	5.8	13.2	29.7	0.00
GM-05	6/5/03 11:25	2.6	10.8	4.9	29.7	-0.50
GM-06	6/5/03 11:29	0.0	2.8	17.0	29.7	-0.20
GM-07	6/5/03 11:32	0.0	7.1	3.1	29.7	-0.30
GM-08	6/5/03 11:36	0.0	2.5	17.0	29.7	-0.20
GM-09	6/5/03 11:39	0.0	4.3	14.4	29.7	-0.20
GM-10	6/5/03 11:43	0.0	1.0	19.1	29.7	0.00
GM-11	6/5/03 11:47	0.0	1.9	18.1	29.7	0.00
GM-12	6/5/03 11:52	0.0	1.1	18.7	29.7	-0.10
GM-13	6/5/03 11:56	0.0	6.2	10.8	29.7	-0.10
GM-14	6/5/03 12:00	0.0	2.5	14.2	29.7	0.00
GM-15	6/5/03 12:04	0.0	4.3	14.7	29.7	0.00
GM-16	6/5/03 12:08	0.0	1.9	16.6	29.7	-0.20
GM-17	6/5/03 12:13	0.0	0.8	19.6	29.7	-0.10

Notes:

CH₄, CO₂, and O₂ are reported in percent gas.
 Relative well head pressure is reported in inches of water.
 Atmospheric pressure is reported in inches of mercury.
 Recovery System Status - On
 Weather - Overcast, 68°F

TABLE 1
LANDFILL GAS MONITORING RESULTS
SONIA ROAD LANDFILL
ISLIP, NEW YORK

Gas Monitoring Wells

Location ID	Time & Date	CH ₄	CO ₂	O ₂	Atmospheric Pressure	Relative Pressure
SONIBLOW	4/3/03 11:48	13.6	15.6	3.8	30.0	-36.50
GM-01	4/3/03 11:51	0.0	1.1	18.4	30.0	0.00
GM-02	4/3/03 11:55	0.0	1.4	17.7	30.0	-0.20
GM-03	4/3/03 11:59	0.0	0.3	20.2	30.0	-0.30
GM-04	4/3/03 12:03	0.0	0.7	20.2	29.9	0.00
GM-05	4/3/03 12:06	0.0	4.1	11.5	29.9	-0.40
GM-06	4/3/03 12:10	0.0	1.4	18.6	29.9	-0.20
GM-07	4/3/03 12:14	0.0	1.6	17.9	29.9	0.00
GM-08	4/3/03 12:18	0.0	1.5	17.9	29.9	-0.10
GM-09	4/3/03 12:22	0.0	4.5	13.7	29.9	-0.10
GM-10	4/3/03 12:25	0.0	0.9	19.7	29.9	0.00
GM-11	4/3/03 12:29	0.0	1.2	18.4	29.9	0.00
GM-12	4/3/03 12:34	0.0	0.7	19.7	29.9	-0.10
GM-13	4/3/03 12:38	0.0	1.5	17.8	29.9	0.00
GM-14	4/3/03 12:43	0.0	1.4	18.0	29.9	0.00
GM-15	4/3/03 12:47	0.0	0.9	18.8	29.9	0.00
GM-16	4/3/03 12:50	0.0	1.3	17.4	29.9	-0.10
GM-17	4/3/03 12:54	0.0	0.7	19.8	29.9	-0.10

Notes:

CH₄, CO₂, and O₂ are reported in percent gas.
 Relative well head pressure is reported in inches of water.
 Atmospheric pressure is reported in inches of mercury.
 Recovery System Status - On
 Weather - Partly Cloudy, 50°F

TABLE 1
 LANDFILL GAS MONITORING RESULTS
 SONIA ROAD LANDFILL
 ISLIP, NEW YORK

Gas Monitoring Wells

Location ID	Date	CH ₄	CO ₂	O ₂	Atmospheric Pressure	Relative Pressure
SONIBLOW	03/04/03	14.6	16.5	3.8	30.2	-38.8
GM-01	03/04/03	0.0	2.5	19.6	30.1	-0.2
GM-02	03/04/03	0.0	0.8	20.1	29.9	-0.1
GM-03	03/04/03	0.0	0.5	20.7	30.0	-0.2
GM-04	03/04/03	0.0	0.3	20.6	30.2	0.0
GM-05	03/04/03	0.0	3.0	13.4	30.2	-0.3
GM-06	03/04/03	0.0	3.2	18.7	30.2	-0.1
GM-07	03/04/03	0.0	1.9	16.8	30.2	-0.2
GM-08	03/04/03	0.0	2.8	16.6	30.2	-0.2
GM-09	03/04/03	0.0	0.9	20.5	30.2	0.0
GM-10	03/04/03	0.0	0.4	20.6	30.2	0.0
GM-11	03/04/03	0.0	0.5	18.8	30.2	0.0
GM-12	03/04/03	0.0	1.0	20.4	30.2	0.0
GM-13	03/04/03	0.0	0.6	19.5	30.2	0.0
GM-14	03/04/03	0.0	0.9	18.9	30.2	-0.1
GM-15	03/04/03	0.0	0.8	19.7	30.2	0.0
GM-16	03/04/03	0.0	1.0	18.2	30.2	-0.2
GM-17	03/04/03	0.0	1.1	20.3	30.2	-0.1

Notes:

CH₄, CO₂, and O₂ are reported in percent gas.

Relative well head pressure is reported in inches of water.

Atmospheric pressure is reported in inches of mercury.

Recovery System Status - On

Weather - Sunny, 46°F

TABLE 1
 LANDFILL GAS MONITORING RESULTS
 SONIA ROAD LANDFILL
 ISLIP, NEW YORK

Gas Monitoring Wells							
Location ID	Time	Date	CH ₄	CO ₂	O ₂	Atmospheric Pressure	Relative Well Head Pressure
SONIBLOW	12:04:43	01/07/03	00.0	00.5	19.9	+029.9	-033.20
0000GM01	12:11:10	01/07/03	00.0	01.1	17.6	+029.9	+000.00
0000GM02	12:15:02	01/07/03	00.0	02.3	17.0	+029.9	+000.00
0000GM03	12:18:42	01/07/03	00.0	00.6	19.9	+029.9	-000.10
0000GM04	12:22:10	01/07/03	00.0	02.1	18.4	+029.9	+000.00
0000GM05	12:25:41	01/07/03	00.0	07.2	10.3	+029.9	+000.00
0000GM06	12:28:47	01/07/03	00.0	03.1	16.9	+029.9	-000.10
0000GM07	12:32:03	01/07/03	00.0	04.4	13.2	+029.9	-000.20
0000GM08	12:35:37	01/07/03	00.0	08.6	08.4	+029.9	-000.10
0000GM09	12:39:04	01/07/03	00.0	12.6	06.2	+029.9	-000.10
0000GM10	12:43:12	01/07/03	00.0	01.1	19.5	+029.9	-000.10
0000GM11	12:47:21	01/07/03	00.0	03.1	16.7	+029.9	-000.10
0000GM12	12:52:42	01/07/03	00.0	00.7	20.0	+029.9	+000.00
0000GM13	12:58:04	01/07/03	00.0	00.9	19.7	+029.9	+000.00
0000GM14	13:02:14	01/07/03	00.0	01.1	18.8	+029.9	+000.00
0000GM15	13:06:25	01/07/03	00.0	01.9	17.8	+029.9	+000.00
0000GM16	13:10:38	01/07/03	00.0	03.9	15.9	+029.9	-000.20
0000GM17	13:14:55	01/07/03	00.0	01.1	19.5	+029.9	+000.00

Notes:

CH₄, CO₂, and O₂ are reported in percent gas.
 Relative well head pressure is reported in inches of water.
 Atmospheric pressure is reported in inches of mercury.
 Recovery system status - On
 Weather - Overcast, 29°F

TABLE 1
LANDFILL GAS MONITORING RESULTS
SONIA ROAD LANDFILL
ISLIP, NEW YORK

Gas Monitoring Wells

Location ID	Date	Time	CH4	CO2	O2	Relative Well Head Pressure	Atmospheric Pressure
GM-01	08/10/01	06:49:53	00.0	02.7	16.5	+000.00	+029.8
GM-02	08/10/01	06:54:25	00.0	07.3	12.5	-000.10	+029.8
GM-03	08/10/01	06:58:57	00.0	00.2	20.6	+000.00	+029.8
GM-04	08/10/01	07:03:09	00.0	00.1	20.7	+000.00	+029.7
GM-05	08/10/01	07:07:24	00.0	00.8	19.8	-000.40	+029.7
GM-06	08/10/01	07:11:31	00.0	01.6	19.1	-000.10	+029.7
GM-07	08/10/01	07:16:15	00.0	01.1	19.6	+000.00	+029.7
GM-08	08/10/01	07:21:22	00.0	00.6	20.0	+000.00	+029.7
GM-09	08/10/01	07:25:28	00.0	01.3	19.4	+000.00	+029.7
GM-10	08/10/01	07:29:17	00.0	00.3	20.3	+000.00	+029.7
GM-11	08/10/01	07:33:16	00.0	01.1	19.6	+000.00	+029.7
GM-12	08/10/01	07:38:12	00.0	00.2	20.3	+000.00	+029.7
GM-13	08/10/01	07:42:05	00.0	06.6	13.7	+000.00	+029.7
GM-14	08/10/01	07:46:08	00.0	03.1	17.4	+000.00	+029.7
GM-15	08/10/01	07:50:35	00.0	01.6	19.2	+000.00	+029.7
GM-16	08/10/01	07:54:20	00.0	01.7	19.1	+000.00	+029.7
GM-17	08/10/01	07:59:12	00.0	00.2	20.0	+000.00	+029.7
BLOWER	08/10/01	06:46:58	02.7	11.0	10.3	-027.90	+029.8

Notes:

CH₄, CO₂, and O₂ are reported in percent gas.

Relative well head pressure is reported in inches of water

Atmosphere pressure is reported in inches of mercury.

Recovery system status : On

Weather : Hazy, 85°F

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TABLE 1
 LANDFILL GAS MONITORING RESULTS
 SONIA ROAD LANDFILL
 ISLIP, NEW YORK

Gas Monitoring Wells

Location ID	Date	Time	CH4	CO2	O2	Relative Well Head Pressure	Atmospheric Pressure
GM-01	07/24/01	09:04:45	00.0	02.0	16.9	+000.00	+029.9
GM-02	07/24/01	09:09:44	00.0	04.9	13.8	+000.00	+029.8
GM-03	07/24/01	09:14:23	00.0	00.2	20.4	+000.00	+029.8
GM-04	07/24/01	09:19:05	00.0	00.0	20.4	+000.00	+029.8
GM-05	07/24/01	09:23:47	00.0	01.7	18.7	-000.20	+029.8
GM-06	07/24/01	09:27:59	00.0	01.7	18.7	-000.10	+029.8
GM-07	07/24/01	09:32:46	00.0	01.9	18.7	-000.10	+029.8
GM-08	07/24/01	09:37:48	00.0	00.3	20.0	-000.10	+029.8
GM-09	07/24/01	09:41:49	00.0	00.9	19.5	+000.00	+029.7
GM-10	07/24/01	09:45:47	00.0	00.2	20.3	+000.00	+029.7
GM-11	07/24/01	09:49:39	00.0	01.1	19.1	+000.00	+029.7
GM-12	07/24/01	09:54:42	00.0	00.2	20.0	+000.00	+029.7
GM-13	07/24/01	09:58:38	00.0	05.7	14.3	+000.00	+029.7
GM-14	07/24/01	10:03:01	00.0	04.0	16.1	+000.00	+029.7
GM-15	07/24/01	10:07:48	00.0	00.2	20.2	+000.00	+029.7
GM-16	07/24/01	10:11:16	00.0	01.4	18.7	-000.10	+029.7
GM-17	07/24/01	10:15:09	00.0	00.3	19.7	+000.00	+029.7
BLOWER	07/24/01	08:59:01	02.7	11.6	08.5	-021.50	+029.9

Notes:

CH₄, CO₂, and O₂ are reported in percent gas.

Relative well head pressure is reported in inches of water

Atmosphere pressure is reported in inches of mercury

Recovery system status - On

Weather - Overcast, 85°F

TABLE 1
 LANDFILL GAS MONITORING RESULTS
 SONIA ROAD LANDFILL
 ISLIP, NEW YORK

Gas Monitoring Wells

Location ID	Date	Time	CH ₄	CO ₂	O ₂	Relative Well Head Pressure	Atmospheric Pressure
GM-01	07/12/01	09:29:51	00.0	01.7	16.8	+000.00	+029.7
GM-02	07/12/01	09:34:48	00.0	05.1	13.1	+000.00	+029.7
GM-03	07/12/01	09:40:26	00.0	00.2	20.3	+000.00	+029.6
GM-04	07/12/01	09:45:21	00.0	00.0	20.5	+000.00	+029.6
GM-05	07/12/01	09:49:27	00.0	01.5	18.9	-000.30	+029.6
GM-06	07/12/01	09:53:43	00.0	02.1	18.5	-000.10	+029.6
GM-07	07/12/01	09:57:26	00.0	00.2	20.4	-000.10	+029.6
GM-08	07/12/01	10:02:12	00.0	00.3	19.9	+000.00	+029.6
GM-09	07/12/01	10:06:06	00.0	01.0	19.0	-000.10	+029.6
GM-10	07/12/01	10:09:46	00.0	00.2	20.3	+000.00	+029.6
GM-11	07/12/01	10:14:35	00.0	01.1	19.2	+000.00	+029.6
GM-12	07/12/01	10:20:35	00.0	00.3	19.8	+000.00	+029.6
GM-13	07/12/01	09:04:47	00.0	06.0	14.3	-000.10	+029.7
GM-14	07/12/01	09:08:54	00.0	04.6	16.1	+000.00	+029.7
GM-15	07/12/01	09:13:05	00.0	04.5	16.3	+001.40	+029.7
GM-16	07/12/01	09:16:21	00.0	02.2	17.4	-000.10	+029.7
GM-17	07/12/01	09:20:44	00.0	00.8	19.6	+000.00	+029.7
BLOWER	07/12/01	09:26:59	02.8	12.6	07.6	-021.70	+029.7

Notes:

CH₄, CO₂, and O₂ are reported in percent gas.

Relative well head pressure is reported in inches of water.

Atmosphere pressure is reported in inches of mercury.

Recovery system status - On

Weather - Partly Cloudy, 80°F

TABLE 1
LANDFILL GAS MONITORING RESULTS
SONIA ROAD LANDFILL
ISLIP, NEW YORK

Gas Monitoring Wells

Location ID	Date	Time	CH4	CO2	O2	Relative Well Head Pressure	Atmospheric Pressure
GM-01	06/28/01	08:44:14	00.0	01.0	17.2	+000.00	+030.0
GM-02	06/28/01	08:49:05	00.0	04.4	15.0	+000.00	+030.0
GM-03	06/28/01	08:53:34	00.0	00.2	18.5	+000.00	+030.0
GM-04	06/28/01	08:58:33	00.0	00.2	17.0	+000.00	+030.0
GM-05	06/28/01	09:03:34	00.0	09.8	05.7	+000.00	+029.9
GM-06	06/28/01	09:07:48	00.0	02.9	14.0	+000.00	+029.9
GM-07	06/28/01	09:12:51	01.0	13.8	00.0	-000.10	+029.9
GM-08	06/28/01	09:17:52	00.0	02.1	15.4	+000.00	+029.9
GM-09	06/28/01	09:23:28	00.0	01.5	17.1	+000.00	+029.9
GM-10	06/28/01	09:28:43	00.0	00.7	19.3	+000.00	+029.9
GM-11	06/28/01	09:34:40	00.0	01.1	18.9	+000.00	+029.9
GM-12	06/28/01	09:39:53	00.0	01.1	16.8	+000.00	+029.9
GM-13	06/28/01	09:44:57	00.0	04.7	10.3	+000.00	+029.9
GM-14	06/28/01	09:49:34	00.1	05.7	10.3	+000.00	+029.9
GM-15	06/28/01	09:54:28	00.1	01.6	16.8	+000.00	+029.9
GM-16	06/28/01	09:58:45	00.1	02.2	16.0	+000.00	+029.9
GM-17	06/28/01	10:03:36	00.1	01.0	18.8	+000.00	+029.9
BLOWER	06/28/01	08:41:35	02.6	15.7	01.0	+000.00	+030.1

Notes:

CH₄, CO₂, and O₂ are reported in percent gas
 Relative well head pressure is reported in inches of water
 Atmospheric pressure is reported in inches of mercury
 Recovery system status - On
 Weather - Sunny, 90-95°F

TABLE 1
LANDFILL GAS MONITORING RESULTS
SONIA ROAD LANDFILL
ISLIP, NEW YORK

Gas Monitoring Wells

Location ID	Date	Time	CH4	CO2	O2	Relative Well Head Pressure	Atmospheric Pressure
GM-01	06/12/01	10:20:22	00.0	00.9	18.0	+000.00	+029.7
GM-02	06/12/01	10:24:39	00.0	03.1	17.2	.000.10	+029.7
GM-03	06/12/01	10:29:23	00.0	00.1	20.5	+000.00	+029.7
GM-04	06/12/01	10:33:35	00.0	00.1	20.5	+000.00	+029.7
GM-05	06/12/01	10:38:11	00.0	01.5	18.8	.000.40	+029.7
GM-06	06/12/01	10:42:05	00.0	01.7	18.9	.000.20	+029.7
GM-07	06/12/01	10:45:48	00.0	01.8	18.8	+000.80	+029.7
GM-08	06/12/01	10:50:11	00.0	00.2	20.0	.000.20	+029.7
GM-09	06/12/01	10:55:42	00.0	00.3	19.7	.000.20	+029.7
GM-10	06/12/01	10:59:21	00.0	00.1	20.3	+000.00	+029.7
GM-11	06/12/01	11:02:56	00.0	00.7	19.7	+000.00	+029.6
GM-12	06/12/01	11:09:07	00.0	00.2	20.3	+000.00	+029.6
GM-13	06/12/01	11:13:29	00.0	03.0	17.0	+000.00	+029.6
GM-14	06/12/01	11:17:04	00.0	02.0	18.1	+000.00	+029.6
GM-15	06/12/01	11:21:19	00.0	00.8	19.6	+000.00	+029.6
GM-16	06/12/01	11:24:44	00.0	01.4	18.8	.000.10	+029.6
GM-17	06/12/01	11:28:55	00.0	00.7	19.8	+000.00	+029.6
BLOWER	06/12/01	10:17:56	01.7	10.4	09.1	.023.80	+029.7

Notes:

CH₄, CO₂, and O₂ are reported in percent gas.
Relative well head pressure is reported in inches of water.
Atmosphere pressure is reported in inches of mercury
Recovery system status - On
Weather - Sunny, 75-80°F

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TABLE 1
 LANDFILL GAS MONITORING RESULTS
 SONIA ROAD LANDFILL
 ISLIP, NEW YORK

Gas Monitoring Wells

Location ID	Date	Time	CH4	CO2	O2	Relative Well Head Pressure	Atmospheric Pressure
GM-01	05/30/01	10:36:58	00.0	00.8	19.1	+000.00	+029.9
GM-02	05/30/01	10:43:03	00.0	02.1	16.9	-000.10	+029.9
GM-03	05/30/01	10:49:23	00.0	00.1	20.9	-000.10	+029.9
GM-04	05/30/01	10:54:27	00.0	00.0	21.2	+000.00	+029.9
GM-05	05/30/01	10:58:48	00.0	00.7	20.1	-000.30	+029.9
GM-06	05/30/01	11:03:01	00.0	01.8	18.4	-000.10	+029.9
GM-07	05/30/01	11:07:35	00.0	02.1	18.8	-000.10	+029.8
GM-08	05/30/01	11:12:58	00.0	00.6	20.6	-000.10	+029.9
GM-09	05/30/01	11:17:51	00.0	00.6	20.4	-000.20	+029.9
GM-10	05/30/01	11:21:59	00.0	00.2	20.7	-000.10	+029.9
GM-11	05/30/01	11:26:34	00.0	00.7	20.2	+000.00	+029.8
GM-12	05/30/01	11:34:07	00.0	00.3	20.6	+000.00	+029.8
GM-13	05/30/01	11:38:45	00.0	02.4	18.3	000.10	+029.8
GM-14	05/30/01	11:43:12	00.0	01.9	19.0	+000.00	+029.8
GM-15	05/30/01	11:47:48	00.0	00.7	20.2	+000.00	+029.8
GM-16	05/30/01	11:52:03	00.0	01.3	19.3	-000.20	+029.8
GM-17	05/30/01	11:57:50	00.0	00.7	20.3	+000.00	+029.8
BLOWER	05/30/01	10:34:47	02.7	10.6	09.2	-025.10	+029.9

Notes:

CH₄, CO₂, and O₂ are reported in percent gas
 Relative well head pressure is reported in inches of water.
 Atmosphere pressure is reported in inches of mercury.
 Recovery system status - On
 Weather - Partly Cloudy, 62°F

**TABLE 1
LANDFILL GAS MONITORING RESULTS
SONIA ROAD LANDFILL
ISLIP, NEW YORK**

Gas Monitoring Wells

Location ID	Date	Time	CH4	CO2	O2	Relative Well Head Pressure	Atmospheric Pressure
GM-01	05/15/01	10:45:52	000	007	18.8	+000.00	+029.8
GM-02	05/15/01	10:50:11	000	027	07.4	+000.00	+029.8
GM-03	05/15/01	10:54:17	000	002	20.7	+000.00	+029.7
GM-04	05/15/01	10:58:47	000	000	20.8	+000.00	+029.7
GM-05	05/15/01	11:03:07	000	044	16.3	-000.20	+029.7
GM-06	05/15/01	11:06:44	000	026	19.1	+000.00	+029.7
GM-07	05/15/01	11:11:12	000	101	12.9	-000.10	+029.7
GM-08	05/15/01	11:16:47	032	073	13.6	-000.10	+029.7
GM-09	05/15/01	11:21:01	013	061	14.9	-000.10	+029.7
GM-10	05/15/01	11:25:04	000	003	20.5	+000.00	+029.7
GM-11	05/15/01	11:29:20	000	010	16.8	+000.00	+029.7
GM-12	05/15/01	11:34:41	000	003	20.5	+000.00	+029.6
GM-13	05/15/01	11:38:26	000	025	18.4	+000.00	+029.7
GM-14	05/15/01	11:41:55	000	024	19.0	-000.10	+029.7
GM-15	05/15/01	11:45:16	000	028	17.7	+000.00	+029.7
GM-16	05/15/01	11:49:02	002	051	08.1	+000.00	+029.7
GM-17	05/15/01	11:53:06	000	009	20.0	+000.00	+029.7
BLOWER	05/15/01	10:42:54	05.9	14.8	05.5	-021.00	+029.8

Notes:

CH₄, CO₂, and O₂ are reported in percent gas.
 Relative well head pressure is reported in inches of water
 Atmosphere pressure is reported in inches of mercury.
 Recovery system status - On
 Weather - Sunny, 65°F. Wind NW ~ 15 mph

**TABLE 1
LANDFILL GAS MONITORING RESULTS
SONIA ROAD LANDFILL
ISLIP, NEW YORK**

Gas Monitoring Wells

Location ID	Date	Time	CH ₄	CO ₂	O ₂	Relative Well Head Pressure	Atmospheric Pressure
GM-01	04/27/01	11:50:18	00.0	00.1	19.6	+000.00	+030.0
GM-02	04/27/01	11:55:52	00.0	01.1	17.0	+000.00	+029.9
GM-03	04/27/01	11:59:55	00.0	00.3	15.4	+000.00	+029.9
GM-04	04/27/01	12:05:50	00.0	00.2	13.0	+000.00	+029.9
GM-05	04/27/01	12:09:19	02.6	15.5	00.0	+000.10	+029.9
GM-06	04/27/01	12:13:34	00.4	11.5	01.4	+000.00	+029.9
GM-07	04/27/01	12:17:14	05.8	19.9	00.0	+000.00	+029.9
GM-08	04/27/01	12:22:11	00.8	11.3	03.7	+000.00	+029.8
GM-09	04/27/01	12:27:57	00.0	05.4	07.2	+000.00	+029.8
GM-10	04/27/01	12:32:00	00.0	00.9	16.3	+000.00	+029.8
GM-11	04/27/01	12:36:56	00.0	00.3	20.1	+000.00	+029.8
GM-12	04/27/01	12:41:54	00.0	04.5	08.8	+000.00	+029.8
GM-13	04/27/01	12:46:11	00.0	07.2	05.7	+000.00	+029.8
GM-14	04/27/01	12:50:09	00.0	06.0	05.0	+000.00	+029.8
GM-15	04/27/01	12:54:04	00.0	01.0	14.0	+000.00	+029.8
GM-16	04/27/01	12:57:44	00.0	01.7	07.3	+000.00	+029.8
GM-17	04/27/01	13:02:16	00.0	00.2	19.7	+000.00	+029.8
BLOWER	04/27/01	13:08:15	03.4	17.4	00.0	+000.00	+029.8

Notes:

CH₄, CO₂, and O₂ are reported in percent gas
 Relative well head pressure is reported in inches of water
 Atmospheric pressure is reported in inches of mercury
 Recovery system status : Off
 Weather : Sunny, 60-65°F

**TABLE 1
LANDFILL GAS MONITORING RESULTS
SONIA ROAD LANDFILL
ISLIP, NEW YORK**

Gas Monitoring Wells

Location ID	Date	Time	CH4	CO2	O2	Relative Well Head Pressure	Atmospheric Pressure
GM-01	04/10/01	11:23:33	00.0	00.2	20.4	+000.20	+030.0
GM-02	04/10/01	11:27:40	00.0	00.2	20.2	-000.20	+030.0
GM-03	04/10/01	11:32:13	00.0	00.1	21.0	+000.00	+030.0
GM-04	04/10/01	11:37:12	00.0	00.0	21.1	+000.00	+030.0
GM-05	04/10/01	11:40:41	00.0	00.0	20.9	-001.00	+030.0
GM-06	04/10/01	11:44:16	00.0	00.0	21.0	-000.50	+030.0
GM-07	04/10/01	11:48:03	00.0	00.2	20.7	-000.50	+030.0
GM-08	04/10/01	11:53:48	00.0	00.0	20.9	-000.40	+030.0
GM-09	04/10/01	12:00:15	00.0	00.0	20.9	-000.40	+030.0
GM-10	04/10/01	12:04:49	00.0	03.1	20.9	-000.20	+030.0
GM-11	04/10/01	12:09:12	00.0	00.0	20.9	+000.00	+030.0
GM-12	04/10/01	12:14:26	00.0	00.0	21.0	-000.40	+029.9
GM-13	04/10/01	12:18:38	00.0	00.1	20.8	-000.30	+029.9
GM-14	04/10/01	12:22:27	00.0	00.2	20.8	+000.00	+030.0
GM-15	04/10/01	12:26:25	00.0	00.1	20.9	+000.00	+030.0
GM-16	04/10/01	12:30:07	00.0	00.2	20.7	-000.40	+030.0
GM-17	04/10/01	12:35:06	00.0	00.1	20.9	-000.20	+030.0
BLOWER	04/10/01	11:21:06	00.0	06.3	13.4	-063.90	+030.0

Notes:

CH₄, CO₂, and O₂ are reported in percent gas.
 Relative well head pressure is reported in inches of water.
 Atmospheric pressure is reported in inches of mercury.
 Recovery system status . . on
 Weather . Partly Cloudy, 40-45°F

**TABLE 2
LANDFILL GAS MONITORING RESULTS
SONIA ROAD LANDFILL
ISLIP, NEW YORK**

Gas Monitoring Wells

Location ID	Date	Time	CH4	CO2	O2	Relative Well Head Pressure	Atmospheric Pressure
GM-01	03/22/01	12:10:29	00.0	00.6	20.2	+000.00	+029.4
GM-02	03/22/01	12:16:39	00.0	00.2	20.7	-000.30	+029.4
GM-03	03/22/01	12:21:39	00.0	00.0	21.1	-000.20	+029.4
GM-04	03/22/01	12:26:15	00.0	00.1	21.1	+000.00	+029.4
GM-05	03/22/01	12:30:17	00.0	00.0	21.1	-000.90	+029.4
GM-06	03/22/01	12:33:52	00.0	00.0	21.1	-000.40	+029.4
GM-07	03/22/01	12:38:03	00.0	00.3	20.9	-000.50	+029.4
GM-08	03/22/01	12:43:06	00.0	00.1	21.0	-000.40	+029.4
GM-09	03/22/01	12:48:23	00.0	04.7	21.0	-000.40	+029.4
GM-10	03/22/01	12:52:03	00.0	00.0	20.9	-000.10	+029.5
GM-11	03/22/01	12:56:20	00.0	00.1	20.9	+000.00	+029.5
GM-12	03/22/01	13:01:51	00.0	00.0	21.0	-000.30	+029.5
GM-13	03/22/01	13:05:46	00.0	00.0	21.0	-000.20	+029.5
GM-14	03/22/01	13:11:14	00.0	00.1	20.9	+000.00	+029.5
GM-15	03/22/01	13:14:54	00.0	00.1	21.0	+000.00	+029.5
GM-16	03/22/01	13:19:43	00.0	00.2	20.6	-000.30	+029.5
GM-17	03/22/01	13:23:55	00.0	00.1	20.8	-000.20	+029.5
BLOWER	03/22/01	13:29:58	00.2	06.2	13.7	-064.70	+029.5

Notes:

CH₄, CO₂, and O₂ are reported in percent gas.
 Relative well head pressure is reported in inches of water.
 Atmosphere pressure is reported in inches of mercury.
 Recovery system status - on
 Weather - Mist, 40-45°F

TABLE 1
LANDFILL GAS MONITORING RESULTS
SONIA ROAD LANDFILL
ISLIP, NEW YORK

Gas Monitoring Wells

Location ID	Date	Time	CH4	CO2	O2	Relative Well Head Pressure	Atmospheric Pressure
GM-01	03/12/01	16:00:27	00.0	00.1	20.7	+000.00	+030.3
GM-02	03/12/01	15:56:13	00.0	00.1	20.7	-000.20	+030.3
GM-03	03/12/01	15:53:06	00.0	00.0	20.9	+000.00	+030.3
GM-04	03/12/01	15:49:43	00.0	00.0	20.9	+000.10	+030.3
GM-05	03/12/01	15:46:59	00.0	00.1	21.0	-000.60	+030.3
GM-06	03/12/01	15:44:14	00.0	00.2	20.9	-000.30	+030.3
GM-07	03/12/01	15:41:18	00.0	00.2	20.6	-000.30	+030.3
GM-08	03/12/01	15:38:13	00.0	00.1	20.9	-000.20	+030.3
GM-09	03/12/01	15:35:26	00.0	00.1	20.9	-000.20	+030.3
GM-10	03/12/01	15:33:08	00.0	00.0	21.1	-000.10	+030.2
GM-11	03/12/01	15:30:57	00.0	00.0	21.1	+000.00	+030.3
GM-12	03/12/01	15:28:13	00.0	00.0	21.0	+000.00	+030.2
GM-13	03/12/01	15:26:00	00.0	00.2	20.7	-000.20	+030.3
GM-14	03/12/01	15:23:18	00.0	00.2	20.7	-000.10	+030.3
GM-15	03/12/01	15:20:01	00.0	00.1	20.9	+000.00	+030.3
GM-16	03/12/01	15:16:40	00.0	00.1	20.5	-000.30	+030.3
GM-17	03/12/01	15:12:08	00.0	00.1	20.9	-000.20	+030.3
BLOWER	03/12/01	16:02:41	00.2	06.6	11.8	-024.80	+030.3

Notes:

CH₄, CO₂, and O₂ are reported in percent gas.
 Relative well head pressure is reported in inches of water.
 Atmosphere pressure is reported in inches of mercury.
 Recovery system status - on
 Weather - Sun, 40-45°F

TABLE 1
 LANDFILL GAS MONITORING RESULTS
 SONIA ROAD LANDFILL
 ISLIP, NEW YORK

Gas Monitoring Wells

Location ID	Date	Time	CH4	CO2	O2	Relative Well Head Pressure	Atmospheric Pressure
GM-01	02/07/01	14:41:37	00.0	00.0	22.8	+000.00	+030.3
GM-02	02/07/01	14:44:35	00.0	00.0	22.8	-000.30	+030.3
GM-03	02/07/01	14:47:13	00.0	00.0	22.9	-000.20	+030.3
GM-04	02/07/01	14:49:57	00.0	00.0	22.9	+000.00	+030.3
GM-05	02/07/01	14:52:48	00.0	00.0	22.8	-000.70	+030.3
GM-06	02/07/01	14:55:01	00.0	00.0	22.7	000.20	+030.2
GM-07	02/07/01	14:57:37	00.0	00.2	22.4	-000.30	+030.2
GM-08	02/07/01	15:00:54	00.0	00.0	22.7	-000.10	+030.2
GM-09	02/07/01	15:04:53	00.0	00.0	22.7	-000.20	+030.3
GM-10	02/07/01	15:07:39	00.0	00.0	22.8	+000.00	+030.3
GM-11	02/07/01	15:11:31	00.0	00.0	22.7	+000.00	+030.3
GM-12	02/07/01	15:14:34	00.0	00.0	22.7	-000.10	+030.3
GM-13	02/07/01	15:17:05	00.0	00.0	22.5	+000.00	+030.3
GM-14	02/07/01	15:19:28	00.0	00.1	22.5	+000.00	+030.3
GM-15	02/07/01	15:22:25	00.0	00.0	22.7	+000.00	+030.3
GM-16	02/07/01	15:25:08	00.0	00.2	22.5	-000.20	+030.3
GM-17	02/07/01	15:27:47	00.0	00.0	22.8	-000.20	+030.3
BLOWER	02/07/01	14:39:26	00.0	00.0	22.6	-022.40	+030.3

Notes:

CH₄, CO₂, and O₂ are reported in percent gas.

Relative well head pressure is reported in inches of water.

Atmosphere pressure is reported in inches of mercury.

Recovery system status - on

Weather - Sun, 40-42°F

TABLE 1
 LANDFILL GAS MONITORING RESULTS
 SONIA ROAD LANDFILL
 ISLIP, NEW YORK

Gas Monitoring Wells

Location ID	Date	Time	CH4	CO2	O2	Relative Well Head Pressure	Atmospheric Pressure
GM-01	01/30/01	08:21:24	000	000	22.4	+000.00	+029.9
GM-02	01/30/01	08:24:37	000	000	22.2	-000.10	+029.9
GM-03	01/30/01	08:27:35	000	000	22.2	+000.00	+029.9
GM-04	01/30/01	08:30:53	000	000	22.2	+000.00	+029.9
GM-05	01/30/01	08:33:27	000	000	22.1	-000.20	+029.9
GM-06	01/30/01	08:35:54	000	000	22.0	-000.20	+029.9
GM-07	01/30/01	08:38:33	000	00.2	21.8	-000.10	+029.9
GM-08	01/30/01	08:42:22	000	00.1	21.8	+000.00	+029.9
GM-09	01/30/01	08:45:14	000	00.1	21.9	+000.00	+029.9
GM-10	01/30/01	08:48:03	000	000	22.0	+000.00	+029.9
GM-11	01/30/01	08:52:00	000	00.1	22.0	+000.00	+029.9
GM-12	01/30/01	08:54:01	000	00.1	22.1	+000.00	+029.9
GM-13	01/30/01	08:57:29	000	00.1	22.2	+000.00	+029.9
GM-14	01/30/01	09:00:22	000	00.2	22.1	+000.00	+030.0
GM-15	01/30/01	09:03:16	000	00.1	22.2	+000.00	+030.0
GM-16	01/30/01	09:06:01	000	00.4	21.6	+000.00	+029.9
GM-17	01/30/01	09:17:36	000	00.2	21.6	+000.00	+029.9
BLOWER	01/30/01	08:18:59	000	00.0	22.4	.022.40	+029.9

Notes:

CH₄, CO₂, and O₂ are reported in percent gas.

Relative well head pressure is reported in inches of water.

Atmosphere pressure is reported in inches of mercury.

Recovery system status on

Weather - Rain, 40°F

C:\MSV\REP\DATA\New\631\02_01\01\01\Sonia Islip1

TABLE 1
 LANDFILL GAS MONITORING RESULTS
 SONIA ROAD LANDFILL
 ISLIP, NEW YORK

Gas Monitoring Wells

Location ID	Date	Time	CH4	CO2	O2	Relative Well Head Pressure	Atmospheric Pressure
GM-01	01/11/01	15:28:58	00.0	00.2	21.9	+000.00	+030.0
GM-02	01/11/01	15:33:28	00.0	00.2	22.0	-000.20	+030.0
GM-03	01/11/01	15:36:51	00.0	00.1	22.2	+000.00	+030.0
GM-04	01/11/01	15:42:46	00.0	00.0	22.2	+000.00	+030.0
GM-05	01/11/01	15:47:29	00.0	00.0	22.2	-000.50	+029.9
GM-06	01/11/01	15:52:52	00.0	00.0	22.1	-000.20	+029.9
GM-07	01/11/01	15:55:17	00.0	00.1	22.0	-000.30	+030.0
GM-08	01/11/01	15:59:47	00.0	00.1	22.0	+000.00	+030.0
GM-09	01/11/01	16:02:47	00.0	00.1	22.0	-000.20	+030.0
GM-10	01/11/01	16:08:15	00.0	00.1	22.1	+000.00	+030.0
GM-11	01/11/01	16:09:15	00.0	00.0	22.2	-000.10	+030.0
GM-12	01/11/01	16:15:13	00.0	00.0	22.4	-000.10	+030.0
GM-13	01/11/01	16:18:52	00.0	00.1	22.4	+000.00	+030.0
GM-14	01/11/01	16:22:14	00.0	00.2	22.3	-000.10	+030.0
GM-15	01/11/01	16:26:55	00.0	00.1	22.3	-000.10	+030.0
GM-16	01/11/01	16:30:15	00.0	00.3	22.0	-000.20	+030.0
GM-17	01/11/01	16:35:55	00.0	00.3	21.9	+000.00	+030.0
BLOWER	01/11/01	15:26:18	00.0	00.9	21.8	-022.30	+030.0

Notes:

CH₄, CO₂, and O₂ are reported in percent gas.

Relative well head pressure is reported in inches of water.

Atmosphere pressure is reported in inches of mercury.

Recovery system status - on

Weather - Mostly sunny, 35-40°F

Client:\1116\BAA\Exports\1116\0111\mwt\Sonria.tbl

APPENDIX E

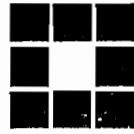
**MAINTENANCE PLAN FOR
VEHICLE STORAGE ON THE
SONIA ROAD LANDFILL**

MAINTENANCE PLAN
FOR
VEHICULAR STORAGE
ON THE
SONIA ROAD LANDFILL

**Brentwood, Town of Islip
Suffolk County, New York**

**Date: January 19, 2004
Revised March 30, 2004**

RMS Project No. 2003-041



RMS ENGINEERING

Robinson, Muller & Schiavone Engineers, P.C.

355 New York Avenue, Huntington, NY, 11743 • (631) 271-0576 • Fax (631) 271-0592

MAINTENANCE PLAN
FOR
VEHICULAR STORAGE
ON THE
SONIA ROAD LANDFILL

Brentwood, Town of Islip
Suffolk County, New York

January 19, 2004
Revised March 30, 2004

RMS Engineering
Project #2003-041



Gregg J. Schiavone, PE
New York State License No. 76387

MAINTENANCE PLAN

Landfill Location:

Brentwood, Town of Islip
Suffolk County, New York

Maintenance Plan Requested By:

New York State Dept. of Environmental
Conservation
Islip Resource Recovery Agency

Date of Report:

January 19, 2004
Revised March 30, 2004

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Introduction

General

The Sonia Road landfill is located in the Town of Islip, New York. The site is situated at the northeast corner of Howell's Road and Deer Park Avenue. The landfill is approximately 42 acres in size. The Town utilized it as a municipal solid waste facility from 1965 until 1977. The landfill is owned and operated by the Town of Islip. The Town of Islip Department of Environmental Control is responsible for the post closure monitoring and maintenance of the site. Presently, the landfill is closed and has been capped. The capping took place under the supervision of the New York State Department Environmental Conservation and has been ready to be put to a viable use.

An active gas collection and monitoring system was constructed during the closure of the landfill. There is a substantial quantity of gas recovery wells located on the property. These wells will be protected at all times and full access will be provided to the Town, thereby permitting the monitoring and maintenance of the collection system as they have been doing since the closing and capping of the facility.

Currently, the Town has entered into an agreement with a private entity to allow for the storage of approximately 5,000 vehicles on the property. The vehicles will be stored on approximately thirty two (32) acres of the site in specifically designed and approved areas. Approximately 1,000 vehicles will be rotated from the site a month to ensure that the grass located on the cap will be healthy and properly maintained as required. The remaining ten (10) acres is designed as a buffer and cannot be used for vehicle storage. This area of the property is a buffer between the subject site and the residential neighborhood located to the east and to the south of the premises. The eastern buffer is approximately 195 feet in width and the southern buffer is approximately 144 feet in width. The buffer extends the full length of the east property line and also the south property line. The ten (10) acre parcel of land the buffer area is not included in the lease with the Town of Islip. However, the lessee will provide lawn mowing maintenance to this area on a monthly basis during the appropriate months.

Site Description and Proposed Use

The existing 42 acre site is generally flat with gentle slopes. In the center of the property a ridge line was established during the cap closure construction. The ridgeline is the highest elevation of the site and it was created to direct storm water runoff to the stone lined open channels located on the property. The eastern and western halves of the property are pitched to a series of channels which carry the storm water runoff to a drainage collection system. The system is comprised of a series of precast concrete structures and related pipe which collect and dispose of the water to two (2) recharge basins located at the southwest corner of the property.

The site is accessed by three (3) entrances. The existing driveway entrance is located at the west side of the property at the intersection of Grand Boulevard and Corbin Avenue. The second access is located at the northeast corner of the property where Sonia Road meets Joselon Avenue. Finally, the third access point is provided along the north side of the property. The first and second entrances will only be used for fire truck and rescue equipment during emergencies. The storage vehicles can access the property only at the northern driveway. This driveway connects to South Fourth Street through an adjacent parcel of land which has been leased by the applicant.

RMS Engineering has reviewed the proposed project with the Commissioner of the Town of Islip Department of Code Enforcement. The attached site plans have been reviewed and approved by the various participating departments within the Town as well as the local fire department. Please refer to the approval letter located in Appendix "C".

To accommodate fire truck access and vehicular transfers into and out of the site, a series of twenty (20) foot access aisles have been design and built on site. The access aisles are comprised of a four (4) inch thick layer of recycled concrete aggregate which will be placed over a high density polyethylene geogrid fabric. The recycled concrete aggregate, as a minimum, meets the New York State Specification Section 300 – Bases and Subbases.

Minor drainage system modifications have been made to the existing system to accommodate to current use. High density polyethylene pipe has been design and installed to allow for the continued flow of storm water through the three (3) access driveways where these driveways cross the existing drainage ditches. The pipe is rated for an H-20 traffic loading. The following table depicts the minimum pipe diameter at the various locations.

Sonia Road Entrance – 15" diameter
Grand Boulevard Entrance – 36" diameter
North Access (Main Vehicular Transfer Access) = 15" diameter

The entrance located along the northern property line is the main entrance to facility for the storage of vehicles. The entrance connects the landfill property to the adjacent property to the north. This driveway is paved with an asphalt pavement section. Please refer to the Amended Site Development Plans located in Appendix "A". The asphalt top course meets the New York State Specification Section 400 - Hot Mix Asphalt Type 6F.

The existing stone lined open channels have not been modified. All vehicles must be set back a minimum distance of 25 feet from the channels. The channels are protected by concrete inertia blocks and are spaced no greater than 10 feet on center.

The 32 acre lease area will be furnished with a portable office trailer for security and site lighting. The light poles are located as depicted on the Amended Site

Development Plans. Please refer to Appendix "A". Light poie foundations do not penetrate the existing landfill cap. The existing landfill closure cap cross section has been provided on drawing SP-5, Construction Details are located in Appendix "A". The Geo-Composite Drainage Layer of the cap is approximately 30 inches below finished grade. There is approximately 6 inches of top soil and 24 inches of barrier protection material above the drainage layer. This layer along with the other various layers of the landfill cap components will be protected at all times.

As indicated above, there is a substantial quantity of gas recovery wells located on the property. These wells will be protected at all times and full access will be maintained to them so that the Town can continue to monitor and maintain the collection system.

Continued erosion control measures will be taken. The measures include the installation of hay bales, silt fencing, erosion control mats and dust control measures. Please refer the site development documents located in Appendix "A".

Maintenance Plan

Adverse Weather Conditions

Extra care will be taken moving the vehicles during inclement weather.

Drainage & Erosion Control

The on-site drainage structures and related piping that have been modified as part of the current use shall be inspected after rainfall events. If the structures become clogged they will be cleaned immediately. Silt will be removed from catch basins on a monthly basis or as required. Upon slumping or unevenness of the rip-rap which has been constructed as part of the drainage improvements it will be reset/regraded.

Erosions control measures will be inspected once a month. Hay bales, silt fencing and erosion control mats will be replaced or repaired as noticed upon inspections made weekly by the tenant of the premises or as required. Refer to the Construction Detail Plan, drawing SP-5. All work conform to the standards set forth on the approved plans as well as in accordance with the New York State Guidelines for Urban Erosion and Sediment Control Manual, latest edition.

Vegetative Cover & Top Soil

The top of the landfill cap is comprised of top soil and grass. The grass will be mowed and kept neat once a month. If additional top soil is required to be imported to the site it will not contain debris, waste, clay, pebble or rocks greater than 2 inches in diameter, weeds or rubbish.

Natural top soil having an organic content of not less than 5% and not more than 20% as determined by the American Standard of Testing Materials (ASTM) test D2974 is required. The additional top soil will have a gradation that conforms to the following sieve analysis.

<u>Sieve Size</u>	<u>Percent Passing By Weight</u>
2 inch	100
1 inch	85 - 100
¼ inch	65 -- 100
No. 200	20 - 80

The pH of the top soil will have an organic content not less than 5.5 and not greater than 6.8.

Top Soil, if required upon inspection, will be at placed and spread to a minimum thickness of six (6) inches. Grass seed will be placed by hydroseeding. The grass seed mixture will include the following: Crown Vetch, Birdsfoot, Trefoil, Palmer Perennial Ryegrass, Chewings Red Fescue, Kentucky 31 Tall Fescue, Redtop and Spring Oats.

Regrading

If rutting or erosion occurs on the landfill cap the effected areas will be regraded back to the original condition. If top soil and seeding is required, it will all conform to subsection "Vegetative Cover & Top Soil" noted above. The regrading operation will not impede the overland flow of storm water to the appropriate drainage structures or stone lined channels. The condition of the top soil will be inspected once a month and immediately after a rainfall event.

If the Geo-Composite Drainage Layer which is located 30 inches below the finished grade of the landfill cap, is exposed, the lessee shall refer to the Emergency Response Telephone Numbers located in Appendix "B". Immediate calls will be placed to the New York State Department of Environmental Conservation Office in Albany New York (Division of Environmental Remediation – Bureau of Eastern Remedial Action) and the Town of Islip Department of Environmental Control. Operations on that specific area of the landfill cap will stop until remedial work has been completed, inspected and approved by the jurisdictional agencies.

Perimeter & Interior Roads

The perimeter and interior roads will be inspected for signs of erosion and degradation. The roads will be repaired if erosion or degradation occurs. Inspections will take place after snow has been plowed off of the roads. The road material, recycled concrete aggregate, will meet the New York State Specification Section 300 – Bases and Subbases. Construction or demolition debris is not be permitted to remain on the site. The minimum road width for all interior roads is 20 feet. The cul-de-sac located at the southwest corner of the site will have a minimum radius of 50 feet at all times. This radius must be maintained for fire truck access and maneuverability. The recycled concrete aggregate is at least four (4) inches thick. No vibratory roller compaction equipment is permitted on the site. The repairs shall be compacted with standard plate tampers or light weight rollers.

Fencing

The fencing and gates constructed as part of the site improvements as well as the existing perimeter fencing will be inspected on an annual basis and maintained as required. If they become damaged they will be repaired or replaced as per the Amended Site Development Plans located in Appendix "A".

Fuel Spill, Fire & Explosion

If a fuel spill, fire or explosion occurs the tenant or tenants agent, will refer to the *Emergency Response Telephone Numbers* located in Appendix "B" and also located in the security trailer at all times, and contact the appropriate agencies immediately. Any damage to the Sonia Road Landfill Cap shall be repaired as per the agencies having jurisdiction. There is an active gas collection and monitoring system on-site. If any of the numerous wells or gas collection system components are damaged the appropriate agencies as noted in Appendix "B" and always located in the trailer, must be notified immediately. On-site portable fire protection equipment will be maintained and inspected periodically per the manufactures standards and specifications.

Notification Procedures

On-site emergencies that involve the immediate danger or threat to human health and welfare require immediate notifications to the Suffolk County Police Department, Town of Islip Fire Department and Town of Islip Public Safety Department. Refer to Appendix "B" for the *Emergency Response Telephone Numbers*.

Vandalism

Due to the nature of the proposed use, routine inspections are required. If vandalism, trespassing or unauthorized dumping occur the situation will be remedied.

Methane

The site is monitored by the Town of Islip. There are approximately thirty-seven (37) gas extraction wells and seventeen (17) gas collection wells on-site. If methane odors are detected, contact will be made to the appropriate agencies noted in Appendix "B".

Dust Control

During prolonged dry periods the six (6) inch layer of top soil may become very dry. At said time, an additional inspection will be required. The vegetative cover if damaged will be repaired and replaced. Refer to the "Dust Control Notes" depicted on drawing SP-5 of the Town approved Site Plans located in Appendix "A".

Excessive Landfill Settlement

Periodic inspections of the landfill cap will be completed in order to determine if there is excessive settlement of the cap. If settlement is detected immediate calls are to be placed to the New York State Department of Environmental Conservation Office in Albany New York (Division of Environmental Remediation – Bureau of Eastern Remedial Action) and the Town of Islip Department of Environmental Control. Vehicles must be removed at that specific area of the landfill, until remedial work is completed and inspected by the agencies having jurisdiction.

APPENDIX "A"

AMENDED SITE DEVELOPMENT PLANS

FOR THE
SONIA ROAD LANDFILL
SITUATED IN
BRENTWOOD, TOWN OF ISLIP
SUFFOLK COUNTY, NEW YORK
OVERALL DRAWING LIST

AS OF

January 19, 2004

RMS Project #2003-041

DRAWING TITLE	DRAWING NUMBER	DATE DRAWN	REVISION NO.	LAST REVISED
Cover	SP-1	05/21/03	2	12/03/03
Overall Alignment Plan	SP-2	05/21/03	2	12/03/03
Partial Alignment Plan	SP-3	05/21/03	1	12/03/03
Partial Grading, Drainage And Erosion Control Plan	SP-4	05/21/03	1	12/03/03
Construction Details	SP-5	05/21/03	2	12/03/03
Fire Protection Plan	SP-6	05/21/03	2	12/03/03
Photometric Plan	SP-7	05/21/03	2	12/03/03

APPENDIX "B"

Emergency Response Telephone Numbers

Suffolk County Dept. of Health Services Administration	(631) 853-3081
Groundwater Resources	(631) 853-2251
Hospital (primary) Good Samaritan Hospital 1000 Montauk Highway West Islip, NY	(631) 376-3000
Hospital (secondary) Southside Hospital 301 E. Main Street Bay Shore, NY	Emergency: (631) 968-3314 General: (631) 968-3000
Suffolk County Police Dept	(631) 968-3000
Local Emergency Response Resources	911
Fire	911
Ambulance	911
Medical Services	911
Town of Islip Public Safety	(631) 224-5300
NYSDEC Region I	
Hazardous Waste Remediation	(631) 444-0405
NYSDEC Albany Jeffrey Trad, PE	(518) 402-9813
Division of Environmental Remediation Bureau of Eastern Remedial Action	
Poison Information Center Winthrop University Hospital	(516) 542-2323
Town of Islip Project Contact: Paul DiMaria, PE	Tel: (631) 224-5644 Fax: (631) 224-5651
Islip Resource Recovery Agency Town of Islip Hazmat Team	(631) 467-3219

APPENDIX "C"

TOWN OF ISLIP



PETE MCGOWAN
SUPERVISOR

JOHN J. SCIMECA
COMMISSIONER

DEPARTMENT OF CODE ENFORCEMENT

28 Nassau Avenue
Islip, New York 11751

RECEIVED

DEC 26 2003

RMS ENGINEERING
P.O. BOX 2241-5549
ISLIP, NY 11750

2003-041

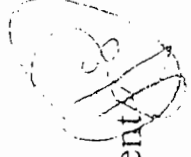
MEMORANDUM

To: Bob Komoroski, Land Management

From: John J. Scimeca, Commissioner, Code Enforcement

Date: December 19, 2003

Re: Proposed Alternative Use of Sonia Road Landfill as
Automobile Storage - Site No. 1-52-013



I have reviewed the site plan relative to construction of fire department access at the Sonia Road Landfill site. Together with Chief Engineer Paul DiMaria of the Islip Resource Recovery, I am in concurrence that the plan is acceptable at this time. It should be noted, that I am still awaiting the final draft of the Maintenance Plan for this site.

Should you have any questions in this regard, please do not hesitate to contact me.

JJS:jah

cc: Paul DiMaria, P.E., Resource Recovery

Gregg J. Schiavone, PE,P.E., RMS Engineering, P.C. ✓

Eric M. Hofmeister, President, Resource Recovery

William Murphy, Atlantic Auto Mall

APPENDIX “D”

Inspection Schedule

- 1. Fencing and Gates - annually**
- 2. Modified Drainage Structures – monthly and after rainfall events**
- 3. Perimeter and Interior Roadways – monthly and after snow plowing**
- 4. Fire Extinguishers – per manufacturers recommendation**
- 5. Erosion Control Measures – monthly and after rainfall events**

APPENDIX F

NYSDEC CORRESPONDENCE OF SEPTEMBER 25, 2003

**New York State Department of Environmental Conservation
Division of Environmental Remediation**

Remedial Bureau D, 12th Floor
625 Broadway, Albany, New York 12233-7013
Phone: (518) 402-9814 • **FAX:** (518) 402-9819
Website: www.dec.state.ny.us



Erin M. Crotty
Commissioner

SEP 25 2003

U.S. Mail and Fax

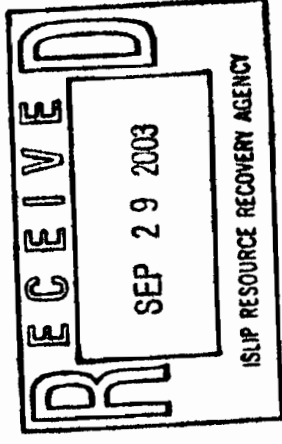
Mr. Paul J. DiMaria, P.E.
Chief Engineer
Islip Resource Recovery Agency
401 Main Street
Islip, New York 11751

Re: Site No. 1-52-013
Sonia Road Landfill Site
State Assistance Contract No. C300428
Proposed Alternative Use of Landfill as Automobile Storage

Dear Mr. DiMaria:

The New York State Department of Environmental Conservation (NYSDEC) has reviewed the September 2003 RMS Report and the May 21, 2003 Amended Site Development Plans for the Sonia Road Landfill. The NYSDEC has the following comments which should be addressed either in a maintenance plan or as part of the lease:

- 1) A maintenance plan should be developed as a standalone document referenced by the lease. It should contain the schedule which cars should be rotated about the leased area so the IRRA may inspect the landfill barrier protection layer. The cars should be rotated frequently enough so the grass remains healthy.
- 2) The maintenance plan or lease should require care be taken when moving cars during adverse weather conditions.
- 3) The consultant should ensure that there is adequate access for fire department personnel and equipment in the design plan. The fire department should have an opportunity to review the plan.
- 4) The maintenance plan should contain the phone numbers of IRRA and NYSDEC contacts and procedures to be employed in the event of spill, fire or emergency.



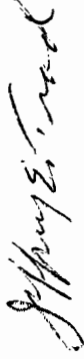
Mr. Paul J. DiMaria, P.E.

Page 2

- 5) The maintenance plan should have procedures for typical repairs such as reseeded and erosion control.
- 6) A copy of the maintenance plan and lease agreement must be submitted to the NYSDEC.

Therefore, the NYSDEC concurs with the alternative use as proposed contingent on these comments being addressed. If you have any questions regarding this matter, please call me at (518) 402-9814.

Sincerely,



Jeffrey E. Trad
Project Manager
Remedial Section D
Remedial Bureau D
Division of Environmental Remediation

cc: E. Hofmeister - IRRRA
R. Whelan - Senator Owen Johnson's Office