



The State of New Hampshire
DEPARTMENT OF ENVIRONMENTAL SERVICES



Thomas S. Burack, Commissioner

December 11, 2014

Sharon Gauthier, Executive Director
Androscoggin Valley Regional Refuse Disposal District
15 Mt. Forist St
PO Box 336
Berlin, NH 03570-0336

RE: On-Site Full Compliance Evaluation Report

Dear Ms. Gauthier:

The New Hampshire Department of Environmental Services, Air Resources Division (“DES”) has completed a Full Compliance Evaluation of the Androscoggin Valley Regional Refuse Disposal District, Mt. Carberry Landfill, located in Success. The purpose of the inspection was to determine compliance with Title V Operating Permit TV-0057 and the N.H. Admin. Rules, Env-A 100 *et seq.* The compliance evaluation included an on-site inspection completed on November 13, 2014. This is a copy of the On-Site Full Compliance Evaluation Report for your review and records.

DES identified deficiencies during this compliance evaluation, as detailed in this report.

The results of the compliance evaluation may be forwarded to the Enforcement Section for further review. If you have any questions, please do not hesitate to give Alan Moulton a call at (603) 271-6797 or by email at Alan.Moulton@des.nh.gov.

Sincerely,

Greg Helve
Compliance Assessment Section Supervisor
Air Resources Division

cc: Jennifer Fish, Administrator, Coos County Unincorporated Places, PO Box 10, W Stewartstown, NH 03597
City Manager, City of Berlin, 168 Main St, Berlin, NH 03570

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Abbreviations and Acronyms

| | |
|------------------|---|
| AAL | Ambient Air Limit |
| acf | actual cubic foot |
| ASTM | American Society of Testing and Materials |
| Btu | British thermal units |
| C&D | construction and demolition |
| CAS | Chemical Abstracts Service |
| cfm | cubic feet per minute |
| CFR | Code of Federal Regulations |
| CI-RICE | Combustion Ignition Reciprocating Internal Combustion Engine |
| CO | Carbon Monoxide |
| DES | New Hampshire Department of Environmental Services |
| Env-A | New Hampshire Code of Administrative Rules – Air Resources Division |
| ft | foot or feet |
| ft ³ | cubic feet |
| gal | gallon |
| HAP | Hazardous Air Pollutant |
| hp | horsepower |
| hr | hour |
| kW | kilowatt |
| lb | pound |
| LFG | landfill gas |
| LPG | Liquefied Petroleum Gas |
| MM | million |
| MSDS | Material Safety Data Sheet |
| MSW | municipal solid waste |
| MW | megawatt |
| NG | Natural Gas |
| NO _x | Oxides of Nitrogen |
| NSPS | New Source Performance Standard |
| PM ₁₀ | Particulate Matter < 10 microns |
| ppm | parts per million |
| psi | pounds per square inch |
| RACT | Reasonably Available Control Technology |
| RSA | Revised Statutes Annotated |
| RTAP | Regulated Toxic Air Pollutant |
| scf | standard cubic foot |
| SO ₂ | Sulfur Dioxide |
| TSP | Total Suspended Particulate |
| tpy | tons per consecutive 12-month period |
| USEPA | United States Environmental Protection Agency |
| VOC | Volatile Organic Compound |

I. Facility Description

DES conducted an On-Site Full Compliance Evaluation of the Androscoggin Valley Regional Refuse Disposal District, Mt. Carberry Landfill (“Mt. Carberry”) on November 13, 2014 and the results are presented herein. The compliance evaluation covers the period calendar year 2009 to November 13, 2014.

The Androscoggin Valley Regional Refuse Disposal District owns Mt. Carberry located in the unincorporated Township of Success, New Hampshire. The scale house is located at the entrance to the landfill, which is at 1222 Hutchins St in Berlin. In 1989, the James River Corporation began operating the landfill at this location. The landfill served a succession of pulp and paper mill companies in Berlin before of the Androscoggin Valley Regional Refuse Disposal District acquired the landfill from Fraser NH, LLC on December 30, 2002. Mt. Carberry has an existing LFG collection and control system that has been operational since October 1, 2007. Collected waste in place includes asbestos, C&D waste, MSW, and paper/pulp sludge from the paper mill. The existing landfill is a mound type landfill with two existing landfill phases: Phases 1 and 2. Phase 1 contains Stages 1 through 6 and is currently closed to filling, with a temporary plastic cover in place to prevent water infiltration and enhance odor control/LFG collection.

Phase 2 consists of Stages 7, 8, and 9, which are currently closed to filling with a temporary plastic cover in place. The Phase 2 vertical expansion area is currently permitted to operate and includes Stages 10 and 11, which consists of an overfill of Stages 7, 8 and 9. Stages 10 and 11 are part of the active landfill area and began operation in 2012.

In addition, Mt. Carberry operates a landfill gas to energy project (“LFGE Project”) to convey LFG collected at the landfill to an offsite user (i.e. the Gorham Paper and Tissue, LLC (“Mill”)), where the LFG is fired in the Mill’s boilers. The LFGE Project has a capacity greater than the current LFG recovery model projections for the landfill. The LFGE Project will therefore serve as the primary control for LFG collected at the landfill, with the existing utility flare maintained as a secondary, backup control device in the event the LFGE Project is temporarily offline for maintenance or repairs.

Mt. Carberry operates an existing diesel-fired emergency generator to supply back-up electrical power to the flare and a second diesel-fired emergency generator to supply back-up electrical power to the new LFG blower associated with the LFGE Project. Mt. Carberry also operates an existing LPG-fired emergency generator to supply back-up electrical power for the scale house.

The facility-wide potential emissions of SO₂ exceed the Title V permit threshold of 100 ton/yr. The facility is therefore considered a major source for this pollutant under Title V of the Clean Air Act. In addition, the facility is subject to 40 CFR 60, Subpart WWW which requires a Title V permit.

The on-site inspection included an opening meeting to discuss the purpose of the inspection as well as the rules pertaining to claims of confidentiality and facility safety concerns. Mt. Carberry agreed to the inspection and authorized access to the facility. Material provided and operations conducted by the facility at the time of the inspection were not claimed as confidential.

II. Emission Unit Identification and Facility Wide Emissions

Table 1 below, taken from Permit TV-0057 and the Application for Minor Permit Modification, lists the permitted emission units as verified during the inspection.

| Table 1 - Significant Activities | | | | |
|----------------------------------|--|---|--|---|
| Emission Unit ID | Description of Emission Unit | Manufacturer Model Number Serial Number | Date Construction Commenced/ Start-Up Date | Maximum Design Capacity and Permitted Fuel Types |
| EU01 | Landfill | N/A | 1989 | 4,286,400 cubic meters (Phase I, Stages 1 – 4 and Phase II, Stages 7 – 11) |
| EU02 | Landfill Gas Utility Flare | Parnel Biogas Skid Mounted Utility Flare System SN 07-051 | 2007 | 36 MMBtu/hr <= (for information only) Landfill Gas – equivalent to 1,200 scfm at 50% methane equivalent |
| EU03 | Emergency Generator for Flare | Caterpillar D100-4 F3A01959 | 2006 (Manufactured 2/5/07) | 1.08 MMBtu/hr (100 kW; 40 CFR 60, Subpart IIII, EPA Certified Tier 2) Diesel – equivalent to 7.9 gal/hr |
| EU04 | Emergency Generator for New LFG Blower | Caterpillar D150-8 CAT00C66EN6D03326 | 2012 | 1.62 MMBtu/hr (150 kW; 40 CFR 60, Subpart IIII, EPA Certified Tier 3) Diesel – equivalent to 11.8 gal/hr |
| EU05 | Emergency Generator for Scale House | Kohler 8.5 RMY 0633557 | 2003 | 0.186 MMBtu/hr (10 kW; 40 CFR 63, Subpart ZZZZ) LPG – equivalent to 1.98 gal/hr |
| EU06 | Solar Spark Vent Flare | LSC Environmental Products, LLC Solar Spark, CF-10 | December, 2013 | 4.6 MMBtu/hr Landfill Gas – equivalent to 150 scfm at 50% methane equivalent |

DES observed the devices identified in this table. Since the last inspection, the facility added the emergency generator (EU04) for the new LFG blower and the Solar Spark Vent Flare (EU06).

Due to the fact that the paper mill equipment was down and could not accept LFG, the only device in operation during the inspection was the Landfill Gas Utility Flare (EU02). The remaining devices were not in operation during the inspection.

During the inspection the following hour meter data was collected from the emergency generators:

| Unit | Hour Meter Reading (hours) |
|---|----------------------------|
| Emergency Generator for the Flare (EU03) | 149.3 |
| Emergency Generator for the New LFG Blower (EU04) | 36.2 |
| Emergency Generator for the Scale House (EU05) | 224.9 |

There are no insignificant activities located at this facility.

The table below lists the permitted device reported annual emissions for the review period.

| Total Permitted Device Emissions (tpy) | | | | | | |
|--|------------------|-----------------|-----------------|-------|------|------------------|
| | PM ₁₀ | SO ₂ | NO _x | CO | VOC | Total HAPs/RTAPs |
| Permitted Limits | — | 250 | --- | --- | --- | See Note below |
| 2013 | 0.55 | 20.13 | 1.34 | 12.12 | 4.82 | 10.37 |
| 2012 | 1.60 | 61.40 | 3.83 | 35.21 | 5.40 | 11.12 |
| 2011 | 1.65 | 19.61 | 3.94 | 36.24 | 2.04 | 1.20 |
| 2010 | 1.21 | 6.26 | 2.84 | 53.27 | 0.00 | 0.17 |
| 2009 | 1.26 | 9.43 | 2.97 | 55.62 | 0.00 | 0.22 |

Note: Facility-wide HAP emissions shall be limited to less than 10 tpy of any individual HAP and 25 tpy of all HAPs combined.

III. Stack Criteria

Table 2 below, taken from Permit TV-0057, lists the permitted stack requirements for the facility. During the inspection, DES observed that the stack was vertical and unobstructed, with no modifications.

| Table 2 – Stack Criteria | | | | |
|---------------------------------|----------------------------|-------------------------|---|----------------------------------|
| Emission Unit ID | Device Name | Exit Orientation | Discharge Height above Ground (ft) | Max. Inside Diameter (ft) |
| EU02 | Landfill Gas Utility Flare | Vertical | 25 | 0.694 |

IV. Control Equipment

Table 3 below, taken from Permit TV-0057 and the Application for Minor Permit Modification, lists the required control equipment for the facility’s devices, as verified during the inspection.

| Table 3 – Pollution Control Equipment Identification | | | |
|---|--|--|---------------------------------|
| Pollution Control Equipment ID | Description | Purpose | Emission Unit Controlled |
| PCE01 | M-I Swaco SulfaTreat Sulfur Removal System | Control of sulfur dioxide (SO ₂) | EU02 |
| PCE02 | Parnel Biogas Skid Mounted Utility Flare System (EU02) | Control of hydrogen sulfide (H ₂ S), non-methane organic compounds (NMOC), volatile organic compounds (VOCs) and methane (CH ₄) | EU01 |
| PCE03 | Solar Spark Vent Flare (EU06) | Control of hydrogen sulfide (H ₂ S), non-methane organic compounds (NMOC), volatile organic compounds (VOCs) and methane (CH ₄) | EU01 |

V. Compliance with Operating and Emission Limitations

Table 4 below, taken from Permit TV-0057 and the Application for Minor Permit Modification, lists the State-only operation and emission limitations for the facility, and any deficiencies noted during the evaluation.

| Table 4 - State-only Enforceable Operational and Emission Limitations | | | | |
|--|--|---------------------------------|----------------------------|------------------|
| Item # | Applicable Requirements | Applicable Emission Unit | Regulatory Citation | Compliant |
| 1 | <p><u>Landfill Gas Collection and Control System Monitoring Plan (Monitoring Plan)</u></p> <p>The facility shall operate the landfill gas collection and control system in accordance with provisions specified in the Monitoring Plan as approved by the Department.</p> <p>a. Any revision to the Monitoring Plan shall be submitted and approved by the Department prior to facility implementation; and</p> <p>b. The Monitoring Plan shall be reviewed by AVRRDD at least annually to determine if changes need to be implemented to improve monitoring or operations of the system.</p> | Facility Wide | TP-0108 | Yes |
| <p><i>Finding: On March 19, 2014, Mt. Carberry submitted the latest updates of the Monitoring Plan to DES. It is currently under review by DES. Mt. Carberry is monitoring the landfill in accordance with its monitoring plan.</i></p> | | | | |
| 2 | <p><u>Operating Requirements for Pollution Control Equipment and Processes</u></p> <p>a. The flare (EU02) has been installed for the purpose of controlling landfill gas emissions, and shall be operated in compliance with state and federal air quality standards and applicable emission standards for municipal solid waste landfills. All gas collected in the Facility's landfill gas collection system shall be routed through either the flare or to a permitted off-site user via the LFGE Project. When continued operation of the flare, off-site user or sulfur removal system requires that the landfill gas collection and control system be temporarily taken off-line to allow servicing the equipment/process, landfill gas will not be collected. Periods when the landfill gas collection and control system are off-line shall not exceed 5 days. At all times, including periods of startup, shutdown, and malfunction (SSM), the Owner or Operator must operate and maintain the flare and landfill gas collection system in a manner consistent with safety and good air pollution control practices for minimizing emissions. During a period of SSM, this general duty to minimize emissions requires that the Owner or Operator reduce emissions of raw landfill gas to the greatest extent which is consistent with safety and good air pollution control practices.</p> | EU02 (PCE02) | Env-A 1403.01 & TP-0108 | Yes |

Table 4 - State-only Enforceable Operational and Emission Limitations

| Item # | Applicable Requirements | Applicable Emission Unit | Regulatory Citation | Compliant |
|--|--|-------------------------------|--|-----------|
| | b. The flare (EU02) shall be operated with a flame present at all times when landfill gas is delivered to the flare as determined by the methods specified in Table 6, Item 8. | EU02 (PCE02) | TP-0108 | Yes |
| | c. The Owner or Operator shall operate and maintain the landfill gas utility flare (EU02), Solar Spark Vent Flare (EU06), and SulfaTreat Sulfur Removal System (PCE01) in accordance with the recommended procedures and maintenance schedules of the respective equipment manufacturers. | EU02, EU06, (PCE02) & PCE01 | TP-0108 | Yes |
| | d. The vent (EU06) shall be operated with a flame present at all times when landfill gas is delivered to the flare by use of a continuous electronic spark ignition with a spark indicator light on the panel. | EU06 | Env-A 604.01 | Yes |
| 3 | <u>24-hour and Annual Ambient Air Limit</u> The emissions of any Regulated Toxic Air Pollutant (RTAP) shall not cause an exceedance of its associated 24-hour or annual Ambient Air Limit (AAL) as set forth in Env-A 1450.01, <i>Table Containing the List Naming All Regulated Toxic Air Pollutants</i> . | Facility Wide | Env-A 1400 | Yes |
| 4 | <u>Revisions of the List of RTAPs</u> In accordance with RSA 125-I:5 IV, if the Division revises the list of RTAPs or their respective AALs or classifications under RSA 125-I:4, II and III, and as a result of such revision the Owner or Operator is required to obtain or modify the permit under the provisions of RSA 125-I or RSA 125-C, the Owner or Operator shall have 90 days following publication of notice of such final revision in the New Hampshire Rulemaking Register to file a complete application for such permit or permit modification. | Facility Wide | RSA 125-I:5 IV | No |
| Findings: Mt. Carberry did not conduct an air toxics compliance determination within 90 days after Env-A 1400 was updated on April 4, 2014. On November 20, 2014, Mt. Carberry submitted the air toxics compliance determination to DES. No permit modifications are required based on the current changes to Env-A 1400. | | | | |
| 5 | <u>Activities Exempt from Visible Emission Standard</u> The average opacity shall be allowed to be in excess of the standard specified in Env-A 2002.02 for one period of 6 continuous minutes in any 60-minute period during startup, shutdown, or malfunction. | EU02, EU03, EU04, EU05 & EU06 | Env-A 2002.04(c) (Effective 4-23-2005) | Yes |

| Table 4 - State-only Enforceable Operational and Emission Limitations | | | | |
|---|---|---------------------------------|----------------------------|------------------|
| Item # | Applicable Requirements | Applicable Emission Unit | Regulatory Citation | Compliant |
| 6 | <u>Precautions to Prevent, Abate, and Control Fugitive Dust</u> The Owner or Operator shall take precautions at all times to prevent, abate, and control the emission of fugitive dust, including but not limited to such measures as wetting, covering, or vacuuming. | Facility Wide | Env-A 1002.03 | Yes |
| Finding: The main road into the facility is paved. Mt. Carberry uses a water truck to control the fugitive dust from the unpaved areas. During the on-site inspection, DES observed there were no fugitive dust emissions. | | | | |

Table 5 below, taken from Permit TV-0057 and the Application for Minor Permit Modification, lists the Federal enforceable operation and emission limitations for the facility, and any deficiencies noted during the evaluation.

| Table 5 – Federally Enforceable Operational and Emission Limitations | | | | |
|--|---|---------------------------------|---|------------------|
| Item # | Applicable Requirement | Applicable Emission Unit | Regulatory Citation | Compliant |
| 1 | <u>Facility-Wide Emission Limitations</u> Facility-wide emissions of SO ₂ shall be limited to less than 250 tpy. | Facility wide | Env-A 604.02(a)(1), Env-A 619 & TP-0108 | Yes |
| 2 | <u>Operating Requirements for Pollution Control Equipment and Processes</u> The hydrogen sulfide (H ₂ S) concentration of the landfill gas entering the flare shall be maintained at or below 4,000 ppm as measured in Table 6, Item 6. The SulfaTreat Sulfur Removal System (PCE01) shall be operated whenever measured H ₂ S levels exceed 4,000 ppm and landfill gas is routed to the flare (EU02). | EU02 (PCE02) & PCE01 | Env-A 604.02(a)(2), Env-A 619, Env-A 1403.01 & TP-0108 | Yes |
| Finding: Mt. Carberry has only used the Sulfa Treat Sulfur Removal System when it sends landfill gas to the LFGE Project. The H₂S levels in the untreated landfill gas at Mt. Carberry are typically around 1,400 ppm. | | | | |
| 3 | <u>New Source Performance Standard (NSPS) Requirements for Municipal Solid Waste Landfills</u> The Owner or Operator shall comply with all applicable parts of 40 CFR Part 60, Subpart WWW, <i>Standards of Performance for Municipal Solid Waste Landfills</i> . | Facility-wide | 40 CFR Subpart WWW | Yes |

Table 5 – Federally Enforceable Operational and Emission Limitations

| Item # | Applicable Requirement | Applicable Emission Unit | Regulatory Citation | Compliant |
|---|--|-------------------------------|--|-----------|
| 4 | <p><u>Visible Emission Standard for Fuel Burning Devices Installed After May 13, 1970</u></p> <p>The average opacity from fuel burning devices installed after May 13, 1970 shall not exceed 20 percent for any continuous 6-minute period.</p> | EU02, EU03, EU04, EU05 & EU06 | Env-A 2002.02 (Effective 4-23-2005) (Formerly Env-A 1202) | Yes |
| <p>Finding: <i>During the on-site inspection, DES observed the opacity from the Landfill Gas Utility Flare (EU02) to be in compliance with the requirement.</i></p> <p><i>The opacity from the emergency generators (EU03, EU04, & EU05) and the Solar Spark Vent Flare (EU06) could not be verified because the devices were not in operation during the inspection. However, at the time the permit was issued, DES had sufficient information indicating that the devices are capable of meeting the opacity standards under normal operating conditions.</i></p> | | | | |
| 5 | <p><u>Particulate Emission Standards for Fuel Burning Devices Installed on or After January 1, 1985</u></p> <p>The particulate matter emissions from fuel burning devices installed on or after January 1, 1985 shall not exceed 0.30 lb/MMBtu.</p> | EU02, EU03, EU04, EU05 & EU06 | Env-A 2002.08(c)(1) (Effective 4-23-2005) (Formerly Env-A 1202) | Yes |
| <p>Finding: <i>Compliance with particulate emission standards can only be verified through stack testing for particulate matter, which has not been required for this facility, to date. However, at the time the permit was issued, DES had sufficient information indicating that these devices are capable of meeting the particulate matter standard under normal operating conditions. The following emission factors are used to calculate the annual particulate matter emissions. For the flares (EU02 and EU06), the AP-42 PM emission factor is 0.017 lb/MMBtu. For the emergency generators (EU03, EU04, & EU05), the PM emission factor is 0.30 lb/MMBtu per DES policy.</i></p> | | | | |
| 6 | <p><u>Definition of Emergency Generator under NH Code of Administrative Rules</u></p> <p>Each emergency generator shall only operate:</p> <ol style="list-style-type: none"> As a mechanical or electrical power source when the primary power source for the Facility has been lost during an emergency such as a power outage; or During normal maintenance and testing as recommended by the manufacturer. | EU03, EU04 & EU05 | Env-A 101.671 | Yes |
| 7 | <p><u>NSPS for Stationary Compression Ignition (CI) Internal Combustion Engines</u></p> <p>Each emergency generators shall:</p> <ol style="list-style-type: none"> Comply with the emission standards for new nonroad CI engines in §60.4202, for all pollutants, for the same model year and maximum engine power; Be installed and configured according to the manufacturer’s emission-related specifications and operated and maintained according to the manufacturer’s emission-related written instructions; Limited to 500 hours of operation during any consecutive 12-month period of which 100 of those | EU03 & EU04 | 40 CFR 60.4205, 40 CFR 60.4211(a) & (f) (Subpart III) & Env-A 606.02(c)(1) | Yes |

Table 5 – Federally Enforceable Operational and Emission Limitations

| Item # | Applicable Requirement | Applicable Emission Unit | Regulatory Citation | Compliant |
|---|---|--------------------------|-------------------------------|-----------|
| | <p>hours may be used for maintenance checks and readiness testing as recommended by the manufacturer; and</p> <p>d. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.</p> <p>Applicability of 40 CFR 60, Subpart IIII requirements was demonstrated at the time of permit issuance based on these devices operating under the conditions listed in Table 5, Item 6 and as described in the Division’s Application Review Summary for application #FY07-0192. AVRDD is not currently participating in an emergency demand response program per 40 CFR 60.4211. AVRDD shall notify the Division of any proposed change to the mode of operation of EU03 and EU04 which would result in any new applicable requirements under 40 CFR 60, Subpart IIII in accordance with Conditions XVII or XVIII as applicable.</p> | | | |
| <p>Finding: <i>Mt. Carberry uses the emergency generators strictly as emergency power sources. Mt. Carberry runs the emergency generators on a weekly basis for operational test purposes. Mt. Carberry does not have a contract with ISO New England or any other Regional Transmission Organization to use the emergency generator to generate power for the grid.</i></p> | | | | |
| 8 | <p><u>Maximum Sulfur Content Allowable in Liquid Fuels</u></p> <p>The sulfur content of diesel fuel burned in the emergency generators subject to 40 CFR 60, Subpart IIII (EU03 & EU04) shall not exceed 15 ppm (0.0015 percent sulfur by weight).</p> | EU03 & EU04 | 40 CFR 60.4207 (Subpart IIII) | Yes |
| 9 | <p><u>Sulfur Content Limitations for Gaseous Fuels</u></p> <p>Gaseous fuels (propane) shall contain no more than 5 grains of sulfur per 100 cubic feet of gas, calculated as hydrogen sulfide at standard conditions.</p> | EU05 | 40 CFR 52 | Yes |
| 10 | <p><u>NSPS General Provisions</u></p> <p>a. At all times, including periods of startup, shutdown, and malfunction, Owners and Operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.</p> | EU01, EU02, EU03 & EU04 | 40 CFR 60.11(d) & (g) | Yes |

Table 5 – Federally Enforceable Operational and Emission Limitations

| Item # | Applicable Requirement | Applicable Emission Unit | Regulatory Citation | Compliant |
|--------|--|--------------------------|--|-----------|
| | <p>b. For the purpose of submitting compliance certifications or establishing whether or not a person has violated or is in violation of any standard in this part, nothing in this part shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed.</p> | | | |
| 11 | <p><u>National Emission Standards for Hazardous Air Pollutants (NESHAP): Stationary Reciprocating Internal Combustion Engines (RICE) Subject to Regulations Under 40 CFR Part 63 Subpart ZZZZ</u></p> <p>a. A new or reconstructed stationary RICE located at an area source (EU03 & EU04) must meet the requirements of 40 CFR 63, Subpart ZZZZ by meeting the requirements of 40 CFR 60, Subpart IIII (Table 5, Items 7 & 8) for compression ignition engines.</p> | EU03 & EU04 | 40 CFR 63.6590 (Subpart ZZZZ) | Yes |
| | <p>b. An existing, emergency stationary spark ignition (SI) RICE (EU05) shall be operated as follows no later than October 19, 2013:</p> <ol style="list-style-type: none"> 1) Limited to 500 hours of operation during any consecutive 12-month period of which 100 of those hours may be used for maintenance checks and readiness testing as recommended by the manufacturer; 2) The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year; 3) Change oil and filter every 500 hours of operation or annually, whichever comes first. 4) Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first; 5) Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary; 6) Operate and maintain the stationary RICE according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing | EU05 | 40 CFR 63.6603, 40 CFR 63.6625 & 40 CFR 63.6640, Subpart ZZZZ & Env-A 606.02(c)(1) | Yes |

Table 5 – Federally Enforceable Operational and Emission Limitations

| Item # | Applicable Requirement | Applicable Emission Unit | Regulatory Citation | Compliant |
|--------|---|--------------------------|---|-----------|
| | <p>emissions; and</p> <p>7) Install a non-resettable hour meter if one is not already installed; and</p> <p>8) Minimize the engine's time spent at idle during startup and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes.</p> <p>Applicability of 40 CFR 63, Subpart ZZZZ requirements was demonstrated at the time of permit issuance based on this device (EU05) operating under the conditions listed in Table 5, Item 6 and as described in the Division's Application Review Summary for application #FY07-0192. AVRRDD is not currently participating in an emergency demand response program per 40 CFR 63.6640. AVRRDD shall notify the Division of any proposed change to the mode of operation of EU05 which would result in any new applicable requirements under 40 CFR 63, Subpart ZZZZ in accordance with Conditions XVII or XVIII as applicable.</p> | | | |
| 12 | <p><u>NESHAP General Provisions</u></p> <p>At all times, the Owner or Operator must operate and maintain the existing, emergency stationary SI RICE (EU05), including monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Division which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.</p> | EU05 | 40 CFR 63.6605 Subpart ZZZZ | Yes |
| 13 | <p><u>Permit Deviations</u></p> <p>In the event of a permit deviation, the Owner or Operator of the affected device, process, or air pollution control equipment shall investigate and take corrective action immediately upon discovery of the permit deviation to restore the affected device, process, or air pollution control equipment to within allowable permit levels.</p> | Facility Wide | Env-A 911.03 (Effective date 4-21-2007) | Yes |
| 14 | <p><u>Active Asbestos Waste Disposal Sites</u></p> <p>For any active waste disposal site that receives asbestos-containing waste material from a source covered under § 61.149, 61.150, or 61.155, the Owner or Operator shall comply with the following:</p> <p>a. Either there must be no visible emissions to the outside air from any active waste disposal site where asbestos-</p> | EU01 | 40 CFR 61.154 | Yes |

Table 5 – Federally Enforceable Operational and Emission Limitations

| Item # | Applicable Requirement | Applicable Emission Unit | Regulatory Citation | Compliant |
|--------|--|--------------------------|---------------------|-----------|
| | <p>containing waste material has been deposited, or the requirements of paragraph (c) or (d) must be met;</p> <p>b. Unless a natural barrier adequately deters access by the general public, either warning signs and fencing must be installed and maintained as follows, or the requirements of paragraph (c)(1) must be met:</p> <ol style="list-style-type: none"> 1) Warning signs must be displayed at all entrances and at intervals of 100 m (330 ft) or less along the property line of the site or along the perimeter of the sections of the site where asbestos-containing waste material is deposited. The warning signs must meet the requirements of § 61.154(b)(1). 2) The perimeter of the disposal site must be fenced in a manner adequate to deter access by the general public; and 3) Upon request and supply of appropriate information, the Administrator will determine whether a fence or a natural barrier adequately deters access by the general public. <p>c. Rather than meet the no visible emission requirement of paragraph (a) of his section, at the end of each operating day, or at least once every 24-hour period while the site is in continuous operation, the asbestos-containing waste material that has been deposited at the site during the operating day or previous 24-hour period shall:</p> <ol style="list-style-type: none"> 1) Be covered with at least 15 cm (6 in) of compacted nonasbestos-containing material, or 2) Be covered with a resinous or petroleum-based dust suppression agent that effectively binds dust and controls wind erosion. Such an agent shall be used in the manner and frequency recommended for the particular dust by the dust suppression agent manufacturer to achieve and maintain dust control. Other equally effective dust suppression agents may be used upon prior approval by the Administrator. For purposes of this paragraph, any used, spent, or other waste oil is not considered a dust suppression agent. <p>d. Rather than meet the no visible emission requirement of paragraph (a) of this section, use an alternative emissions control method that has received prior written approval by the Administrator according to the procedures described in § 61.149(c)(2).</p> <p>e. For all asbestos-containing waste material received, the Owner or Operator of the active waste disposal site shall:</p> <ol style="list-style-type: none"> 1) Maintain waste shipment records, using a form similar to that shown in Figure 4 of § 61.154, and | | | |

Table 5 – Federally Enforceable Operational and Emission Limitations

| Item # | Applicable Requirement | Applicable Emission Unit | Regulatory Citation | Compliant |
|--------|--|--------------------------|---------------------|-----------|
| | <p>include the following information:</p> <ul style="list-style-type: none"> i. The name, address, and telephone number of the waste generator; ii. The name, address, and telephone number of the transporter(s); iii. The quantity of the asbestos-containing waste material in cubic meters (cubic yards); iv. The presence of improperly enclosed or uncovered waste, or any asbestos-containing waste material not sealed in leak-tight containers. Report in writing to the local, state or EPA Regional office responsible for administering the asbestos NESHAP program for the waste generator (identified in the waste shipment record), and if different, the local, state or EPA Regional office responsible for administering the asbestos NESHAP program for the disposal site, by the following working day, the presence of a significant amount of improperly enclosed or uncovered waste. Submit a copy of the waste shipment record along with the report; and v. The date of the receipt. <p>2) As soon as possible and no longer than 30 days after receipt of the waste, send a copy of the signed waste shipment record to the waste generator.</p> <p>3) Upon discovering a discrepancy between the quantity of waste designated on the waste shipment records and the quantity actually received, attempt to reconcile the discrepancy with the waste generator. If the discrepancy is not resolved within 15 days after receiving the waste, immediately report in writing to the local, state, or EPA Regional office responsible for administering the asbestos NESHAP program for the waste generator (identified in the waste shipment record), and if different, the local, state or EPA Regional office responsible for administering the asbestos NESHAP program for the disposal site. Describe the discrepancy and attempts to reconcile it, and submit a copy of the waste shipment record along with the report.</p> <p>4) Retain a copy of all records and reports required by this paragraph for at least 2 years.</p> <p>f. Maintain, until closure, records of the location, depth and area, and quantity in cubic meters (cubic yards) of asbestos-containing waste material within the disposal site on a map or diagram of the disposal area.</p> | | | |

| Table 5 – Federally Enforceable Operational and Emission Limitations | | | | |
|---|---|---------------------------------|----------------------------|-----------------------|
| Item # | Applicable Requirement | Applicable Emission Unit | Regulatory Citation | Compliant |
| | <p>g. Upon closure, comply with all the provisions of § 61.151.</p> <p>h. Submit to the Administrator, upon closure of the facility, a copy of records of asbestos waste disposal locations and quantities.</p> <p>i. Furnish upon request, and make available during normal business hours for inspection by the Administrator, all records required under this section.</p> <p>j. Notify the Administrator in writing at least 45 days prior to excavating or otherwise disturbing any asbestos-containing waste material that has been deposited at a waste disposal site and is covered. If the evacuation will begin on a date other than the one contained in the original notice, notice of the new start date must be provided to the Administrator at least 10 working days before excavation begins and in no event shall excavation begin earlier than the date specified in the original notification. Include the following information in the notice:</p> <ol style="list-style-type: none"> 1) Scheduled starting and completion dates, 2) Reason for disturbing the waste; 3) Procedures to be used to control emissions during the excavation, storage, transport, and ultimate disposal of the excavated asbestos-containing waste material. If deemed necessary, the Administrator may require changes in the emission control procedures to be used; and 4) Location of any temporary storage site and the final disposal site. | | | |
| 15 | <p><u>Inactive Asbestos Waste Disposal Sites</u></p> <p>For any inactive waste disposal site that received deposits of asbestos-containing waste material, the Owner or Operator shall comply with one of the following:</p> <ol style="list-style-type: none"> a. Discharge no visible emissions to the outside air from an inactive waste disposal site; or b. Cover the asbestos-containing waste material with at least 15 centimeters (6 inches) of compacted nonasbestos-containing material, and grow and maintain a cover of vegetation on the area adequate to prevent exposure of the asbestos-containing waste material; or c. Cover the asbestos-containing waste material with at least 60 centimeters (2 feet) of compacted nonasbestos-containing material, and maintain it to prevent exposure of the asbestos-containing waste. d. Unless a natural barrier adequately deters access by the general public, install and maintain warning signs and fencing or comply with a.2 or a.3 above. The warning signs shall be displayed at all entrances at intervals of | EU01 | 40 CFR 61.151 | Not Applicable |

Table 5 – Federally Enforceable Operational and Emission Limitations

| Item # | Applicable Requirement | Applicable Emission Unit | Regulatory Citation | Compliant |
|--|---|--------------------------|---------------------|-----------|
| | <p>100 m (328 ft) or less along the property line or along the perimeter of the sections where asbestos-containing waste material was deposited and shall meet the specifications of 40 CFR 61.151(b). The perimeter shall be fenced in a manner adequate to deter access by the general public.</p> <p>e. Notify EPA and DES in writing at least 45 days prior to excavating or otherwise disturbing any asbestos-containing waste material. The notification shall include the following:</p> <ol style="list-style-type: none"> 1) Scheduled startup and completion dates, 2) The reason for disturbing the waste, 3) Procedures to be used to control emissions during the excavation, storage, transport, and ultimate disposal of the excavated asbestos-containing waste material, 4) Location of any temporary storage site and the final disposal site. <p>f. Within 60 days of a site becoming inactive, record a notation on the deed to the facility property, in accordance with state law, and on any other instrument that would normally be examined during a title search that the land has been used for the disposal of asbestos-containing materials; the survey plot and a record of location and quantity of asbestos-containing waste disposed has been filed with EPA; and the site is subject to 40 CFR Part 61 Subpart M.</p> | | | |
| <p>Finding: Mt. Carberry is an active waste disposal site. See Table 5, Item #14.</p> | | | | |
| 16 | <p><u>Accidental Release Program Requirements</u></p> <p>The quantities of regulated chemicals stored at the facility are less than the applicable threshold quantities established in 40 CFR 68.130. The facility is subject to the Purpose and General Duty clause of the 1990 Clean Air Act Amendments, Section 112(r)(1). General Duty includes the following responsibilities:</p> <ol style="list-style-type: none"> a) Identify potential hazards which result from such releases using appropriate hazard assessment techniques; b) Design and maintain a safe facility; c) Take steps necessary to prevent releases; and d) Minimize the consequences of accidental releases that do occur. | Facility wide | CAAA 112(r)(1) | Yes |

VI. Compliance with Monitoring and Testing Requirements

Table 6 below, taken from Permit TV-0057, lists the monitoring and testing requirements for the facility, and any deficiencies noted during the evaluation.

| Table 6 - Monitoring/Testing Requirements | | | | | | |
|---|--------------------|--|------------------------------------|---------------------------------|----------------------------|-----------------------|
| Item # | Parameter | Method of Compliance | Frequency of Method | Applicable Emission Unit | Regulatory Citation | Compliant |
| 1 | To Be Determined | When conditions warrant, the Division may require the Owner or Operator to conduct stack testing in accordance with USEPA or other Division approved methods. | Upon request by the Division | Facility Wide | RSA 125-C:6, XI | Not Applicable |
| Finding: During the inspection period, the Division has not required additional testing. | | | | | | |
| 2 | Various Parameters | <p><u>Landfill Gas Collection and Control System Monitoring Plan (Monitoring Plan)</u> The facility shall monitor and test the landfill gas collection and control system in accordance with provisions specified in the Monitoring Plan as approved by the Department.</p> <p>a. Any revision to the Monitoring Plan shall be submitted and approved prior to facility implementation; and</p> <p>b. The Monitoring Plan shall be reviewed by AVRRDD at least annually to determine if changes need to be implemented to improve monitoring or operations of the system.</p> | As approved in the Monitoring Plan | Facility Wide | RSA 125-C:6, XI & TP-0108 | Yes |
| Finding: On March 19, 2014, Mt. Carberry submitted the latest updates of the Monitoring Plan to DES. It is currently under review by DES. Mt. Carberry is operating in accordance with the currently approved Monitoring Plan. | | | | | | |

Table 6 - Monitoring/Testing Requirements

| Item # | Parameter | Method of Compliance | Frequency of Method | Applicable Emission Unit | Regulatory Citation | Compliant |
|--|---|---|---|--------------------------|---------------------------|-----------|
| 3 | Landfill gas flow rate | <p><u>Monitoring of Landfill Gas Flow Rate</u></p> <p>In order to demonstrate compliance with Table 4, Item 2.a. and to calculate actual emissions from the flare (EU02), the Owner or Operator shall install, calibrate, maintain, and operate according to the manufacturer's specifications the following equipment:</p> <p>a. A device that records landfill gas instantaneous flow rate, corrected for standard temperature and pressure, to the flare when LFG is routed to the flare. The measuring device shall record the flow to the landfill gas utility flare at least every 15 minutes to measure the instantaneous flow rate and shall keep records of the totalized flow rate; and</p> <p>b. A device that records landfill gas instantaneous flow rate, corrected for standard temperature and pressure, to the permitted off-site user when LFG is routed to the permitted off-site user. The measuring device shall record the flow to the landfill gas utility flare at least every 15 minutes to measure the instantaneous flow rate and shall keep records of the totalized flow rate.</p> | Continuous | Facility Wide | RSA 125-C:6, XI & TP-0108 | Yes |
| <p>Finding: <i>Mt. Carberry reported one deviation in its Semi-Annual Permit Deviation and Monitoring Report for the second half of 2013. On September 3 and 4, 2013, the landfill gas flow rate was not being recorded due to a flow meter malfunction. The flare was shut down and the flow meter was replaced.</i></p> | | | | | | |
| 4 | Predicted Annual Landfill Gas Generation Rate | <p><u>Prediction of Annual LFG Generation and Collection Rates</u></p> <p>a. The Owner or Operator shall calculate the predicted annual LFG generation rate and predicted annual gas collection rate in each of the next 5 years, at a minimum. Predicted annual LFG generation rates shall be developed using the latest version of USEPA's LandGEM model with appropriate input values of k and L_o. Landfill gas collection efficiencies shall be based on EPA guidance for the appropriate cover type or as approved by DES for the appropriate cover type.</p> <p>b. The predicted gas collection rates shall be compared with existing and planned landfill gas control capacities to assess future capacity needs.</p> | Every 5 years (within 60 months of previous evaluation) | EU01 | RSA 125-C:6, XI & TP-0108 | Yes |

Table 6 - Monitoring/Testing Requirements

| Item # | Parameter | Method of Compliance | Frequency of Method | Applicable Emission Unit | Regulatory Citation | Compliant |
|---|---|---|--|--------------------------|--------------------------------|-----------|
| 5 | NMOC Emissions | <p><u>NSPS Calculation of NMOC Emission Rate</u></p> <p>The Owner or Operator shall either design, install, and operate a landfill gas collection and control system complying with 40 CFR 60.752(b)(2) or calculate an NMOC emission rate for the landfill using the procedures specified in 40 CFR 60.754. The NMOC emission rate shall be recalculated annually, except as provided in 40 CFR 60.757(b)(1)(ii).</p> <p>a. If the calculated NMOC emission rate is less than 50 Mg per year, the Owner or Operator shall:</p> <ol style="list-style-type: none"> 1) Submit an annual emission report to the Department, except as provided for in 40 CFR 60.757(b)(1)(ii); and 2) Recalculate the NMOC emission rate annually using the procedures specified in 40 CFR 60.754 until such time as the calculated NMOC emission rate is equal to or greater than 50 Mg per year, or the landfill is closed. <p>b. If the NMOC emission rate, upon recalculation, is equal to or greater than 50 Mg per year, the Owner or Operator shall design, install, and operate a collection and control system in compliance with 40 CFR 60.752(b)(2).</p> | Annually except as provided in 40 CFR 60.757(b)(1)(ii) | EU01 | 40 CFR 60.752(b) (Subpart WWW) | Yes |
| <p>Finding: Mt. Carberry calculates the NMOC emission rate. In March 2012, Mt. Carberry conducted NMOC emission rate calculations. Results indicated that the NMOC emission rates are less than 50 Mg per year through 2015.</p> | | | | | | |
| 6 | Landfill gas constituent concentrations | <p><u>Testing of Landfill Gas Composition</u></p> <p>a. The Owner or Operator shall field measure the hydrogen sulfide concentration as specified in the Monitoring Plan identified in Table 5, Item 2.</p> | As specified in the Monitoring Plan | EU02 | RSA 125-C:6, XI & TP-0108 | Yes |
| | | <p>b. The Owner or Operator shall perform analytical testing of landfill gas composition at the designated locations and frequency. For each required sampling event, three samples shall be taken at the main gas collection system header just upstream from the SulfaTreat Sulfur Removal System (PCE01) (raw gas) and if the sulfa-treat system is operational at the time of the sampling,</p> | Tri-annually | EU01 | RSA 125-C:6, XI & TP-0108 | Yes |

Table 6 - Monitoring/Testing Requirements

| Item # | Parameter | Method of Compliance | Frequency of Method | Applicable Emission Unit | Regulatory Citation | Compliant |
|--------|-----------------------|---|---------------------|--------------------------|---------------------------|-----------|
| | | <p>prior to discharge to the pipeline to the Mill by approved sample collection methods.</p> <p>c. The first tri-annual period covers January 1 through April 30. The second tri-annual period covers May 1 to August 31. The third tri-annual period covers September 1 through December 31.</p> <p>d. Analyses shall be performed for the following landfill gas constituents in accordance with the referenced methods or other approved DES methods:</p> <ol style="list-style-type: none"> 1) methane, carbon dioxide, nitrogen, oxygen [40 CFR 60, Appendix A, Method 3C]; 2) total reduced sulfur (TRS) [ASTM 5504]; and | | | | |
| | | <ol style="list-style-type: none"> 3) total NMOC [40 CFR 60, Appendix A, Method 25C]. | Every 5 years | EU01 | RSA 125-C:6, XI & TP-0108 | Yes |
| 7 | Collection Efficiency | <p><u>Collection System Standard and Enhanced Operating Procedures</u></p> <p>Hydrogen sulfide emissions from the landfill shall be estimated tri-annually utilizing the following operational data:</p> <ol style="list-style-type: none"> a. Average H₂S concentration in untreated LFG at the main header, based on tri-annual analytical testing required in Table 6, Item 6d; b. Average LFG recovery rate, as measured at the flow meters required in Table 6, Item 3; c. LFG generation rate determined by the LFG recovery rate divided by 75% collection efficiency. <p>If potential H₂S emissions from the landfill are estimated at above 4.5 lbs/hr at 75% collection efficiency then enhanced collection system operating procedures contained in the Monitoring Plan required in Table 6, Item 2 shall be implemented.</p> | Tri-annually | EU01 | RSA 125-C:6, XI & TP-0108 | Yes |
| 8 | Flame Presence | <p><u>Flare Flame Monitoring</u></p> <p>In order to demonstrate compliance with Table 4, Item 2.b, the landfill gas utility flare (EU02) shall be equipped with instrumentation to monitor flame presence. The instrumentation shall be a heat sensing device, such as an ultraviolet beam sensor or</p> | Continuous | EU02 | RSA 125-C:6, XI & TP-0108 | Yes |

Table 6 - Monitoring/Testing Requirements

| Item # | Parameter | Method of Compliance | Frequency of Method | Applicable Emission Unit | Regulatory Citation | Compliant |
|--|---------------------------------|--|--|--------------------------|--|----------------|
| | | thermocouple, at the pilot light or the flame itself to indicate the continuous presence of a flame. The flame detection equipment shall operate continuously and shall signal an alarm whenever a flameout occurs. | | | | |
| 9 | Hours of Operation | The emergency generators (EU03 & EU04) shall be equipped with a non-resettable hour meter. | Continuous | EU03 & EU04 | TP-0108 | Yes |
| 10 | Sulfur Content of Liquid Fuels | Conduct testing in accordance with appropriate ASTM test methods or retain delivery tickets in accordance with Table 7, Item 7 in order to demonstrate compliance with the sulfur content limitation provisions specified in this permit for liquid fuels. | For each delivery of fuel oil/diesel to the facility | Facility Wide | Env-A 806.02 & Env-A 806.05 (Effective 10-31-2010) | Yes |
| Finding: Mt. Carberry retains delivery slips. | | | | | | |
| 11 | Sulfur Content of Gaseous Fuels | Conduct testing to determine the sulfur content in grains of sulfur per 100 cubic feet, of gaseous fuels. | Upon written request by EPA or DES | Facility Wide | Env-A 806.03 (effective 10-31-2010) | Not Applicable |
| Finding: During the inspection period, EPA or DES has not requested this testing. | | | | | | |
| 12 | Opacity Measurements | <u>Testing for Opacity from Stationary Sources</u> Opacity measurements shall be conducted following the procedure set forth in 40 CFR 60, Appendix A, Method 9, <i>Visual Determination of the Opacity of Emissions from Stationary Sources</i> or other Division approved method. | Upon request by DES/EPA | Facility Wide | Env-A 807.02 (Effective 10-31-2010) & TP-0108 | Not Applicable |
| Finding: During the inspection period, EPA or DES has not requested these measurements. | | | | | | |

VII. Compliance with Recordkeeping Requirements

Table 7 below, taken from Permit TV-0057 and the Application for Minor Permit Modification, lists the recordkeeping requirements for the facility, and any deficiencies noted during the evaluation.

| Table 7 - Applicable Recordkeeping Requirements | | | | | |
|--|--|------------------------------------|---------------------------------|----------------------------|------------------|
| Item # | Applicable Recordkeeping Requirement | Records Retention/Frequency | Applicable Emission Unit | Regulatory Citation | Compliant |
| 1 | <u>Record Retention and Availability</u> The Owner or Operator shall retain records of all required monitoring data, recordkeeping and reporting requirements, stack testing results and support information for a period of at least 5 years from the date of origination. | Retain for a minimum of 5 years | Facility Wide | 40 CFR 70.6(a)(3)(ii)(B) | Yes |
| 2 | <u>Monitoring Recordkeeping Requirements</u> The Permittee shall maintain records of monitoring requirements as required by the Monitoring Plan and as specified in Table 6 of this Permit including: a. Summary of maintenance, calibration, and repair records of the LFG flow, temperature and pressure monitoring devices; b. Summary of actual LFG collected as measured by the devices required in Table 6, Item 3; c. The date and test results for all samples collected and analyzed pursuant to the testing of landfill gas composition as described in Table 6, Items 6a, 6b and 6d; d. Summary of maintenance and repair records of the LFG flare (EU02) and the SulfaTreat Sulfur Removal System (PCE01); e. Date and hours of operation of the SulfaTreat Sulfur Removal System; f. Results of most recent NMOC Tier 2 testing conducted in accordance with §60.754(a)(3) pursuant to Table 6, Item 5; g. The input data, calculations, and LandGem outputs used to predict future landfill gas generation as well as gas collection rate calculations used to assess future landfill gas control capacity needs identified in Table 6, Item 4; h. Field data and corrective actions for collection system well balancing; i. Enhanced monitoring conducted in accordance with the Monitoring Plan; j. Any changes to the Monitoring Plan; and k. The manufacturers' design specifications, operating manuals and recommended maintenance schedules for the air pollution control equipment. | Maintain on a continuous basis | Facility-wide | 40 CFR 70.6(a)(3)(iii)(A) | Yes |

Table 7 - Applicable Recordkeeping Requirements

| Item # | Applicable Recordkeeping Requirement | Records Retention/Frequency | Applicable Emission Unit | Regulatory Citation | Compliant |
|--------|---|---|--------------------------|--|-----------|
| 3 | <p><u>Regulated Toxic Air Pollutants</u></p> <p>Maintain records documenting compliance with Env-A 1400.</p> <p>Compliance was demonstrated at the time of permit issuance as described in the Division's Application Review Summary for application #12-0102. The source must update the compliance demonstration using one of the methods provided in Env-A 1405 if:</p> <ol style="list-style-type: none"> There is a revision to the list of RTAPs lowering the AAL for any RTAP emitted from the Facility; The amount of any RTAP emitted is greater than the amount that was evaluated in the Application Review Summary (e.g., concentration of RTAP in LFG has increased); An RTAP that was not evaluated in the Application Review Summary will be emitted (e.g., a new RTAP has been identified in the LFG); or Stack conditions (e.g. air flow rate) change. | Update prior to process changes and within 90 days of each revision of Env-A 1400 | Facility-wide | Env-A 902.01 (Effective 4-21-2007) | Yes |
| 4 | <p><u>NSPS Recordkeeping Requirements for MSW Landfills</u></p> <p>The Owner or Operator shall maintain records of the NMOC emission rate calculations identified in Table 6, Item 5.</p> <p>In addition, the Owner or Operator of an MSW landfill subject to the provisions of §60.752(b) shall keep for at least 5 years up-to-date, readily accessible, on-site records of the design capacity report which triggered §60.752(b), the current amount of solid waste in-place, and the year-by-year waste acceptance rate. Off-site records may be maintained if they are retrievable within 4 hours. Either paper copy or electronic formats are acceptable.</p> | Annually except as provided in 40 CFR 60.757(b)(1)(ii) | EU01 | 40 CFR 60.752(b) (Subpart WWW) | Yes |
| 5 | <p><u>Municipal Solid Waste Landfill Gas Recordkeeping Requirements</u></p> <p>The Owner or Operator of a combustion device (EU02) shall maintain monthly records, or records for an alternative period as approved by the department pursuant to Env-A 912, of fuel characteristics and use, including the following information:</p> <ul style="list-style-type: none"> Consumption; Sulfur content as ppmv; and BTU content per cubic foot of landfill gas. | Monthly | EU02 & EU06 | Env-A 903.03(a)(5) (Effective 4-21-2007) | Yes |

Table 7 - Applicable Recordkeeping Requirements

| Item # | Applicable Recordkeeping Requirement | Records Retention/ Frequency | Applicable Emission Unit | Regulatory Citation | Compliant |
|---|--|---|--------------------------|--|-----------|
| 6 | <p><u>Additional Recordkeeping for Flare Operation</u></p> <p>The Owner or Operator shall keep a record of all periods during which the flare is not operating, including times when LFG is routed to the LFGE Project, scheduled or unscheduled periods for service and unscheduled down time caused by flameout or other malfunction. The record shall include the reason for each outage, initial date and time of each outage, and the date and time that flare operation is restored and the corrective action(s) taken to restore flare operation.</p> | Continuous | EU02 | 40 CFR 70.6(a)(3)(iii)(A) & TP-0108 | Yes |
| 7 | <p><u>Liquid Fuel Oil Recordkeeping Requirements</u></p> <p>In lieu of sulfur testing pursuant to Table 6, Item 10, the Owner or Operator may maintain fuel delivery tickets that contain a written statement from the fuel supplier that the sulfur content of the fuel as delivered does not exceed state or federal standards for that fuel.</p> | Whenever there is a change in fuel supplier but at least annually | EU03 & EU04 | Env-A 806.05 (Effective date 10-31-2010) | Yes |
| Finding: Mt. Carberry retains delivery slips. | | | | | |
| 8 | <p><u>Gaseous Fuel Recordkeeping Requirements</u></p> <p>Maintain <u>one</u> of the following:</p> <ol style="list-style-type: none"> Sulfur content as percent sulfur by weight or in grains per 100 cubic feet of fuel; Documentation that the fuel source is from a utility pipeline; or Documentation that the fuel meets state sulfur limits. | Whenever there is a change in propane fuel supplier but at least annually | EU05 | Env-A 903.03 | Yes |
| Finding: Mount Carberry has documentation showing the sulfur content of the propane meets the sulfur limit. The propane does not come from a utility pipeline. | | | | | |
| 9 | <p><u>General Recordkeeping Requirements for Combustion Devices</u></p> <p>Maintain the following records of fuel characteristics and utilization for the fuel used in the emergency generators:</p> <ol style="list-style-type: none"> Type (e.g. diesel or propane fuel) and amount of fuel burned in each device; Hours of operation of each emergency generator. | Monthly | EU03, EU04 & EU05 | Env-A 903.03 | Yes |

Table 7 - Applicable Recordkeeping Requirements

| Item # | Applicable Recordkeeping Requirement | Records Retention/Frequency | Applicable Emission Unit | Regulatory Citation | Compliant | | | | | | | | |
|---|---|-----------------------------|-----------------------------------|---|--|--------------------|--|----------------------------|--|---------|---------------|-------------------------------------|-----|
| 10 | <p><u>Additional Recordkeeping Requirements: Facility-wide emission limitations</u> Maintain a 12-month running total of facility-wide emissions of SO₂, which shall include emissions from insignificant activities, for the purpose of demonstrating that the total emissions of these pollutants are below the PSD threshold for this pollutant of 250 tpy. The following landfill gas concentrations measured in accordance with Table 6, Item 6.d. shall be used when calculating SO₂ emissions:</p> <table border="1"> <thead> <tr> <th>Time Period</th> <th>Landfill gas concentration to use</th> </tr> </thead> <tbody> <tr> <td>January 1 to April 30</td> <td>1st tri-annual LFG test result</td> </tr> <tr> <td>May 1 to August 31</td> <td>2nd tri-annual LFG test result</td> </tr> <tr> <td>September 1 to December 31</td> <td>3rd tri-annual LFG test result</td> </tr> </tbody> </table> | Time Period | Landfill gas concentration to use | January 1 to April 30 | 1 st tri-annual LFG test result | May 1 to August 31 | 2 nd tri-annual LFG test result | September 1 to December 31 | 3 rd tri-annual LFG test result | Monthly | Facility Wide | 40 CFR 70.6(a)(3)(iii)(A) & TP-0108 | Yes |
| Time Period | Landfill gas concentration to use | | | | | | | | | | | | |
| January 1 to April 30 | 1 st tri-annual LFG test result | | | | | | | | | | | | |
| May 1 to August 31 | 2 nd tri-annual LFG test result | | | | | | | | | | | | |
| September 1 to December 31 | 3 rd tri-annual LFG test result | | | | | | | | | | | | |
| 11 | <p><u>General NO_x Recordkeeping Requirements</u> If the actual annual NO_x emissions from all permitted devices located at the Facility are greater than or equal to 10 tpy, then record the following information:</p> <ol style="list-style-type: none"> Identification of each fuel burning device; Operating schedule during the high ozone season (June 1 through August 31) for each fuel burning device identified in a) above, including: <ol style="list-style-type: none"> Typical hours of operation per day; Typical days of operation per calendar month; Number of weeks of operation; Type and amount of each fuel burned; Heat input rate in MMBtu/hr; Actual NO_x emissions for the calendar year and a typical high ozone day during that calendar year; and Emission factors and the origin of the emission factors used to calculate the NO_x emissions. | Maintain Up-to-Date Data | Facility Wide | Env-A 905.02 (Effective 4-21-2007)(Formerly Env-A 901.08) & TP-0108 | Not Applicable | | | | | | | | |
| Finding: Actual NO_x emissions were less than 10 tons per year during the inspection period. | | | | | | | | | | | | | |
| 12 | <p><u>Recordkeeping of Emissions from Insignificant Activity</u> Maintain records of actual emissions for each significant and insignificant activity for determination of emission based fees.</p> | Annually | Facility wide | Env-A 903.01 | Not Applicable | | | | | | | | |
| Finding: There are no insignificant activities at this facility. | | | | | | | | | | | | | |

Table 7 - Applicable Recordkeeping Requirements

| Item # | Applicable Recordkeeping Requirement | Records Retention/ Frequency | Applicable Emission Unit | Regulatory Citation | Compliant |
|--------|---|---------------------------------|--------------------------|---|-----------|
| 13 | <p><u>Additional Recordkeeping to Demonstrate Compliance with NSPS Subpart IIII</u></p> <p>Maintain the following records for EU03 & EU04:</p> <ul style="list-style-type: none"> a. Documentation from the engine manufacturer(s) certifying that the engines comply with the applicable emissions standards stated in 40 CFR 60, Subpart IIII; b. Keep records of the hours of operation of the engines in emergency and non-emergency service that are recorded through the non-resettable hour meter. Record the time of operation of the engines and the reason the engines were in operation during that time; and c. Maintain a current copy of the operation and maintenance (O&M) manual for the engine and any associated control devices. | Maintain Up-to-Date Data | EU03 & EU04 | Env-A 906 & TP-0108 | Yes |
| 14 | <p><u>NESHAP Subpart ZZZZ Recordkeeping Requirements</u></p> <ul style="list-style-type: none"> a. The Owner or Operator shall keep records of the hours of operation of the engine (EU05) that is recorded through the non-resettable hour meter. b. The Owner or Operator must document how many hours are spent for emergency operation; including what classified the operation as emergency (i.e. loss of power) and how many hours are spent for non-emergency operation (i.e. maintenance & testing hours). c. The Owner or Operator must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that you operated and maintained the stationary RICE according to your own maintenance plan. d. The owner or operator must maintain a current copy of the O&M manual for the engine and its associated control devices. | Maintain Up-to-Date Data | EU05 | 40 CFR 63.6655 Subpart ZZZZ & Env-A 906 | Yes |
| 15 | <p><u>Recordkeeping for Permit Deviations</u></p> <p>Recordkeeping of deviations from Permit requirements shall be conducted in accordance with Section XXVIII of this Permit.</p> | Maintain Up-to-date Data | Facility Wide | Env-A 911 (Effective date 4-21-2007) | Yes |
| 16 | <p><u>Records of Asbestos-containing Material Locations</u></p> <p>The Permittee shall conduct the following:</p> <ul style="list-style-type: none"> a. Maintain, until closure, records of the location, depth and area, and quantity in cubic meters (cubic yards) of asbestos-containing waste material within the disposal site on a map or | Until closure of disposal site | EU01 | 40 CFR 61.154 (f) - (j) | Yes |

| Table 7 - Applicable Recordkeeping Requirements | | | | | |
|--|--|------------------------------------|---------------------------------|----------------------------|------------------|
| Item # | Applicable Recordkeeping Requirement | Records Retention/Frequency | Applicable Emission Unit | Regulatory Citation | Compliant |
| | diagram of the disposal area. b. Upon closure, comply with all the provisions applicable to inactive waste sites (40 CFR 60.151). c. Submit to the Administrator, upon closure of the facility, a copy of records of asbestos waste disposal locations and quantities. d. Furnish upon request and make available during normal business hours, all records required under 40 CFR 61.154. e. Notify the Administrator in writing at least 45 days prior to excavating or otherwise disturbing any asbestos-containing waste material that has been deposited at a waste disposal site and is covered. The notice shall include the following: <ol style="list-style-type: none"> 1) Scheduled starting and completion dates. 2) The reason for disturbing the wastes. 3) Procedures to be used to control emissions during the excavation, storage, transport, and ultimate disposal of the excavated asbestos-containing waste material, and 4) Location of any temporary storage site and the final disposal site. | | | | |

VIII. Compliance with Reporting Requirements

Table 8 below, taken from Permit TV-0057, lists the reporting requirements for the facility, and any deficiencies noted during the evaluation.

| Table 8 - Applicable Reporting Requirements | | | | | |
|--|---|---------------------------------|---------------------------------|----------------------------|------------------|
| Item # | Reporting Requirements | Frequency of Reporting | Applicable Emission Unit | Regulatory Citation | Compliant |
| 1 | Any report submitted to the DES and/or EPA shall include the certification of accuracy statement outlined in Section XXI.B. of this Permit and shall be signed by the responsible official. | As specified in Section XXI. B. | Facility Wide | 40 CFR 70.6(c)(1) | Yes |

Table 8 - Applicable Reporting Requirements

| Item # | Reporting Requirements | Frequency of Reporting | Applicable Emission Unit | Regulatory Citation | Compliant |
|---|--|---|--------------------------|-----------------------------------|-----------|
| 2 | <p><u>Annual Emissions Report</u> The Owner or Operator shall submit to the Department an annual emissions report which shall include the following information:</p> <ul style="list-style-type: none"> a. For EU01 and EU02, the actual calendar year emissions of CO, NO_x, SO₂, TSP, VOCs, HAPs, and RTAPs; (Note: VOCs, HAPs, and RTAPs shall be listed by individual CAS number and chemical name.) b. For EU03, EU04 and EU05, the actual calendar year emissions of CO, NO_x, SO₂, TSP and VOCs; c. The methods used in calculating such emissions in accordance with Env-A 705.02, <i>Determination of Actual Emissions for Use in Calculating Emission-Based Fees</i>; and d. All information recorded pursuant to Table 7, Items 2b, 2c, and 2f. | Annually (Received by DES no later than April 15 th of the following year) | Facility Wide | Env-A 907.01 | Yes |
| 3 | <p><u>Annual Compliance Certification</u> Annual compliance certification shall be submitted in accordance with Section XXI.A. of this Permit.</p> | Annually (Received by DES no later than April 15 th of the following year) | Facility wide | 40 CFR 70.6(c)(1) | Yes |
| 4 | <p><u>Semi-Annual Permit Deviation and Monitoring Report</u> The Owner or Operator shall submit a semi-annual permit deviation and monitoring report, which contains:</p> <ul style="list-style-type: none"> a) Summaries of all monitoring and testing requirements contained in this permit; and b) A summary of all permit deviations and excursions that have occurred during the reporting period. | Semi-annually (Received by DES no later than July 31 st and January 31 st of each calendar year) | Facility Wide | 40 CFR 70.6(a)(3)(iii)(A) | No |
| <p>Findings: <i>The Semi-Annual Permit Deviation and Monitoring Reports are due at DES on January 31 and July 31. Several of the reports have been received by DES late. The 2009 second half report was received at DES on February 1, 2010. The 2010 reports were received at DES on August 2, 2010 and February 1, 2011. The 2011 second half report was received at DES on February 1, 2012.</i></p> | | | | | |
| 5 | <p><u>NSPS Reporting Requirements for MSW Landfills</u></p> <ul style="list-style-type: none"> a. Except as provided in 40 CFR 60.757(b)(1)(ii), the Owner or Operator shall submit an NMOC emission rate | Annually (Received by DES no later than April 15 th of the following | EU01 | 40 CFR 60.752(b) (Subpart WWW) | Yes |

Table 8 - Applicable Reporting Requirements

| Item # | Reporting Requirements | Frequency of Reporting | Applicable Emission Unit | Regulatory Citation | Compliant |
|--------|--|--|--------------------------|---------------------|-----------|
| | <p>report to the Department annually. The Department may request such additional information as may be necessary to verify the reported NMOC emission rate.</p> <ol style="list-style-type: none"> 1) The NMOC emission rate report shall contain an annual or 5-year estimate of the NMOC emission rate calculated using the formula and procedures provided in 40 CFR 60.754(a). 2) If the estimated NMOC emission rate as reported in the annual report to the Department is less than 50 Mg per year in each of the next 5 consecutive years, the Owner or Operator may elect to submit an estimate of the NMOC emission rate for the next 5-year period in lieu of the annual report. This estimate shall include the current amount of solid waste-in-place and the estimated waste acceptance rate for each year of the 5 years for which an NMOC emission rate is estimated. All data and calculations upon which this estimate is based shall be provided to the Department. This estimate shall be revised at least once every 5 years. If the actual waste acceptance rate exceeds the estimated waste acceptance rate in any year reported in the 5-year estimate, a revised 5-year estimate shall be submitted to the Department. The revised estimate shall cover the 5-year period beginning with the year in which the actual waste acceptance rate exceeded the estimated waste acceptance rate. 3) The NMOC emission rate report shall include all the data, calculations, sample reports, and measurements used to estimate the annual or 5-year emissions. 4) The Owner or Operator is exempted from the NMOC reporting requirements described | <p>year) except as provided in 40 CFR 60.757(b)(1) (ii).</p> | | | |

Table 8 - Applicable Reporting Requirements

| Item # | Reporting Requirements | Frequency of Reporting | Applicable Emission Unit | Regulatory Citation | Compliant |
|--------|---|------------------------|--------------------------|---------------------|-----------|
| | <p>above, after the installation of a collection and control system in compliance with 40 CFR 60.752(b)(2), during such time as the collection and control system is in operation and in compliance with 40 CFR 60.753 and 60.755.</p> <p>b. Within 1 year of the first report in which the NMOC emission rate equals or exceeds 50 Mg per year, any Owner or Operator subject to the provisions of 40 CFR 60.752(b)(2)(i) shall submit a collection and control system design plan to the Department, except as follows:</p> <ol style="list-style-type: none"> 1) If the Owner or Operator elects to recalculate the NMOC emission rate after Tier 2 NMOC sampling and analysis as provided in 40 CFR 60.754(a)(3) and the resulting rate is less than 50 Mg per year, annual periodic reporting shall be resumed, using the Tier 2 determined site-specific NMOC concentration, until the calculated emission rate is equal to or greater than 50 Mg per year or the landfill is closed. The revised NMOC emission rate report, with the recalculated emission rate based on NMOC sampling and analysis, shall be submitted within 180 days of the first calculated exceedance of 50 Mg per year. 2) If the Owner or Operator elects to recalculate the NMOC emission rate after determining a site-specific methane generation rate constant (k), as provided in Tier 3 in 40 CFR 60.754(a)(4), and the resulting NMOC emission rate is less than 50 Mg/yr, annual periodic reporting shall be resumed. The resulting site-specific methane generation rate constant (k) shall be used in the emission rate calculation until such time as the emission rate calculation results in an exceedance. The revised NMOC emission rate report based on the | | | | |

Table 8 - Applicable Reporting Requirements

| Item # | Reporting Requirements | Frequency of Reporting | Applicable Emission Unit | Regulatory Citation | Compliant |
|--|---|---|--|---|-----------------------|
| | provisions of 40 CFR 60.754(a)(4) and the resulting site-specific methane generation rate constant (k) shall be submitted to the Department within 1 year of the first calculated emission rate exceeding 50 Mg per year. | | | | |
| Finding: In the NMOC estimate report done in 2012, the predicted NMOC emissions were less than 50 Mg/yr. Therefore, the next report and estimate are due in 2016. | | | | | |
| 6 | <u>Landfill Closure Report</u> The Permittee shall submit a closure report to the US EPA and DES within 30 days of waste acceptance cessation. | Within 30 days of waste acceptance cessation | EU01 | 40 CFR 60.757 (d) | Not Applicable |
| Finding: Mt. Carberry is an active waste disposal site. | | | | | |
| 7 | <u>NO_x Emission Statements Reporting Requirements</u> If the actual annual NO _x emissions from all permitted devices located at the Facility are greater than or equal to 10 tpy, then include the following information with the annual emission report: a. A breakdown of NO _x emissions reported pursuant to Table 8, Item 2 by month; and b. All data recorded in accordance with Table 7, Item 11. | Annually (Received by DES no later than April 15 th of the following year) | Facility Wide | Env-A 909 (Effective 4-21-2007) & TP-0108 | Not Applicable |
| Finding: Actual NO_x emissions were less than 10 tons per year during the inspection period. | | | | | |
| 8 | <u>Payment of Emission-Based Fee</u> Annual reporting of emission based fees shall be conducted in accordance with Section XXIII of this Permit. | Annually (Received by DES no later than April 15 th of the following year) | Significant & Insignificant Activities | Env-A 705.04 | Yes |
| 9 | <u>Additional Reporting Requirements for Testing of Landfill Gas Composition</u> The Owner or Operator shall submit to the Department within 30 days after the information becomes available all analytical test results obtained pursuant to the periodic testing of landfill gas composition as described in Table 6, Items 6.b. and 6.d. | Tri-annually or every 5 years as set forth in Table 6, Item 6 | EU01 | Env-A 910.01 (Effective 4-21-2007) | Yes |

| Table 8 - Applicable Reporting Requirements | | | | | |
|--|---|---|---------------------------------|----------------------------|------------------|
| Item # | Reporting Requirements | Frequency of Reporting | Applicable Emission Unit | Regulatory Citation | Compliant |
| 10 | <p><u>Additional Reporting Requirements for Assessing Future Control Equipment Capacity Needs</u></p> <p>The Owner or Operator shall submit to the Department an Assessing Future Control Equipment Capacity Needs report containing the data identified in Table 7, Item 2g.</p> | Every 5 years (within 60 months of previous report) | EU01 | TP-0108 | Yes |

IX. Permit Deviation Reporting Requirements

Mt. Carberry is aware of the recordkeeping and reporting requirements for permit deviations. Since the time of the last inspection, there have been two deviations.

In its Semi-Annual Permit Deviation and Monitoring Report for the second half of 2013, Mt. Carberry reported that on September 3-4, 2013, landfill gas flow was not recorded due to a flow meter malfunction. The flow meter was replaced and proper operation was restored.

During the inspection, Mt. Carberry indicated that, on November 10-11, 2014, the computer that records the landfill gas flow to the paper mill malfunctioned. The computer was fixed and proper operation was restored. This deviation needs to be added to the next Semi-Annual Permit Deviation and Monitoring Report.

X. Other Findings

There are no other findings.

XI. Enforcement History and Status

During the inspection period, DES has had no enforcement actions against Mt. Carberry.

XII. Compliance Assistance, Recommendations and Corrective Actions

During the on-site inspection, no compliance assistance ensued that would lead to corrective actions completed at that time.

Based on the findings of this compliance evaluation, DES recommends the following actions to bring the facility into compliance with the identified deficiencies and future reporting requirements:

- a) Monitor for changes to Env-A 1400 and when there is a change update the air toxics compliance determination accordingly within 90 days of the change in Env-A 1400.
- b) Submit all future Semi-Annual Permit Deviation and Monitoring Reports to DES so that they are received at DES no later than January 31 and July 31 of each year.

| | |
|--------------------|---|
| Report Prepared By | Alan H. Moulton |
| Title | Compliance Assessment Engineer |
| Signed |  |