RIPUC Use Only	
Date Application Received:	__ __/__ __/__ __
Date Review Completed:	__ __/__ __/__ __
Date Commission Action:	__ __/__ __/__ __
Date Commission Approved:	__ __/__ __/__ __

GIS Certification #:

MSS12323

RENEWABLE ENERGY RESOURCES ELIGIBILITY FORM

The Standard Application Form
Required of all Applicants for Certification of Eligibility of Renewable Energy Resource
(Version 5 – January 5, 2007)

STATE OF RHODE ISLAND PUBLIC UTILITIES COMMISSION
Pursuant to the Renewable Energy Act
Section 39-26-1 et. seq. of the General Laws of Rhode Island

NOTICE:

When completing this Renewable Energy Resources Eligibility Form and any applicable Appendices, please refer to the State of Rhode Island and Providence Plantations Public Utilities Commission Rules and Regulations Governing the Implementation of a Renewable Energy Standard (RES Regulations, Effective Date: January 1, 2006), and the associated RES Certification Filing Methodology Guide. All applicable regulations, procedures and guidelines are available on the Commission's web site: www.ripuc.org/utilityinfo/res.html. Also, all filings must be in conformance with the Commission's Rules of Practice and Procedure, in particular, Rule 1.5, or its successor regulation, entitled "Formal Requirements as to Filings."

• Please complete the Renewable Energy Resources Eligibility Form and Appendices using a typewriter or black ink.

• Please submit one original and three copies of the completed Application Form, applicable Appendices and all supporting documentation to the Commission at the following address:

Rhode Island Public Utilities Commission
89 Jefferson Blvd
Warwick, RI 02888
Attn: Renewable Energy Resources Eligibility

In addition to the paper copies, electronic/email submittals are required under Commission regulations. Such electronic submittals should be sent to: Luly E. Massaro, Commission Clerk at lmassaro@puc.state.ri.us

• In addition to filing with the Commission, Applicants are required to send, electronically or electronically and in paper format, a copy of the completed Application including all attachments and supporting documentation, to the Division of Public Utilities and Carriers and to all interested parties. A list of interested parties can be obtained from the Commission's website at www.ripuc.org/utilityinfo/res.html.

• Keep a copy of the completed Application for your records.

• The Commission will notify the Authorized Representative if the Application is incomplete.

• Pursuant to Section 6.0 of the RES Regulations, the Commission shall provide a thirty (30) day period for public comment following posting of any administratively complete Application.

• Please note that all information submitted on or attached to the Application is considered to be a public record unless the Commission agrees to deem some portion of the application confidential after consideration under section 1.2(g) of the Commission's Rules of Practice and Procedure.

• In accordance with Section 6.2 of the RES Regulations, the Commission will provide prospective reviews for Applicants seeking a preliminary determination as to whether a facility would be eligible prior to the formal certification process described in Section 6.1 of the RES Regulations. Please note that space is provided on the Form for applicant to designate the type of review being requested.

• Questions related to this Renewable Energy Resources Eligibility Form should be submitted in writing, preferably via email and directed to: Luly E. Massaro, Commission Clerk at lmassaro@puc.state.ri.us

SECTION I: Identification Information

1.1 Name of Generation Unit (sufficient for full and unique identification): Washington Electric Cooperative Coventry Landfill Gas to Energy Project

1.2 Type of Certification being requested (check one):

√ Standard Certification ❑ Prospective Certification (Declaratory Judgment)

1.3 This Application includes: (Check all that apply)[1]

- ❑ APPENDIX A: Authorized Representative Certification for Individual Owner or Operator
- √ APPENDIX B: Authorized Representative Certification for Non-Corporate Entities Other Than Individuals
- ❑ APPENDIX C: Existing Renewable Energy Resources
- ❑ APPENDIX D: Special Provisions for Aggregators of Customer-sited or Off-grid Generation Facilities
- ❑ APPENDIX E: Special Provisions for a Generation Unit Located in a Control Area Adjacent to NEPOOL
- √ APPENDIX F: Fuel Source Plan for Eligible Biomass Fuels

1.4 Primary Contact Person name and title: Avram Patt, General Manager

1.5 Primary Contact Person address and contact information:
Address: Washington Electric Cooperative
PO Box 8
East Montpelier, VT 05651
Phone: 802-223-5245 Fax: 802-223-6780
Email: Avram.Patt@washingtonelectric.coop

1.6 Backup Contact Person name and title: Stan Faryniarz, Managing Consultant

1.7 Backup Contact Person address and contact information:
Address: La Capra Associates
20 Winthrop Square
Boston, MA 02110
Phone: 617-557-9100 Fax: 617-951-0528
Email: sfaryniarz@lacapra.com

[1] Please note that all Applicants are required to complete the Renewable Energy Resources Eligibility Standard Application Form and all of the Appendices that apply to the Generation Unit or Owner or Operator that is the subject of this Form. Please omit Appendices that do not apply.

1.8 Name and Title of Authorized Representative (*i.e.*, the individual responsible for certifying the accuracy of all information contained in this form and associated appendices, and whose signature will appear on the application): Avram Patt, General Manager

Appendix A or B (as appropriate) completed and attached? √ Yes ❑ No ❑ N/A

1.9 Authorized Representative address and contact information:
Address: Washington Electric Cooperative
PO Box 8
East Montpelier, VT 05651
Phone: 802-223-5245 Fax: 802-223-6780
Email: Avram.Patt@washingtonelectric.coop

1.10 Owner name and title: Washington Electric Cooperative

1.11 Owner address and contact information:
Address: Washington Electric Cooperative
PO Box 8
East Montpelier, VT 05651
Phone: 802-223-5245 Fax: 802-223-6780
Email: Avram.Patt@washingtonelectric.coop

1.12 Owner business organization type (check one):
❑ Individual
❑ Partnership
√ Corporation--Non-Profit 501(c) (12) Electrical Cooperative
❑ Other:

1.13 Operator name and title: Coventry Clean Energy Corporation

1.14 Operator address and contact information:
Address: Coventry Clean Energy Corporation
PO Box 8
East Montpelier, VT 05651
Phone: 802-223-5245 Fax: 802-223-6780
Email: Avram.Patt@washingtonelectric.coop

1.15 Operator business organization type (check one):
❑ Individual
❑ Partnership
√ Corporation--Wholly Owned Subsidiary of WEC
❑ Other:

SECTION II: Generation Unit Information, Fuels, Energy Resources and Technologies

2.1 ISO-NE Generation Unit Asset Identification Number or NEPOOL GIS Identification Number (either or both as applicable): MSS12323

2.2 Generation Unit Nameplate Capacity: 1.6 MW

2.3 Maximum Demonstrated Capacity: 1.6 MW

2.4 Please indicate which of the following Eligible Renewable Energy Resources are used by the Generation Unit: (Check ALL that apply) – *per RES Regulations Section 5.0*

- ❑ Direct solar radiation
- ❑ The wind
- ❑ Movement of or the latent heat of the ocean
- ❑ The heat of the earth
- ❑ Small hydro facilities
- √ Biomass facilities using Eligible Biomass Fuels and maintaining compliance with all aspects of current air permits; Eligible Biomass Fuels may be co-fired with fossil fuels, provided that only the renewable energy fraction of production from multi-fuel facilities shall be considered eligible.
- ❑ Biomass facilities using unlisted biomass fuel
- ❑ Biomass facilities, multi-fueled or using fossil fuel co-firing
- ❑ Fuel cells using a renewable resource referenced in this section

2.5 If the box checked in Section 2.4 above is "Small hydro facilities", please certify that the facility's aggregate capacity does not exceed 30 MW. – *per RES Regulations Section 3.31*

❑ ← check this box to certify that the above statement is true

√ N/A or other (please explain) _____

_____

2.6 If the box checked in Section 2.4 above is "Small hydro facilities", please certify that the facility does not involve any new impoundment or diversion of water with an average salinity of twenty (20) parts per thousand or less. – *per RES Regulations Section 3.31*

❑ ← check this box to certify that the above statement is true

√ N/A or other (please explain) _____

_____

2.7 If you checked one of the Biomass facilities boxes in Section 2.1 above, please respond to the following:

A. Please specify the fuel or fuels used or to be used in the Unit: landfill methane gas

B. Please complete and attach Appendix F, Eligible Biomass Fuel Source Plan.

Appendix F completed and attached? √ Yes ❑ No ❑ N/A

2.8 Has the Generation Unit been certified as a Renewable Energy Resource for eligibility in another state's renewable portfolio standard?

√ Yes ❑ No If yes, please attach a copy of that state's certifying order.

Copy of State's certifying order attached? √ Yes ❑ No ❑ N/A

SECTION III: Commercial Operation Date

Please provide documentation to support all claims and responses to the following questions:

3.1 Date Generation Unit first entered Commercial Operation: 01/12/07

3.2 Is there an Existing Renewable Energy Resource located at the site of Generation Unit?

❑ Yes
√ No

3.3 If the date entered in response to question 3.1 is earlier than December 31, 1997 or if you checked "Yes" in response to question 3.2 above, please complete Appendix C.

Appendix C completed and attached? ❑ Yes √ No ❑ N/A

3.4 Was all or any part of the Generation Unit used on or before December 31, 1997 to generate electricity at any other site?

❑ Yes
√ No

3.5 If you checked "Yes" to question 3.4 above, please specify the power production equipment used and the address where such power production equipment produced electricity (attach more detail if the space provided is not sufficient):

_____

_____

_____

SECTION IV: Metering

4.1 Please indicate how the Generation Unit's electrical energy output is verified (check all that apply):

❑ ISO-NE Market Settlement System
√ Self-reported to the NEPOOL GIS Administrator
❑ Other (please specify below and see Appendix D: Eligibility for Aggregations):

_____

Appendix D completed and attached? ❑ Yes ❑ No √ N/A

SECTION V: Location

5.1 Please check one of the following that apply to the Generation Unit:

- √ Grid Connected Generation
- ❑ Off-Grid Generation (not connected to a utility transmission or distribution system)
- ❑ Customer Sited Generation (interconnected on the end-use customer side of the retail electricity meter in such a manner that it displaces all or part of the metered consumption of the end-use customer)

5.2 Generation Unit address: 21 Landfill Lane, Coventry, VT 05855

5.3 Please provide the Generation Unit's geographic location information:

A. Universal Transverse Mercator Coordinates: Zone 18T, 719183m E, 4976796m N

B. Longitude/Latitude: 72-13-24 /44-54-39 (NAD 83 datum)

5.4 The Generation Unit located: (please check the appropriate box)

- √ In the NEPOOL control area
- ❑ In a control area adjacent to the NEPOOL control area
- ❑ In a control area other than NEPOOL which is not adjacent to the NEPOOL control area ← *If you checked this box, then the generator does not qualify for the RI RES – therefore, please do not complete/submit this form.*

5.5 If you checked "In a control area adjacent to the NEPOOL control area" in Section 5.4 above, please complete Appendix E.

Appendix E completed and attached? ❑ Yes ❑ No √ N/A

SECTION VI: Certification

6.1 Please attach documentation, using one of the applicable forms below, demonstrating the authority of the Authorized Representative indicated in Section 1.8 to certify and submit this Application.

Corporations

If the Owner or Operator is a corporation, the Authorized Representative shall provide **either**:

(a) Evidence of a board of directors vote granting authority to the Authorized Representative to execute the Renewable Energy Resources Eligibility Form, **or**

(b) A certification from the Corporate Clerk or Secretary of the Corporation that the Authorized Representative is authorized to execute the Renewable Energy Resources Eligibility Form or is otherwise authorized to legally bind the corporation in like matters.

Evidence of Board Vote provided? ❑ Yes ❑ No √ N/A

Corporate Certification provided? √ Yes ❑ No ❑ N/A

Individuals

If the Owner or Operator is an individual, that individual shall complete and attach APPENDIX A, or a similar form of certification from the Owner or Operator, duly notarized, that certifies that the Authorized Representative has authority to execute the Renewable Energy Resources Eligibility Form.

Appendix A completed and attached? ❑ Yes ❑ No √ N/A

Non-Corporate Entities

(Proprietorships, Partnerships, Cooperatives, etc.) If the Owner or Operator is not an individual or a corporation, it shall complete and attach APPENDIX B or execute a resolution indicating that the Authorized Representative named in Section 1.8 has authority to execute the Renewable Energy Resources Eligibility Form or to otherwise legally bind the non-corporate entity in like matters.

Appendix B completed and attached? ❑ Yes ❑ No √ N/A

6.2 Authorized Representative Certification and Signature:

I hereby certify, under pains and penalties of perjury, that I have personally examined and am familiar with the information submitted herein and based upon my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties, both civil and criminal, for submitting false information, including possible fines and punishment. My signature below certifies all information submitted on this Renewable Energy Resources Eligibility Form. The Renewable Energy Resources Eligibility Form includes the Standard Application Form and all required Appendices and attachments. I acknowledge that the Generation Unit is obligated to and will notify the Commission promptly in the event of a change in a generator's eligibility status (including, without limitation, the status of the air permits) and that when and if, in the Commission's opinion, after due consideration, there is a material change in the characteristics of a Generation Unit or its fuel stream that could alter its eligibility, such Generation Unit must be re-certified in accordance with Section 9.0 of the RES Regulations. I further acknowledge that the Generation Unit is obligated to and will file such quarterly or other reports as required by the Regulations and the Commission in its certification order. I understand that the Generation Unit will be immediately de-certified if it fails to file such reports.

Signature of Authorized Representative:

SIGNATURE: _____ DATE: 9/12/07

_____

General Manager

GIS Certification #:

MSS10801

APPENDIX B
(Required When Owner or Operator is a Non-Corporate Entity Other Than An Individual)

STATE OF RHODE ISLAND
PUBLIC UTILITIES COMMISION

RENEWABLE ENERGY RESOURCES ELIGIBILITY FORM
Pursuant to the Renewable Energy Act
Section 39-26-1 et. seq. of the General Laws of Rhode Island

RESOLUTION OF AUTHORIZATION

Resolved: that Avram Patt, named in Section 1.8 of the Renewable Energy Resources Eligibility Form as Authorized Representative, is authorized to execute the Application on the behalf of Washington Electric Cooperative, the Owner or Operator of the Generation Unit named in section 1.1 of the Application.

SIGNATURE: _____ DATE: 9/12/07

State: Vermont

County: Washington

I, Deborah Brown, as a notary public, certify that I witnessed the signature of the above named Avram Patt, and that said person stated that he is authorized to execute this resolution, and the individual verified his identity to me, on this date: September 12, 2007.

SIGNATURE: Deborah Brown DATE: 9/12/07

My commission expires on: 2/10/12 NOTARY SEAL:

Washington Electric Cooperative, Inc.

P.O. Box 8, 75 Vermont Route 14N
East Montpelier, Vermont 05651

Telephone: 802-223-5245; *Fax*: 802-223-6780
www.washingtonelectric.coop

Resolution to Qualify Coventry Landfill Gas Generating Facility as a Renewable Source in Rhode Island

The Board of Directors of Washington Electric Cooperative, Inc. hereby authorizes its General Manager to sign an Eligibility Application and any other necessary documents in order to qualify the Coventry Landfill Gas Generating Facility as a renewable resource in Rhode Island.

CERTIFICATION

I, Marion Milne, Secretary of Washington Electric Cooperative do hereby certify that the above is a true and correct copy of a Resolution from the minutes of a meeting of the Board of Directors of Washington Electric Cooperative held on the 29th day of August, 2007, at which meeting a quorum was present.

Marion Milne
Marion Milne, Secretary

(SEAL)

Original copy, with corporate seal, enclosed with orginal copy of the MSS10801 unit application for RI Renewable Energy Eligibility.

GIS Certification #:
MSS12323

APPENDIX F
Eligible Biomass Fuel Source Plan
(Required of all Applicants Proposing to Use An Eligible Biomass Fuel)

STATE OF RHODE ISLAND PUBLIC UTILITIES COMMISION
Part of Application for Certificate of Eligibility
RENEWABLE ENERGY RESOURCES ELIGIBILITY FORM
Pursuant to the Renewable Energy Act
Section 39-26-1 et. sq. of the General Laws of Rhode Island

Note to Applicants: Please refer to the RES Certification Filing Methodology Guide posted on the Commission's web site (www.ripuc.org/utilityinfo/res.html) for information, templates and suggestions regarding the types and levels of detail appropriate for responses to specific application items requested below. Also, please see Section 6.9 of the RES Regulations for additional details on specific

The phrase "Eligible Biomass Fuel" (per RES Regulations Section 3.6) means fuel sources including brush, stumps, lumber ends and trimmings, wood pallets, bark, wood chips, shavings, slash, yard trimmings, site clearing waste, wood packaging, and other clean wood that is not mixed with other unsorted solid wastes[4]; agricultural waste, food and vegetative material; energy crops; landfill methane[5] or biogas[6], provided that such gas is collected and conveyed directly to the Generation Unit without use of facilities used as common carriers of natural gas; or neat bio-diesel and other neat liquid fuels that are derived from such fuel sources.

In determining if an Eligible Biomass Generation Unit shall be certified, the Commission will consider if the fuel source plan can reasonably be expected to ensure that only Eligible Biomass Fuels will be used, and in the case of co-firing ensure that only that proportion of generation attributable to an Eligible Biomass Fuel be eligible. Certification will not be granted to those Generation Units with fuel source plans the Commission deems inadequate for these purposes.

This Appendix must be attached to the front of Applicant's Fuel Source Plan required for Generating Units proposing to use an Eligible Biomass Fuel (per Section 6.9 of RES Regulations).

---

[4] Generation Units using wood sources other than those listed above may make application, as part of the required fuel source plan described in Section 6.9 of the RES Regulations, for the Commission to approve a particular wood source as "clean wood." The burden will be on the applicant to demonstrate that the wood source is at least as clean as those listed in the legislation. Wood sources containing resins, glues, laminates, paints, preservatives, or other treatments that would combust or off-gas, or mixed with any other material that would burn, melt, or create other residue aside from wood ash, will not be approved as clean wood.

[5] Landfill gas, which is an Eligible Biomass Fuel, means only that gas recovered from inside a landfill and resulting from the natural decomposition of waste, and that would otherwise be vented or flared as part of the landfill's normal operation if not used as a fuel source.

[6] Gas resulting from the anaerobic digestion of sewage or manure is considered to be a type of biogas, and therefore an Eligible Biomass Fuel that has been fully separated from the waste stream.

F.1 The attached Fuel Source Plan includes a detailed description of the type of Eligible Biomass Fuel to be used at the Generation Unit.

Detailed description attached? v Yes ❑ No ❑ N/A
Comments: _____

F.2 If the proposed fuel is "other clean wood," the Fuel Source Plan should include any further substantiation to demonstrate why the fuel source should be considered as clean as those clean wood sources listed in the legislation.

Further substantiation attached? ❑ Yes ❑ No v N/A
Comments: _____

F.3 In the case of co-firing with ineligible fuels, the Fuel Source Plan must include a description of (a) how such co-firing will occur; (b) how the relative amounts of Eligible Biomass Fuel and ineligible fuel will be measured; and (c) how the eligible portion of generation output will be calculated. Such calculations shall be based on the energy content of all of the proposed fuels used.

Description attached? ❑ Yes ❑ No v N/A
Comments: _____

F.4 The Fuel Source Plan must provide a description of what measures will be taken to ensure that only the Eligible Biomass Fuel are used, examples of which may include: standard operating protocols or procedures that will be implemented at the Generation Unit, contracts with fuel suppliers, testing or sampling regimes.

Description provided? v Yes ❑ No ❑ N/A
Comments: _____

F.5 Please include in the Fuel Source Plan an acknowledgement that the fuels stored at or brought to the Generation Unit will only be either Eligible Biomass Fuels or fossil fuels used for co-firing and that Biomass Fuels not deemed eligible will not be allowed at the premises of the certified Generation Unit. And please check the following box to certify that this statement is true.

❑ ← check this box to certify that the above statement is true
v N/A or other (please explain) _____

F.6 If the proposed fuel includes recycled wood waste, please submit documentation that such fuel meets the definition of Eligible Biomass Fuel and also meets material separation, storage, or handling standards acceptable to the Commission and furthermore consistent with the RES Regulations.

Documentation attached? ❑ Yes ❑ No v N/A

Comments: _____

_____

F.7 Please certify that you will file all reports and other information necessary to enable the Commission to verify the on-going eligibility of the renewable energy generators pursuant to Section 6.3 of the RES Regulations.

v ← check this box to certify that the above statement is true

❑ N/A or other (please explain) _____

_____

F.8 Please attach a copy of the Generation Unit's Valid Air Permit or equivalent authorization.

Valid Air Permit or equivalent attached? v Yes ❑ No ❑ N/A

Comments: _____

_____

F.9 Effective date of Valid Air Permit or equivalent authorization:

12/16/04

F.10 State or jurisdiction issuing Valid Air Permit or equivalent authorization: State of Vermont

August 13, 2007

Avram Patt
General Manager
Washington Electric Cooperative, Inc.
P.O. Box 8
East Montpelier, VT 05651

Attachment to Renewable Energy Resources Eligibility Application

Fuel Source Plan for Coventry Landfill Gas to Energy Project

The Coventry Landfill Gas to Energy Project is located at 21 Landfill Lane, Coventry, VT 05855, on the site of the Coventry Landfill. The sole fuel source for all four of the 1.6 MW Caterpillar generator sets is the methane gas produced by the anaerobic decomposition of waste at the landfill. The landfill gas emissions are collected and used to fuel the generators; were it not for the generation project they would be unproductively flared into the atmosphere.

The Coventry Landfill produces enough gas to consistently fuel the 6.4 MW of generating capacity. If problems were to develop with the gas collection system, the multiple generator set configuration of the facility allows for scaled-back electricity production. Combustion of the gas occurs as it is produced; there are no gas storage facilities at the Coventry site. Flaring is used to provide additional balancing of gas production and electricity production.

There is no connection to an external fuel source and therefore there is no ability for a non-eligible biomass fuel to be used as a fuel source.

The Coventry Landfill is owned by New England Waste Services of Vermont, Inc., a division of Casella, Inc. Washington Electric Cooperative, Inc. has a contract with the landfill to lease the landfill's gas, as well as land to accommodate the generators, for 33 years. This contract will expire on July 1, 2038.

COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF
ENERGY AND ENVIRONMENTAL AFFAIRS
DIVISION OF ENERGY RESOURCES
100 CAMBRIDGE ST., SUITE 1020
BOSTON, MA 02114
Internet: www.Mass.Gov/DOER
Email: Energy@State.MA.US

TELEPHONE
617-727-4732

FACSIMILE
617-727-0030
617-727-0093

July 11, 2007

Mr. Avram Patt
General Manager
Washington Electric Cooperative, Inc.
P. O. Box 8
East Montpelier, VT 05651

RE: Amended Statement of Qualification
Coventry Landfill Gas to Energy Facility [LG-1034-05]

Dear Mr. Patt,

On behalf of the Division of Energy Resources (the Division), I am pleased to inform you that your request to amend the existing Statement of Qualification (SQ) pursuant to the Massachusetts Renewable Energy Portfolio Standard (RPS) Regulations, 225 CMR 14.00, is hereby approved. The Division finds that the Generation Unit, as expanded, continues to meet the requirements for eligibility as a New Renewable Generation Unit pursuant to the RPS regulation at 225 CMR 14.05.

Accordingly, the SQ for the Coventry Landfill Gas to Energy Facility has been amended to reflect the addition of 1.6 MW in capacity and the new NEPOOL GIS number that was assigned to the addition.

Sincerely,

Robert Sydney
General Counsel

Encl: Statement of Qualification

COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENERGY & ENVIRONMENTAL AFFAIRS
DIVISION OF ENERGY RESOURCES

Statement of Qualification – Amended

Pursuant to the Renewable Energy Portfolio Standard 225 CMR 14.00

This Statement of Qualification, provided by the Massachusetts Division of Energy Resources, signifies that the Generation Unit identified below meets the requirements for eligibility as a New Renewable Generation Unit, pursuant to the Renewable Energy Portfolio Standard 225 CMR 14.05, as of the approval date of the Application for Statement of Qualification, this 18th day of February 2005, and as amended this 11th day of July 2007.

Name of Generation Unit:	**Coventry Landfill Gas to Energy Facility** Coventry, VT 6.4 MW
Authorized Representative's Name and Address:	Mr. Avram Patt General Manager Washington Electric Cooperative, Inc. P. O. Box 8 East Montpelier, VT 05651

ISO-NE Generation Unit Asset Identification Numbers or NEPOOL-GIS Identification Numbers:

MSS 10801 (4.8 MW) and MSS 12323 (1.6 MW)

This New Renewable Generation Unit is assigned a unique Massachusetts RPS Identification Number. Please include MA RPS ID #s on all correspondence with the Division.

MA RPS ID #: LG-1034-05

Pursuant to 225 CMR 14.06, the Owner or Operator of the New Renewable Generation Unit is responsible for notifying the Division of any change in eligibility status, and the Division may suspend or revoke this Statement of Qualification if the Owner or Operator of a New Renewable Generation Unit fails to comply with 225 CMR 14.00.

Date: 7-11-07

Philip Giudice
Commissioner
Division of Energy Resources

#AOP-03-044
DEC#SJ91-0001
Operating Permit Expiration Date: December 16, 2009

State of Vermont
Agency of Natural Resources
Department of Environmental Conservation

Air Pollution Control Division
Waterbury, Vermont

TITLE V
AIR POLLUTION CONTROL PERMIT
TO CONSTRUCT AND OPERATE

Date Permit Issued: December 16, 2004

Owner/Operator:	New England Waste Services of Vermont, Inc. 3 Pitkin Court Montpelier, Vermont 05602
Source:	Municipal Solid Waste Landfill Airport Road Coventry, Vermont

FINDINGS OF FACT

(A) FACILITY DESCRIPTION

New England Waste Services of Vermont, Inc. (also referred to herein as "Permittee") owns and operates a municipal solid waste (MSW) landfill off Airport Road in the town of Coventry, Vermont (also referred to herein as "Facility"). The landfill site consists of the original unlined landfill, referred to as Areas A & B, that operated from approximately 1970 until 1992 when it was closed and capped. In 1993 a new, lined landfill began operations near the original landfill and consists of Phases I, II and III. Phase III is anticipated to reach its full capacity in 2006. The Permittee is required to actively collect the landfill gas that is generated from the decomposition of wastes within the landfill and route it to a combustion device to thoroughly destroy the non-methane organic compounds (NMOCs) contained in the landfill gas. The gas collection system consists of a series of gas collection points including wells drilled into the landfill as well as horizontal collection trenches and leachate cleanout piping, all connected by piping to a blower that maintains a negative pressure in the lines to pull the gas from the landfill. A flare is currently used to combust the landfill gas that is collected at the Facility.

With the proposed Phase IV expansion of the landfill, the Permittee has also proposed the expansion of the landfill gas collection and control system to include an on-site landfill gas to energy (LFGTE) system. The gas to energy system will consist of up to four (4) Caterpillar G3520C LE landfill gas fired internal combustion engine generators rated at 2,221 hp and 1,600 kW each for a total of 6.4 megawatts of electric power generation. Initially three (3) engines will be installed and the fourth will be added in the future (presently estimated to be the year 2009) as gas volumes increase. Any excess landfill gas collected and not combusted in the engines, as well as gas generated during periods the engines may be off-line, will be routed to an on-site flare or flares to ensure continued complete combustion of the gas.

In addition to the current demister knock-out vessel necessary to remove moisture droplets from the gas prior to the blower, the LFGTE system will include additional equipment for pressurizing, drying, and cleaning the landfill gas that will extend the life of the engines. This includes a second blower to provide complete backup blower capability. The gas will also pass through a non-contact heat exchanger that will utilize chilled water to cool the gas stream and condense out additional moisture. This is then followed by a liquid sorption dehumidification system which consists of a series of glycol liquid (sorbent) sprays that contact the gas and absorb the remaining moisture from the gas. The gas then passes through four (4) coalescing polishing filters before being sent to the engines where it is combusted.

Below is a summary table of the Facility landfill capacities and equipment specifications:

Landfill and Equipment Specifications			
Landfill Area/Phase	Years of Operation[1]	Refuse Capacity (Mg)[2] And Landfill Size (acres)	Cumulative Facility Refuse Capacity (Mg) and Landfill size (acres)
Unlined landfill Areas A & B	1970 - 1992	146,050 (11 acres)	146,050 (11 acres)
Landfill Phases I, II, and III	1993 - 2006	2,423,504 (34 acres)	2,569,554 (45 acres)
Landfill Phase IV	2006 - 2020	4,706,259 (45 acres)	7,275,813 (90 acres)

Landfill Gas Combustion devices	Size[3]	Gas capacity (scfm)[4]	Location, stack height
(4) Caterpillar G3520C LE Engines	2,221 bhp (1,600 kW)	507 scfm each	Lined Landfill; 28' min.
(2) John Zink Utility Ground Flares	12"	2,500 cfm each	Lined Landfill; 35' min.
(2) LTI Model CF-5 Passive Flares	2"	2-60 scfm each	Unlined Landfill: (1) at Area A (1) at Area B. 8' min. stack ht. each.

Miscellaneous Equipment and Storage Tanks
(1) Waste oil furnace: 235,000 BTU/hour, located in maintenance garage.
(1) No.2 fuel oil space heating furnace: 175,000 BTU/hour, located at maintenance garage.
(1) No.2 fuel oil space heating furnace: 85,000 BTU/hour, located at scale house.
(1) Safety-Kleen parts cleaner.
(7) Leachate storage tanks: (2) 15,000 gallon, (3) 20,000 gallon, (1) 30,000 gallon, and (1) 55,000 gallon.
(1) Diesel fuel oil storage tank: <10,000 gallons.
(1) Lube oil supply storage tank: 8,000 gallons.
(1) Waste oil storage tank: 2,000 gallons.
(2) Ethylene glycol storage tanks: 1,000 gallons each.

[1] Years of operation are approximate and are estimated for Phase IV.
[2] Mg – Mega grams. To convert to English tons multiply the Mg value by 1.1025.
[3] bhp – brake horsepower rated output as specified by the manufacturer. KW - kilowatt electrical output.
[4] scfm - standard cubic feet per minute of landfill gas. Landfill gas is assumed to contain 40% - 60% methane with the balance predominately carbon dioxide but also includes 561 ppm nonmethane organic compounds (NMOCs) based on prior testing at this landfill. The maximum landfill gas generation rate was predicted to be 5,140 scfm based on default values in AP42 Section 2.4 (rev. 11/98) and doubling the result.

(B) FACILITY CLASSIFICATION

The Facility is classified as a source of air contaminants pursuant to Title 10 of the *Vermont Statutes Annotated* ("10 *VSA*.") §555 and §5-401(16) and (17) of the *Vermont Air Pollution Control Regulations* (hereinafter "*Regulations*"). In addition, §5-101 of the *Regulations* defines a *stationary source* as any structure(s), equipment, installation(s), or operation(s), or combination thereof, which emit or may emit any air contaminant, which is located on one or more contiguous or adjacent properties and which is owned or operated by the same person or persons under common control. Based on this definition, all of the equipment, operations, and structures at the Facility are grouped together by the Agency of Natural Resources, Department of Environmental Conservation, Air Pollution Control Division (hereinafter "Agency") as one stationary air contaminant source for purposes of review under the *Regulations*.

(C) PRIOR AGENCY ACTIONS/APPROVALS

The Facility has been issued the following "Permit to Construct" approvals pursuant to 10 *VSA* §556 and §5-501 of the *Regulations*.

Prior Agency Approvals and Actions	
Date of Action	Description of Agency Approval/Action
November 13, 1992	#AP-92-020 – Original Agency Permit to Construct approval for construction of the lined landfill at the Facility. The Permit included requirements for gas collection and control on the existing unlined landfill that was to be closed and the proposed lined landfill expansion at the same site.
December 15, 1995	#AP-92-020a – Amended Permit to Construct to allow interim "passive" gas collection with passive flare controls on the closed unlined landfill rather than "active" gas collection as required for the lined landfill.

(D) FACILITY PERMIT APPLICABILITY

As noted above, the Facility is classified as a source of air contaminants under §5-401 of the *Regulations*. Pursuant to 10 *VSA* §556 and §5-501 of the *Regulations* a Permit to Construct, or an amendment to any existing Permit to Construct, must be obtained before commencing the construction, installation, modification or operation of an air contaminant source. The proposed Phase IV expansion and its associated gas collection and control system, including the LFGTE system, is considered a modification to the Facility under the *Regulations* and consequently a Permit to Construct must be obtained.

Pursuant to 10 *VSA* §556a and Subchapter X of the *Regulations* a Permit to Operate is required for any air contaminant source with allowable emissions of all air contaminants combined of ten (10) tons per year ("tpy") or more or that is subject to a standard, limitation or other requirement under §111 and/or §112 of the Clean Air Act. Allowable emissions from the Facility in the future as a result of the approval of the Phase IV expansion are estimated to be greater than ten (10) tpy combined and emissions of carbon monoxide (CO) are estimated to be in excess of the one-hundred (100) tpy threshold for applicability of Title

V of the federal Clean Air Act. In addition, pursuant to Title 40 of the *Code of Federal Regulations* ("40 *CFR*") Subpart WWW - Standards of Performance for Municipal Solid Waste Landfills - Part 60.752(b) the Facility is required to submit an application for a Title V Permit to Operate once the design capacity of the landfill exceeds 2.5 million Mg. The July 9, 1999 Solid Waste Certification for the Phase III expansion approved a total design capacity of 2.57 million Mg for the Facility. The proposed Phase IV expansion will increase the Facility design capacity to 7.28 million Mg.

Therefore, pursuant to §§5-1002, 5-1003, and 5-1005 of the *Regulations* the Facility is classified as a "Title V Subject Source" and must obtain a Permit to Operate consistent with the requirements of Subchapter X of the *Regulations* and 40 *CFR* Part 70.

In accordance with 10 *VSA* §556(e) the Agency has combined the Permit to Construct and the Permit to Operate for this Facility into one combined Permit to Construct and Operate. The allowable emissions for the Facility are summarized below:

Future Allowable Air Contaminant Emissions (tons/year)[1]						
PM/PM_{10}	SO_2	NO_x	CO	VOCs	Total Criteria	HAPs[2]
8.6	7.8	59	325	17	>10	<10/25

[1] PM/PM_{10} - particulate matter and particulate matter of 10 micrometers in size or smaller; SO_2 - sulfur dioxide; NO_x - oxides of nitrogen measured as NO_2 equivalent; CO - carbon monoxide; VOCs - volatile organic compounds; HAPs - hazardous air pollutants as defined in §112 of the federal Clean Air Act. Emissions are based on: (1) the maximum predicted gas generation rate from the landfill based on AP-42 factors from section 2.4 (rev. 11/98) which is 2,570 scfm and then doubling the result to 5,140 scfm, (2) 50% methane in the landfill gas, (3) 75% gas collection efficiency from the landfill and (4) the worst case emissions scenario of the engines at full load (2,030 scfm) with the flares consuming the remaining (1,825 scfm)

[2] Emissions of individual HAPs each < 10 tpy and emissions of total HAPs combined <25 tpy.

(E) REVIEW FOR THE PERMIT TO CONSTRUCT

(a) New Source Review Designation

The Facility, prior to the construction of the proposed Phase IV expansion, is designated as a major stationary source of air contaminants since it has allowable emissions of carbon monoxide (CO) of fifty (50) tons per year or greater. Consequently, any *modification* of the source that would result in a significant increase in emissions of any air contaminant, as defined in §5-101 of the *Regulations*, is designated as a major modification and is subject to review under §5-501 and §5-502 of the *Regulations*. The proposed project identified in Findings of Fact (A) above, together with all previous minor modifications constructed at the Facility since July 1, 1979, and which have not been previously reviewed under §5-502 of the *Regulations*, will result in a significant increase in emissions. Consequently, the proposed modification is designated as a major modification and is subject to the requirements of §5-502 of the *Regulations*.

(b) Most Stringent Emission Rate

Pursuant to §5-502 of the *Regulations*, the owner/operator of each new major stationary source or major modification must apply control technology adequate to achieve the Most Stringent Emission Rate ("MSER") with respect to those air contaminants for which there would be a major or significant actual emissions increase, respectively, but only for those currently proposed physical or operational changes which would contribute to the increased emissions.

The proposed project is designated as a major modification of a stationary source and therefore is subject to review under the MSER requirements in §5-502 of the *Regulations* for the pollutants carbon monoxide (CO) and nitrogen oxides (NO_x).

The Agency has determined MSER for these two pollutants to be:

Most Stringent Emission Rate Determination

Date of Determination/ Permit #	Pollutant	Description/Emission limit
December 16, 2004 #AOP-03-044	CO	Cat G3520C Engines: 2.75 g/bhphr and 13.5 lbs/hour (each) John Zink Flares: 0.37 lbs/MMBtu
	NO_x	Cat G3520C Engines: 0.5 g/bhphr and 2.45 lbs/hour (each) John Zink Flares: 0.068 lbs/MMBtu

(c) Ambient Air Quality Impact Evaluation

An ambient air quality impact evaluation (AQIE) is performed to demonstrate whether or not a proposed project will cause or contribute to violations of the ambient air quality standards and/or significantly deteriorate existing air quality. The Agency's implementation procedures concerning the need for an AQIE under §5-406(1) of the *Regulations*, specifies that such analyses may be required when a project results in an allowable emissions increase of ten (10) tons per year or more of any air contaminant, excluding VOCs. Additionally, the Agency may require an AQIE where the short-term allowable emission rates will significantly increase as a result of a project.

Based on the proposed level of emissions from this Facility, the Agency required an AQIE for the pollutants CO and NO_x. The proposed level of emissions of all other criteria pollutants, excluding VOCs, are below the ten (10) tons per year threshold. Since both CO and NO_x emissions also exceed the respective major source threshold of fifty (50) tons per year, the Agency's implementation procedures require the AQIE to determine which other nearby sources, if any, must be included in the analysis. Any other nearby source that has a significant impact area for a respective pollutant that overlaps with the proposed Facility's significant impact area for that same pollutant must be included in the AQIE. All other nearby sources are assumed to be included in the ambient background value for the pollutant. The ambient background value is determined from the Agency's ambient monitoring network

throughout the State. For the pollutant CO the nearby sources required to be included in the AQIE were the Columbia Forest Products facility in Newport and the Ethan Allen, Inc. facility in Orleans. No nearby sources were required to be included in the AQIE for the pollutant NO_x since the significant impact areas of the other sources did not overlap with the proposed Facility's significant impact area for NO_x, but NEWSVT opted to conservatively include both Columbia Forest Products and Ethan Allen for comparison to the NO_x national ambient air quality standard.

The Facility emissions used in the AQIE are based on the maximum projected volumes of landfill gas generation and the highest level of emissions generated from the two potential operating scenarios: (1) all the gas being burned in the flares, or (2) the engines burning the maximum amount of gas they are capable of with any excess gas being burned in the flares. In the case of both CO and NO_x, the engines have higher emission rates than the flares and thus the engine operating scenario is worst case for ambient impacts.

The Facility was found to comply with all applicable ambient air quality standards and prevention of significant deterioration increments. A summary of the AQIE results are presented below:

Ambient Air Quality Impact Evaluation
Performed for Permit #AOP-03-044

Comparison of Facilities Combined Impacts to National Ambient Air Quality Standards[1]

Pollutant	Averaging time of Std.	Ambient Standard (ug/m3)	Modeled Impact of Facilities (ug/m3)	Background Value[2] (ug/m3)	Total Impact w/ Background (ug/m3)
CO	1-hour	40,000	1,270	5,720	6,990
CO	8-hour	10,000	710	3,090	3,800
NO_x	annual	100	18.6	24.5	43.1

Comparison of Facility Impacts to Prevention of Significant Deterioration Increments[3]

Pollutant	Averaging time of PSD Increment	PSD Increment (ug/m3)	Modeled Impact of Facility alone (ug/m3)	Maximum distance of significant impacts (>1ug/m3 annual avg) in kilometers from the source
NO_x	annual	6.25	2.5	2.1

[1] The National Ambient Air Quality Standards are presented in Subchapter III - Ambient Air Quality Standards - of the *Vermont Air Pollution Control Regulations*.
[2] Background values are provided by the Agency and are based on the maximum actual monitored values from the Agency's ambient monitoring network across the State over the past three (3) years.
[3] Prevention of Significant Deterioration Increments are presented in Table 2 of the *Vermont Air Pollution Control Regulations*. All areas in Vermont with the exception of the Lye Brook Wilderness Area are classified as Class II. In addition, pursuant to §5-502(5) of the *Regulations* major sources are only allowed a maximum of 25% of the total available increment of 25 ug/m3.

(F) REVIEW FOR THE PERMIT TO OPERATE

(a) Applicable Requirements

The operations at the Facility are subject to the following state and federal laws and regulations, the requirements of which are embodied in the conditions of this Permit.

(i) *Vermont Air Pollution Control Regulations*:

Applicable Requirements from the Vermont Air Pollution Control Regulations
Section 5-201 – Prohibition of Open Burning
Section 5-211(2) - Prohibition of Visible Air Contaminants, Installations Constructed Subsequent to April 30, 1970.

Applicable Requirements from the Vermont Air Pollution Control Regulations
Section 5-221(1) - Prohibition of Potentially Polluting Materials in Fuel, Sulfur Limitation in Fuel.
Section 5-221(2) - Prohibition of Potentially Polluting Materials in Fuel, Waste Oil.
Section 5-231(3) - Prohibition of Particulate Matter; Combustion Contaminants.
Section 5-231(4) - Prohibition of Particulate Matter; Fugitive Particulate Matter.
Section 5-241 – Prohibition of Nuisance and Odor.
Section 5-253.14 - Control of Volatile Organic Compounds from Solvent Metal Cleaning.
Section 5-261(3) – Control of Hazardous Air Contaminants - Hazardous Most Stringent Emission Rate.
Section 5-271 – Control of Air Contaminants from Stationary Reciprocating Internal Combustion Engines.
Section 5-402 – Written Reports When Requested.
Section 5-403 – Circumvention.
Subchapter VIII – Registration of Air Contaminant Sources.
Subchapter X – Operating Permits.

(ii) Reasonably Available Control Technology - §5-1010 of the *Regulations*

Pursuant to 10 *VSA* §556a(d) and §5-1010 of the *Regulations* the Agency may establish and include within any Permit to Operate emission control requirements based on Reasonably Available Control Technology ("RACT"). The Agency has not imposed any RACT requirements on this Facility under this authority at this time.

(iii) Existing Air Pollution Control Permit to Construct and/or Operate

The Facility currently operates under the confines of a Permit to Construct issued on December 15, 1995 (#AP-92-020a) and the Solid Waste Certification issued July 9, 1999. The conditions within those approvals relating to the *Air Pollution Control Regulations* and reviews there under are considered applicable requirements pursuant to §5-1002(d) of the *Regulations*. The applicable requirements of those approvals which are not being modified herein are incorporated into this new combined Permit to Construct and Operate (#AOP-03-044).

(iv) Federal Requirements:

Applicable Requirements from Federal Regulations and the Clean Air Act
40 *CFR* Part 60, Subpart WWW - Standards of Performance for Municipal Solid Waste Landfills. §60.752 Standards - Requires landfill gas collection and control system. §60.753 Operational Standards - Operational requirements of the gas collection and control system. Applicable to all MSW landfills with a design capacity of 2.5 million megagrams (Mg) or greater, however the requirement to install the landfill gas collection and control system is only required once uncontrolled emissions of nonmethane organic compounds (NMOCs) from the landfill equal or exceed 50 Mg/year. The NEWSVT landfill has an existing design capacity (unlined through Phases III) of 2,569,554 Mg and Phase IV will add an additional capacity of 4,706,259 Mg for a cumulative total of 7,275,813 Mg. Uncontrolled NMOC emissions were predicted to first exceed 50 Mg in the year 2001.
40 *CFR* Part 63, Subpart AAAA - National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills. §63.1955 Standards - Requires gas collection and control system meeting same standards as 40 *CFR* Part 60, Subpart WWW by referencing such. Applicable to all MSW landfills that are (1) a major source of Hazardous Air Pollutants (HAPs), or (2) are collocated with a major source of HAPs, or (3) are an area source with a design capacity of 2.5 million megagrams (Mg) or greater and have estimated uncontrolled emissions of NMOCs equal to or greater than 50 Mg/year. The NEWSVT landfill is not a major source of HAPs nor is it collocated at a major source of HAPs but it is an area source with a design capacity of 2.5 million Mg or greater and has estimated uncontrolled emissions of NMOCs equal to or greater than 50 Mg/year.
40 *CFR* Part 60, Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984. §60.116b Monitoring of operations - For vessels storing liquids with a vapor pressure of less than 3.5 kPa the requirements are only to maintain records of the dimensions and capacity of storage vessels. Applicable to all storage vessels of 10,568 gallons or greater manufactured after July 23, 1984. NEWSVT has storage vessels for leachate, some of which exceed 10,568 gallons in capacity, but leachate has a maximum vapor pressure of less than 3.5 kPa therefore this regulation is not applicable.
Clean Air Act §§114(a)(3), 502(b), and 504(a)-(c); 40 *CFR* Part 70 §§70.6(a)(3)(i)(B) and 70.6(c)(1); and 40 *CFR* Part 64 - Compliance Assurance Monitoring. Upon renewal of a Title V Permit to Operate, a facility must comply with enhanced monitoring and compliance assurance monitoring requirements for any emission controlled unit subject to an emission standard with uncontrolled emissions from the unit in excess of the Title V major source thresholds.

(b) Non-Applicable Requirements

Pursuant to §5-1015(a)(14) of the *Regulations*, an owner or operator of a Facility may request a permit shield from specific state or federally enforceable regulations and standards which are not applicable to the source. The Permittee has requested a permit shield with respect to several potentially applicable requirements. The Agency has reviewed this request and is hereby granting a permit shield in accordance with §5-1015(a)(14) of the *Regulations* for the following requirements which have been determined not to be applicable to the Facility based on the information provided by the Permittee:

Non-Applicable Requirements for which a Permit Shield is Granted
§5-231(1) - Prohibition of Particulate Matter: Industrial Process Emissions. The Agency has determined that the combustion of landfill gas is not considered an industrial process since gaseous fuels are not considered part of the *process weight* input into a process. Therefore, the combustion of landfill gas is not subject to this regulation
§5-231(3) - Prohibition of Particulate Matter: Combustion Contaminants. The Agency has determined that landfill gas is not a *fossil fuel* under the definition in the *Regulations* therefore this regulation is not applicable to the flares or engines combustion landfill gas. However, the other fuel burning equipment at the facility including the No.2 fuel oil space heating units and waste oil furnace are subject.
§5-241(3) - Prohibition of Nuisance and Odor: Control of Odors from Industrial Processes. While the Facility is subject to §5-241(1) and (2), the Agency has not previously classified all landfills as industrial processes subject to §5-241(3) and does not currently consider the Facility subject to this regulation. However, in order to ensure compliance with other applicable requirements for this Facility, most of these emission control measures are required under separate authority.

(c) Enforceability

This section delineates which permit conditions are federally enforceable and which conditions are state only enforceable. All federal enforceable conditions are subject to federal citizen suit provisions. All conditions of this Permit are enforceable under both state and federal authorities.

(d) Compliance Certification

The Permittee is required by this Permit to certify compliance as part of its annual registration with the Agency pursuant to the requirements of Subchapter X of the *Regulations*. Additionally, this Permit requires the submission of semi-annual reports of monitoring records used to demonstrate compliance with the limitations contained in this Permit.

(G) HAZARDOUS MOST STRINGENT EMISSION RATE

Pursuant to §5-261 of the *Regulations*, any stationary source whose current or proposed actual emission rate of a hazardous air contaminant ("HAC") is equal to or greater than the respective Action Level (found in Appendix C of the *Regulations*) shall achieve the Hazardous Most Stringent Emission Rate ("HMSER") for the respective HAC.

While landfill gas is comprised principally of methane and carbon dioxide from the decomposition of wastes within the landfill, as this gas works its way to the ambient air it contacts and strips out other volatile HACs in the landfill such as from cleaning solvents, paints and petroleum contaminated materials. These HAC compounds are collectively referred to as non-methane organic compounds (NMOCs). As part of the review for Air Pollution Control Permit #AP-92-020 issued November 13, 1992, the Agency determined that the Facility would have regulated emissions of several hazardous air contaminants in excess of their respective Action Levels if the landfill gas was allowed to vent to the ambient air uncontrolled. The Agency subsequently determined HMSER to be the installation and operation of a landfill gas collection and control system that captures the landfill gas and routes it to a combustion device with a minimum ninety-eight (98) percent destruction efficiency of the NMOCs. Flares designed and operated in accordance with 40 *CFR* Part 60.18 were and still are considered an acceptable method of compliance with this requirement. None of the emissions were estimated to exceed their respective Action Levels after initiation of the emission controls.

Since that original permit, samples of the landfill gas at the Facility have been collected and analyzed for HACs in both 1993 and again in 2002. Based on these results, the Facility is still expected to have emissions of several HACs in excess of their respective Action Level if allowed to vent uncontrolled and therefore the Facility is subject to HMSER under §5-261 of the Regulations. Also since that original permit, the U.S. EPA has promulgated two similar federal regulations that require similar gas collection and control requirements, to which the Facility is now subject. Based on this information, the Agency has determined that HMSER shall continue to be the requirement to achieve the minimum 98% destruction efficiency of the NMOCs in the landfill gas as required by the prior HMSER and the federal regulations or alternatively demonstrate that the outlet concentrations of NMOCs are less than 20 ppmvd. In addition, the Facility must also comply with various requirements for the collection of the landfill gas to ensure as much gas is collected as is technically feasible and for monitoring of the gas collection and control system operations.

This HMSER evaluation shall be subject to re-evaluation five (5) years from the date of its determination and shall remain in effect until revised by the Agency. Upon reevaluation of this HMSER, the Agency intends to require further review of the status of emission control technologies, including but not limited to the status of catalytic control technologies, to determine their technical and economic feasibility at that time. This and prior HMSER determinations for this Facility are presented below.

Hazardous Most Stringent Emission Rate Determinations		
Date of Determination/ Permit #	Pollutant	Description/Emission limit
November 13, 1992 #AP-92-020	NMOCs including: benzene ethylene dichloride methylene chloride perchloroethylene trichloroethylene vinyl chloride	MSER: 98% destruction of NMOCs achieved through the installation and operation of a properly designed landfill gas collection and control system.
December 16, 2004 #AOP-03-044	NMOCs including: acrylonitrile benzene chloroform 1,1,2-trichloroethane 1,1,2,2-tetrachloroethane ethylene dibromide ethylene dichloride hydrogen sulfide methylene chloride perchloroethylene propylene dichloride trichloroethylene vinyl chloride	MSER: 98% destruction of NMOCs achieved through the installation and operation of a properly designed landfill gas collection and control system. Alternatively to demonstrating 98% destruction, the Facility may demonstrate that the outlet concentration of NMOCs from the combustion device does not exceed 20 ppmvd[1] (as hexane equivalent) at 3% oxygen.

[1] 20 ppmvd is parts per million by volume on a dry basis and is the alternative emission limit as provided in the federal regulations 40 *CFR* Part 60 §60.752 and Part 63 §63.1955 .

Based on the Agency's review of the Facility's application and the above Findings of Fact, the Agency concludes that the Facility, subject to the following Permit conditions, complies with all applicable state and federal air pollution control laws and regulations or is subject to an acceptable schedule of compliance. Therefore, pursuant to 10 *VSA* §§556 and 556a, as amended, the Agency hereby proposes to issue a Permit approving the Facility, as described in the above Findings of Fact, subject to the following:

PERMIT CONDITIONS

- Construction Specifications and Operational Limitations -

(1) The Permittee shall construct and operate the Facility in accordance with the plans and specifications submitted to the Agency and in accordance with the conditions set forth herein, including the equipment specifications as listed in Findings of Fact (A) or their equivalent as approved by the Agency. [10 *V.S.A.* §§556(c) and 556a(d)]] [§5-501(1) of the *Regulations*]

(2) In accordance with 40 *CFR* Part 60 Subpart WWW (Standards of Performance for Municipal Solid Waste Landfills) and 40 *CFR* Part 63 Subpart AAAA (National Emission Standards for Hazardous Air Pollutants: Municipal solid Waste Landfills), the Permittee shall install, operate and maintain a landfill gas collection and control system that effectively captures the gas generated within the landfill and routes the gas to a control device that effectively destroys the nonmethane organic compounds (NMOCs) within the gas. [10 *V.S.A.* §§556(c) and 556a(d)] [§5-261(3) of the *Regulations*] [40 *CFR* Part 60 Subpart WWW and 40 *CFR* Part 63 Subpart AAAA]

Gas Collection System Requirements

(3) The landfill gas collection system shall be designed, constructed and operated in accordance with 40 *CFR* §60.759 which includes but is not limited to the following:

(a) The landfill gas collection system and individual wells shall be designed to achieve comprehensive control of the landfill gas taking into account: depths of refuse, refuse gas generation rates and flow characteristics, cover properties, gas system expandability, leachate and condensate management, accessibility, compatibility with filling operations, integrations with closure end use, air intrusion control, corrosion resistance, fill settlement, temperature resistance.

(b) There shall be a sufficient density of landfill gas collection wells to ensure comprehensive and effective collection of landfill gas.

(c) The system shall control landfill gas from all gas producing areas of the landfill except as otherwise approved by the Agency.

(d) The landfill gas collection system shall be designed so as not to allow indirect short circuiting of air under the cover or refuse into the gas collection system or landfill gas into the air. Any gravel or other materials used around pipe perforations shall be of sufficient dimension so as not to penetrate or block the perforations.

(e) The landfill gas collection system components shall be constructed of PVC, HDPE, fiberglass, stainless steel or other nonporous corrosion resistant materials.

(f) The individual landfill gas collection wells shall be connected to the header pipes with a positive closing throttle valve and shall be equipped with a gas sampling port.

(g) The gas mover system shall be designed to handle the maximum gas generation flow rate expected over the life of the system.

[10 *V.S.A.* §§556(c) and 556a(d)] [§5-5261(3) of the *Regulations*] [40 *CFR* Part 60 Subpart WWW §60.759]

(4) In accordance with 40 *CFR* §60.753(a), the Permittee shall ensure the gas collection system collects gas from all areas of the landfill where trash has been in place for five (5) years or more and from all closed areas of the landfill, as well as areas at final grade, where trash has been in place for two (2) years or more. In addition, the gas collection system must be extended into any area of the landfill that is considered a bioreactor as defined in 40 CFR Part 63 Subpart AAAA prior to initiating addition of liquids other than leachate. [10 *V.S.A.* §§556(c) and 556a(d)] [§5-5261(3) of the *Regulations*] [40 *CFR* Part 60 Subpart WWW §60.753(a)] [40 *CFR* Part 63 Subpart AAAA §63.1955(d)]

(5) In accordance with 40 *CFR* §60.753(b), the Permittee shall ensure the gas collection system maintains a negative pressure at each gas collection wellhead except in cases where it is documented that well temperatures have increased and must be reduced to avoid the risk of a fire. In addition, the requirement to maintain a negative pressure at each well head does not apply to the gas collection wells in the unlined landfill while that separate gas collection system is operated in a passive gas collection mode.

The Permittee shall monitor and record the gauge pressure at each active gas collection system well head monthly. [10 *V.S.A.* §§556(c) and 556a(d)] [§5-5261(3) of the *Regulations*] [40 *CFR* Part 60 Subpart WWW §60.753(b)]

(6) In accordance with 40 *CFR* §60.753(c), the Permittee shall ensure the gas collection system maintains at each gas collection wellhead a landfill gas temperature below 131°F (55°C) with either a nitrogen level of less than twenty (20) percent by volume or an oxygen level less than five (5) percent by volume.

The Permittee shall monitor and record the temperature and either the nitrogen level or oxygen level at each well head monthly. The nitrogen level shall be determined in accordance with 40 *CFR* Part 60, Appendix A, Reference Method 3C or an equivalent method approved in writing by the Agency. The oxygen level shall be determined in accordance with 40 *CFR* Part 60, Appendix A, Reference Method 3A, except as provided in 40 *CFR* §60.753(c)(2), or an equivalent method approved in writing by the Agency. [10 *V.S.A.* §§556(c) and 556a(d)] [§5-5261(3) of the *Regulations*] [40 *CFR* Part 60 Subpart WWW §60.753(c)]

(7) In accordance with 40 *CFR* §60.753(d), the Permittee shall ensure the gas collection system is operated in such a manner that the methane concentration is maintained at less than 500 ppm above background at the surface of the landfill. The Permittee shall develop a surface monitoring design plan that includes the monitoring procedures to be followed per 40 *CFR* §60.755(c) and (d), as well as a topographical map with the proposed monitoring route. Prior to closure of the landfill, at a minimum the methane concentrations shall be monitored quarterly along the entire perimeter of the collection area and along a pattern that traverses the landfill at 30 meter intervals and where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover. Upon closure of the landfill, the Permittee may skip to annual monitoring along the entire perimeter of the collection area and along a pattern that traverses the landfill at 30 meter intervals provided there are no monitored exceedances of the surface methane limit

for three consecutive quarters. Any subsequent monitored exceedance of the surface methane limit shall return the monitoring frequency for the entire landfill back to quarterly. [10 *V.S.A.* §§556(c) and 556a(d)] [§5-5261(3) of the *Regulations*] [40 *CFR* Part 60 Subpart WWW §60.753(d)]

(8) The gas collection and control system shall not be equipped with any landfill gas bypass system that would enable the collected landfill gas to be sent to the ambient air without first passing through the control system combustion device(s). [10 *V.S.A.* §§556(c) and 556a(d)] [§5-5261(3) of the *Regulations*] [40 *CFR* Part 60 Subpart WWW §60.756(b)]

Landfill Gas Control System Requirements

(9) In accordance with 40 *CFR* §60.753(e), the Permittee shall ensure that all landfill gas collected by the gas collection system is routed to a landfill gas control system consisting of either a flare or flares designed and operated in accordance with 40 *CFR* §60.18 or to a Caterpillar G3520C landfill gas engine or engines as specified in Finding of Fact A above, or their equivalent as approved by the Agency. In the event the engines are off-line for any reason, the flare or flares shall have the capacity to combust the entire amount of landfill gas collected while still complying with the all the requirements of 40 *CFR* §60.18 including operation with no visible emissions and the limitations on gas exit velocity. The Permittee shall at no time allow the venting of landfill gas from the gas collection system that is not properly combusted in one of the landfill gas control system combustion devices without the approval of the Agency. In the event more landfill gas is collected than can be accommodated in the landfill gas control system combustion devices the Permittee shall within one (1) hour shut down the gas mover system and close all valves in the collection and control system contributing to the venting of the gas to the atmosphere. The Permittee shall also immediately make arrangements to bring the necessary gas control system capacity on-line. [10 *V.S.A.* §§556(c) and 556a(d)] [§5-5261(3) of the *Regulations*] [40 *CFR* Part 60 Subpart WWW §60.753(e)]

(10) In accordance with 40 *CFR* §60.753(f), the Permittee shall ensure that all landfill gas collected by the gas collection system is at all times routed to either the properly operating engines and/or flares, as specified above. [10 *V.S.A.* §§556(c) and 556a(d)] [§5-5261(3) of the *Regulations*] [40 *CFR* Part 60 Subpart WWW §60.753(f)]

(11) Each flare shall be operated with a flame present at all times landfill gas is routed through the flare. In addition, the flares shall be equipped with a windscreen to prevent flame out if necessary. [10 *V.S.A.* §§556(c) and 556a(d)] [§5-5261(3) of the *Regulations*] [40 *CFR* Part 60 Subpart A §60.18(c)(2)]

(12) Each flare shall be equipped with a heat sensing device, such as an ultraviolet beam sensor or thermocouple, at the pilot light or the flame itself to indicate the continuous presence of a flame when LFG is being delivered to the respective flare. The device shall be installed, calibrated, maintained and operated in accordance with the manufacturer's specifications. In the event the heat sensing device detects a flame failure the gas flow to the flare shall be automatically shut down until the flame is reestablished. Passive flares operated as part of any separate gas collection and control system for the unlined landfill shall not be subject to this condition. [10 *V.S.A.* §§556(c) and 556a(d)] [§5-5261(3) of the *Regulations*] [40 *CFR* Part 60 Subpart WWW §60.756(c)] [40 *CFR* Part 60 Subpart A §60.18(f)(2)]

(13) Each passive flare operated as part of any separate gas collection and control system for the unlined landfill shall be equipped either with a pilot light and heat sensing device as required in the prior condition above or a continuous sparking plug or plugs to effectively maintain a flame at the flare. The Permittee shall routinely inspect and maintain the spark arrestors for said flares, the spark plugs and any batteries or solar panels necessary for the proper operation of the plugs, in accordance with the manufacturer's recommendations. This shall include but not be limited to ensuring the plugs are properly sparking, the batteries are adequately charged and the solar panels are clean and properly aligned. The Permittee shall also maintain a sufficient supply of routine replacement parts for said flares such as spark plugs and batteries so as to minimize maintenance and repair downtimes. [10 *V.S.A.* §§556(c) and 556a(d)] [§5-5261(3) of the *Regulations*]

(14) In accordance with 40 *CFR* §60.752(b)(2)(v), the Permittee shall ensure the gas collection and control system is operated and maintained for a minimum of 15 years and shall not be discontinued until the Permittee has demonstrated the Facility will comply with 40 *CFR* §60.752(b)(2)(v) and has obtained the prior written approval of the Agency. [10 *V.S.A.* §§556(c) and 556a(d)] [§5-5261(3) of the *Regulations*] [40 *CFR* Part 60 Subpart WWW §60.752(b)(2)(v)] [40 *CFR* Part 60 Subpart A §60.18(f)(2)]

(15) Only No. 2 fuel oil or lighter grade fuel oils with a maximum sulfur content not to exceed 0.5 percent by weight may be used as fuel in the distillate fuel oil space heating furnaces unless the Permittee obtains prior written approval from the Agency to use another type of fuel. [10 *V.S.A.* §§556(c) and 556a(d)] [§§5-221(1)(a) and 5-1015(a)(1) of the *Regulations*] [application for #AOP-03-044]

(16) Waste Oil Used as a Fuel In Waste Oil Furnace

(a) The waste oil furnace shall not exceed a maximum heat input rating of 500,000 BTUs per hour.

(b) The Permittee shall comply with all applicable requirements for handling, storage, testing and disposal of waste oil as specified in the Vermont Hazardous Waste Management Regulations.

(c) The Permittee shall only burn waste oil which has properties and constituents within the allowable limits set forth in Table A of the *Regulations*, as may be amended. Table A of the *Regulations* with the current levels is reproduced below:

Table A
Waste Oil Constituents and Properties
(Prior to Blending)

Constituent/Property	Allowable
Polychlorinated Biphenyls (PCBs)	<2 ppm maximum [1]
Total Halogens	1000 ppm maximum
Arsenic	5 ppm maximum
Cadmium	2 ppm maximum
Chromium	10 ppm maximum
Chlorine	500 ppm maximum
Lead	100 ppm maximum
Net Heat of Combustion	8000 BTU/lb minimum
Flash Point	140 degree F minimum

Note: [1]units of parts per million (ppm) are by weight on a water free basis. [§5-221(2) of the *Regulations*]

(17) Solvent Metal Cleaning Parts Cleaner: The Permittee shall operate the cold, solvent metal cleaning units (parts cleaners) in accordance with the following requirements and shall only use a solvent with a vapor pressure equal to or less than 0.3 pounds per square inch measured at 100°F, which includes but is not limited to the Safety-Kleen 105 hydrocarbon solvent. Prior to the Permittee using any solvent with a maximum true vapor pressure greater than 0.3 psi or using a solvent that is heated, the Permittee shall notify the Agency and comply with any additional applicable requirements of §5-253.14 of the *Regulations*.

(a) Provide a permanent, legible, conspicuous label, summarizing the operating requirements;
(b) Store waste solvent in covered containers;
(c) Close the cover whenever parts are not being handled in the cleaner;
(d) Drain the cleaned parts until dripping ceases;
(e) Supply a solvent spray, if used, that ensures a solid fluid stream at a pressure that does not exceed ten (10) pounds per square inch gauge;
(f) Degrease only materials that are neither porous nor absorbent; and
(g) Cease operation of the unit upon the detection of any visible solvent leak until such solvent leak is repaired.

[10 *V.S.A.* §§556(c) and 556a(d)] [§5-253.14 of the *Regulations*]

(18) Engines: The Permittee shall not install or operate any additional stationary reciprocating internal combustion engine, as defined in the *Regulations*, that is 450 bhp or greater unless the engine at a minimum complies with §5-271 of the *Regulations*, as applicable. Engines installed after July 1, 1999 must comply with the emission standards of §5-271 of the *Regulations* immediately upon installation. Engines installed prior to July 1, 1999 must comply with the emission standards of §5-271 of the *Regulations* by no later than July 1, 2007. Installation of any size stationary reciprocating internal combustion engine, even those below 450 bhp, may still require approval from the Agency in the form of an amended Permit prior to installation. Stationary reciprocating internal combustion engines include those used to power generator sets or to provide shaft power for equipment but does not include engines used to power motor vehicles. [§§5-501 and 5-271 of the *Regulations*]

(19) Stack heights: The exhaust gases from each of the landfill gas engines shall be vented vertically through a stack or stacks which extend a minimum of twenty-eight (28) feet above the stack base grade elevation. The exhaust gases from the flares, except those flares used exclusively for the unlined landfill, shall be vented vertically through separate stacks which extend a minimum of thirty-five (35) feet above the stack base grade elevation. The Permittee shall at the request of the Agency increase the stack height of any respective stack if, in the judgment of the Agency based on inspections of the actual operations at the Facility, proper or adequate dispersion can not be maintained at the current stack height. The stacks shall not be equipped with any device that may obstruct the upward discharge of the exhaust gases such as a fixed raincap. [10 *V.S.A.* §§556(c) and 556a(d)] [§§5-406 and 5-501 of the *Regulations*]

(20) Open Burning: The Permittee shall burn only natural wood in any open burn pile and shall only burn in accordance with this Permit and the *Regulations*. For the purposes of this Permit, natural wood shall be defined as trees, including logs, boles, trunks, branches, limbs, and stumps, lumber including timber, logs or slabs, especially when dressed for use. This definition shall also include pallets which are used for the shipment of various materials so long as such pallets are not chemically treated with any preservative, paint, or oil. This definition shall not extend to other wood products such as sawdust, plywood, particle board and press board. Prior to conducting any open burning of natural wood, the Permittee shall notify the Air Pollution Control Officer and shall obtain approval from the Air Pollution Control Officer to conduct open burning at the Facility, if required. [§5-202 of the *Regulations*]

- Emission Limitations -

(21) John Zink Utility Ground Flares: Emissions of the following pollutants from each of the John Zink utility ground flares shall not exceed the following limits:

Pollutant Emission Limitations		
John Zink Flares	Emission Limitations	
	lbs/MMBTU[1]	lbs/hour[2] (each)
Carbon monoxide (CO)	0.37	27.8
Nitrogen oxides (as NO_2)	0.068	5.1

[1] lbs/MMBTU equals pounds of pollutant emitted per million British Thermal Units of heat input.
[2] lbs/hour equals pounds of pollutant emitted per hour based on the rated capacity of the flare of 2,500 scfm and 50% methane for maximum rating of 75 MMBTU/hr for each flare.

Any emission testing conducted to demonstrate compliance with the above emission limit shall be performed in accordance with 40 *CFR* Part 60, Appendix A, Reference Method 10 for CO and Method 7E for NOx or an alternative method which has been published in 40 *CFR*, provided the federally approved alternative method has been accepted in writing by the Agency before testing. Open utility flares typically are not subject to stack emission testing due to the inherent limitations in the design of such flares and instead are required to comply with the visible emissions and gas velocity design criteria of 40 *CFR* Part 60.18. [10 *V.S.A.* §§556(c) and 556a(d)] [§S5-404 and 5-502(3) of the *Regulations*] [application for #AOP-03-044]

(22) Caterpillar G3520C Landfill Gas Engines: Emissions of the following pollutants from each Caterpillar G3520C engine shall not exceed the following limits:

Pollutant Emission Limitations		
Caterpillar Model G3520C (2,221 hp) Engine Generators	Emission Limitations	
	g/bhphr [1] (unless otherwise noted)	lbs/hr [2]
Carbon monoxide (CO)	2.75	13.5
Nitrogen oxides (as NO_2)	0.5	2.45
Nonmethane organic compounds (NMOCs)	98% destruction efficiency or 20 ppmvd [3] as hexane@3% O_2 outlet concentration	na

[1] g/bhphr equals grams of pollutant emitted per brake horsepower hour.
[2] lbs/hour equals pounds of pollutant emitted per hour based on full capacity of the engines (507 scfm each for a total of 2,030 scfm for all 4 engines).
[3] ppmvd equals parts per million by volume on a dry basis corrected to three (3) % oxygen.

Any emission testing conducted to demonstrate compliance with the above emission limits shall be performed at the rated load and speed of the engine and in accordance with 40 *CFR* Part 60, Appendix A, Reference Method 10 for CO, Method 7E for NO_x, and Method 25C or Method 18 for NMOC destruction efficiency and NMOC outlet concentration or an alternative method which has been published in 40 *CFR*, provided the federally approved alternative method has been accepted in writing by the Agency before testing. [10 *V.S.A* §§556(c) and 556a(d)] [§§5-271(b), 5-404 and 5-502(3) of the *Regulations*] [application for #AOP-03-044]

(23) Visible Emissions [Facility Wide]: Emissions of visible air contaminants from any installation at the Facility, except where otherwise noted in this Permit, shall not exceed twenty (20) percent opacity for more than a period or periods aggregating six (6) minutes in any hour and at no time shall visible emissions exceed sixty (60) percent opacity.

Any emission testing conducted to demonstrate compliance with the above emission limits shall be performed in accordance with the proposed Federal Reference Method F-1 contained in the Federal Register Vol.51, No.168, pp. 31076-31081, August 29, 1986 or an equivalent method approved in writing by the Agency. [§§5-211(2), 5-211(3) and 5-404 of the *Regulations*]

(24) Visible Emissions [Flares]: All flares used for the combustion of landfill gas at the Facility shall be operated with no visible emissions in accordance with 40 *CFR* §60.18(c)(1). [10 *V.S.A.* §§556(c) and 556a(d)] [§5-5261(3) of the *Regulations*] [40 *CFR* Part 60 Subpart A §60.18(c)(1)]

(25) Particulate Matter: Emissions of particulate matter ("PM") from any fuel burning device, except motorized vehicles, with a heat input rating of less than ten (10) million British Thermal Units per hour ("MMBTU/hr") shall not exceed 0.5 pounds per MMBTU.

Any emission testing conducted to demonstrate compliance with the above emission limit shall be performed in accordance with 40 *CFR* Part 60, Appendix A, Reference Method 5 or an alternative method which has been published in 40 *CFR*, provided the federally approved alternative method has been accepted in writing by the Agency before testing. [§§5-231(3)(a)(i) and 5-404 of the *Regulations*]

(26) Volatile Organic Compounds: Emissions of volatile organic compounds from the Facility shall not equal or exceed fifty (50) tons per calendar year per year based on any rolling twelve (12) consecutive calendar month period. [§5-502 of the *Regulations*]

(27) Hazardous Air Pollutants: Emission of federally regulated hazardous air pollutants (HAPs) from the Facility shall not equal or exceed ten (10) tons per year of any single HAP or twenty-five (25) tons per year of all HAPs combined per calendar year per year based on any rolling twelve (12) consecutive calendar month period. [40 *CFR* Part 63]

(28) Hazardous Air Contaminants: Emissions of state hazardous air contaminants (HACs) from the applicable operations at the Facility shall not equal or exceed their respective Action Level (found in Appendix C of the *Regulations*) unless the Agency has reviewed and approved such HAC emission under §5-261 of the *Regulations*. [§5-261 of the *Regulations*]

(29) Fugitive Particulate Emissions: The Permittee shall take reasonable precautions at all times to control and minimize emissions of fugitive particulate matter (dust) from the operations at the Facility. This shall include but not be limited to the following:

(a) The use of wet suppression, calcium chloride applications or other dust control measures as necessary to minimize fugitive dust from all unpaved roads and traffic areas, aggregate handling operations and storage piles at the Facility. The paved portions of the haul roads and traffic areas shall be periodically sprayed with water and swept to prevent buildup of material that may generate fugitive dust emissions;

(b) The covering of all trucks owned or operated by the Permittee while operated on public roadways and loaded with materials that may generate fugitive dust emissions.

[10 *V.S.A.* §§556(c) and 556a(d)] [§5-231(4) of the *Regulations*]

(30) Nuisance and Odor: The Permittee shall not discharge, cause, suffer, allow, or permit from any source whatsoever such quantities of air contaminants or other material which will cause injury, detriment, nuisance or annoyance to any considerable number of people or to the public or which endangers the comfort, repose, health or safety of any such persons or the public or which causes or has a natural tendency to cause injury or damage to business or property. The Permittee shall not discharge, cause, suffer, allow, or permit any emissions of objectionable odors beyond the property line of the premises. [§5-241(1) and (2) of the *Regulations*]

- Compliance Testing and Monitoring -

(31) The Permittee shall perform emission testing on one of the Caterpillar G3520C engines and shall furnish the Agency with a written report of the results within one-hundred eighty (180) days after the initial start-up date of the first engine at the Facilty. The emission testing shall be performed in order to demonstrate compliance with the carbon monoxide (CO), nitrogen oxides (NO_x) and nonmethane organic compound (NMOC) emission limitation(s) specified in condition (22) of this Permit, respectively. At least thirty (30) days prior to performing the emission testing required above, the Permittee shall submit to the Agency a pretest report prepared in accordance with the Agency's "Source Emission Testing Guidelines". [§§5-402(1), 5-404(1) and 5-405(1) of the *Regulations*]

(32) Landfill Gas Collection and Control System Design and Operation Plan: The Permittee shall develop and implement a landfill gas collection and control system design and operation plan that addresses the construction design and operational requirements of this Permit within one-hundred eighty (180) days after the issuance of this Permit. The purpose of said plan shall be to ensure that the design and operation of the landfill gas collection and control system remains in continuous compliance with the conditions of this Permit. The design plan shall include the details of the gas collection and control system including a map of the collection system layout and the detailed design drawings of the collection and control systems. The plan shall also include provisions for the operations, monitoring, inspections and maintenance of the gas collection and control systems. Said plan shall be present at the Facility at all times and shall be made available to representatives of the Agency upon request. The Permittee shall revise this plan at the Agency's request or on its own motion to reflect equipment or operational changes as well as the required expansions of the collection and control system over time. [10 *V.S.A.* §§556(c) and 556a(d)] [§5-405(1) of the *Regulations*]

(33) Landfill Surface Monitoring Design Plan: In accordance with condition (7) of this Permit, the Permittee shall develop and implement a landfill surface monitoring design plan.

(34) Startup, Shutdown and Malfunction Plan: The Permittee shall develop and implement a written startup, shutdown and malfunction (SSM) Plan in accordance with 40 CFR Part 63 Subpart A §63.6(e)(3). The Permittee shall submit a semi-annual startup, shutdown and malfunction report to the Agency that details all actions taken during periods of startup, shutdown and malfunctions. The Permittee shall also report all actions taken during periods of startup, shutdown and malfunctions that are not consistent with the SSM Plan within two (2) working days of such action followed by a written letter to the Agency within seven (7) day of such action. [10 *V.S.A.* §§556(c) and 556a(d)] [40 *CFR* Part 63 Subpart A §63.6(e)(3)]

- Record Keeping and Reporting -

(35) Records of Gas Collection System Well Head Inspections and Monitoring: The Permittee shall maintain records of all monitoring of the individual landfill gas collection well heads for gauge pressure, temperature and either the nitrogen level or the oxygen level in accordance with the conditions of this Permit as well as any maintenance, adjustments or other actions taken at each well head. [10 *V.S.A* §§556(c) and 556a(d)] [§§5-405(1) and 5-1015(a)(3) and (4) of the *Regulations*]

(36) Records of Landfill Surface Monitoring: The Permittee shall maintain records of the results of all landfill surface monitoring of methane levels completed in accordance with this Permit and any actions taken. [10 *V.S.A.* §§556(c) and 556a(d)] [§§5-405(1) and 5-1015(a)(3) and (4) of the *Regulations*]

(37) Records of Engine and Flare Operation: The Permittee shall maintain records of the operating status of each engine and flare for all periods of operation and shall include the level of operation such as the kilowatts of power produced for the engines and the quantity of landfill gas, in standard cubic feet or BTU's per hour, delivered to the engines and flares. [10 *V.S.A.* §§556(c) and 556a(d)] [§§5-405(1) and 5-1015(a)(3) and (4) of the *Regulations*]

(38) Records of Engine and Flare Inspections and Maintenance: The Permittee shall maintain records of all maintenance and repairs completed on the engines and flares. [10 *V.S.A.* §§556(c) and 556a(d)] [§§5-405(1) and 5-1015(a)(3) and (4) of the *Regulations*]

(39) Records of Distillate No. 2 Fuel Use and Waste Oil Fuel Use: The Permittee shall maintain records of the total quantity of distillate No. 2 fuel oil consumed in the Facility furnaces as well as the quantity of waste oil consumed in the waste oil furnace, in gallons, each calendar year. [10 *V.S.A.* §§556(c) and 556a(d)] [§§5-405(1) and 5-1015(a)(3) and (4) of the *Regulations*]

(40) Records of Distillate No.2 Fuel Oil Certifications: The Permittee shall obtain from the fuel supplier, for each shipment of fuel oil received at the Facility, a certification or invoice stating the sulfur content of the fuel oil. The certification or invoice shall include the name of the fuel oil supplier, date of delivery, fuel type, quantity of fuel oil delivered, and a statement from the fuel oil supplier that the oil complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society of Testing and Materials in ASTM D396, "Standard Specifications for Fuel Oils" or a statement as to the sulfur content of the fuel oil in percent sulfur by weight. [10 *V.S.A.* §§556(c) and 556a(d)] [§§5-405(1) and 5-1015(a)(3) and (4) of the *Regulations*]

(41) Records of Waste Oil Analyses: The Permittee shall maintain records of any and all analyses of the waste oils generated at the Facility or accepted at the Facility for combustion in the waste oil furnace. [10 *V.S.A.* §§556(c) and 556a(d)] [§§5-221(2), 5-405(1) and 5-1015(a)(3) and (4) of the *Regulations*]

(42) Records for Storage Vessels: For all volatile organic liquid storage vessel at the Facility, including the fuel oil storage tanks, that were installed after July 23, 1984 and that have a design capacity equal to or greater than 40 m3 (10,562 gallons), the Permittee shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. Such records shall be kept for the life of the source. Prior to the Permittee storing any volatile organic liquid with a maximum true vapor pressure equal to or greater than 3.5 kPa (0.5 psia) in any of the above tanks which have a design capacity equal to or greater than 75 m3 (19,805 gallons), the Permittee shall notify the Agency and comply with any additional applicable requirements of 40 *CFR* Part 60

Subpart Kb. For the purposes of this condition, No. 2, No. 4 and No. 6 fuel oils are assumed to have a maximum true vapor pressure less than 3.5 kPa (0.5 psia). [10 *V.S.A.* §§556(c) and 556a(d)] [40 *CFR* Part 60 Subpart Kb]

(43) Records of all required compliance testing shall include the following:

(a) the date, place, and time of sampling or measurements;
(b) the date analyses were performed;
(c) the company or entity that performed the analyses;
(d) the analytical techniques or methods used;
(e) the results of all such analyses; and
(f) the operating conditions existing at the time of sampling or measurement.

[§§5-402(1), 5-405(1) and 5-1015(5) of the *Regulations*]

(44) All records shall be retained for a minimum period of five (5) years from the date of record and shall be made available to the Agency upon request. [§§5-402(1), 5-405(1) and 5-1015(a)(7) of the *Regulations*]

(45) Notification of Start-up: The Permittee shall notify the Agency in writing of the date of initial start-up of the first Caterpillar G3520C engine within fifteen (15) days after such date. [§5-402(1) of the *Regulations*]

(46) Notification of Violations: The Permittee shall notify the Agency in writing within ten (10) days of any violation, of which it is aware, of any requirements of this Permit. This notification shall include, at a minimum, the cause for the violation and corrective action or preventative maintenance taken to correct the violation. [§§5-402(1) and 5-1015(a)(6) of the *Regulations*]

(47) Notification of Modifications to Facility: The Permittee shall notify the Agency in writing of any proposed physical or operational change at the Facility which may increase the emission rate of any air contaminant to the ambient air regardless of any concurrent emission reductions that may be achieved. If the Agency determines that a permit amendment is required, a new application and the appropriate application fee shall be submitted. The permit amendment shall be obtained prior to commencing any such change. [10 *V.S.A.* §556(c)] [§§5-402(1) and 5-501 of the *Regulations*]

(48) Semi-Annual Periodic Monitoring Reports: Within thirty (30) days after July 1 and January 1 of each year, the Permittee shall submit to the Agency a report, signed by a responsible official of the Facility, containing the following information regarding the preceding six (6) months:

(a) description and duration of all periods when the gas stream is diverted from the controls devices;
(b) all periods when the collection system was not operating in excess of 5 days;
(c) a summary of the landfill surface monitoring results including the location and concentration of each exceedance of the 500 ppm methane surface monitoring threshold;
(d) the date and location of each new gas collection well added to the system;
(e) a summary of the gas collection system well head inspections and monitoring results;
(f) a summary of the operating status of the engines and flares;
(g) a summary of inspections and maintenance on the engines and flares;
(h) a summary of the fuel usage records required by this Permit;
(i) a statement of the sulfur content of any distillate fuel delivered to the Facility; and
(j) a summary of any and all waste oil analyses performed.

[§§5-402(1), 5-405(1) and 5-1015(a)(5) of the *Regulations*] [40 CFR Part 63 Subpart AAAA §63.1980(a)]

(49) Annual Compliance Certification: By February 1st of each year, the Permittee shall submit an annual certification of compliance for the previous calendar year which ascertains and identifies the compliance status of the Facility with respect to all terms and conditions of this Permit, including but not limited to the following:

(a) Identification of each term or condition of the permit that is the basis of the certification;
(b) The compliance status;
(c) Whether compliance was continuous or intermittent; and
(d) The methods used for determining the compliance status of the Facility over the reporting period.

A copy of the compliance certification shall also be sent to the U.S. Environmental Protection Agency at the following address:

Air Technical Unit (Mail Code SEA)
Office of Environmental Stewardship
U.S. Environmental Protection Agency
John F. Kennedy Federal Building
Boston, MA 02203

[§114(a)(3) of the CAA] [§§5-402(1) and 5-1015(a)(11) of the *Regulations*]

(50) Notification of Closure: The Permittee shall notify the Agency of permanent closure of the landfill within thirty (30) days of waste acceptance cessation. [10 *V.S.A.* §§556(c) and 556a(c)] [§5-402(1) and §5-1015(a)(5) of the *Regulations*] [40 *CFR* Part 60 Subpart WWW §60.757(d)]

(51) Annual Registration: The Permittee shall calculate the quantity of emissions of air contaminants from the Facility annually. If the Facility emits more than five (5) tons of any and all air contaminants per year, the Permittee shall register the source with the Secretary of the Agency (hereinafter "Secretary"), and shall renew such registration annually. Each day of operating a source which is subject to registration without a valid, current registration shall constitute a separate violation and subject the Permittee to civil penalties. The registration process shall follow the procedures set forth in Subchapter VIII of the *Regulations*, including the payment of the annual registration fee on or before May 15 of each year. [Subchapter VIII §§5-802, 5-803, 5-807, 5-808 of the *Regulations*]

(52) All records, reports, and notifications that are required to be submitted to the Agency by this Permit shall be submitted to:

Agency of Natural Resources
Air Pollution Control Division
103 South Main Street, Bldg 3 South
Waterbury, Vermont 05671-0402.

[§5-402(1) of the *Regulations*]

- Permit Shield -

(53) In accordance with §5-1015(a)(14) of the *Regulations*, the Facility is granted a "permit shield" and is not subject to the regulations and standards listed in Finding of Fact (F)(b) of this Permit. The Agency's "permit shield" determination is based upon the information submitted by the Permittee in its application. The "permit shield" shall be binding only with respect to activities disclosed in the Permittee's application. [§5-1015(a)(14) of the *Regulations*]

- Stratospheric Ozone Protection -

(54) Protection of Stratospheric Ozone - Recycling and Emissions Reduction. The Permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 *CFR* Part 82, Subpart F:

(a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices specified in 40 *CFR* Part 82, Subpart F §82.156.

(b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment as specified in 40 *CFR* Part 82, Subpart F §82.158.

(c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program as specified in 40 *CFR* Part 82, Subpart F §82.161.

(d) Commercial or industrial process refrigeration equipment must comply with the leak repair requirements specified in 40 *CFR* Part 82, Subpart F §82.156.

(e) For each appliance normally containing fifty (50) or more pounds of refrigerant, the Permittee shall keep records of refrigerant purchased and added to such appliances as specified in 40 *CFR* Part 82, Subpart F §82.166.

[40 *CFR* Part 82, Subpart F]

- Motor Vehicles -

(55) The Permittee shall not fail to maintain in good working order or remove, alter or otherwise render inoperative, the exhaust emission control system, the evaporative emission control system, or crankcase ventilation, or any other air pollution control device which has been installed as a requirement of the Federal or State laws or regulations. [§5-701 of the *Regulations*]

(56) The Permittee shall not cause, suffer, allow, or permit excessive emissions of visible air contaminants, other than water, from a motor vehicle for longer than five (5) consecutive seconds. [§5-702 of the *Regulations*]

(57) The Permittee shall not service motor vehicles air conditioners, except in conformance with the requirements of §5-911 of the *Regulations*. [§5-911 of the *Regulations*]

- Standard Permit Conditions -

(58) Approval to construct or modify under this Permit shall become invalid if construction or modification is not commenced within eighteen (18) months after issuance of this Permit, if construction or modification is discontinued for a period of eighteen (18) months or more, or if construction is not substantially completed within a reasonable time. The Agency may extend any one of these periods upon a satisfactory showing that an extension is justified. The term "commence" as applied to the proposed construction or modification of a source means that the Permittee either has:

(a) Begun, or caused to begin, a continuous program of actual on-site construction or modification of the source, to be completed within a reasonable time; or

(b) Entered into binding agreements or contractual obligations, which cannot be cancelled or modified without substantial loss to the Permittee, to undertake a continuous program of actual on-site construction or modification of the source to be completed within a reasonable time.

[10 *V.S.A.* §556(c)] [§5-501 of the *Regulations*]

(59) These Permit conditions may be suspended, terminated, modified, or revoked for cause and reissued upon the filing of a written request with the Secretary of the Agency (hereinafter "Secretary") or upon the Secretary's own motion. Any modification shall be granted only with the written approval of the Secretary. If the Secretary finds that modification is appropriate, only the conditions subject to modification shall be re-opened. The filing of a request for modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated non-compliance does not stay any terms or conditions of this Permit. The Secretary may provide opportunity for public comment on any proposed modification of these conditions. If public comments are solicited, the Secretary shall follow the procedures set forth in 10 *V.S.A.* §556 and §556a, as amended. [10 *V.S.A.* §§556(d) and 556a(g)] [§§5-1008(a) and 5-1008(e) of the *Regulations*]

(60) Cause for reopening, modification, termination and revocation of this Permit includes, but is not limited to:

(a) Inclusion of additional applicable requirements pursuant to state or federal law;
(b) A determination that the permit contains a material mistake or that inaccurate information was used to establish emissions standards or other terms or conditions of the operating permit;
(c) A determination that the operating permit must be modified or revoked to ensure compliance with applicable requirements;
(d) A determination that the subject source has failed to comply with a permit condition;
(e) For Title V subject sources, a determination by U.S. EPA that cause exists to terminate, modify, revoke or reissue an operating permit;
(f) Those causes which are stated as grounds for refusal to issue, renew or modify an operating permit under §5-1008(a) of the *Regulations*; or
(g) If more than three (3) years remain in the permit term and the source becomes subject to a new applicable requirement.

[§5-1008(e)(4) of the *Regulations*]

(61) The Permittee shall furnish to the Agency, within a reasonable time, any information that the Agency may request in writing to determine whether cause exists to modify, revoke, reissue, or terminate the Permit or to determine compliance with this Permit. Upon request, the Permittee shall also furnish to the Agency copies of records required to be kept by this Permit. [10 *V.S.A.* §§556(c) and 556a(d)] [§5-402(1) of the *Regulations*] [40 *CFR* Part 70 §70.6(a)(6)(v)]

(62) By acceptance of this Permit, the Permittee agrees to allow representatives of the State of Vermont access to the properties covered by the Permit, at reasonable times, to ascertain compliance with Vermont environmental and health statutes and regulations and with this Permit. The Permittee also agrees to give the Agency access to review and copy any records required to be maintained by this Permit, and to sample or monitor at reasonable times to ascertain compliance with this Permit. [10 *V.S.A.* §§556(c), 556a(d) and 557] [§§5-402(1), 5-404, and 5-1015(a)(10) of the *Regulations*]

(63) All data, plans, specifications, analyses and other information submitted or caused to be submitted to the Agency as part of the application for this Permit or an amendment to this Permit shall be complete and truthful and, for Title V permit applications, certified by a responsible official whose designation has been approved by the Secretary. Any such submission which is false or misleading shall be sufficient grounds for denial or revocation of this Permit, and may result in a fine and/or imprisonment under the authority of Vermont statutes. [10 *V.S.A.* §§556(c) and 556a(d)] [§§5-505 and 5-1006(f) of the *Regulations*]

(64) For the purpose of establishing whether or not a person has violated or is in violation of any condition of this Permit, nothing in this Permit 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. [10 *V.S.A.* §§556(c) and 556a(d)]

(65) Any permit noncompliance could constitute a violation of the federal Clean Air Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. [10 *V.S.A.* §§556(c) and 556a(d)] [§§5-1008(a) and 5-1008(e) of the *Regulations*]

(66) It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the conditions of this Permit. [10 *V.S.A.* §§556(c) and 556a(d)]

(67) No person shall build, erect, install or use any article, machine, equipment or other contrivances, the use of which, without resulting in a reduction in the total release of air contaminants to the atmosphere, reduces or conceals an emission which otherwise would constitute a violation of these *Regulations*. [§5-403 of the *Regulations*]

(68) The provisions of this Permit are severable. If any provision of this Permit, or its application to any person or circumstances is held invalid, illegal, or unenforceable by a court of competent jurisdiction, the invalidity shall not apply to any other portion of this Permit which can be given effect without the invalid provision or application thereof. [10 *V.S.A.* §§556(c) and 556a(d)]

(69) This Permit does not convey any property rights of any sort or any exclusive privilege, nor does it authorize any injury to private property or any invasion of personal rights. [10 *V.S.A.* §§556(c) and 556a(d)]

(70) All subsequent owners and/or operators of this Facility must request an amendment and transfer of this Permit prior to commencing any operations covered by this Permit. All subsequent owners and/or operators shall submit to the Agency as part of the request for amendment all such information the Agency deems necessary to establish legal ownership and/or interest in the property and all such information the Agency deems necessary to ensure the new owners and/or operators will construct and operate the Facility in compliance with the *Regulations* and this Permit. The terms and conditions of this Permit shall remain in full force and effect after submittal of the request for amendment and until the issuance of an amended Permit or denial. Should the Secretary deny the request, the new owner and/or operator must take whatever action is necessary to comply with the denial. [10 *V.S.A.* §§556 and 556a] [§§5-501, 5-1004, and 5-1013(a) of the *Regulations*]

(71) This Operating Permit shall expire on December 16, 2009. The Permittee shall submit to the Agency a complete application for renewal of the Operating Permit at least twelve (12) months before the expiration of the Operating Permit. If a timely and administratively complete application for an operating permit renewal is submitted to the Secretary, but the Secretary has failed to issue or deny such renewal before the end of the term of this Operating Permit, then the Permittee may continue to operate the subject source and all terms and conditions of this Operating Permit shall remain in effect until the Secretary has issued or denied the operating permit renewal. However, this Operating Permit shall automatically expire if, subsequent to the renewal application being determined or deemed administratively complete pursuant to §5-1006 of the *Regulations*, the Permittee fails to submit any additional information required by the Secretary as well as information pertaining to changes to the Facility within thirty (30) days or such other period as specified in writing by the Secretary. [§§5-1011 and 5-1012(a) of the *Regulations*] [§§5-1005(c) and 5-1012 of the *Regulations*]

(72) The conditions of this Permit as set forth above supercede all conditions contained in all prior Permits issued by the Air Pollution Control Division to the Permittee for this Facility. [10 *V.S.A.* §§556(c) and 556a(d)]

The Agency's issuance of this Air Pollution Control Permit relies upon the data, judgment, and other information supplied by the Permittee. The Agency makes no assurances that the air contaminant source approved herein will meet performance objectives or vendor guarantees supplied to the source Permittee. It is the sole responsibility of the Permittee to operate the source in accordance with the conditions herein and with all applicable state and federal standards and regulations.

Dated this 16th day of December, 2004, in the town of Waterbury, county of Washington, state of Vermont.

Agency of Natural Resources

Jeffrey Wennberg, Commissioner
Department of Environmental Conservation

By: Richard A. Valentinetti
Richard A. Valentinetti, Director
Air Pollution Control Division

de
A2 NEWSVT Landfill - Coventry

RIPUC Use Only	
Date Application Received:	__ __/__ __/__ __
Date Review Completed:	__ __/__ __/__ __
Date Commission Action:	__ __/__ __/__ __
Date Commission Approved:	__ __/__ __/__ __

GIS Certification #:

MSS10801

RENEWABLE ENERGY RESOURCES ELIGIBILITY FORM

The Standard Application Form
Required of all Applicants for Certification of Eligibility of Renewable Energy Resource
(Version 5 – January 5, 2007)

STATE OF RHODE ISLAND PUBLIC UTILITIES COMMISSION
Pursuant to the Renewable Energy Act
Section 39-26-1 et. seq. of the General Laws of Rhode Island

NOTICE:

When completing this Renewable Energy Resources Eligibility Form and any applicable Appendices, please refer to the State of Rhode Island and Providence Plantations Public Utilities Commission Rules and Regulations Governing the Implementation of a Renewable Energy Standard (RES Regulations, Effective Date: January 1, 2006), and the associated RES Certification Filing Methodology Guide. All applicable regulations, procedures and guidelines are available on the Commission's web site: www.ripuc.org/utilityinfo/res.html. Also, all filings must be in conformance with the Commission's Rules of Practice and Procedure, in particular, Rule 1.5, or its successor regulation, entitled "Formal Requirements as to Filings."

• Please complete the Renewable Energy Resources Eligibility Form and Appendices using a typewriter or black ink.

• Please submit one original and three copies of the completed Application Form, applicable Appendices and all supporting documentation to the Commission at the following address:

Rhode Island Public Utilities Commission
89 Jefferson Blvd
Warwick, RI 02888
Attn: Renewable Energy Resources Eligibility

In addition to the paper copies, electronic/email submittals are required under Commission regulations. Such electronic submittals should be sent to: Luly E. Massaro, Commission Clerk at lmassaro@puc.state.ri.us

• In addition to filing with the Commission, Applicants are required to send, electronically or electronically and in paper format, a copy of the completed Application including all attachments and supporting documentation, to the Division of Public Utilities and Carriers and to all interested parties. A list of interested parties can be obtained from the Commission's website at www.ripuc.org/utilityinfo/res.html.

• Keep a copy of the completed Application for your records.

• The Commission will notify the Authorized Representative if the Application is incomplete.

• Pursuant to Section 6.0 of the RES Regulations, the Commission shall provide a thirty (30) day period for public comment following posting of any administratively complete Application.

• Please note that all information submitted on or attached to the Application is considered to be a public record unless the Commission agrees to deem some portion of the application confidential after consideration under section 1.2(g) of the Commission's Rules of Practice and Procedure.

• In accordance with Section 6.2 of the RES Regulations, the Commission will provide prospective reviews for Applicants seeking a preliminary determination as to whether a facility would be eligible prior to the formal certification process described in Section 6.1 of the RES Regulations. Please note that space is provided on the Form for applicant to designate the type of review being requested.

• Questions related to this Renewable Energy Resources Eligibility Form should be submitted in writing, preferably via email and directed to: Luly E. Massaro, Commission Clerk at lmassaro@puc.state.ri.us

SECTION I: Identification Information

1.1 Name of Generation Unit (sufficient for full and unique identification): Washington Electric Cooperative Coventry Landfill Gas to Energy Project

1.2 Type of Certification being requested (check one):

√ Standard Certification ❑ Prospective Certification (Declaratory Judgment)

1.3 This Application includes: (Check all that apply)[1]

- ❑ APPENDIX A: Authorized Representative Certification for Individual Owner or Operator
- √ APPENDIX B: Authorized Representative Certification for Non-Corporate Entities Other Than Individuals
- ❑ APPENDIX C: Existing Renewable Energy Resources
- ❑ APPENDIX D: Special Provisions for Aggregators of Customer-sited or Off-grid Generation Facilities
- ❑ APPENDIX E: Special Provisions for a Generation Unit Located in a Control Area Adjacent to NEPOOL
- √ APPENDIX F: Fuel Source Plan for Eligible Biomass Fuels

1.4 Primary Contact Person name and title: Avram Patt, General Manager

1.5 Primary Contact Person address and contact information:

Address: Washington Electric Cooperative
PO Box 8
East Montpelier, VT 05651
Phone: 802-223-5245 Fax: 802-223-6780
Email: Avram.Patt@washingtonelectric.coop

1.6 Backup Contact Person name and title: Stan Faryniarz, Managing Consultant

1.7 Backup Contact Person address and contact information:

Address: La Capra Associates
20 Winthrop Square
Boston, MA 02110
Phone: 617-557-9100 Fax: 617-951-0528
Email: sfaryniarz@lacapra.com

[1] Please note that all Applicants are required to complete the Renewable Energy Resources Eligibility Standard Application Form and all of the Appendices that apply to the Generation Unit or Owner or Operator that is the subject of this Form. Please omit Appendices that do not apply.

1.8 Name and Title of Authorized Representative (*i.e.*, the individual responsible for certifying the accuracy of all information contained in this form and associated appendices, and whose signature will appear on the application): Avram Pratt, General Manager

Appendix A or B (as appropriate) completed and attached? √ Yes ❑ No ❑ N/A

1.9 Authorized Representative address and contact information:
Address: Washington Electric Cooperative
PO Box 8
East Montpelier, VT 05651
Phone: 802-223-5245 Fax: 802-223-6780
Email: Avram.Patt@washingtonelectric.coop

1.10 Owner name and title: Washington Electric Cooperative

1.11 Owner address and contact information:
Address: Washington Electric Cooperative
PO Box 8
East Montpelier, VT 05651
Phone: 802-223-5245 Fax: 802-223-6780
Email: Avram.Patt@washingtonelectric.coop

1.12 Owner business organization type (check one):
❑ Individual
❑ Partnership
√ Corporation--Non-Profit 501(c) (12) Electrical Cooperative
❑ Other:

1.13 Operator name and title: Coventry Clean Energy Corporation

1.14 Operator address and contact information:
Address: Coventry Clean Energy Corporation
PO Box 8
East Montpelier, VT 05651
Phone: 802-223-5245 Fax: 802-223-6780
Email: Avram.Patt@washingtonelectric.coop

1.15 Operator business organization type (check one):
❑ Individual
❑ Partnership
√ Corporation--Wholly Owned Subsidiary of WEC
❑ Other:

SECTION II: Generation Unit Information, Fuels, Energy Resources and Technologies

2.1 ISO-NE Generation Unit Asset Identification Number or NEPOOL GIS Identification Number (either or both as applicable): MSS10801

2.2 Generation Unit Nameplate Capacity: 4.8 MW

2.3 Maximum Demonstrated Capacity: 4.8 MW

2.4 Please indicate which of the following Eligible Renewable Energy Resources are used by the Generation Unit: (Check ALL that apply) – *per RES Regulations Section 5.0*

- ❑ Direct solar radiation
- ❑ The wind
- ❑ Movement of or the latent heat of the ocean
- ❑ The heat of the earth
- ❑ Small hydro facilities
- √ Biomass facilities using Eligible Biomass Fuels and maintaining compliance with all aspects of current air permits; Eligible Biomass Fuels may be co-fired with fossil fuels, provided that only the renewable energy fraction of production from multi-fuel facilities shall be considered eligible.
- ❑ Biomass facilities using unlisted biomass fuel
- ❑ Biomass facilities, multi-fueled or using fossil fuel co-firing
- ❑ Fuel cells using a renewable resource referenced in this section

2.5 If the box checked in Section 2.4 above is "Small hydro facilities", please certify that the facility's aggregate capacity does not exceed 30 MW. – *per RES Regulations Section 3.31*

❑ ← check this box to certify that the above statement is true

√ N/A or other (please explain) _____

_____

2.6 If the box checked in Section 2.4 above is "Small hydro facilities", please certify that the facility does not involve any new impoundment or diversion of water with an average salinity of twenty (20) parts per thousand or less. – *per RES Regulations Section 3.31*

❑ ← check this box to certify that the above statement is true

√ N/A or other (please explain) _____

_____

2.7 If you checked one of the Biomass facilities boxes in Section 2.1 above, please respond to the following:

A. Please specify the fuel or fuels used or to be used in the Unit: landfill methane gas

B. Please complete and attach Appendix F, Eligible Biomass Fuel Source Plan.

Appendix F completed and attached? √ Yes ❑ No ❑ N/A

2.8 Has the Generation Unit been certified as a Renewable Energy Resource for eligibility in another state's renewable portfolio standard?

√ Yes ❑ No If yes, please attach a copy of that state's certifying order.

Copy of State's certifying order attached? √ Yes ❑ No ❑ N/A

SECTION III: Commercial Operation Date

Please provide documentation to support all claims and responses to the following questions:

3.1 Date Generation Unit first entered Commercial Operation: 07 /01 /05

3.2 Is there an Existing Renewable Energy Resource located at the site of Generation Unit?

❑ Yes
√ No

3.3 If the date entered in response to question 3.1 is earlier than December 31, 1997 or if you checked "Yes" in response to question 3.2 above, please complete Appendix C.

Appendix C completed and attached? ❑ Yes √ No ❑ N/A

3.4 Was all or any part of the Generation Unit used on or before December 31, 1997 to generate electricity at any other site?

❑ Yes
√ No

3.5 If you checked "Yes" to question 3.4 above, please specify the power production equipment used and the address where such power production equipment produced electricity (attach more detail if the space provided is not sufficient):

_____

_____

_____

SECTION IV: Metering

4.1 Please indicate how the Generation Unit's electrical energy output is verified (check all that apply):

❑ ISO-NE Market Settlement System
√ Self-reported to the NEPOOL GIS Administrator
❑ Other (please specify below and see Appendix D: Eligibility for Aggregations):

_____

Appendix D completed and attached? ❑ Yes ❑ No √ N/A

SECTION V: Location

5.1 Please check one of the following that apply to the Generation Unit:

- √ Grid Connected Generation
- ❑ Off-Grid Generation (not connected to a utility transmission or distribution system)
- ❑ Customer Sited Generation (interconnected on the end-use customer side of the retail electricity meter in such a manner that it displaces all or part of the metered consumption of the end-use customer)

5.2 Generation Unit address: 21 Landfill Lane, Coventry, VT 05855

5.3 Please provide the Generation Unit's geographic location information:

A. Universal Transverse Mercator Coordinates: Zone 18T, 719183m E, 4976796m N

B. Longitude/Latitude: 72-13-24 /44-54-39 (NAD 83 datum)

5.4 The Generation Unit located: (please check the appropriate box)

- √ In the NEPOOL control area
- ❑ In a control area adjacent to the NEPOOL control area
- ❑ In a control area other than NEPOOL which is not adjacent to the NEPOOL control area ← *If you checked this box, then the generator does not qualify for the RI RES – therefore, please do not complete/submit this form.*

5.5 If you checked "In a control area adjacent to the NEPOOL control area" in Section 5.4 above, please complete Appendix E.

Appendix E completed and attached? ❑ Yes ❑ No √ N/A

SECTION VI: Certification

6.1 Please attach documentation, using one of the applicable forms below, demonstrating the authority of the Authorized Representative indicated in Section 1.8 to certify and submit this Application.

Corporations

If the Owner or Operator is a corporation, the Authorized Representative shall provide **either**:

(a) Evidence of a board of directors vote granting authority to the Authorized Representative to execute the Renewable Energy Resources Eligibility Form, **or**

(b) A certification from the Corporate Clerk or Secretary of the Corporation that the Authorized Representative is authorized to execute the Renewable Energy Resources Eligibility Form or is otherwise authorized to legally bind the corporation in like matters.

Evidence of Board Vote provided? ❑ Yes ❑ No √ N/A

Corporate Certification provided? √ Yes ❑ No ❑ N/A

Individuals

If the Owner or Operator is an individual, that individual shall complete and attach APPENDIX A, or a similar form of certification from the Owner or Operator, duly notarized, that certifies that the Authorized Representative has authority to execute the Renewable Energy Resources Eligibility Form.

Appendix A completed and attached? ❑ Yes ❑ No √ N/A

Non-Corporate Entities

(Proprietorships, Partnerships, Cooperatives, etc.) If the Owner or Operator is not an individual or a corporation, it shall complete and attach APPENDIX B or execute a resolution indicating that the Authorized Representative named in Section 1.8 has authority to execute the Renewable Energy Resources Eligibility Form or to otherwise legally bind the non-corporate entity in like matters.

Appendix B completed and attached? ❑ Yes ❑ No √ N/A

6.2 Authorized Representative Certification and Signature:

I hereby certify, under pains and penalties of perjury, that I have personally examined and am familiar with the information submitted herein and based upon my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties, both civil and criminal, for submitting false information, including possible fines and punishment. My signature below certifies all information submitted on this Renewable Energy Resources Eligibility Form. The Renewable Energy Resources Eligibility Form includes the Standard Application Form and all required Appendices and attachments. I acknowledge that the Generation Unit is obligated to and will notify the Commission promptly in the event of a change in a generator's eligibility status (including, without limitation, the status of the air permits) and that when and if, in the Commission's opinion, after due consideration, there is a material change in the characteristics of a Generation Unit or its fuel stream that could alter its eligibility, such Generation Unit must be re-certified in accordance with Section 9.0 of the RES Regulations. I further acknowledge that the Generation Unit is obligated to and will file such quarterly or other reports as required by the Regulations and the Commission in its certification order. I understand that the Generation Unit will be immediately de-certified if it fails to file such reports.

Signature of Authorized Representative:

SIGNATURE: DATE: 9/12/07

General Manager

GIS Certification #:
MSS10801

APPENDIX B
(Required When Owner or Operator is a Non-Corporate Entity Other Than An Individual)

STATE OF RHODE ISLAND
PUBLIC UTILITIES COMMISION

RENEWABLE ENERGY RESOURCES ELIGIBILITY FORM
Pursuant to the Renewable Energy Act
Section 39-26-1 et. seq. of the General Laws of Rhode Island

RESOLUTION OF AUTHORIZATION

Resolved: that Avram Patt, named in Section 1.8 of the Renewable Energy Resources Eligibility Form as Authorized Representative, is authorized to execute the Application on the behalf of Washington Electric Cooperative, the Owner or Operator of the Generation Unit named in section 1.1 of the Application.

SIGNATURE: Avram Patt DATE: 9/12/07

State: Vermont

County: Washington

I, Deborah Brown, as a notary public, certify that I witnessed the signature of the above named Avram Patt, and that said person stated that he is authorized to execute this resolution, and the individual verified his identity to me, on this date: September 12, 2007.

SIGNATURE: Deborah Brown DATE: 9/12/07

My commission expires on: 2/10/12 NOTARY SEAL:

Washington Electric Cooperative, Inc.

P.O. Box 8, 75 Vermont Route 14N
East Montpelier, Vermont 05651

Telephone: 802-223-5245; *Fax*: 802-223-6780
www.washingtonelectric.coop

Resolution to Qualify Coventry Landfill Gas Generating Facility as a Renewable Source in Rhode Island

The Board of Directors of Washington Electric Cooperative, Inc. hereby authorizes its General Manager to sign an Eligibility Application and any other necessary documents in order to qualify the Coventry Landfill Gas Generating Facility as a renewable resource in Rhode Island.

CERTIFICATION

I, Marion Milne, Secretary of Washington Electric Cooperative do hereby certify that the above is a true and correct copy of a Resolution from the minutes of a meeting of the Board of Directors of Washington Electric Cooperative held on the 29th day of August, 2007, at which meeting a quorum was present.

Marion Milne

Marion Milne, Secretary

(SEAL)

GIS Certification #:
MSS10801

APPENDIX F
Eligible Biomass Fuel Source Plan
(Required of all Applicants Proposing to Use An Eligible Biomass Fuel)

STATE OF RHODE ISLAND PUBLIC UTILITIES COMMISION
Part of Application for Certificate of Eligibility
RENEWABLE ENERGY RESOURCES ELIGIBILITY FORM
Pursuant to the Renewable Energy Act
Section 39-26-1 et. sq. of the General Laws of Rhode Island

Note to Applicants: Please refer to the RES Certification Filing Methodology Guide posted on the Commission's web site (www.ripuc.org/utilityinfo/res.html) for information, templates and suggestions regarding the types and levels of detail appropriate for responses to specific application items requested below. Also, please see Section 6.9 of the RES Regulations for additional details on specific

The phrase "Eligible Biomass Fuel" (per RES Regulations Section 3.6) means fuel sources including brush, stumps, lumber ends and trimmings, wood pallets, bark, wood chips, shavings, slash, yard trimmings, site clearing waste, wood packaging, and other clean wood that is not mixed with other unsorted solid wastes[4]; agricultural waste, food and vegetative material; energy crops; landfill methane[5] or biogas[6], provided that such gas is collected and conveyed directly to the Generation Unit without use of facilities used as common carriers of natural gas; or neat bio-diesel and other neat liquid fuels that are derived from such fuel sources.

In determining if an Eligible Biomass Generation Unit shall be certified, the Commission will consider if the fuel source plan can reasonably be expected to ensure that only Eligible Biomass Fuels will be used, and in the case of co-firing ensure that only that proportion of generation attributable to an Eligible Biomass Fuel be eligible. Certification will not be granted to those Generation Units with fuel source plans the Commission deems inadequate for these purposes.

This Appendix must be attached to the front of Applicant's Fuel Source Plan required for Generating Units proposing to use an Eligible Biomass Fuel (per Section 6.9 of RES Regulations).

---

[4] Generation Units using wood sources other than those listed above may make application, as part of the required fuel source plan described in Section 6.9 of the RES Regulations, for the Commission to approve a particular wood source as "clean wood." The burden will be on the applicant to demonstrate that the wood source is at least as clean as those listed in the legislation. Wood sources containing resins, glues, laminates, paints, preservatives, or other treatments that would combust or off-gas, or mixed with any other material that would burn, melt, or create other residue aside from wood ash, will not be approved as clean wood.

[5] Landfill gas, which is an Eligible Biomass Fuel, means only that gas recovered from inside a landfill and resulting from the natural decomposition of waste, and that would otherwise be vented or flared as part of the landfill's normal operation if not used as a fuel source.

[6] Gas resulting from the anaerobic digestion of sewage or manure is considered to be a type of biogas, and therefore an Eligible Biomass Fuel that has been fully separated from the waste stream.

F.1 The attached Fuel Source Plan includes a detailed description of the type of Eligible Biomass Fuel to be used at the Generation Unit.

Detailed description attached? v Yes ❑ No ❑ N/A

Comments: _____

_____

F.2 If the proposed fuel is "other clean wood," the Fuel Source Plan should include any further substantiation to demonstrate why the fuel source should be considered as clean as those clean wood sources listed in the legislation.

Further substantiation attached? ❑ Yes ❑ No v N/A

Comments: _____

_____

F.3 In the case of co-firing with ineligible fuels, the Fuel Source Plan must include a description of (a) how such co-firing will occur; (b) how the relative amounts of Eligible Biomass Fuel and ineligible fuel will be measured; and (c) how the eligible portion of generation output will be calculated. Such calculations shall be based on the energy content of all of the proposed fuels used.

Description attached? ❑ Yes ❑ No v N/A

Comments: _____

_____

F.4 The Fuel Source Plan must provide a description of what measures will be taken to ensure that only the Eligible Biomass Fuel are used, examples of which may include: standard operating protocols or procedures that will be implemented at the Generation Unit, contracts with fuel suppliers, testing or sampling regimes.

Description provided? v Yes ❑ No ❑ N/A

Comments: _____

_____

F.5 Please include in the Fuel Source Plan an acknowledgement that the fuels stored at or brought to the Generation Unit will only be either Eligible Biomass Fuels or fossil fuels used for co-firing and that Biomass Fuels not deemed eligible will not be allowed at the premises of the certified Generation Unit. And please check the following box to certify that this statement is true.

❑ ← check this box to certify that the above statement is true

v N/A or other (please explain) _____

_____

F.6 If the proposed fuel includes recycled wood waste, please submit documentation that such fuel meets the definition of Eligible Biomass Fuel and also meets material separation, storage, or handling standards acceptable to the Commission and furthermore consistent with the RES Regulations.

Documentation attached? ❑ Yes ❑ No v N/A

Comments: _____

_____

F.7 Please certify that you will file all reports and other information necessary to enable the Commission to verify the on-going eligibility of the renewable energy generators pursuant to Section 6.3 of the RES Regulations.

v ← check this box to certify that the above statement is true

❑ N/A or other (please explain) _____

_____

F.8 Please attach a copy of the Generation Unit's Valid Air Permit or equivalent authorization.

Valid Air Permit or equivalent attached? v Yes ❑ No ❑ N/A

Comments: _____

_____

F.9 Effective date of Valid Air Permit or equivalent authorization:

12/16/04

F.10 State or jurisdiction issuing Valid Air Permit or equivalent authorization: State of Vermont

August 13, 2007

Avram Patt
General Manager
Washington Electric Cooperative, Inc.
P.O. Box 8
East Montpelier, VT 05651

Attachment to Renewable Energy Resources Eligibility Application

Fuel Source Plan for Coventry Landfill Gas to Energy Project

The Coventry Landfill Gas to Energy Project is located at 21 Landfill Lane, Coventry, VT 05855, on the site of the Coventry Landfill. The sole fuel source for all four of the 1.6 MW Caterpillar generator sets is the methane gas produced by the anaerobic decomposition of waste at the landfill. The landfill gas emissions are collected and used to fuel the generators; were it not for the generation project they would be unproductively flared into the atmosphere.

The Coventry Landfill produces enough gas to consistently fuel the 6.4 MW of generating capacity. If problems were to develop with the gas collection system, the multiple generator set configuration of the facility allows for scaled-back electricity production. Combustion of the gas occurs as it is produced; there are no gas storage facilities at the Coventry site. Flaring is used to provide additional balancing of gas production and electricity production.

There is no connection to an external fuel source and therefore there is no ability for a non-eligible biomass fuel to be used as a fuel source.

The Coventry Landfill is owned by New England Waste Services of Vermont, Inc., a division of Casella, Inc. Washington Electric Cooperative, Inc. has a contract with the landfill to lease the landfill's gas, as well as land to accommodate the generators, for 33 years. This contract will expire on July 1, 2038.

COMMONWEALTH OF MASSACHUSETTS
OFFICE OF CONSUMER AFFAIRS
AND BUSINESS REGULATION
DIVISION OF ENERGY RESOURCES
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Mitt Romney
Governor

Kerry Healey
Lieutenant Governor

Beth Lindstrom
Director, Office of Consumer Affairs
and Business Regulation

David L. O'Connor
Commissioner

February 18, 2005

Mr. Avram Patt
Genera Manager
Washington Electric Cooperative, Inc.
P. O. Box 8
East Montpelier, VT 05651

RE: RPS Eligibility Decision
Coventry Landfill Gas to Energy Facility [LG-1034-05]

Dear Mr. Patt,

On behalf of the Division of Energy Resources (the Division), I am pleased to inform you that your Application for Statement of Qualification pursuant to the Massachusetts Renewable Energy Portfolio Standard (RPS) Regulations, 225 CMR 14.00, is hereby approved. The Division finds that the Generation Unit meets the requirements for eligibility as a New Renewable Generation Unit pursuant to 225 CMR 14.05.

Each Massachusetts New Renewable Generation Unit is assigned a unique Massachusetts RPS Identification Number (MA RPS ID#). The MA RPS ID # stated on the Statement of Qualification must be included in all correspondence with the Division. Coventry Landfill Gas to Energy Facility's MA RPS ID# is: LG-1034-05.

COMMONWEALTH OF MASSACHUSETTS
OFFICE OF CONSUMER AFFAIRS AND BUSINESS REGULATION
DIVISION OF ENERGY RESOURCES

Statement of Qualification

Pursuant to the Renewable Energy Portfolio Standard 225 CMR 14.00

This Statement of Qualification, provided by the Massachusetts Division of Energy Resources, signifies that the Generation Unit identified below meets the requirements for eligibility as a New Renewable Generation Unit, pursuant to the Renewable Energy Portfolio Standard 225 CMR 14.05, as of the approval date of the Application for Statement of Qualification, this 18th day of February 2005.

Authorized Representative's Name and Address:	Mr. Avram Patt Genera Manager Washington Electric Cooperative, Inc. P. O. Box 8 East Montpelier, VT 05651
Name of Generation Unit:	**Coventry Landfill Gas to Energy Facility**

ISO-NE Generation Unit Asset Identification Number or NE-GIS Identification Number:

MSS 10801

This New Renewable Generation Unit is assigned a unique Massachusetts RPS Identification Number. Please include MA RPS ID #s on all correspondence with the Division.

MA RPS ID #: LG-1034-05

Pursuant to 225 CMR 14.06, the Owner or Operator of the New Renewable Generation Unit is responsible for notifying the Division of any change in eligibility status, and the Division may suspend or revoke this Statement of Qualification if the Owner or Operator of a New Renewable Generation Unit fails to comply with 225 CMR 14.00.

Robert Sydney Date: February 18, 2005

Robert Sydney
General Counsel
Division of Energy Resources

#AOP-03-044
DEC#SJ91-0001
Operating Permit Expiration Date: December 16, 2009

State of Vermont
Agency of Natural Resources
Department of Environmental Conservation

Air Pollution Control Division
Waterbury, Vermont

TITLE V
AIR POLLUTION CONTROL PERMIT
TO CONSTRUCT AND OPERATE

Date Permit Issued: December 16, 2004

Owner/Operator:	New England Waste Services of Vermont, Inc. 3 Pitkin Court Montpelier, Vermont 05602
Source:	Municipal Solid Waste Landfill Airport Road Coventry, Vermont

FINDINGS OF FACT

(A) FACILITY DESCRIPTION

New England Waste Services of Vermont, Inc. (also referred to herein as "Permittee") owns and operates a municipal solid waste (MSW) landfill off Airport Road in the town of Coventry, Vermont (also referred to herein as "Facility"). The landfill site consists of the original unlined landfill, referred to as Areas A & B, that operated from approximately 1970 until 1992 when it was closed and capped. In 1993 a new, lined landfill began operations near the original landfill and consists of Phases I, II and III. Phase III is anticipated to reach its full capacity in 2006. The Permittee is required to actively collect the landfill gas that is generated from the decomposition of wastes within the landfill and route it to a combustion device to thoroughly destroy the non-methane organic compounds (NMOCs) contained in the landfill gas. The gas collection system consists of a series of gas collection points including wells drilled into the landfill as well as horizontal collection trenches and leachate cleanout piping, all connected by piping to a blower that maintains a negative pressure in the lines to pull the gas from the landfill. A flare is currently used to combust the landfill gas that is collected at the Facility.

With the proposed Phase IV expansion of the landfill, the Permittee has also proposed the expansion of the landfill gas collection and control system to include an on-site landfill gas to energy (LFGTE) system. The gas to energy system will consist of up to four (4) Caterpillar G3520C LE landfill gas fired internal combustion engine generators rated at 2,221 hp and 1,600 kW each for a total of 6.4 megawatts of electric power generation. Initially three (3) engines will be installed and the fourth will be added in the future (presently estimated to be the year 2009) as gas volumes increase. Any excess landfill gas collected and not combusted in the engines, as well as gas generated during periods the engines may be off-line, will be routed to an on-site flare or flares to ensure continued complete combustion of the gas.

In addition to the current demister knock-out vessel necessary to remove moisture droplets from the gas prior to the blower, the LFGTE system will include additional equipment for pressurizing, drying, and cleaning the landfill gas that will extend the life of the engines. This includes a second blower to provide complete backup blower capability. The gas will also pass through a non-contact heat exchanger that will utilize chilled water to cool the gas stream and condense out additional moisture. This is then followed by a liquid sorption dehumidification system which consists of a series of glycol liquid (sorbent) sprays that contact the gas and absorb the remaining moisture from the gas. The gas then passes through four (4) coalescing polishing filters before being sent to the engines where it is combusted.

Below is a summary table of the Facility landfill capacities and equipment specifications:

Landfill and Equipment Specifications			
Landfill Area/Phase	Years of Operation[1]	Refuse Capacity (Mg)[2] And Landfill Size (acres)	Cumulative Facility Refuse Capacity (Mg) and Landfill size (acres)
Unlined landfill Areas A & B	1970 - 1992	146,050 (11 acres)	146,050 (11 acres)
Landfill Phases I, II, and III	1993 - 2006	2,423,504 (34 acres)	2,569,554 (45 acres)
Landfill Phase IV	2006 - 2020	4,706,259 (45 acres)	7,275,813 (90 acres)

Landfill Gas Combustion devices	Size[3]	Gas capacity (scfm)[4]	Location, stack height
(4) Caterpillar G3520C LE Engines	2,221 bhp (1,600 kW)	507 scfm each	Lined Landfill; 28' min.
(2) John Zink Utility Ground Flares	12"	2,500 cfm each	Lined Landfill; 35' min.
(2) LTI Model CF-5 Passive Flares	2"	2-60 scfm each	Unlined Landfill: (1) at Area A (1) at Area B. 8' min. stack ht. each.

Miscellaneous Equipment and Storage Tanks
(1) Waste oil furnace: 235,000 BTU/hour, located in maintenance garage.
(1) No.2 fuel oil space heating furnace: 175,000 BTU/hour, located at maintenance garage.
(1) No.2 fuel oil space heating furnace: 85,000 BTU/hour, located at scale house.
(1) Safety-Kleen parts cleaner.
(7) Leachate storage tanks: (2) 15,000 gallon, (3) 20,000 gallon, (1) 30,000 gallon, and (1) 55,000 gallon.
(1) Diesel fuel oil storage tank: <10,000 gallons.
(1) Lube oil supply storage tank: 8,000 gallons.
(1) Waste oil storage tank: 2,000 gallons.
(2) Ethylene glycol storage tanks: 1,000 gallons each.

[1] Years of operation are approximate and are estimated for Phase IV.
[2] Mg – Mega grams. To convert to English tons multiply the Mg value by 1.1025.
[3] bhp – brake horsepower rated output as specified by the manufacturer. KW - kilowatt electrical output.
[4] scfm - standard cubic feet per minute of landfill gas. Landfill gas is assumed to contain 40% - 60% methane with the balance predominately carbon dioxide but also includes 561 ppm nonmethane organic compounds (NMOCs) based on prior testing at this landfill. The maximum landfill gas generation rate was predicted to be 5,140 scfm based on default values in AP42 Section 2.4 (rev. 11/98) and doubling the result.

(B) FACILITY CLASSIFICATION

The Facility is classified as a source of air contaminants pursuant to Title 10 of the *Vermont Statutes Annotated* ("10 *VSA*.") §555 and §5-401(16) and (17) of the *Vermont Air Pollution Control Regulations* (hereinafter "*Regulations*"). In addition, §5-101 of the *Regulations* defines a *stationary source* as any structure(s), equipment, installation(s), or operation(s), or combination thereof, which emit or may emit any air contaminant, which is located on one or more contiguous or adjacent properties and which is owned or operated by the same person or persons under common control. Based on this definition, all of the equipment, operations, and structures at the Facility are grouped together by the Agency of Natural Resources, Department of Environmental Conservation, Air Pollution Control Division (hereinafter "Agency") as one stationary air contaminant source for purposes of review under the *Regulations*.

(C) PRIOR AGENCY ACTIONS/APPROVALS

The Facility has been issued the following "Permit to Construct" approvals pursuant to 10 *VSA* §556 and §5-501 of the *Regulations*.

Prior Agency Approvals and Actions	
Date of Action	Description of Agency Approval/Action
November 13, 1992	#AP-92-020 – Original Agency Permit to Construct approval for construction of the lined landfill at the Facility. The Permit included requirements for gas collection and control on the existing unlined landfill that was to be closed and the proposed lined landfill expansion at the same site.
December 15, 1995	#AP-92-020a – Amended Permit to Construct to allow interim "passive" gas collection with passive flare controls on the closed unlined landfill rather than "active" gas collection as required for the lined landfill.

(D) FACILITY PERMIT APPLICABILITY

As noted above, the Facility is classified as a source of air contaminants under §5-401 of the *Regulations*. Pursuant to 10 *VSA* §556 and §5-501 of the *Regulations* a Permit to Construct, or an amendment to any existing Permit to Construct, must be obtained before commencing the construction, installation, modification or operation of an air contaminant source. The proposed Phase IV expansion and its associated gas collection and control system, including the LFGTE system, is considered a modification to the Facility under the *Regulations* and consequently a Permit to Construct must be obtained.

Pursuant to 10 *VSA* §556a and Subchapter X of the *Regulations* a Permit to Operate is required for any air contaminant source with allowable emissions of all air contaminants combined of ten (10) tons per year ("tpy") or more or that is subject to a standard, limitation or other requirement under §111 and/or §112 of the Clean Air Act. Allowable emissions from the Facility in the future as a result of the approval of the Phase IV expansion are estimated to be greater than ten (10) tpy combined and emissions of carbon monoxide (CO) are estimated to be in excess of the one-hundred (100) tpy threshold for applicability of Title

V of the federal Clean Air Act. In addition, pursuant to Title 40 of the *Code of Federal Regulations* ("40 *CFR*") Subpart WWW - Standards of Performance for Municipal Solid Waste Landfills - Part 60.752(b) the Facility is required to submit an application for a Title V Permit to Operate once the design capacity of the landfill exceeds 2.5 million Mg. The July 9, 1999 Solid Waste Certification for the Phase III expansion approved a total design capacity of 2.57 million Mg for the Facility. The proposed Phase IV expansion will increase the Facility design capacity to 7.28 million Mg.

Therefore, pursuant to §§5-1002, 5-1003, and 5-1005 of the *Regulations* the Facility is classified as a "Title V Subject Source" and must obtain a Permit to Operate consistent with the requirements of Subchapter X of the *Regulations* and 40 *CFR* Part 70.

In accordance with 10 *VSA* §556(e) the Agency has combined the Permit to Construct and the Permit to Operate for this Facility into one combined Permit to Construct and Operate. The allowable emissions for the Facility are summarized below:

Future Allowable Air Contaminant Emissions (tons/year)[1]						
PM/PM_{10}	**SO_2**	**NO_x**	**CO**	**VOCs**	**Total Criteria**	**HAPs[2]**
8.6	7.8	59	325	17	>10	<10/25

[1] PM/PM_{10} - particulate matter and particulate matter of 10 micrometers in size or smaller; SO_2 - sulfur dioxide; NO_x - oxides of nitrogen measured as NO_2 equivalent; CO - carbon monoxide; VOCs - volatile organic compounds; HAPs - hazardous air pollutants as defined in §112 of the federal Clean Air Act. Emissions are based on: (1) the maximum predicted gas generation rate from the landfill based on AP-42 factors from section 2.4 (rev. 11/98) which is 2,570 scfm and then doubling the result to 5,140 scfm, (2) 50% methane in the landfill gas, (3) 75% gas collection efficiency from the landfill and (4) the worst case emissions scenario of the engines at full load (2,030 scfm) with the flares consuming the remaining (1,825 scfm)

[2] Emissions of individual HAPs each < 10 tpy and emissions of total HAPs combined <25 tpy.

(E) REVIEW FOR THE PERMIT TO CONSTRUCT

(a) New Source Review Designation

The Facility, prior to the construction of the proposed Phase IV expansion, is designated as a major stationary source of air contaminants since it has allowable emissions of carbon monoxide (CO) of fifty (50) tons per year or greater. Consequently, any *modification* of the source that would result in a significant increase in emissions of any air contaminant, as defined in §5-101 of the *Regulations*, is designated as a major modification and is subject to review under §5-501 and §5-502 of the *Regulations*. The proposed project identified in Findings of Fact (A) above, together with all previous minor modifications constructed at the Facility since July 1, 1979, and which have not been previously reviewed under §5-502 of the *Regulations*, will result in a significant increase in emissions. Consequently, the proposed modification is designated as a major modification and is subject to the requirements of §5-502 of the *Regulations*.

(b) Most Stringent Emission Rate

Pursuant to §5-502 of the *Regulations*, the owner/operator of each new major stationary source or major modification must apply control technology adequate to achieve the Most Stringent Emission Rate ("MSER") with respect to those air contaminants for which there would be a major or significant actual emissions increase, respectively, but only for those currently proposed physical or operational changes which would contribute to the increased emissions.

The proposed project is designated as a major modification of a stationary source and therefore is subject to review under the MSER requirements in §5-502 of the *Regulations* for the pollutants carbon monoxide (CO) and nitrogen oxides (NO_x).

The Agency has determined MSER for these two pollutants to be:

Most Stringent Emission Rate Determination		
Date of Determination/ Permit #	**Pollutant**	**Description/Emission limit**
December 16, 2004 #AOP-03-044	CO	Cat G3520C Engines: 2.75 g/bhphr and 13.5 lbs/hour (each) John Zink Flares: 0.37 lbs/MMBtu
	NO_x	Cat G3520C Engines: 0.5 g/bhphr and 2.45 lbs/hour (each) John Zink Flares: 0.068 lbs/MMBtu

(c) Ambient Air Quality Impact Evaluation

An ambient air quality impact evaluation (AQIE) is performed to demonstrate whether or not a proposed project will cause or contribute to violations of the ambient air quality standards and/or significantly deteriorate existing air quality. The Agency's implementation procedures concerning the need for an AQIE under §5-406(1) of the *Regulations*, specifies that such analyses may be required when a project results in an allowable emissions increase of ten (10) tons per year or more of any air contaminant, excluding VOCs. Additionally, the Agency may require an AQIE where the short-term allowable emission rates will significantly increase as a result of a project.

Based on the proposed level of emissions from this Facility, the Agency required an AQIE for the pollutants CO and NO_x. The proposed level of emissions of all other criteria pollutants, excluding VOCs, are below the ten (10) tons per year threshold. Since both CO and NO_x emissions also exceed the respective major source threshold of fifty (50) tons per year, the Agency's implementation procedures require the AQIE to determine which other nearby sources, if any, must be included in the analysis. Any other nearby source that has a significant impact area for a respective pollutant that overlaps with the proposed Facility's significant impact area for that same pollutant must be included in the AQIE. All other nearby sources are assumed to be included in the ambient background value for the pollutant. The ambient background value is determined from the Agency's ambient monitoring network

throughout the State. For the pollutant CO the nearby sources required to be included in the AQIE were the Columbia Forest Products facility in Newport and the Ethan Allen, Inc. facility in Orleans. No nearby sources were required to be included in the AQIE for the pollutant NO_x since the significant impact areas of the other sources did not overlap with the proposed Facility's significant impact area for NO_x, but NEWSVT opted to conservatively include both Columbia Forest Products and Ethan Allen for comparison to the NO_x national ambient air quality standard.

The Facility emissions used in the AQIE are based on the maximum projected volumes of landfill gas generation and the highest level of emissions generated from the two potential operating scenarios: (1) all the gas being burned in the flares, or (2) the engines burning the maximum amount of gas they are capable of with any excess gas being burned in the flares. In the case of both CO and NO_x, the engines have higher emission rates than the flares and thus the engine operating scenario is worst case for ambient impacts.

The Facility was found to comply with all applicable ambient air quality standards and prevention of significant deterioration increments. A summary of the AQIE results are presented below:

Ambient Air Quality Impact Evaluation
Performed for Permit #AOP-03-044

Comparison of Facilities Combined Impacts to National Ambient Air Quality Standards[1]

Pollutant	Averaging time of Std.	Ambient Standard (ug/m3)	Modeled Impact of Facilities (ug/m3)	Background Value[2] (ug/m3)	Total Impact w/ Background (ug/m3)
CO	1-hour	40,000	1,270	5,720	6,990
CO	8-hour	10,000	710	3,090	3,800
NO_x	annual	100	18.6	24.5	43.1

Comparison of Facility Impacts to Prevention of Significant Deterioration Increments[3]

Pollutant	Averaging time of PSD Increment	PSD Increment (ug/m3)	Modeled Impact of Facility alone (ug/m3)	Maximum distance of significant impacts (>1ug/m3 annual avg) in kilometers from the source
NO_x	annual	6.25	2.5	2.1

[1] The National Ambient Air Quality Standards are presented in Subchapter III - Ambient Air Quality Standards - of the *Vermont Air Pollution Control Regulations*.
[2] Background values are provided by the Agency and are based on the maximum actual monitored values from the Agency's ambient monitoring network across the State over the past three (3) years.
[3] Prevention of Significant Deterioration Increments are presented in Table 2 of the *Vermont Air Pollution Control Regulations*. All areas in Vermont with the exception of the Lye Brook Wilderness Area are classified as Class II. In addition, pursuant to §5-502(5) of the *Regulations* major sources are only allowed a maximum of 25% of the total available increment of 25 ug/m3.

(F) REVIEW FOR THE PERMIT TO OPERATE

(a) Applicable Requirements

The operations at the Facility are subject to the following state and federal laws and regulations, the requirements of which are embodied in the conditions of this Permit.

(i) *Vermont Air Pollution Control Regulations*:

Applicable Requirements from the Vermont Air Pollution Control Regulations
Section 5-201 – Prohibition of Open Burning
Section 5-211(2) - Prohibition of Visible Air Contaminants, Installations Constructed Subsequent to April 30, 1970.

Applicable Requirements from the Vermont Air Pollution Control Regulations
Section 5-221(1) - Prohibition of Potentially Polluting Materials in Fuel, Sulfur Limitation in Fuel.
Section 5-221(2) - Prohibition of Potentially Polluting Materials in Fuel, Waste Oil.
Section 5-231(3) - Prohibition of Particulate Matter; Combustion Contaminants.
Section 5-231(4) - Prohibition of Particulate Matter; Fugitive Particulate Matter.
Section 5-241 – Prohibition of Nuisance and Odor.
Section 5-253.14 - Control of Volatile Organic Compounds from Solvent Metal Cleaning.
Section 5-261(3) – Control of Hazardous Air Contaminants - Hazardous Most Stringent Emission Rate.
Section 5-271 – Control of Air Contaminants from Stationary Reciprocating Internal Combustion Engines.
Section 5-402 – Written Reports When Requested.
Section 5-403 – Circumvention.
Subchapter VIII – Registration of Air Contaminant Sources.
Subchapter X – Operating Permits.

(ii) Reasonably Available Control Technology - §5-1010 of the *Regulations*

Pursuant to 10 *VSA* §556a(d) and §5-1010 of the *Regulations* the Agency may establish and include within any Permit to Operate emission control requirements based on Reasonably Available Control Technology ("RACT"). The Agency has not imposed any RACT requirements on this Facility under this authority at this time.

(iii) Existing Air Pollution Control Permit to Construct and/or Operate

The Facility currently operates under the confines of a Permit to Construct issued on December 15, 1995 (#AP-92-020a) and the Solid Waste Certification issued July 9, 1999. The conditions within those approvals relating to the *Air Pollution Control Regulations* and reviews there under are considered applicable requirements pursuant to §5-1002(d) of the *Regulations*. The applicable requirements of those approvals which are not being modified herein are incorporated into this new combined Permit to Construct and Operate (#AOP-03-044).

(iv) Federal Requirements:

Applicable Requirements from Federal Regulations and the Clean Air Act
40 *CFR* Part 60, Subpart WWW - Standards of Performance for Municipal Solid Waste Landfills. §60.752 Standards - Requires landfill gas collection and control system. §60.753 Operational Standards - Operational requirements of the gas collection and control system. Applicable to all MSW landfills with a design capacity of 2.5 million megagrams (Mg) or greater, however the requirement to install the landfill gas collection and control system is only required once uncontrolled emissions of nonmethane organic compounds (NMOCs) from the landfill equal or exceed 50 Mg/year. The NEWSVT landfill has an existing design capacity (unlined through Phases III) of 2,569,554 Mg and Phase IV will add an additional capacity of 4,706,259 Mg for a cumulative total of 7,275,813 Mg. Uncontrolled NMOC emissions were predicted to first exceed 50 Mg in the year 2001.
40 *CFR* Part 63, Subpart AAAA - National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills. §63.1955 Standards - Requires gas collection and control system meeting same standards as 40 *CFR* Part 60, Subpart WWW by referencing such. Applicable to all MSW landfills that are (1) a major source of Hazardous Air Pollutants (HAPs), or (2) are collocated with a major source of HAPs, or (3) are an area source with a design capacity of 2.5 million megagrams (Mg) or greater and have estimated uncontrolled emissions of NMOCs equal to or greater than 50 Mg/year. The NEWSVT landfill is not a major source of HAPs nor is it collocated at a major source of HAPs but it is an area source with a design capacity of 2.5 million Mg or greater and has estimated uncontrolled emissions of NMOCs equal to or greater than 50 Mg/year.
40 *CFR* Part 60, Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984. §60.116b Monitoring of operations - For vessels storing liquids with a vapor pressure of less than 3.5 kPa the requirements are only to maintain records of the dimensions and capacity of storage vessels. Applicable to all storage vessels of 10,568 gallons or greater manufactured after July 23, 1984. NEWSVT has storage vessels for leachate, some of which exceed 10,568 gallons in capacity, but leachate has a maximum vapor pressure of less than 3.5 kPa therefore this regulation is not applicable.
Clean Air Act §§114(a)(3), 502(b), and 504(a)-(c); 40 *CFR* Part 70 §§70.6(a)(3)(i)(B) and 70.6(c)(1); and 40 *CFR* Part 64 - Compliance Assurance Monitoring. Upon renewal of a Title V Permit to Operate, a facility must comply with enhanced monitoring and compliance assurance monitoring requirements for any emission controlled unit subject to an emission standard with uncontrolled emissions from the unit in excess of the Title V major source thresholds.

(b) Non-Applicable Requirements

Pursuant to §5-1015(a)(14) of the *Regulations*, an owner or operator of a Facility may request a permit shield from specific state or federally enforceable regulations and standards which are not applicable to the source. The Permittee has requested a permit shield with respect to several potentially applicable requirements. The Agency has reviewed this request and is hereby granting a permit shield in accordance with §5-1015(a)(14) of the *Regulations* for the following requirements which have been determined not to be applicable to the Facility based on the information provided by the Permittee:

Non-Applicable Requirements for which a Permit Shield is Granted
§5-231(1) - Prohibition of Particulate Matter: Industrial Process Emissions. The Agency has determined that the combustion of landfill gas is not considered an industrial process since gaseous fuels are not considered part of the *process weight* input into a process. Therefore, the combustion of landfill gas is not subject to this regulation
§5-231(3) - Prohibition of Particulate Matter: Combustion Contaminants. The Agency has determined that landfill gas is not a *fossil fuel* under the definition in the *Regulations* therefore this regulation is not applicable to the flares or engines combustion landfill gas. However, the other fuel burning equipment at the facility including the No.2 fuel oil space heating units and waste oil furnace are subject.
§5-241(3) - Prohibition of Nuisance and Odor: Control of Odors from Industrial Processes. While the Facility is subject to §5-241(1) and (2), the Agency has not previously classified all landfills as industrial processes subject to §5-241(3) and does not currently consider the Facility subject to this regulation. However, in order to ensure compliance with other applicable requirements for this Facility, most of these emission control measures are required under separate authority.

(c) Enforceability

This section delineates which permit conditions are federally enforceable and which conditions are state only enforceable. All federal enforceable conditions are subject to federal citizen suit provisions. All conditions of this Permit are enforceable under both state and federal authorities.

(d) Compliance Certification

The Permittee is required by this Permit to certify compliance as part of its annual registration with the Agency pursuant to the requirements of Subchapter X of the *Regulations*. Additionally, this Permit requires the submission of semi-annual reports of monitoring records used to demonstrate compliance with the limitations contained in this Permit.

(G) HAZARDOUS MOST STRINGENT EMISSION RATE

Pursuant to §5-261 of the *Regulations*, any stationary source whose current or proposed actual emission rate of a hazardous air contaminant ("HAC") is equal to or greater than the respective Action Level (found in Appendix C of the *Regulations*) shall achieve the Hazardous Most Stringent Emission Rate ("HMSER") for the respective HAC.

While landfill gas is comprised principally of methane and carbon dioxide from the decomposition of wastes within the landfill, as this gas works its way to the ambient air it contacts and strips out other volatile HACs in the landfill such as from cleaning solvents, paints and petroleum contaminated materials. These HAC compounds are collectively referred to as non-methane organic compounds (NMOCs). As part of the review for Air Pollution Control Permit #AP-92-020 issued November 13, 1992, the Agency determined that the Facility would have regulated emissions of several hazardous air contaminants in excess of their respective Action Levels if the landfill gas was allowed to vent to the ambient air uncontrolled. The Agency subsequently determined HMSER to be the installation and operation of a landfill gas collection and control system that captures the landfill gas and routes it to a combustion device with a minimum ninety-eight (98) percent destruction efficiency of the NMOCs. Flares designed and operated in accordance with 40 *CFR* Part 60.18 were and still are considered an acceptable method of compliance with this requirement. None of the emissions were estimated to exceed their respective Action Levels after initiation of the emission controls.

Since that original permit, samples of the landfill gas at the Facility have been collected and analyzed for HACs in both 1993 and again in 2002. Based on these results, the Facility is still expected to have emissions of several HACs in excess of their respective Action Level if allowed to vent uncontrolled and therefore the Facility is subject to HMSER under §5-261 of the Regulations. Also since that original permit, the U.S. EPA has promulgated two similar federal regulations that require similar gas collection and control requirements, to which the Facility is now subject. Based on this information, the Agency has determined that HMSER shall continue to be the requirement to achieve the minimum 98% destruction efficiency of the NMOCs in the landfill gas as required by the prior HMSER and the federal regulations or alternatively demonstrate that the outlet concentrations of NMOCs are less than 20 ppmvd. In addition, the Facility must also comply with various requirements for the collection of the landfill gas to ensure as much gas is collected as is technically feasible and for monitoring of the gas collection and control system operations.

This HMSER evaluation shall be subject to re-evaluation five (5) years from the date of its determination and shall remain in effect until revised by the Agency. Upon reevaluation of this HMSER, the Agency intends to require further review of the status of emission control technologies, including but not limited to the status of catalytic control technologies, to determine their technical and economic feasibility at that time. This and prior HMSER determinations for this Facility are presented below.

Hazardous Most Stringent Emission Rate Determinations		
Date of Determination/ Permit #	Pollutant	Description/Emission limit
November 13, 1992 #AP-92-020	NMOCs including: benzene ethylene dichloride methylene chloride perchloroethylene trichloroethylene vinyl chloride	MSER: 98% destruction of NMOCs achieved through the installation and operation of a properly designed landfill gas collection and control system.
December 16, 2004 #AOP-03-044	NMOCs including: acrylonitrile benzene chloroform 1,1,2-trichloroethane 1,1,2,2-tetrachloroethane ethylene dibromide ethylene dichloride hydrogen sulfide methylene chloride perchloroethylene propylene dichloride trichloroethylene vinyl chloride	MSER: 98% destruction of NMOCs achieved through the installation and operation of a properly designed landfill gas collection and control system. Alternatively to demonstrating 98% destruction, the Facility may demonstrate that the outlet concentration of NMOCs from the combustion device does not exceed 20 ppmvd[1] (as hexane equivalent) at 3% oxygen.

[1] 20 ppmvd is parts per million by volume on a dry basis and is the alternative emission limit as provided in the federal regulations 40 *CFR* Part 60 §60.752 and Part 63 §63.1955 .

Based on the Agency's review of the Facility's application and the above Findings of Fact, the Agency concludes that the Facility, subject to the following Permit conditions, complies with all applicable state and federal air pollution control laws and regulations or is subject to an acceptable schedule of compliance. Therefore, pursuant to 10 *VSA* §§556 and 556a, as amended, the Agency hereby proposes to issue a Permit approving the Facility, as described in the above Findings of Fact, subject to the following:

PERMIT CONDITIONS

- Construction Specifications and Operational Limitations -

(1) The Permittee shall construct and operate the Facility in accordance with the plans and specifications submitted to the Agency and in accordance with the conditions set forth herein, including the equipment specifications as listed in Findings of Fact (A) or their equivalent as approved by the Agency. [10 *V.S.A.* §§556(c) and 556a(d)]] [§5-501(1) of the *Regulations*]

(2) In accordance with 40 *CFR* Part 60 Subpart WWW (Standards of Performance for Municipal Solid Waste Landfills) and 40 *CFR* Part 63 Subpart AAAA (National Emission Standards for Hazardous Air Pollutants: Municipal solid Waste Landfills), the Permittee shall install, operate and maintain a landfill gas collection and control system that effectively captures the gas generated within the landfill and routes the gas to a control device that effectively destroys the nonmethane organic compounds (NMOCs) within the gas. [10 *V.S.A.* §§556(c) and 556a(d)] [§5-261(3) of the *Regulations*] [40 *CFR* Part 60 Subpart WWW and 40 *CFR* Part 63 Subpart AAAA]

Gas Collection System Requirements

(3) The landfill gas collection system shall be designed, constructed and operated in accordance with 40 *CFR* §60.759 which includes but is not limited to the following:

(a) The landfill gas collection system and individual wells shall be designed to achieve comprehensive control of the landfill gas taking into account: depths of refuse, refuse gas generation rates and flow characteristics, cover properties, gas system expandability, leachate and condensate management, accessibility, compatibility with filling operations, integrations with closure end use, air intrusion control, corrosion resistance, fill settlement, temperature resistance.

(b) There shall be a sufficient density of landfill gas collection wells to ensure comprehensive and effective collection of landfill gas.

(c) The system shall control landfill gas from all gas producing areas of the landfill except as otherwise approved by the Agency.

(d) The landfill gas collection system shall be designed so as not to allow indirect short circuiting of air under the cover or refuse into the gas collection system or landfill gas into the air. Any gravel or other materials used around pipe perforations shall be of sufficient dimension so as not to penetrate or block the perforations.

(e) The landfill gas collection system components shall be constructed of PVC, HDPE, fiberglass, stainless steel or other nonporous corrosion resistant materials.

(f) The individual landfill gas collection wells shall be connected to the header pipes with a positive closing throttle valve and shall be equipped with a gas sampling port.

(g) The gas mover system shall be designed to handle the maximum gas generation flow rate expected over the life of the system.

[10 *V.S.A.* §§556(c) and 556a(d)] [§5-5261(3) of the *Regulations*] [40 *CFR* Part 60 Subpart WWW §60.759]

(4) In accordance with 40 *CFR* §60.753(a), the Permittee shall ensure the gas collection system collects gas from all areas of the landfill where trash has been in place for five (5) years or more and from all closed areas of the landfill, as well as areas at final grade, where trash has been in place for two (2) years or more. In addition, the gas collection system must be extended into any area of the landfill that is considered a bioreactor as defined in 40 CFR Part 63 Subpart AAAA prior to initiating addition of liquids other than leachate. [10 *V.S.A.* §§556(c) and 556a(d)] [§5-5261(3) of the *Regulations*] [40 *CFR* Part 60 Subpart WWW §60.753(a)] [40 *CFR* Part 63 Subpart AAAA §63.1955(d)]

(5) In accordance with 40 *CFR* §60.753(b), the Permittee shall ensure the gas collection system maintains a negative pressure at each gas collection wellhead except in cases where it is documented that well temperatures have increased and must be reduced to avoid the risk of a fire. In addition, the requirement to maintain a negative pressure at each well head does not apply to the gas collection wells in the unlined landfill while that separate gas collection system is operated in a passive gas collection mode.

The Permittee shall monitor and record the gauge pressure at each active gas collection system well head monthly. [10 *V.S.A.* §§556(c) and 556a(d)] [§5-5261(3) of the *Regulations*] [40 *CFR* Part 60 Subpart WWW §60.753(b)]

(6) In accordance with 40 *CFR* §60.753(c), the Permittee shall ensure the gas collection system maintains at each gas collection wellhead a landfill gas temperature below 131°F (55°C) with either a nitrogen level of less than twenty (20) percent by volume or an oxygen level less than five (5) percent by volume.

The Permittee shall monitor and record the temperature and either the nitrogen level or oxygen level at each well head monthly. The nitrogen level shall be determined in accordance with 40 *CFR* Part 60, Appendix A, Reference Method 3C or an equivalent method approved in writing by the Agency. The oxygen level shall be determined in accordance with 40 *CFR* Part 60, Appendix A, Reference Method 3A, except as provided in 40 *CFR* §60.753(c)(2), or an equivalent method approved in writing by the Agency. [10 *V.S.A.* §§556(c) and 556a(d)] [§5-5261(3) of the *Regulations*] [40 *CFR* Part 60 Subpart WWW §60.753(c)]

(7) In accordance with 40 *CFR* §60.753(d), the Permittee shall ensure the gas collection system is operated in such a manner that the methane concentration is maintained at less than 500 ppm above background at the surface of the landfill. The Permittee shall develop a surface monitoring design plan that includes the monitoring procedures to be followed per 40 *CFR* §60.755(c) and (d), as well as a topographical map with the proposed monitoring route. Prior to closure of the landfill, at a minimum the methane concentrations shall be monitored quarterly along the entire perimeter of the collection area and along a pattern that traverses the landfill at 30 meter intervals and where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover. Upon closure of the landfill, the Permittee may skip to annual monitoring along the entire perimeter of the collection area and along a pattern that traverses the landfill at 30 meter intervals provided there are no monitored exceedances of the surface methane limit

for three consecutive quarters. Any subsequent monitored exceedance of the surface methane limit shall return the monitoring frequency for the entire landfill back to quarterly. [10 *V.S.A.* §§556(c) and 556a(d)] [§5-5261(3) of the *Regulations*] [40 *CFR* Part 60 Subpart WWW §60.753(d)]

(8) The gas collection and control system shall not be equipped with any landfill gas bypass system that would enable the collected landfill gas to be sent to the ambient air without first passing through the control system combustion device(s). [10 *V.S.A.* §§556(c) and 556a(d)] [§5-5261(3) of the *Regulations*] [40 *CFR* Part 60 Subpart WWW §60.756(b)]

Landfill Gas Control System Requirements

(9) In accordance with 40 *CFR* §60.753(e), the Permittee shall ensure that all landfill gas collected by the gas collection system is routed to a landfill gas control system consisting of either a flare or flares designed and operated in accordance with 40 *CFR* §60.18 or to a Caterpillar G3520C landfill gas engine or engines as specified in Finding of Fact A above, or their equivalent as approved by the Agency. In the event the engines are off-line for any reason, the flare or flares shall have the capacity to combust the entire amount of landfill gas collected while still complying with the all the requirements of 40 *CFR* §60.18 including operation with no visible emissions and the limitations on gas exit velocity. The Permittee shall at no time allow the venting of landfill gas from the gas collection system that is not properly combusted in one of the landfill gas control system combustion devices without the approval of the Agency. In the event more landfill gas is collected than can be accommodated in the landfill gas control system combustion devices the Permittee shall within one (1) hour shut down the gas mover system and close all valves in the collection and control system contributing to the venting of the gas to the atmosphere. The Permittee shall also immediately make arrangements to bring the necessary gas control system capacity on-line. [10 *V.S.A.* §§556(c) and 556a(d)] [§5-5261(3) of the *Regulations*] [40 *CFR* Part 60 Subpart WWW §60.753(e)]

(10) In accordance with 40 *CFR* §60.753(f), the Permittee shall ensure that all landfill gas collected by the gas collection system is at all times routed to either the properly operating engines and/or flares, as specified above. [10 *V.S.A.* §§556(c) and 556a(d)] [§5-5261(3) of the *Regulations*] [40 *CFR* Part 60 Subpart WWW §60.753(f)]

(11) Each flare shall be operated with a flame present at all times landfill gas is routed through the flare. In addition, the flares shall be equipped with a windscreen to prevent flame out if necessary. [10 *V.S.A.* §§556(c) and 556a(d)] [§5-5261(3) of the *Regulations*] [40 *CFR* Part 60 Subpart A §60.18(c)(2)]

(12) Each flare shall be equipped with a heat sensing device, such as an ultraviolet beam sensor or thermocouple, at the pilot light or the flame itself to indicate the continuous presence of a flame when LFG is being delivered to the respective flare. The device shall be installed, calibrated, maintained and operated in accordance with the manufacturer's specifications. In the event the heat sensing device detects a flame failure the gas flow to the flare shall be automatically shut down until the flame is reestablished. Passive flares operated as part of any separate gas collection and control system for the unlined landfill shall not be subject to this condition. [10 *V.S.A.* §§556(c) and 556a(d)] [§5-5261(3) of the *Regulations*] [40 *CFR* Part 60 Subpart WWW §60.756(c)] [40 *CFR* Part 60 Subpart A §60.18(f)(2)]

(13) Each passive flare operated as part of any separate gas collection and control system for the unlined landfill shall be equipped either with a pilot light and heat sensing device as required in the prior condition above or a continuous sparking plug or plugs to effectively maintain a flame at the flare. The Permittee shall routinely inspect and maintain the spark arrestors for said flares, the spark plugs and any batteries or solar panels necessary for the proper operation of the plugs, in accordance with the manufacturer's recommendations. This shall include but not be limited to ensuring the plugs are properly sparking, the batteries are adequately charged and the solar panels are clean and properly aligned. The Permittee shall also maintain a sufficient supply of routine replacement parts for said flares such as spark plugs and batteries so as to minimize maintenance and repair downtimes. [10 *V.S.A.* §§556(c) and 556a(d)] [§5-5261(3) of the *Regulations*]

(14) In accordance with 40 *CFR* §60.752(b)(2)(v), the Permittee shall ensure the gas collection and control system is operated and maintained for a minimum of 15 years and shall not be discontinued until the Permittee has demonstrated the Facility will comply with 40 *CFR* §60.752(b)(2)(v) and has obtained the prior written approval of the Agency. [10 *V.S.A.* §§556(c) and 556a(d)] [§5-5261(3) of the *Regulations*] [40 *CFR* Part 60 Subpart WWW §60.752(b)(2)(v)] [40 *CFR* Part 60 Subpart A §60.18(f)(2)]

(15) Only No. 2 fuel oil or lighter grade fuel oils with a maximum sulfur content not to exceed 0.5 percent by weight may be used as fuel in the distillate fuel oil space heating furnaces unless the Permittee obtains prior written approval from the Agency to use another type of fuel. [10 *V.S.A.* §§556(c) and 556a(d)] [§§5-221(1)(a) and 5-1015(a)(1) of the *Regulations*] [application for #AOP-03-044]

(16) Waste Oil Used as a Fuel In Waste Oil Furnace

(a) The waste oil furnace shall not exceed a maximum heat input rating of 500,000 BTUs per hour.

(b) The Permittee shall comply with all applicable requirements for handling, storage, testing and disposal of waste oil as specified in the Vermont Hazardous Waste Management Regulations.

(c) The Permittee shall only burn waste oil which has properties and constituents within the allowable limits set forth in Table A of the *Regulations*, as may be amended. Table A of the *Regulations* with the current levels is reproduced below:

Table A
Waste Oil Constituents and Properties
(Prior to Blending)

Constituent/Property	Allowable
Polychlorinated Biphenyls (PCBs)	<2 ppm maximum [1]
Total Halogens	1000 ppm maximum
Arsenic	5 ppm maximum
Cadmium	2 ppm maximum
Chromium	10 ppm maximum
Chlorine	500 ppm maximum
Lead	100 ppm maximum
Net Heat of Combustion	8000 BTU/lb minimum
Flash Point	140 degree F minimum

Note: [1]units of parts per million (ppm) are by weight on a water free basis. [§5-221(2) of the *Regulations*]

(17) Solvent Metal Cleaning Parts Cleaner: The Permittee shall operate the cold, solvent metal cleaning units (parts cleaners) in accordance with the following requirements and shall only use a solvent with a vapor pressure equal to or less than 0.3 pounds per square inch measured at 100°F, which includes but is not limited to the Safety-Kleen 105 hydrocarbon solvent. Prior to the Permittee using any solvent with a maximum true vapor pressure greater than 0.3 psi or using a solvent that is heated, the Permittee shall notify the Agency and comply with any additional applicable requirements of §5-253.14 of the *Regulations*.

(a) Provide a permanent, legible, conspicuous label, summarizing the operating requirements;
(b) Store waste solvent in covered containers;
(c) Close the cover whenever parts are not being handled in the cleaner;
(d) Drain the cleaned parts until dripping ceases;
(e) Supply a solvent spray, if used, that ensures a solid fluid stream at a pressure that does not exceed ten (10) pounds per square inch gauge;
(f) Degrease only materials that are neither porous nor absorbent; and
(g) Cease operation of the unit upon the detection of any visible solvent leak until such solvent leak is repaired.

[10 *V.S.A.* §§556(c) and 556a(d)] [§5-253.14 of the *Regulations*]

(18) Engines: The Permittee shall not install or operate any additional stationary reciprocating internal combustion engine, as defined in the *Regulations*, that is 450 bhp or greater unless the engine at a minimum complies with §5-271 of the *Regulations*, as applicable. Engines installed after July 1, 1999 must comply with the emission standards of §5-271 of the *Regulations* immediately upon installation. Engines installed prior to July 1, 1999 must comply with the emission standards of §5-271 of the *Regulations* by no later than July 1, 2007. Installation of any size stationary reciprocating internal combustion engine, even those below 450 bhp, may still require approval from the Agency in the form of an amended Permit prior to installation. Stationary reciprocating internal combustion engines include those used to power generator sets or to provide shaft power for equipment but does not include engines used to power motor vehicles. [§§5-501 and 5-271 of the *Regulations*]

(19) Stack heights: The exhaust gases from each of the landfill gas engines shall be vented vertically through a stack or stacks which extend a minimum of twenty-eight (28) feet above the stack base grade elevation. The exhaust gases from the flares, except those flares used exclusively for the unlined landfill, shall be vented vertically through separate stacks which extend a minimum of thirty-five (35) feet above the stack base grade elevation. The Permittee shall at the request of the Agency increase the stack height of any respective stack if, in the judgment of the Agency based on inspections of the actual operations at the Facility, proper or adequate dispersion can not be maintained at the current stack height. The stacks shall not be equipped with any device that may obstruct the upward discharge of the exhaust gases such as a fixed raincap. [10 *V.S.A.* §§556(c) and 556a(d)] [§§5-406 and 5-501 of the *Regulations*]

(20) Open Burning: The Permittee shall burn only natural wood in any open burn pile and shall only burn in accordance with this Permit and the *Regulations*. For the purposes of this Permit, natural wood shall be defined as trees, including logs, boles, trunks, branches, limbs, and stumps, lumber including timber, logs or slabs, especially when dressed for use. This definition shall also include pallets which are used for the shipment of various materials so long as such pallets are not chemically treated with any preservative, paint, or oil. This definition shall not extend to other wood products such as sawdust, plywood, particle board and press board. Prior to conducting any open burning of natural wood, the Permittee shall notify the Air Pollution Control Officer and shall obtain approval from the Air Pollution Control Officer to conduct open burning at the Facility, if required. [§5-202 of the *Regulations*]

- Emission Limitations -

(21) John Zink Utility Ground Flares: Emissions of the following pollutants from each of the John Zink utility ground flares shall not exceed the following limits:

Pollutant Emission Limitations		
John Zink Flares	Emission Limitations	
	lbs/MMBTU[1]	lbs/hour[2] (each)
Carbon monoxide (CO)	0.37	27.8
Nitrogen oxides (as NO_2)	0.068	5.1

[1] lbs/MMBTU equals pounds of pollutant emitted per million British Thermal Units of heat input.
[2] lbs/hour equals pounds of pollutant emitted per hour based on the rated capacity of the flare of 2,500 scfm and 50% methane for maximum rating of 75 MMBTU/hr for each flare.

Any emission testing conducted to demonstrate compliance with the above emission limit shall be performed in accordance with 40 *CFR* Part 60, Appendix A, Reference Method 10 for CO and Method 7E for NOx or an alternative method which has been published in 40 *CFR*, provided the federally approved alternative method has been accepted in writing by the Agency before testing. Open utility flares typically are not subject to stack emission testing due to the inherent limitations in the design of such flares and instead are required to comply with the visible emissions and gas velocity design criteria of 40 *CFR* Part 60.18. [10 *V.S.A.* §§556(c) and 556a(d)] [§S5-404 and 5-502(3) of the *Regulations*] [application for #AOP-03-044]

(22) Caterpillar G3520C Landfill Gas Engines: Emissions of the following pollutants from each Caterpillar G3520C engine shall not exceed the following limits:

Pollutant Emission Limitations		
Caterpillar Model G3520C (2,221 hp) Engine Generators	Emission Limitations	
	g/bhphr [1] (unless otherwise noted)	lbs/hr [2]
Carbon monoxide (CO)	2.75	13.5
Nitrogen oxides (as NO_2)	0.5	2.45
Nonmethane organic compounds (NMOCs)	98% destruction efficiency or 20 ppmvd [3] as hexane@3% O_2 outlet concentration	na

[1] g/bhphr equals grams of pollutant emitted per brake horsepower hour.
[2] lbs/hour equals pounds of pollutant emitted per hour based on full capacity of the engines (507 scfm each for a total of 2,030 scfm for all 4 engines).
[3] ppmvd equals parts per million by volume on a dry basis corrected to three (3) % oxygen.

Any emission testing conducted to demonstrate compliance with the above emission limits shall be performed at the rated load and speed of the engine and in accordance with 40 *CFR* Part 60, Appendix A, Reference Method 10 for CO, Method 7E for NO_x, and Method 25C or Method 18 for NMOC destruction efficiency and NMOC outlet concentration or an alternative method which has been published in 40 *CFR*, provided the federally approved alternative method has been accepted in writing by the Agency before testing. [10 *V.S.A.* §§556(c) and 556a(d)] [§§5-271(b), 5-404 and 5-502(3) of the *Regulations*] [application for #AOP-03-044]

(23) Visible Emissions [Facility Wide]: Emissions of visible air contaminants from any installation at the Facility, except where otherwise noted in this Permit, shall not exceed twenty (20) percent opacity for more than a period or periods aggregating six (6) minutes in any hour and at no time shall visible emissions exceed sixty (60) percent opacity.

Any emission testing conducted to demonstrate compliance with the above emission limits shall be performed in accordance with the proposed Federal Reference Method F-1 contained in the Federal Register Vol.51, No.168, pp. 31076-31081, August 29, 1986 or an equivalent method approved in writing by the Agency. [§§5-211(2), 5-211(3) and 5-404 of the *Regulations*]

(24) Visible Emissions [Flares]: All flares used for the combustion of landfill gas at the Facility shall be operated with no visible emissions in accordance with 40 *CFR* §60.18(c)(1). [10 *V.S.A.* §§556(c) and 556a(d)] [§5-5261(3) of the *Regulations*] [40 *CFR* Part 60 Subpart A §60.18(c)(1)]

(25) Particulate Matter: Emissions of particulate matter ("PM") from any fuel burning device, except motorized vehicles, with a heat input rating of less than ten (10) million British Thermal Units per hour ("MMBTU/hr") shall not exceed 0.5 pounds per MMBTU.

Any emission testing conducted to demonstrate compliance with the above emission limit shall be performed in accordance with 40 *CFR* Part 60, Appendix A, Reference Method 5 or an alternative method which has been published in 40 *CFR*, provided the federally approved alternative method has been accepted in writing by the Agency before testing. [§§5-231(3)(a)(i) and 5-404 of the *Regulations*]

(26) Volatile Organic Compounds: Emissions of volatile organic compounds from the Facility shall not equal or exceed fifty (50) tons per calendar year per year based on any rolling twelve (12) consecutive calendar month period. [§5-502 of the *Regulations*]

(27) Hazardous Air Pollutants: Emission of federally regulated hazardous air pollutants (HAPs) from the Facility shall not equal or exceed ten (10) tons per year of any single HAP or twenty-five (25) tons per year of all HAPs combined per calendar year per year based on any rolling twelve (12) consecutive calendar month period. [40 *CFR* Part 63]

(28) Hazardous Air Contaminants: Emissions of state hazardous air contaminants (HACs) from the applicable operations at the Facility shall not equal or exceed their respective Action Level (found in Appendix C of the *Regulations*) unless the Agency has reviewed and approved such HAC emission under §5-261 of the *Regulations*. [§5-261 of the *Regulations*]

(29) Fugitive Particulate Emissions: The Permittee shall take reasonable precautions at all times to control and minimize emissions of fugitive particulate matter (dust) from the operations at the Facility. This shall include but not be limited to the following:

(a) The use of wet suppression, calcium chloride applications or other dust control measures as necessary to minimize fugitive dust from all unpaved roads and traffic areas, aggregate handling operations and storage piles at the Facility. The paved portions of the haul roads and traffic areas shall be periodically sprayed with water and swept to prevent buildup of material that may generate fugitive dust emissions;

(b) The covering of all trucks owned or operated by the Permittee while operated on public roadways and loaded with materials that may generate fugitive dust emissions.

[10 *V.S.A.* §§556(c) and 556a(d)] [§5-231(4) of the *Regulations*]

(30) Nuisance and Odor: The Permittee shall not discharge, cause, suffer, allow, or permit from any source whatsoever such quantities of air contaminants or other material which will cause injury, detriment, nuisance or annoyance to any considerable number of people or to the public or which endangers the comfort, repose, health or safety of any such persons or the public or which causes or has a natural tendency to cause injury or damage to business or property. The Permittee shall not discharge, cause, suffer, allow, or permit any emissions of objectionable odors beyond the property line of the premises. [§5-241(1) and (2) of the *Regulations*]

- Compliance Testing and Monitoring -

(31) The Permittee shall perform emission testing on one of the Caterpillar G3520C engines and shall furnish the Agency with a written report of the results within one-hundred eighty (180) days after the initial start-up date of the first engine at the Facilty. The emission testing shall be performed in order to demonstrate compliance with the carbon monoxide (CO), nitrogen oxides (NO_x) and nonmethane organic compound (NMOC) emission limitation(s) specified in condition (22) of this Permit, respectively. At least thirty (30) days prior to performing the emission testing required above, the Permittee shall submit to the Agency a pretest report prepared in accordance with the Agency's "Source Emission Testing Guidelines". [§§5-402(1), 5-404(1) and 5-405(1) of the *Regulations*]

(32) Landfill Gas Collection and Control System Design and Operation Plan: The Permittee shall develop and implement a landfill gas collection and control system design and operation plan that addresses the construction design and operational requirements of this Permit within one-hundred eighty (180) days after the issuance of this Permit. The purpose of said plan shall be to ensure that the design and operation of the landfill gas collection and control system remains in continuous compliance with the conditions of this Permit. The design plan shall include the details of the gas collection and control system including a map of the collection system layout and the detailed design drawings of the collection and control systems. The plan shall also include provisions for the operations, monitoring, inspections and maintenance of the gas collection and control systems. Said plan shall be present at the Facility at all times and shall be made available to representatives of the Agency upon request. The Permittee shall revise this plan at the Agency's request or on its own motion to reflect equipment or operational changes as well as the required expansions of the collection and control system over time. [10 *V.S.A.* §§556(c) and 556a(d)] [§5-405(1) of the *Regulations*]

(33) Landfill Surface Monitoring Design Plan: In accordance with condition (7) of this Permit, the Permittee shall develop and implement a landfill surface monitoring design plan.

(34) Startup, Shutdown and Malfunction Plan: The Permittee shall develop and implement a written startup, shutdown and malfunction (SSM) Plan in accordance with 40 CFR Part 63 Subpart A §63.6(e)(3). The Permittee shall submit a semi-annual startup, shutdown and malfunction report to the Agency that details all actions taken during periods of startup, shutdown and malfunctions. The Permittee shall also report all actions taken during periods of startup, shutdown and malfunctions that are not consistent with the SSM Plan within two (2) working days of such action followed by a written letter to the Agency within seven (7) day of such action. [10 *V.S.A.* §§556(c) and 556a(d)] [40 *CFR* Part 63 Subpart A §63.6(e)(3)]

- Record Keeping and Reporting -

(35) Records of Gas Collection System Well Head Inspections and Monitoring: The Permittee shall maintain records of all monitoring of the individual landfill gas collection well heads for gauge pressure, temperature and either the nitrogen level or the oxygen level in accordance with the conditions of this Permit as well as any maintenance, adjustments or other actions taken at each well head. [10 *V.S.A* §§556(c) and 556a(d)] [§§5-405(1) and 5-1015(a)(3) and (4) of the *Regulations*]

(36) Records of Landfill Surface Monitoring: The Permittee shall maintain records of the results of all landfill surface monitoring of methane levels completed in accordance with this Permit and any actions taken. [10 *V.S.A.* §§556(c) and 556a(d)] [§§5-405(1) and 5-1015(a)(3) and (4) of the *Regulations*]

(37) Records of Engine and Flare Operation: The Permittee shall maintain records of the operating status of each engine and flare for all periods of operation and shall include the level of operation such as the kilowatts of power produced for the engines and the quantity of landfill gas, in standard cubic feet or BTU's per hour, delivered to the engines and flares. [10 *V.S.A.* §§556(c) and 556a(d)] [§§5-405(1) and 5-1015(a)(3) and (4) of the *Regulations*]

(38) Records of Engine and Flare Inspections and Maintenance: The Permittee shall maintain records of all maintenance and repairs completed on the engines and flares. [10 *V.S.A.* §§556(c) and 556a(d)] [§§5-405(1) and 5-1015(a)(3) and (4) of the *Regulations*]

(39) Records of Distillate No. 2 Fuel Use and Waste Oil Fuel Use: The Permittee shall maintain records of the total quantity of distillate No. 2 fuel oil consumed in the Facility furnaces as well as the quantity of waste oil consumed in the waste oil furnace, in gallons, each calendar year. [10 *V.S.A.* §§556(c) and 556a(d)] [§§5-405(1) and 5-1015(a)(3) and (4) of the *Regulations*]

(40) Records of Distillate No.2 Fuel Oil Certifications: The Permittee shall obtain from the fuel supplier, for each shipment of fuel oil received at the Facility, a certification or invoice stating the sulfur content of the fuel oil. The certification or invoice shall include the name of the fuel oil supplier, date of delivery, fuel type, quantity of fuel oil delivered, and a statement from the fuel oil supplier that the oil complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society of Testing and Materials in ASTM D396, "Standard Specifications for Fuel Oils" or a statement as to the sulfur content of the fuel oil in percent sulfur by weight. [10 *V.S.A.* §§556(c) and 556a(d)] [§§5-405(1) and 5-1015(a)(3) and (4) of the *Regulations*]

(41) Records of Waste Oil Analyses: The Permittee shall maintain records of any and all analyses of the waste oils generated at the Facility or accepted at the Facility for combustion in the waste oil furnace. [10 *V.S.A.* §§556(c) and 556a(d)] [§§5-221(2), 5-405(1) and 5-1015(a)(3) and (4) of the *Regulations*]

(42) Records for Storage Vessels: For all volatile organic liquid storage vessel at the Facility, including the fuel oil storage tanks, that were installed after July 23, 1984 and that have a design capacity equal to or greater than 40 m3 (10,562 gallons), the Permittee shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. Such records shall be kept for the life of the source. Prior to the Permittee storing any volatile organic liquid with a maximum true vapor pressure equal to or greater than 3.5 kPa (0.5 psia) in any of the above tanks which have a design capacity equal to or greater than 75 m3 (19,805 gallons), the Permittee shall notify the Agency and comply with any additional applicable requirements of 40 *CFR* Part 60

Subpart Kb. For the purposes of this condition, No. 2, No. 4 and No. 6 fuel oils are assumed to have a maximum true vapor pressure less than 3.5 kPa (0.5 psia). [10 *V.S.A.* §§556(c) and 556a(d)] [40 *CFR* Part 60 Subpart Kb]

(43) Records of all required compliance testing shall include the following:

(a) the date, place, and time of sampling or measurements;
(b) the date analyses were performed;
(c) the company or entity that performed the analyses;
(d) the analytical techniques or methods used;
(e) the results of all such analyses; and
(f) the operating conditions existing at the time of sampling or measurement.

[§§5-402(1), 5-405(1) and 5-1015(5) of the *Regulations*]

(44) All records shall be retained for a minimum period of five (5) years from the date of record and shall be made available to the Agency upon request. [§§5-402(1), 5-405(1) and 5-1015(a)(7) of the *Regulations*]

(45) Notification of Start-up: The Permittee shall notify the Agency in writing of the date of initial start-up of the first Caterpillar G3520C engine within fifteen (15) days after such date. [§5-402(1) of the *Regulations*]

(46) Notification of Violations: The Permittee shall notify the Agency in writing within ten (10) days of any violation, of which it is aware, of any requirements of this Permit. This notification shall include, at a minimum, the cause for the violation and corrective action or preventative maintenance taken to correct the violation. [§§5-402(1) and 5-1015(a)(6) of the *Regulations*]

(47) Notification of Modifications to Facility: The Permittee shall notify the Agency in writing of any proposed physical or operational change at the Facility which may increase the emission rate of any air contaminant to the ambient air regardless of any concurrent emission reductions that may be achieved. If the Agency determines that a permit amendment is required, a new application and the appropriate application fee shall be submitted. The permit amendment shall be obtained prior to commencing any such change. [10 *V.S.A.* §556(c)] [§§5-402(1) and 5-501 of the *Regulations*]

(48) Semi-Annual Periodic Monitoring Reports: Within thirty (30) days after July 1 and January 1 of each year, the Permittee shall submit to the Agency a report, signed by a responsible official of the Facility, containing the following information regarding the preceding six (6) months:

(a) description and duration of all periods when the gas stream is diverted from the controls devices;
(b) all periods when the collection system was not operating in excess of 5 days;
(c) a summary of the landfill surface monitoring results including the location and concentration of each exceedance of the 500 ppm methane surface monitoring threshold;
(d) the date and location of each new gas collection well added to the system;
(e) a summary of the gas collection system well head inspections and monitoring results;
(f) a summary of the operating status of the engines and flares;
(g) a summary of inspections and maintenance on the engines and flares;
(h) a summary of the fuel usage records required by this Permit;
(i) a statement of the sulfur content of any distillate fuel delivered to the Facility; and
(j) a summary of any and all waste oil analyses performed.

[§§5-402(1), 5-405(1) and 5-1015(a)(5) of the *Regulations*] [40 CFR Part 63 Subpart AAAA §63.1980(a)]

(49) Annual Compliance Certification: By February 1st of each year, the Permittee shall submit an annual certification of compliance for the previous calendar year which ascertains and identifies the compliance status of the Facility with respect to all terms and conditions of this Permit, including but not limited to the following:

(a) Identification of each term or condition of the permit that is the basis of the certification;
(b) The compliance status;
(c) Whether compliance was continuous or intermittent; and
(d) The methods used for determining the compliance status of the Facility over the reporting period.

A copy of the compliance certification shall also be sent to the U.S. Environmental Protection Agency at the following address:

Air Technical Unit (Mail Code SEA)
Office of Environmental Stewardship
U.S. Environmental Protection Agency
John F. Kennedy Federal Building
Boston, MA 02203

[§114(a)(3) of the CAA] [§§5-402(1) and 5-1015(a)(11) of the *Regulations*]

(50) Notification of Closure: The Permittee shall notify the Agency of permanent closure of the landfill within thirty (30) days of waste acceptance cessation. [10 *V.S.A.* §§556(c) and 556a(c)] [§5-402(1) and §5-1015(a)(5) of the *Regulations*] [40 *CFR* Part 60 Subpart WWW §60.757(d)]

(51) Annual Registration: The Permittee shall calculate the quantity of emissions of air contaminants from the Facility annually. If the Facility emits more than five (5) tons of any and all air contaminants per year, the Permittee shall register the source with the Secretary of the Agency (hereinafter "Secretary"), and shall renew such registration annually. Each day of operating a source which is subject to registration without a valid, current registration shall constitute a separate violation and subject the Permittee to civil penalties. The registration process shall follow the procedures set forth in Subchapter VIII of the *Regulations*, including the payment of the annual registration fee on or before May 15 of each year. [Subchapter VIII §§5-802, 5-803, 5-807, 5-808 of the *Regulations*]

(52) All records, reports, and notifications that are required to be submitted to the Agency by this Permit shall be submitted to:

Agency of Natural Resources
Air Pollution Control Division
103 South Main Street, Bldg 3 South
Waterbury, Vermont 05671-0402.

[§5-402(1) of the *Regulations*]

- Permit Shield -

(53) In accordance with §5-1015(a)(14) of the *Regulations*, the Facility is granted a "permit shield" and is not subject to the regulations and standards listed in Finding of Fact (F)(b) of this Permit. The Agency's "permit shield" determination is based upon the information submitted by the Permittee in its application. The "permit shield" shall be binding only with respect to activities disclosed in the Permittee's application. [§5-1015(a)(14) of the *Regulations*]

- Stratospheric Ozone Protection -

(54) Protection of Stratospheric Ozone - Recycling and Emissions Reduction. The Permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 *CFR* Part 82, Subpart F:

(a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices specified in 40 *CFR* Part 82, Subpart F §82.156.

(b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment as specified in 40 *CFR* Part 82, Subpart F §82.158.

(c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program as specified in 40 *CFR* Part 82, Subpart F §82.161.

(d) Commercial or industrial process refrigeration equipment must comply with the leak repair requirements specified in 40 *CFR* Part 82, Subpart F §82.156.

(e) For each appliance normally containing fifty (50) or more pounds of refrigerant, the Permittee shall keep records of refrigerant purchased and added to such appliances as specified in 40 *CFR* Part 82, Subpart F §82.166.

[40 *CFR* Part 82, Subpart F]

- Motor Vehicles -

(55) The Permittee shall not fail to maintain in good working order or remove, alter or otherwise render inoperative, the exhaust emission control system, the evaporative emission control system, or crankcase ventilation, or any other air pollution control device which has been installed as a requirement of the Federal or State laws or regulations. [§5-701 of the *Regulations*]

(56) The Permittee shall not cause, suffer, allow, or permit excessive emissions of visible air contaminants, other than water, from a motor vehicle for longer than five (5) consecutive seconds. [§5-702 of the *Regulations*]

(57) The Permittee shall not service motor vehicles air conditioners, except in conformance with the requirements of §5-911 of the *Regulations*. [§5-911 of the *Regulations*]

- Standard Permit Conditions -

(58) Approval to construct or modify under this Permit shall become invalid if construction or modification is not commenced within eighteen (18) months after issuance of this Permit, if construction or modification is discontinued for a period of eighteen (18) months or more, or if construction is not substantially completed within a reasonable time. The Agency may extend any one of these periods upon a satisfactory showing that an extension is justified. The term "commence" as applied to the proposed construction or modification of a source means that the Permittee either has:

(a) Begun, or caused to begin, a continuous program of actual on-site construction or modification of the source, to be completed within a reasonable time; or

(b) Entered into binding agreements or contractual obligations, which cannot be cancelled or modified without substantial loss to the Permittee, to undertake a continuous program of actual on-site construction or modification of the source to be completed within a reasonable time.

[10 *V.S.A.* §556(c)] [§5-501 of the *Regulations*]

(59) These Permit conditions may be suspended, terminated, modified, or revoked for cause and reissued upon the filing of a written request with the Secretary of the Agency (hereinafter "Secretary") or upon the Secretary's own motion. Any modification shall be granted only with the written approval of the Secretary. If the Secretary finds that modification is appropriate, only the conditions subject to modification shall be re-opened. The filing of a request for modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated non-compliance does not stay any terms or conditions of this Permit. The Secretary may provide opportunity for public comment on any proposed modification of these conditions. If public comments are solicited, the Secretary shall follow the procedures set forth in 10 *V.S.A.* §556 and §556a, as amended. [10 *V.S.A.* §§556(d) and 556a(g)] [§§5-1008(a) and 5-1008(e) of the *Regulations*]

(60) Cause for reopening, modification, termination and revocation of this Permit includes, but is not limited to:

(a) Inclusion of additional applicable requirements pursuant to state or federal law;
(b) A determination that the permit contains a material mistake or that inaccurate information was used to establish emissions standards or other terms or conditions of the operating permit;
(c) A determination that the operating permit must be modified or revoked to ensure compliance with applicable requirements;
(d) A determination that the subject source has failed to comply with a permit condition;
(e) For Title V subject sources, a determination by U.S. EPA that cause exists to terminate, modify, revoke or reissue an operating permit;
(f) Those causes which are stated as grounds for refusal to issue, renew or modify an operating permit under §5-1008(a) of the *Regulations*; or
(g) If more than three (3) years remain in the permit term and the source becomes subject to a new applicable requirement.

[§5-1008(e)(4) of the *Regulations*]

(61) The Permittee shall furnish to the Agency, within a reasonable time, any information that the Agency may request in writing to determine whether cause exists to modify, revoke, reissue, or terminate the Permit or to determine compliance with this Permit. Upon request, the Permittee shall also furnish to the Agency copies of records required to be kept by this Permit. [10 *V.S.A.* §§556(c) and 556a(d)] [§5-402(1) of the *Regulations*] [40 *CFR* Part 70 §70.6(a)(6)(v)]

(62) By acceptance of this Permit, the Permittee agrees to allow representatives of the State of Vermont access to the properties covered by the Permit, at reasonable times, to ascertain compliance with Vermont environmental and health statutes and regulations and with this Permit. The Permittee also agrees to give the Agency access to review and copy any records required to be maintained by this Permit, and to sample or monitor at reasonable times to ascertain compliance with this Permit. [10 *V.S.A.* §§556(c), 556a(d) and 557] [§§5-402(1), 5-404, and 5-1015(a)(10) of the *Regulations*]

(63) All data, plans, specifications, analyses and other information submitted or caused to be submitted to the Agency as part of the application for this Permit or an amendment to this Permit shall be complete and truthful and, for Title V permit applications, certified by a responsible official whose designation has been approved by the Secretary. Any such submission which is false or misleading shall be sufficient grounds for denial or revocation of this Permit, and may result in a fine and/or imprisonment under the authority of Vermont statutes. [10 *V.S.A.* §§556(c) and 556a(d)] [§§5-505 and 5-1006(f) of the *Regulations*]

(64) For the purpose of establishing whether or not a person has violated or is in violation of any condition of this Permit, nothing in this Permit 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. [10 *V.S.A.* §§556(c) and 556a(d)]

(65) Any permit noncompliance could constitute a violation of the federal Clean Air Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. [10 *V.S.A.* §§556(c) and 556a(d)] [§§5-1008(a) and 5-1008(e) of the *Regulations*]

(66) It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the conditions of this Permit. [10 *V.S.A.* §§556(c) and 556a(d)]

(67) No person shall build, erect, install or use any article, machine, equipment or other contrivances, the use of which, without resulting in a reduction in the total release of air contaminants to the atmosphere, reduces or conceals an emission which otherwise would constitute a violation of these *Regulations*. [§5-403 of the *Regulations*]

(68) The provisions of this Permit are severable. If any provision of this Permit, or its application to any person or circumstances is held invalid, illegal, or unenforceable by a court of competent jurisdiction, the invalidity shall not apply to any other portion of this Permit which can be given effect without the invalid provision or application thereof. [10 *V.S.A.* §§556(c) and 556a(d)]

(69) This Permit does not convey any property rights of any sort or any exclusive privilege, nor does it authorize any injury to private property or any invasion of personal rights. [10 *V.S.A.* §§556(c) and 556a(d)]

(70) All subsequent owners and/or operators of this Facility must request an amendment and transfer of this Permit prior to commencing any operations covered by this Permit. All subsequent owners and/or operators shall submit to the Agency as part of the request for amendment all such information the Agency deems necessary to establish legal ownership and/or interest in the property and all such information the Agency deems necessary to ensure the new owners and/or operators will construct and operate the Facility in compliance with the *Regulations* and this Permit. The terms and conditions of this Permit shall remain in full force and effect after submittal of the request for amendment and until the issuance of an amended Permit or denial. Should the Secretary deny the request, the new owner and/or operator must take whatever action is necessary to comply with the denial. [10 *V.S.A.* §§556 and 556a] [§§5-501, 5-1004, and 5-1013(a) of the *Regulations*]

(71) This Operating Permit shall expire on December 16, 2009. The Permittee shall submit to the Agency a complete application for renewal of the Operating Permit at least twelve (12) months before the expiration of the Operating Permit. If a timely and administratively complete application for an operating permit renewal is submitted to the Secretary, but the Secretary has failed to issue or deny such renewal before the end of the term of this Operating Permit, then the Permittee may continue to operate the subject source and all terms and conditions of this Operating Permit shall remain in effect until the Secretary has issued or denied the operating permit renewal. However, this Operating Permit shall automatically expire if, subsequent to the renewal application being determined or deemed administratively complete pursuant to §5-1006 of the *Regulations*, the Permittee fails to submit any additional information required by the Secretary as well as information pertaining to changes to the Facility within thirty (30) days or such other period as specified in writing by the Secretary. [§§5-1011 and 5-1012(a) of the *Regulations*] [§§5-1005(c) and 5-1012 of the *Regulations*]

(72) The conditions of this Permit as set forth above supercede all conditions contained in all prior Permits issued by the Air Pollution Control Division to the Permittee for this Facility. [10 *V.S.A.* §§556(c) and 556a(d)]

The Agency's issuance of this Air Pollution Control Permit relies upon the data, judgment, and other information supplied by the Permittee. The Agency makes no assurances that the air contaminant source approved herein will meet performance objectives or vendor guarantees supplied to the source Permittee. It is the sole responsibility of the Permittee to operate the source in accordance with the conditions herein and with all applicable state and federal standards and regulations.

Dated this 16th day of December, 2004, in the town of Waterbury, county of Washington, state of Vermont.

Agency of Natural Resources

Jeffrey Wennberg, Commissioner
Department of Environmental Conservation

By: Richard A. Valentinetti
Richard A. Valentinetti, Director
Air Pollution Control Division

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A2 NEWSVT Landfill - Coventry