WM Renewable Energy, L.L.C.	)	AFFIDAVIT ATTESTING
	)	CONTENT APPLICATION
	)	
	)	
COUNTY OF Harris	)	
	)	
STATE OF TEXAS	)	

I, Paul Pabor, do hereby depose and state upon my oath:

1. I hold the position of Vice President for WM Renewable Energy, L.L.C. (Turnkey I) gas-to-energy facility.

2. As an authorized agent of WM Renewable Energy, L.L.C. I have personally examined and I am familiar with the information submitted in this affidavit and all attached related Renewable Energy Source Eligibility Application documents.

The foregoing statements made by me are true and correct.

Name: Paul Pabor Date: 4/23/09

SUBSCRIBED AND SWORN TO BEFORE ME THIS 23 day of April, 2009 pursuant to New Hampshire Admin. Code PUC 2500 Rules.

Name: Jennifer Hickerson Date: 4·23·09

Jennifer Hickerson
Notary Public
My commission expires:

JENNIFER HICKERSON
MY COMMISSION EXPIRES
April 19, 2013

STATE OF NEW HAMPSHIRE

PUBLIC UTILITIES COMMISSION

SAMPLE APPLICATION FORM

FOR RENEWABLE ENERGY SOURCE ELIGIBILITY

Pursuant to New Hampshire Admin. Code Puc 2500 Rules

NOTE: When completing this application electronically, using the "tab" key after completing each answer will move the cursor to the next blank to be filled in. If a question is not applicable to your facility, then check the box next to N/A.

Pursuant to Puc 202, the signed application shall be filed with the Executive Director and Secretary of the New Hampshire Public Utilities Commission (Commission). To ensure that your submitted application is complete, please read RSA 362-F and N.H. Code Admin. Rules Puc 2500 before filling out this application. It is the burden of the applicant to provide timely, accurate and complete information as part of the application process. Any failure by the applicant to provide information in a timely manner may result in the Commission dismissing this application without prejudice.

1. **ELIGIBILITY CLASS APPLIED FOR:** ☐ I ☐ II ☒ III ☐ IV

2. Applicant's legal name: WM Renewable Energy, L.L.C.

3. Address: (1) 1001 Fannin, Suite 4000

(2) _____

(3) _____

Houston (City) TX (State) 77002 (Zip code)

4. Telephone number: 713-328-7345

5. Facsimile number: 713-287-2423

6. Email address: ppabor@wm.com

7. Facility name: Turnkey I

8. Facility location: (1) 30 Rochester Neck Road

(2) _____

Rochester NH 3839
(City) (State) (Zip code)

9. Latitude: 43 15'13.60 Longitude: 70 58'28.40

10. The name and telephone number of the facility's operator, if different from the owner: Same ☐

Mike Dent 603-330-2120
(Name) (Telephone number)

11. The ISO-New England asset identification number, if applicable: _____ or N/A: ☐

12. The GIS facility code, if applicable: MSS253 or N/A: ☐

13. A description of the facility, including fuel type, gross nameplate generation capacity, the initial commercial operation date, and the date it began operation, if different.

14. If Class I certification is sought for a generation facility that uses biomass, the applicant shall submit:
    (a) quarterly average NOx emission rates over the past rolling year,
    (b) the most recent average particulate matter emission rates as required by the New Hampshire Department of Environmental Services (NHDES),
    (c) a description of the pollution control equipment or proposed practices for compliance with such requirements,
    (d) proof that a copy of the completed application has been filed with the NHDES, and
    (e) conduct a stack test to verify compliance with the emission standard for particulate matter no later than 12 months prior to the end of the subject calendar quarter except as provided for in RSA 362-F:12, II.
    (f) [X] N/A: Class I certification is NOT being sought for a generation facility that uses biomass.

15. If Class I certification is sought for the incremental new production of electricity by a generation facility that uses biomass, methane or hydroelectric technologies to produce energy, the applicant shall:
    (a) demonstrate that it has made capital investments after January 1, 2006 with the successful purpose of improving the efficiency or increasing the output of renewable energy from the facility, and
    (b) supply the historical generation baseline as defined in RSA 362-F:2, X.
    (c) [X] N/A: Class I certification is NOT being sought for the incremental new production of electricty by a generation facility that uses biomass, methane or hydroelectric technologies.

16. If Class I certification is sought for repowered Class III or Class IV sources, the applicant shall:
    (a) demonstrate that it has made new capital investments for the purpose of restoring unusable generation capacity or adding to the existing capacity, in light of the NHDES environmental

permitting requirements or otherwise, and

(b) provide documentation that eighty percent of its tax basis in the resulting plant and equipment of the eligible generation capacity, including the NHDES permitting requirements for new plants, but exclusive of any tax basis in real property and intangible assets, is derived from the new capital investments.

(c) [X] N/A: Class I certification is NOT being sought for repowered Class III or Class IV sources.

17. If Class I certification is sought for formerly nonrenewable energy electric generation facilities, the applicant shall:

(a) demonstrate that it has made new capital investments for the purpose of repowering with eligible biomass technologies or methane gas and complies with the certification requirements of Puc 2505.04, if using biomass fuels, and

(b) provide documentation that eighty percent of its tax basis in the resulting generation unit, including NHDES permitting requirements for new plants, but exclusive of any tax basis in real property and intangible assets, is derived from the new capital investments.

(c) [X] N/A: Class I certification is NOT being sought for formerly nonrenewable energy electric generation facilities.

18. If Class IV certification is sought for an existing small hydroelectric facility, the applicant shall submit proof that:

(a) it has installed upstream and downstream diadromous fish passages that have been required and approved under the terms of its license or exemption from the Federal Energy Regulatory Commission, and

(b) when required, has documented applicable state water quality certification pursuant to section 401 of the Clean Water Act for hydroelectric projects.

(c) [X] N/A: Class IV certification is NOT being sought for existing small hydroelectric facilities.

19. If the source is located in a control area adjacent to the New England control area, the applicant shall submit proof that the energy is delivered within the New England control area and such delivery is verified using the documentation required in Puc 2504.01(a)(2) a. to e.

20. All other necessary regulatory approvals, including any reviews, approvals or permits required by the NHDES or the environmental protection agency in the facility's state.

21. Proof that the applicant either has an approved interconnection study on file with the commission, is a party to a currently effective interconnection agreement, or is otherwise not required to undertake an interconnection study.

22. A description of how the generation facility is connected to the regional power pool of the local electric distribution utility.

23. A statement as to whether the facility has been certified under another non-federal jurisdiction's renewable portfolio standard and proof thereof.

24. A statement as to whether the facility's output has been verified by ISO-New England.

25. A description of how the facility's output is reported to the GIS if not verified by ISO-New England.

26. An affidavit by the owner attesting to the accuracy of the contents of the application.

27. Such other information as the applicant wishes to provide to assist in classification of the generating facility.

28. This application and all future correspondence should be sent to:

Ms. Debra A. Howland
Executive Director and Secretary
State of New Hampshire
Public Utilities Commission
21 S. Fruit St, Suite 10
Concord, NH 03301-2429

29. Preparer's information:

Name: Paul Pabor

Title: Vice President

Address: (1) 1001 Fannin, Ste. 4000

(2)

(3)

Houston (City) TX (State) 77002 (Zip code)

30. Preparer's signature: Paul Pabor

WM Renewable Energy, L.L.C.
1001 Fannin, Suite 4000
Houston, TX 77002

State of New Hampshire
Public Utilities Commission
Application Form – Additional Support
Turnkey I

(13) The eligible Class III landfill gas fuel used by WM Renewable Energy, L.L.C. is landfill methane gas with a gross nameplate generation capacity of 3.2 MW with an initial commercial operation date of March 1992.

The following standard operating protocol measures will be taken to ensure that only the eligible landfill methane gas will be used.

> Landfill methane gas will be recovered via a series of wells drilled into the landfill. The wells will then be connected by a common pipe system that will collect the methane gas and transport it to a nearby compression facility. At the compression facility, the landfill methane gas will then be de-watered, filtered and pressurized; and transported to the generation unit where no other ineligible Biomass Fuel(s) will be allowed to turn engines or turbines to generate renewable electricity.

(20) See attached Air Quality Permit

(21) See attached fully executed Operating Agreement (partial pages)
(22) Via Public Service of New Hampshire metering system
(23) The facility has been certified under the non-federal jurisdiction renewable portfolio standard in Massachusetts and Connecticut – See attached Massachusetts certification documents
(24) Facility output is verified by ISO-New England via connected utility metering
(25) Verified by ISO New England and reported into GIS
(26) See attached affidavit

OPERATING AGREEMENT
FOR
PURPOSES OF WHEELING AND POWER SALES

AGREEMENT, dated March 26, 2004 by and between Bio-Energy Partners, an Illinois general partnership (hereinafter referred to as the "Interconnector"), and Public Service Company of New Hampshire, a New Hampshire corporation having its principal place of business in Manchester, New Hampshire (hereinafter referred to as "PSNH").

WHEREAS, Interconnector's Turnkey Landfill Gas Project electric generating facility fueled by landfill gas (the "Facility"), (SESD # 496) located in Rochester, New Hampshire, is interconnected with the electric system of PSNH in accordance with applicable New Hampshire Public Utilities Commission ("NHPUC") Orders and federal law; and

WHEREAS, Interconnector desires to, and PSNH agrees to, provide for the continuing interconnection of the Facility with the electric system of PSNH, its successors and permitted assigns, and Interconnector desires to sell the electric output of the Facility to PSNH and/or to such other third party purchasers with which Interconnector may make sales arrangements; and

WHEREAS, to provide for the continued interconnection of the Facility, it is necessary that certain agreements be made to ensure the safety, reliability and integrity of PSNH's electric system and the operation of the Facility; and

WHEREAS, Interconnector's predecessor at the Turnkey Landfill Gas Project and PSNH entered into an Operating Agreement for Purposes of Wheeling on December 12, 1991, which as a result of this agreement will be terminated, and

WHEREAS, Interconnector and PSNH wish to provide for certain other matters pertaining to discretionary power sales from the Facility;

NOW, THEREFORE, the parties hereby agree as follows:

Article 1. Interconnection and Voltage Characteristics.

The interconnection point shall continue to be that point at which the Facility presently

Interconnector:

Bio-Energy Partners
c/o Waste Management, Inc.
1001 Fannin, Suite 4000
Houston, Texas 77002

Attn.: Paul Pabor,
Vice President Renewable Energy

Telephone No. (713) 328-7345
Fax No. (713) 328-7411
email: ppabor@wm.com

PSNH:

Public Service Company of New Hampshire
780 North Commercial Street
P. O. Box 330
Manchester, NH 03105-0330
Attn.: Manager, Supplemental Energy Sources Department
Telephone No. (603) 634-2312
Fax No. (603) 634-2449
email: psnhsesd@psnh.com

IN WITNESS WHEREOF, the parties, each by its duly authorized representative, have hereunto caused their names to be subscribed, as of the day and year first above written.

Bio-Energy Partners

By: Paul Pabor
Vice President Renewable Energy
Duly Authorized Representative of Bio-Energy Partners

Public Service Company of New Hampshire

By: ~~Paul E. Ramsey~~ John M. MacDonald
Title: Vice President, ~~Customer Services~~ Operations
Duly Authorized

COMMONWEALTH OF MASSACHUSETTS
OFFICE OF CONSUMER AFFAIRS
AND BUSINESS REGULATION
DIVISION OF ENERGY RESOURCES
70 FRANKLIN STREET, 7TH FLOOR
BOSTON, MA 02110-1313
Internet: http://www.Mass.Gov//DOER
E-mail: Energy@State.MA.US

TELEPHONE
(617) 727-4732

FACSIMILE
(617) 727-0030
(617) 727-0093

Mitt Romney
Governor

Kerry Healey
Lieutenant Governor

Beth Lindstrom
Director, Office of Consumer Affairs
and Business Regulation

David L. O'Connor
Commissioner

March 31, 2003

Mr. David Unger
Director of LFG Plant Services
Waste Management Inc.
1001 Fannin, Suite 4000
Houston, TX 77002

RE: RPS Eligibility Decision
Rochester Landfill and Turnkey Load Reducer [LG-1018-02]

Dear Mr. Unger,

On behalf of the Division of Energy Resources (the Division), I am pleased to inform you that your Application for an amended Statement of Qualification (SQ) pursuant to the Massachusetts Renewable Energy Portfolio Standard (RPS) Regulations, 225 CMR 14.00, is hereby approved. The SQ, as amended, now adds the Turnkey Load Reducer to the previously qualified Rochester Landfill. The Division finds that the Turnkey Load Reducer meets the requirements for qualification as a New Renewable Generation Unit pursuant to 225 CMR 14.05 under the Vintage Waiver provision at Section 14.05(2). However, because the previously qualified Rochester Landfill shares the site with the Turnkey Load Reducer, a Vintage Generation Unit, the Rochester Landfill's qualification is now modified to come under that same Vintage Waiver provision, and the two units must share the Historical Generation Rate. Accordingly, qualification of this pair of Generation Units is subject to the following provisions:

1. The Historical Generation Rate of the pair of Generation Units combined is determined to be 24, 987 MWh.

2. Said Historical Generation Rate is attributed to Turnkey Load Reducer alone for the purpose of 2002 certificate trading at the NEPOOL Generation Information System (GIS).
3. Subsequent to the 2002 trading period, said Historical Generation Rate will be apportioned between the two units in accordance with their capacity, such that Turnkey Load Reducer's Historical Generation Rate will be set at 8,329 MWh and Rochester Landfill's Historical Generation Rate will be set at 16,658 MWh. Those rates will remain in effect only until such time as the Administrator of the NEPOOL Generation Information System (GIS) revises the software of the GIS to electronically combine the electrical output of the two Generation Units for the purpose of calculating when such combined total equals the shared Historical Generation Rate of 24,987 MWh, whereupon the subsequently generated certificates of both Units will be encoded as "Massachusetts Qualified New Renewable Generation Unit."
4. During the time when the Historical Generation Rate is apportioned between the two Units as described above (item 3), you are required to provide documentation satisfactory to the Division no later than thirty (30) days after the end of each calendar quarter the electricity output of each Unit. Finally, under no circumstance are you permitted to sell GIS certificates in any quantity that would violate the provisions of the Vintage Waiver at 225 CMR 14.05(2).
5. When the NEPOOL GIS Administrator informs the Division that the software changes described above (in item 3) have been completed, the Division will assign the Historical Generation Rate jointly to both Units, and the reporting requirement of item 4 will be voided. These changes will be made by means of a modification of the Statement of Qualification.

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. Turnkey Load Reducer and Rochester Landfill's MA RPS ID# is: LG-1018-02.

The Division wishes to remind you of the notification requirements for changes in eligibility status contained in 225 CMR 14.06(3). The Owner or Operator of the Generation Unit shall submit notification of such changes to the Division no later than five days following the end of the month during which such changes were implemented.

Sincerely,

Robert Sydney
General Counsel

Encl.(1): Statement of Qualification

State of New Hampshire
Department of Environmental Services
Air Resources Division

Temporary Permit

Permit No: **FP-T-0168**
Date Issued: **September 11, 2008**

This certifies that

Waste Management of New Hampshire, Inc.
d/b/a Turnkey Recycling & Environmental Enterprise
30 Rochester Neck Rd.
P.O. Box 7065
Gonic, NH 03839

has been granted a Temporary Permit for the

Turnkey Recycling & Environmental Enterprise
30 Rochester Neck Rd.
Rochester, NH 03867
Facility ID Number: 3301700003
Application Number: FY06-0044

which facility includes devices that emit air pollutants into the ambient air as set forth in the permit application filed with the New Hampshire Department of Environmental Services, Air Resources Division (the Department) on **April 28, 2006**, in accordance with RSA 125-C of the New Hampshire Laws.

Request for permit renewal is due to the Department at least 90 days prior to expiration of this permit and must be accompanied by the appropriate permit application forms. This permit is valid upon issuance and expires on **January 31, 2010.**

This permit (or a copy) should be appropriately displayed near each device for which it is issued.

Director, Air Resources Division

Frequently Used Abbreviations and Acronyms

AAL	Ambient Air Limit
acf	actual cubic foot
ags	above ground surface
ASTM	American Society of Testing and Materials
Btu	British thermal units
CAS	Chemical Abstracts Service
cfm	cubic feet per minute
CFR	Code of Federal Regulations
CO	Carbon Monoxide
DER	Discrete Emission Reduction
DES	New Hampshire Department of Environmental Services
Env-A	New Hampshire Code of Administrative Rules – Air Resources Division
ERC	Emission Reduction Credit
ft	foot or feet
ft^3	cubic feet
gal	gallon
HAP	Hazardous Air Pollutant
hp	horsepower
hr	hour
kW	kilowatt
lb	pound
LPG	Liquefied Petroleum Gas
MM	million
MSDS	Material Safety Data Sheet
MW	megawatt
NAAQS	National Ambient Air Quality Standard
NESHAP	National Emission Standards for Hazardous Air Pollutants
NG	Natural Gas
NOx	Oxides of Nitrogen
NSPS	New Source Performance Standards
PM_{10}	Particulate Matter < 10 microns
ppm	parts per million
psi	pounds per square inch
RACT	Reasonably Available Control Technology
RSA	Revised Statues Annotated
RTAP	Regulated Toxic Air Pollutant
scf	standard cubic foot
SO_2	Sulfur dioxide
TSP	Total Suspended Particulate
tpy	tons per consecutive 12-month period
USEPA	United States Environmental Protection Agency
VOC	Volatile Organic Compound

I. Facility Description

Turnkey Recycling and Environmental Enterprise (TREE), a subsidiary of Waste Management of NH, Inc. (WMNH), is an integrated solid waste management facility (the Facility) located on Rochester Neck Road, in Rochester, New Hampshire. The Facility has three landfills: TLR-I and TLR-II are capped landfills, which closed in 1992 and 1997, respectively; TLR-III commenced operation in December 1995 and continues as an active landfill. The Facility collects landfill gas (LFG) from all three landfills and operates several combustion and electrical generating devices to control, and produce energy from, the collected gas. This permit establishes emission limitations and certain monitoring/testing requirements for the Facility.

II. Emission Unit Identification

This permit covers the devices identified in Table 1. For any device or source affected by a previously issued permit, the conditions of each such permit shall continue to apply except where those conditions conflict with the conditions of this Temporary Permit, in which case the conditions of this Temporary Permit shall supersede.

Table 1 – Emission Unit Identification (excluding insignificant activities[1])				
Emission Unit ID	**Device or Area Source Name/ NH Air Permit Number[2]**	**Manufacturer/ Model/ Serial Number**	**Year Installed**	**Maximum Permitted Capacity/ Permitted Fuel Type(s)/ Nominal Heat Input or Fuel Rate[3]**
EU01	Flare No. 1 (Utility Flare – Backup Device) TP-B-0525 (expires 03/31/08)	McGill Environmental Model BFT-10 Serial No. 1667-1	1989	1,500 scfm Landfill Gas 49.5 MMBtu/hr
EU02	Flare No. 2 (Utility Flare) P0-BP-1927 (expired 03/31/2002)	LFG Specialties Model CFI02018 Serial No. 1298	1995	1,500 scfm Landfill Gas 49.5 MMBtu/hr
EU03	Reciprocating Engine No. 1 P0-B-1821 (expired 03/31/2002)	Caterpillar Model 3516 Serial No. 3RC00348	1992	10.0 MMBtu/hr Landfill Gas 303 scfm
EU04	Reciprocating Engine No. 2 P0-B-1822 (expired 03/31/2002)	Caterpillar Model 3516 Serial No. 4EK01362	1992	10.0 MMBtu/hr Landfill Gas 303 scfm
EU05	Reciprocating Engine No. 3 P0-B-1823 (expired 03/31/2002)	Caterpillar Model 3516 Serial No. 3RC00346	1992	10.0 MMBtu/hr Landfill Gas 303 scfm
EU06	Reciprocating Engine No. 4 P0-B-1824 (expired 03/31/2002)	Caterpillar Model 3516 Serial No. 3RC00349	1993	10.0 MMBtu/hr Landfill Gas 303 scfm
EU07	Emergency Generator at Leachate Treatment Plant	Caterpillar Model 3406TA Serial No. 2WB04342	1992	2.79 MMBtu/hr (275 kW) Diesel Fuel Oil 20.4 gal/hr
EU08	Turbine No. 1 PO-B-2010 (expired 10/31/2003)	Solar Turbines Model: Centaur Serial No. 3826C52	1997	50 MMBtu/hr Landfill Gas 1,515 scfm
EU09	Turbine No. 2 PO-B-2001 (expired 10/31/2003)	Solar Turbines Model: Centaur Serial No. 3000405	1997	50 MMBtu/hr Landfill Gas 1,515 scfm
EU13	Boiler at Leachate Treatment Plant	Envirex, Inc. Model 1506 RM Serial No. 11110.11	1991	2.03 MMBtu/hr Landfill Gas (or LPG) 61.5 scfm (21.6 gal/hr)
EU15	Flare No. 3 (Ultra-Low-Emissions Flare) TP-B-0482 (expired 05/31/2003)	John Zink Company Model ZULE Serial No. 938953	2002	3,900 scfm Landfill Gas 128.7 MMBtu/hr
EU18	Portable Emergency Generator	Caterpillar Model XTI25-3304 Serial No. 9HK00082	2000	1.36 MMbtu/hr (125 kW) Diesel Fuel Oil 9.9 gal/hr
EU19	Flare No. 5 (Utility Flare) TP-B-0525 (expires 03/31/08)	LFG Specialties, Inc. Model PCF1434112 Serial No. 1822	2006	3,200 scfm Landfill Gas 105.6 MMBtu/hr
EU20	Flare No. 6 (Ultra-Low-Emissions Flare) TP-B-0525 (expires 03/31/08)	John Zink Company Model ZULE Serial No. 9048205	2006	4,000 scfm Landfill Gas 132.0 MMBtu/hr

[1] An insignificant activity is defined as any device, source, or activity that is below any applicable permit threshold and emits less than 1,000 lb/year of all regulated air pollutants [Env-A 609.04].

[2] Application shield provisions apply to expired permits in accordance with Env-A 607.10 (for Temporary Permits) and Env-A 607.10 (for State Permits to Operate).

[3] Maximum permitted capacity is stated in units of *scfm* for flares and units of *MMBtu/hr* for all other devices. Nominal heat input or fuel flow rate values are calculated on the basis of assumed higher heating values (HHV) of 550 Btu/scf for landfill gas and 137,000 Btu/gal for diesel fuel oil.

III. Operating and Emission Limitations

A. Treatment/control devices listed in Table 1 were installed by the Owner/Operator of the Facility for the purpose of compliance with state and federal air quality standards and emission standards for municipal solid waste landfills. All gas collected in the Facility's landfill gas collection system shall be routed through treatment/control devices. Bypassing treatment/control devices shall not be allowed, unless the gas mover system is shut down and all valves in the gas collection and control system contributing to venting of the gas to the atmosphere are closed within 1 hour, as provided in 40 CFR 60.753(e).

B. The Owner or Operator shall be subject to the operating and emission limitations identified in Table 2. The listed limitations pertain to emissions from the Facility and are not intended to be inclusive of all operating limitations effective for the Facility.

Table 2 – Operating and Emission Limitations

Item #	Applicable Requirement	Applicable Emission Unit(s)	Regulatory Basis
1	*Facility-Wide Carbon Monoxide Emissions Cap* Combined total emissions of CO shall not exceed 249.9 tons in any consecutive 12 month period.[4] This condition shall become effective no later than March 3, 2008.[5]	Facility-wide[6]	Env-A 619 and Consent Decree
2	*Facility-Wide Sulfur Dioxide Emissions Cap* Combined total emissions of SO_2 shall not exceed 249.9 tons in any consecutive 12 month period.[4] This condition shall become effective no later than March 3, 2008.[5]	Facility-wide[6]	Env-A 619 and Consent Decree
3	*Particulate Emission Standard for Fuel-Burning Devices Installed on or after January 1, 1985* For each fuel-burning device having a maximum gross heat input rate less than 100 MMBtu/hr, particulate emissions shall not exceed 0.30 lb/MMBtu.	EU08, EU09	Env-A 2002.08(c)(1)
4	*Operating Requirements for Permit Deviations* In the event of a permit deviation, the Owner or Operator shall investigate and take corrective actions immediately upon discovery of the permit deviation to restore the affected device, process, or air pollution equipment to within allowable permit levels.	Facility-wide	Env-A 911.03(a)

[4] The Facility is considered a minor source for CO and SO_2 as defined under the Prevention of Significant Deterioration (PSD) program and shall not be subject to PSD requirements, provided that total emissions of CO and SO_2 remain below the stated limits.

[5] Compliance with this condition shall commence with the 12 consecutive months immediately preceding the effective date and shall continue monthly on a rolling basis for each consecutive 12-month period after the effective date.

[6] Facility-wide means all devices, sources, and activities except those listed in Env-A 609.03, *Exempt Activities*.

C. Emissions from individual devices shall not exceed the short-term emission limitations (hourly emission rates) presented in Table 2a. The listed values were used in air dispersion modeling pursuant to Env-A 606 for the purpose of demonstrating compliance with NAAQS. No increase in these emission limitations shall be allowed unless:

1. An air quality impact analysis meeting the criteria of Env-A 606 has been performed by either the Facility or the Department (if requested by the Facility in writing),
2. The results of the analysis are deemed acceptable by the Department, and
3. The revised short-term emission limitations have been incorporated into an amended permit (see VII. Permit Amendments).

Table 2a – Short-Term Emission Limitations (lb/hr)

Emission Unit #	Device Identification	CO	NOx	PM_{10}	SO_2
EU01	Flare No. 1 (Back-up Utility Flare)	18.3	3.4	0.8	12.2
EU02	Flare No. 2 (Utility Flare)	18.3	3.4	0.8	12.2
EU08	Turbine No. 1	8.5	8.0	0.8	13.4
EU09	Turbine No. 2	8.5	8.0	0.8	13.4
EU15	Flare No. 3 (Ultra-Low-Emissions Flare)	6.9	2.9	2.3	31.6
EU20	Flare No. 6 (Ultra-Low-Emissions Flare)	6.9	2.9	2.4	60.8

IV. Monitoring/Testing Requirements

The Owner or Operator shall be subject to the monitoring/testing requirements identified in Table 3. The listed requirements relate mainly to monitoring/testing for control of emissions and are not intended to be inclusive of all monitoring/testing requirements for operation of the Facility.

Table 3 – Monitoring/Testing Requirements

Item #	Parameter(s)	Method of Compliance	Frequency	Applicable Emission Unit(s)	Regulatory Basis
1	Landfill gas flow rate	*Monitoring of Landfill Gas Flow Rate* Flow measuring instrumentation shall be operated and maintained to measure the instantaneous flow rate and totalized flow, corrected for temperature and pressure, to each operating control device. This requirement shall apply at all times that landfill gas is delivered to a control device. Note: In the case of the four engines (EU01 thru EU06), the Owner or Operator may elect to monitor total landfill gas flow to the engine plant and allocate the total flow to individual engines on the basis of recorded operating hours.	Continuous	All landfill gas control devices	Env-A 604.01

Table 3 – Monitoring/Testing Requirements					
Item #	**Parameter(s)**	**Method of Compliance**	**Frequency**	**Applicable Emission Unit(s)**	**Regulatory Basis**
2	Hydrogen sulfide	*LFG Sulfur Monitoring* a) The Owner or Operator shall perform landfill gas sulfur monitoring for TLR-I, -II, and -III in accordance with the provisions of the most recent Test Protocol for Landfill Gas Monitoring, as approved by the Department. b) As an alternative to the method described in paragraph a) for TLR-III, the Owner or Operator may elect to install, operate, and maintain a continuous emissions monitoring device for hydrogen sulfide at the Turbine Plant. Monitoring for TLR-I and TLR-II under this alternative would continue as described in paragraph a).	Monthly Continuous for TLR-III; monthly or semiannually for TLR-I and TLR-II, as specified	EU21, EU22, EU23	Consent Decree paragraph 16.c and Exhibit D
3	Sulfur content of landfill gas	*NSPS Monitoring for Stationary Gas Turbines* The Owner or Operator shall monitor the total sulfur content of the fuel being fired in the turbines by using one of the approved methods identified below: a) Daily sampling and testing by either: total sulfur methods described in 40 CFR 60.335(b)(10); or, if the total sulfur content of the gaseous fuel during the most recent performance test was less than 0.4 weight percent (4000 ppmw), ASTM D4084–82, 94, D5504–01, D6228–98, or Gas Processors Association Standard 2377–86, which measure the major sulfur compounds; or b) As an alternative to daily sampling and testing, the Owner or Operator may elect to sample and test sulfur content in conformance to the monitoring protocol and custom schedule issued and approved for the Facility by USEPA in a letter dated May 19, 1999.	Once per unit operating day (See schedule established in referenced letter.)	EU08, EU09	40 CFR 60.334, paragraphs (h) and (i) (Subpart GG)
4	Electrical power generation	*Power Generation Monitoring and Calculations for NOx-Emitting Generation Sources* The Owner or Operator shall determine electrical power generation by either of the following methods: 1) By calculating actual electrical power generation in MW-hr by multiplying the heat input in MMBtu obtained from fuel use records by 0.10 MW-hr/MMBtu, or 2) By monitoring electrical power generation in kW-hr using one of the monitors specified in Env-A 3705.01(b)(1).	Continuous	EU08, EU09	Env-A 3705.01

V. Recordkeeping Requirements

The Owner or Operator shall be subject to the recordkeeping requirements identified in Table 4. The listed requirements relate mainly to recordkeeping for emissions and are not intended to be inclusive of all recordkeeping requirements for operation of the Facility.

Table 4 - Recordkeeping Requirements

Item #	Applicable Requirement	Frequency	Applicable Emission Unit(s)	Regulatory Basis
1	*Record Retention and Availability* The Owner or Operator shall keep the records required by this permit on file. These records shall be available for review by the Department upon request.	Continuous for a minimum of 5 years	Facility-wide	Env-A 902.01(a)
2	*Availability of Records to the Public* All data submitted to the Department, including emission data and applicable emission limitations, shall be available to the public.	Continuous	Facility-wide	Env-A 902.01(d)
3	*General Recordkeeping Requirements for Combustion Devices* The Owner or Operator shall maintain the following records of fuel characteristics and utilization for the fuels used in the combustion devices: a) Type (e.g., landfill gas, diesel fuel, LPG) and amount of fuel burned in each device. b) Sulfur content of: 1) Gaseous fuel burned in terms of grains sulfur per 100 scf of fuel, or percent sulfur by weight, at standard temperature and pressure; 2) Liquid fuel burned in terms of percent sulfur by weight; c) BTU content per cubic foot of landfill gas; and d) Hours of operation of each device.	Monthly	All combustion devices	Env-A 903.03
4	*Additional Recordkeeping Requirements for CO and SO_2* The Owner or Operator shall maintain a 12-month running total record of CO and SO_2 emissions from all devices, including insignificant activities, for the purpose of demonstrating that Facility-wide emissions of these pollutants do not exceed the annual emissions caps identified in Items 1 and 2 of Table 2.	Monthly	Facility-wide	Env-A 906.01 and Env-A 604.02(a)(3)
5	*General NOx Recordkeeping Requirements* If the actual annual NOx emissions from the Facility are greater than or equal to 10 tpy, the Owner or Operator shall record the following information: a) Identification of each fuel burning device; b) Operating schedule during the high ozone season (June 1 through August 31) for each fuel burning device identified in a), above, including: 1) Hours and days of operation per calendar month; 2) Number of weeks of operation; 3) Type and amount of each fuel burned; 4) Heat input rate in MMBtu/hr; 5) Actual NOx emissions for the calendar year and a typical high ozone day during that calendar year; and 6) Emission factors and the origin of the emission factors used to calculate the NOx emissions.	Continuous	Facility-wide	Env-A 905.02

Table 4 - Recordkeeping Requirements

Item #	Applicable Requirement	Frequency	Applicable Emission Unit(s)	Regulatory Basis
6	*Recordkeeping for NOx-Emitting Generation Sources* The Owner or Operator shall maintain the following records for any NOx-emitting generation source: a) Actual NOx emissions in accordance with the methods set forth in Env-A 616; b) Fuel usage; c) Hours of operation; d) Power generation as monitored pursuant to Item 4 of Table 3; e) Hours of downtime of the power generation monitoring system, if applicable, during the time period when the generator is in operation; and f) Frequency and results of calibrations performed on the power generation monitoring system, as applicable.	Monthly	EU08, EU09	Env-A 3706.01
7	*NSPS Recordkeeping for Stationary Gas Turbines* The Owner or Operator shall record the sulfur content of the LFG fuel as determined by one of the approved procedures identified in Item 3 of Table 3. Records of sample dates, monitoring dates, and fuel supply shall be made available for inspection by USEPA or the Department upon request.	Varies with chosen method	EU08, EU09	40 CFR 60.334(i) (Subpart GG)
8	*Recordkeeping Requirements for Permit Deviations* a) Definitions: 1) A *permit deviation* is any occurrence that results in an excursion from any emission limitation, operating condition, or work practice standard as specified in either a Title V permit, state permit to operate, temporary permit or general state permit issued by the Department. 2) An *excess emission* is an air emission rate that exceeds any applicable emission limitation. b) In the event of a permit deviation (including any excess emissions), the Owner or Operator of the affected device, process, or air pollution control equipment shall record the following information: 1) The permit deviation; 2) The probable cause of the permit deviation; 3) The date of the occurrence; 4) The duration; 5) The specific device that contributed to the permit deviation; and 6) Any corrective or preventative measures taken.	As necessary	Facility-wide	Env-A 911.03

VI. Reporting Requirements

The Owner or Operator shall be subject to the reporting requirements identified in Table 5. The listed requirements relate mainly to reporting for emissions and are not intended to be inclusive of all reporting requirements for operation of the Facility.

Table 5 – Reporting Requirements

Item #	Applicable Requirement	Frequency	Applicable Emission Unit(s)	Regulatory Basis
1	*General Reporting Requirements* The Owner or Operator shall submit an annual emissions report which shall include the following information: a) Actual calendar year emissions from each device of CO, NOx, PM_{10}, SO_2, TSP, VOCs, HAPs (listed by individual CAS number and chemical name), and RTAPs (listed by individual CAS number and chemical name); and b) The methods used in calculating such emissions in accordance with Env-A 705.02, *Determination of Actual Emissions for Use in Calculating Emission-Based Fees.*	Annually (no later than April 15th of the following year)	Facility-wide	Env-A 907.01
2	*Additional Reporting Requirements for CO and SO_2* The Owner or Operator shall include in the annual emissions report identified in Item 1 above all data collected pursuant to Item 4 of Table 4.	Annually (no later than April 15th of the following year)	Facility-wide	Env-A 910.01
3	*NOx Emission Statements Reporting Requirements* If the actual annual NOx emissions for the Facility are greater than or equal to 10 tpy, the Owner or Operator shall include the following information in the annual emission report identified in Item 1 above: a) A breakdown by month of NOx emissions; and b) All data recorded pursuant to Item 5 of Table 4.	Annually (no later than April 15th of the following year)	EU01, EU02, EU08, EU09, EU15	Env-A 909 and Env-A 910.01
4	*Reporting Requirements for NOx-Emitting Generation Sources* The Owner or Operator shall include in the annual emissions report identified in Item 1 above all data collected pursuant to Item 6 of Table 4.	Annually (no later than April 15th of the following year)	EU08, EU09	Env-A 3706.03

Table 5 – Reporting Requirements

Item #	Applicable Requirement	Frequency	Applicable Emission Unit(s)	Regulatory Basis
5	*Reporting Requirements for Permit Deviations* In the event of a permit deviation, the Owner or Operator shall notify the Department by telephone (603-271-1370), fax (603-271-7053), or e-mail (pdeviations@des.state.nh.us) as follows: a) If the permit deviation does not cause excess emissions but continues for a period greater than 9 consecutive days, notify the Department on the tenth day of the permit deviation, or, if it is a Saturday, Sunday, or state or federal legal holiday, on the next regular business day, of the subsequent corrective actions to be taken. b) If the permit deviation causes excess emissions, 1) Notify the Department within 24 hours of discovery of the permit deviation, or, if it is a Saturday, Sunday, or state or federal legal holiday, on the next regular business day; and 2) Submit a written report to the Department within 10 days of discovery of the permit deviation, which report shall include the following information: i) Facility name; ii) Facility address; iii) Name of the responsible official employed at the Facility; iv) Facility telephone number; v) Date(s) of the occurrence; vi) Time of the occurrence; vii) Description of the permit deviation; viii) The probable cause of the permit deviation; ix) Corrective action taken to date; x) Preventative measures taken to prevent future occurrences; xi) Date and time that the device, process, or air pollution control equipment returned to operation in compliance with enforceable emission limitation or operating condition; xii) The specific device, process or air pollution control equipment that contributed to the permit deviation; xiii) The type and quantity of excess emissions emitted to the atmosphere due to the permit deviation; and xiv) The calculation or estimation used to quantify the excess emissions.	As necessary	Facility-wide	Env-A 911.04(a) Env-A 911.04(b)
	c) The Owner or Operator shall report to the Department a summary of all permit deviations previously reported to the Department pursuant to Env-A 911.04(a) and (b) for the reporting period.	Annually (no later than April 15th of the following year)	Facility-wide	Env-A 911.05

Table 5 – Reporting Requirements				
Item #	**Applicable Requirement**	**Frequency**	**Applicable Emission Unit(s)**	**Regulatory Basis**
6	*NSPS Reporting for Stationary Gas Turbines* The Owner or Operator shall submit reports of excess emissions and monitor downtime, in accordance with 40 CFR 60.7(c). Excess emissions shall be reported for all periods of unit operation, including startup, shutdown and malfunction. Periods of excess emissions and monitor downtime that shall be reported are defined as follows: a) Sulfur dioxide: A period of monitor downtime begins when a required sample is not taken by its due date. A period of monitor downtime also begins on the date and hour of a required sample, if invalid results are obtained. The period of monitor downtime shall include only unit operating hours, and ends on the date and hour of the next valid sample. b) All reports required under 40 CFR 60.7(c) shall be postmarked by the 30th day following the end of each 6-month period.	Semiannually	EU08, EU09	40 CFR 60.334(j) (Subpart GG)

VII. Permit Amendments

A. Env-A 612.01, *Administrative Permit Amendments*:

1. An administrative permit amendment includes the following:
   a. Corrects typographical errors;
   b. Requires more frequent monitoring or reporting; or
   c. Allows for a change in ownership or operational control of a source provided that a written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new permittee has been submitted to the Department.
2. The Owner or Operator may implement the changes addressed in the request for an administrative amendment immediately upon submittal of the request.

B. Env-A 612.03, *Minor Permit Amendments: Temporary Permits and State Permits to Operate:*

1. The Owner or Operator shall submit to the Department a request for a minor permit amendment for any proposed change to any of the conditions contained in this permit which will not result in an increase in the amount of a specific air pollutant currently emitted by the devices listed in Condition III and will not result in the emission of any air pollutant not emitted by the source of device.
2. The request for a minor permit amendment shall be in the form of a letter to the Department and shall include the following:
   a. A description of the proposed change; and
   b. A description of any new applicable requirements that will apply if the change occurs.
3. The Owner or Operator may implement the proposed change immediately upon filling a request for the minor permit amendment.

C. Env-A 612.04, *Significant Permit Amendments: Temporary Permits and State Permits to Operate*:

1. The Owner or Operator shall submit a written request for a permit amendment to the Department at least 90 days prior to the implementation of any proposed change to the physical structure or operation of the devices covered by this permit which increases the amount of a specific air pollutant currently emitted by such device or which results in the emission of any regulated air pollutant currently not emitted by such device.

2. A request for a significant permit amendment shall include the following:
   a. A complete application form, as described in Env-A 1703 through Env-A 1708, as applicable;
   b. A description of:
      i. The proposed change;
      ii. The emissions resulting from the change; and
      iii. Any new applicable requirements that will apply if the change occurs; and
   c. Where air pollution dispersion modeling is required for a device pursuant to Env-A 606.02, the information required pursuant to Env-A 606.03.
3. The Owner or Operator shall not implement the proposed change until the Department issues the amended permit.

VIII. Emission-Based Fee Requirements

A. Env-A 705.01, *Emission-based Fees*: The Owner or Operator shall pay to the Department each year an emission-based fee for emissions from the devices listed in Table 1.

B. Env-A 705.02, *Determination of Actual Emissions for use in Calculating of Emission-based Fees*: The Owner or Operator shall determine the total actual annual emissions from the devices listed in Condition III for each calendar year in accordance with the methods specified in Env-A 616, *Determination of Actual Emissions*. If the emissions are determined to be less than one ton, the emission-based fee shall be calculated using an emission-based multiplier of one ton.

C. Env-A 705.03, *Calculation of Emission-based Fees*: The Owner or Operator shall calculate the annual emission-based fee for each calendar year in accordance with the procedures specified in Env-A 705.03 and the following equation:

$$FEE = E*DPT$$

where:

FEE = The annual emission-based fee for each calendar year as specified in Env-A 705;
E = Total actual emissions as determined pursuant to Condition XII.B; and
DPT = The dollar per ton fee the Department has specified in Env-A 705.03(e).

D. Env-A 3704.01, *Calculation of NOx Emissions for One or More NOx-Emitting Generation Sources Located at a Single Stationary Source*: The Owner or Operator shall calculate average monthly emissions from the generators using the following equation:

$$E = (A_1 + A_2 + \ldots + A_n) - \frac{[(7 + C)*(B_1 + B_2 + \ldots + B_n)]}{2000}$$

where:

$A_1 + A_2 + \ldots + A_n$ = The sum of actual NOx emissions from each unit as determined in accordance with Env-A 616, in tons per month;

$B_1 + B_2 + \ldots + B_n$ = The sum of actual power generation of each unit in megawatt-hours of electricity produced per month; and

C = The NOx emissions rate that is attributable to the provision of other, non-electric services and is exempt from the fee calculation in accordance with Env-A 3703.02, in pounds of NOx emitted per megawatt hour of electricity produced per month.

E. Env-A 3704.02, *Calculation of NOx Emissions for Replacement Sources with Increased Generation Capacity*[7]: The Owner or Operator shall calculate the total NOx emissions attributable to the increase in the amount of generating capacity using the following equation:

$$E = E_{total} * \frac{(MW_{old} - MW_{new})}{MW_{old}}$$

where:

E = The total NOx emissions subject to fees after the replacement, in tons per month;

E_{total} = The total NOx emissions from all generation sources after the replacement, as calculated in Condition VI.D, in tons per month;

MW_{new} = The total generation capacity from all NOx-emitting generation sources before the replacement; and

MW_{old} = The total generation capacity from all NOx-emitting generation sources after the replacement.

F. Env-A 3707.03, *Calculation of NOx Emissions Reduction Fund Fees*: The NOx emissions reduction fund fee shall be equal to the total tons of NOx emissions calculated in accordance with Condition VI.D, multiplied by the NOx emissions reduction fund fee in dollars per ton, as listed in Table 5:

Table 5 – NOx Emissions Reduction Fund Fee

Time Period	NOx Emissions Reduction Fund Fee (Dollars Per Ton)
January 1 to April 30	500
May 1 to September 30	1000
October 1 to December 31	500

G. Env-A 705.04, *Payment of Emission-Based Fee*: The Owner or Operator shall submit, to the Department, payment of the emission-based fee and the NOx emissions reduction fund fee by April 15th for emissions during the previous calendar year. For example, the fees for calendar year 2008 shall be submitted on or before April 15, 2009.

STATE OF NEW HAMPSHIRE
Department of Environmental Services
Air Resources Division

State Permit to Operate

Permit No: **PO-B-1821**
County: **Strafford**
Date Issued: **May 18, 1998 - Amended**

This certifies that:

Waste Management of New Hampshire, Inc.
Turnkey Recycling and Environmental Enterprises (T.R.E.E.)
97 Rochester Neck Road, Rochester, NH

has been granted a permit for:

#1 Caterpillar Model 3516 Landfill Gas Fired Reciprocating Engine

A device which emits air pollutants into the ambient air as set forth in equipment registration forms (ARD 1-6), filed with this Division under the date of **June 24, 1996**, in accordance with RSA 125-C of the New Hampshire laws. Request for permit renewal prior to expiration of this State Permit to Operate is subject to Division requirements and must be accompanied by the appropriate equipment registration forms. This permit is valid until **March 31, 2002.**

This permit is valid provided the device is operated in accordance with all the legally enforceable conditions specified below:

I. The owner or operator of the device as specified by this permit shall be subject to the New Hampshire Rules Governing the Control of Air Pollution.

II. All equipment, facilities and systems installed and used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible to minimize air pollutant emissions.

SEE ATTACHED SHEETS FOR ADDITIONAL PERMIT CONDITIONS

The owner or operator of the device covered by this permit shall submit a written request for a permit amendment to the Director at least 90 days prior to the implementation of any proposed change to the physical structure or operation of the device covered by this permit which increases the amount of a specific air pollutant emitted by such device or which results in the emission of any additional air pollutant. The change shall not take place until a new permit application is submitted and acted upon by the Director pursuant to Env-A 600.

Any unavoidable malfunction, breakdown, or upset of the device, which results in emissions greater than those stipulated in this permit, must be reported to the Division within 8 working hours of the occurrence.

This permit (or a copy) should be appropriately displayed near the device for which it is issued.

Kenneth A. Colburn

Director, Air Resources Division

Turnkey Recycling and Environmental Enterprises (T.R.E.E.)
#1 Caterpillar Model 3519 Landfill Gas-Fired Reciprocating Engine
PO-B-1821

III. Operating Limitations:

A. The maximum gross heat input of this device shall be limited to 10 MMBTU per hour (lower heating value) of landfill gas.

B. This device shall be operated at maximum load conditions, or at load conditions established through the procedure outlined in condition III.E., at all times except for periods of startup, shutdown, or malfunction.

C. For the purposes of this State Permit to Operate, maximum load conditions shall be defined as the range of power output starting at 720 Kilowatts and ending at 880 Kilowatts.

D. Prior to commencing operation of either Solar Centaur Landfill Gas-Fired Turbine #1 (TP-B-420) or Solar Centaur Landfill Gas-Fired Turbine #2 (TP-B-421), T.R.E.E. shall install and operate on this device fuel to air ratio controllers in order to reduce Oxides of Nitrogen emissions to the levels specified in Condition IV.A. of this permit.

E. Operating load conditions for this device other than those listed in condition III.B. may be allowed by the Division provided that T.R.E.E. demonstrates through a division approved performance test that all applicable emission limitations are met at the alternative operating load conditions. All performance testing shall be conducted in accordance with Division rules and policy.

IV. Emission Limitations:

A. Upon commencing operation of Solar Centaur Landfill Gas-Fired Turbine #1 (TP-B-420) or Solar Centaur Landfill Gas-Fired Turbine #2 (TP-B-421) emissions of oxides of nitrogen (NOx) from this device shall not exceed 3.5 pounds per hour.

B. Prior to commencing operation of either Solar Centaur Landfill Gas-Fired Turbine #1 (TP-B-420) or Solar Centaur Landfill Gas-Fired Turbine #2 (TP-B-421) emissions of NOx from this device shall not exceed 5.02 pounds per hour.

C. Emissions of NOx from this device shall not exceed 2.5 grams per brake horsepower hour as specified in Env-A 1211.

D. Prior to commencing operation of either Solar Centaur Landfill Gas-Fired Turbine #1 (TP-B-420) or Solar Centaur Landfill Gas-Fired Turbine #2 (TP-B-421), emissions of NOx from #1 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1821), #2 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1822), #3 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1823), #4 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1824), LFG-Fired Flare #1 (PO-BP-2545), LFG-Fired Flare #2 (PO-B-1927) shall not exceed 111.0 tons in any consecutive 12 month period.

Turnkey Recycling and Environmental Enterprises (T.R.E.E.)
#1 Caterpillar Model 3519 Landfill Gas-Fired Reciprocating Engine
PO-B-1821

IV. Emission Limitations (continued):

E. Emissions of NOx from #1 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1821), #2 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1822), #3 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1823), #4 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1824), LFG-Fired Flare #1 (PO-BP-2545), LFG-Fired Flare #2 (PO-B-1927), Solar Centaur Landfill Gas-Fired Turbine #1 (TP-B-420) and Solar Centaur Landfill Gas-Fired Turbine #2 (TP-B-421) shall not exceed 107.44 tons in any consecutive 12 month period.

F. Emissions of carbon monoxide (CO) from this device shall not exceed 7.3 pounds per hour.

G. Emissions of CO from #1 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1821), #2 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1822), #3 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1823), #4 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1824), LFG-Fired Flare #1 (PO-BP-2545), LFG-Fired Flare #2 (PO-B-1927), Leachate Plant Emergency Diesel Generator (PO-B-1791), Solar Centaur Landfill Gas-Fired Turbine #1 (TP-B-420), and Solar Centaur Landfill Gas-Fired Turbine #2 (TP-B-421) shall not exceed 249.0 tons in any consecutive 12 month period.

H. The opacity of emissions of this device shall not exceed 20%.

V. Stack Criteria:

A. The exhaust stack venting this device shall be a minimum of 27.5 feet above ground level with a maximum inside diameter of 0.667 feet.

B. The exhaust stack shall have a vertical and unobstructed discharge to the ambient air.

VI. Performance Testing:

A. Within 60 days of complete installation of the fuel to air ratio controllers on all of the four Caterpillar Model 3516 LFG-Fired Reciprocating Engines and for the purposes of demonstrating compliance with Env-A 1211 and at such other times as required by the Division, T.R.E.E. shall conduct US EPA method stack tests at maximum production rate conditions, and/or at the request of the Division, any other production rate at which maximum emissions may occur.

B. Testing shall be performed for carbon monoxide, carbon dioxide, oxides of nitrogen and oxygen.

C. Testing shall be conducted and the results reported in accordance with 40 CFR 60, Part 60.8(a), (b), (d), (e), and (f) and Appendix A, and the Division's policy "Procedures and Minimum Requirements for Stack Tests". The following test methods or Division approved alternatives shall be used:

Turnkey Recycling and Environmental Enterprises (T.R.E.E.)
#1 Caterpillar Model 3519 Landfill Gas-Fired Reciprocating Engine
PO-B-1821

VI. Performance Testing (continued):

1. Performance tests for the emissions of Carbon Monoxide, Oxides of Nitrogen and Oxygen shall be conducted using US EPA Methods 1 through 4, 7E and 10, or US EPA and Division approved alternate methods.

D. Compliance testing shall be planned and carried out in accordance with the following schedule:

1. At least 30 days prior to the commencement of testing, T.R.E.E. shall submit to the Division a pretest report presenting the following information:

   a. Calibration methods and sample data sheets;
   b. Description of the test methods to be used;
   c. Pretest preparation procedures;
   d. Sample collection and analysis methods;
   e. Process data to be collected; and
   f. Complete test program description.

2. At least 15 days prior to the test date, T.R.E.E. and any contractor that T.R.E.E. retains for the performance of the test shall participate in a pretest conference with a Division representative.

3. Emissions testing shall be carried out under the observation of a Division representative.

4. Within 30 days after completion of testing, T.R.E.E. shall submit a test report to the Division.

E. For performance testing purposes, sampling ports, platforms and access shall be provided by T.R.E.E. in accordance with 40 CFR 60.8(e).

VII. Malfunction

The Division shall be notified by telephone or fax within 8 working hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner, which results in an increase in emissions above any allowable emission limit stated in this permit. In addition, the Division shall be notified in writing within 15 (fifteen) days of any such failure. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed, and the corrective actions taken to restore normal operations. Compliance with this malfunction notification provision shall not excuse, or otherwise constitute a defense to, any violation of this permit or of any laws or regulations, which such a malfunction may cause.

Turnkey Recycling and Environmental Enterprises (T.R.E.E.)
#1 Caterpillar Model 3519 Landfill Gas-Fired Reciprocating Engine
PO-B-1821

VIII. Recordkeeping and Reporting:

Copies of all records shall be retained by the owner or operator for a minimum of four years and shall be made available to the Director and EPA upon request. However, these records shall not be discarded, removed or destroyed thereafter without the express written approval of the Director in accordance with Env-A 901.09.

A. A daily operating log shall be kept. This operating log shall include the following information:

1. Hours of operation for each engine;
2. Landfill gas flow rate of each engine;
3. Electrical generating loads.

B. T.R.E.E. shall report the information required under condition VIII.A. of this permit and total emissions of each regulated pollutant listed in section IV for #1 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1821), #2 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1822), #3 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1823), #4 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1824) for each month of the previous calendar year in writing to the Division, no later than April 15 of each calendar year.

IX. Emission-Based Fee Requirements:

A. The facility shall pay an emission-based fee annually as calculated each calendar year pursuant to Env-A 704.03 for this device.

B. The facility shall determine the total actual annual emissions from this device for each calendar year in accordance with the methods specified in Env-A 620.

C. The facility shall calculate the annual emission-based fee for each calendar year in accordance with the procedures specified in Env-A 704.03 and the following equation:

$$\mathbf{FEE = E * DPT * CPIm * ISF}$$

Where:

FEE =	The annual emission-based fee for each calendar year as specified in Env-A 704.
E =	The emission-based multiplier is based on the calculation of total annual emissions as specified in Env-A 704.02 and the provisions specified in Env-A 704.03(a).
DPT =	The dollar per ton fee the Division has specified in Env-A 704.03(b).
CPIm=	The Consumer Price Index Multiplier as calculated in Env-A 704.03(c).
ISF =	The Inventory Stabilization Factor as specified in Env-A 704.03(d).

IX. Emission-Based Fee Requirements (continued):

D. Each calendar year the facility shall obtain from the Division the value of the Inventory Stabilization Factor.

E. Each calendar year the facility shall obtain from the Division the value of the Consumer Price Index Multiplier.

F. The facility shall submit, to the Division, payment of the emission-based fee and a summary of the calculations referenced in conditions IX.B. and IX.C. of this permit for each calendar year by October 15th of the following calendar year in accordance with Env-A 704.04. The emission-based fee and summary of the calculations shall be submitted to the following address:

New Hampshire Department of Environmental Services
Air Resources Division
64 North Main Street
P.O. Box 2033
Concord, NH 03302-2033
ATTN: Emissions Inventory

G. The Division shall notify the facility of any under payments or over payments of the annual emission-based fee in accordance with Env-A 704.05.

STATE OF NEW HAMPSHIRE
Department of Environmental Services
Air Resources Division

State Permit to Operate

Permit No: **PO-B-1822**
County: **Strafford**
Date Issued: **May 18, 1998 - Amended**

This certifies that:

Waste Management of New Hampshire, Inc.
Turnkey Recycling and Environmental Enterprises (T.R.E.E.)
97 Rochester Neck Road, Rochester, NH

has been granted a permit for:

#2 Caterpillar Model 3516 Landfill Gas Fired Reciprocating Engine

A device which emits air pollutants into the ambient air as set forth in equipment registration forms (ARD 1-6), filed with this Division under the date of **June 24, 1996**, in accordance with RSA 125-C of the New Hampshire laws. Request for permit renewal prior to expiration of this State Permit to Operate is subject to Division requirements and must be accompanied by the appropriate equipment registration forms. This permit is valid until **March 31, 2002**.

This permit is valid provided the device is operated in accordance with all the legally enforceable conditions specified below:

I. The owner or operator of the device as specified by this permit shall be subject to the New Hampshire Rules Governing the Control of Air Pollution.

II. All equipment, facilities and systems installed and used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible to minimize air pollutant emissions.

SEE ATTACHED SHEETS FOR ADDITIONAL PERMIT CONDITIONS

The owner or operator of the device covered by this permit shall submit a written request for a permit amendment to the Director at least 90 days prior to the implementation of any proposed change to the physical structure or operation of the device covered by this permit which increases the amount of a specific air pollutant emitted by such device or which results in the emission of any additional air pollutant. The change shall not take place until a new permit application is submitted and acted upon by the Director pursuant to Env-A 600.

Any unavoidable malfunction, breakdown, or upset of the device, which results in emissions greater than those stipulated in this permit, must be reported to the Division within 8 working hours of the occurrence.

This permit (or a copy) should be appropriately displayed near the device for which it is issued.

Kenneth A. Colburn

Director, Air Resources Division

Turnkey Recycling and Environmental Enterprises (T.R.E.E.)
#2 Caterpillar Model 3519 Landfill Gas-Fired Reciprocating Engine
PO-B-1822

III. Operating Limitations:

A. The maximum gross heat input of this device shall be limited to 10 MMBTU per hour (lower heating value) of landfill gas.

B. This device shall be operated at maximum load conditions, or at load conditions established through the procedure outlined in condition III.E., at all times except for periods of startup, shutdown, or malfunction.

C. For the purposes of this State Permit to Operate, maximum load conditions shall be defined as the range of power output starting at 720 Kilowatts and ending at 880 Kilowatts.

D. Prior to commencing operation of either Solar Centaur Landfill Gas-Fired Turbine #1 (TP-B-420) or Solar Centaur Landfill Gas-Fired Turbine #2 (TP-B-421), T.R.E.E. shall install and operate on this device fuel to air ratio controllers in order to reduce Oxides of Nitrogen emissions to the levels specified in Condition IV.A. of this permit.

E. Operating load conditions for this device other than those listed in condition III.B. may be allowed by the Division provided that T.R.E.E. demonstrates through a division approved performance test that all applicable emission limitations are met at the alternative operating load conditions. All performance testing shall be conducted in accordance with Division rules and policy.

IV. Emission Limitations:

A. Upon commencing operation of Solar Centaur Landfill Gas-Fired Turbine #1 (TP-B-420) or Solar Centaur Landfill Gas-Fired Turbine #2 (TP-B-421) emissions of oxides of nitrogen (NOx) from this device shall not exceed 3.5 pounds per hour.

B. Prior to commencing operation of either Solar Centaur Landfill Gas-Fired Turbine #1 (TP-B-420) or Solar Centaur Landfill Gas-Fired Turbine #2 (TP-B-421) emissions of NOx from this device shall not exceed 5.02 pounds per hour.

C. Emissions of NOx from this device shall not exceed 2.5 grams per brake horsepower hour as specified in Env-A 1211.

D. Prior to commencing operation of either Solar Centaur Landfill Gas-Fired Turbine #1 (TP-B-420) or Solar Centaur Landfill Gas-Fired Turbine #2 (TP-B-421), emissions of NOx from #1 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1821), #2 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1822), #3 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1823), #4 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1824), LFG-Fired Flare #1 (PO-BP-2545), LFG-Fired Flare #2 (PO-B-1927) shall not exceed 111.0 tons in any consecutive 12 month period.

Turnkey Recycling and Environmental Enterprises (T.R.E.E.)
#2 Caterpillar Model 3519 Landfill Gas-Fired Reciprocating Engine
PO-B-1822

IV. Emission Limitations (continued):

E. Emissions of NOx from #1 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1821), #2 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1822), #3 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1823), #4 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1824), LFG-Fired Flare #1 (PO-BP-2545), LFG-Fired Flare #2 (PO-B-1927), Solar Centaur Landfill Gas-Fired Turbine #1 (TP-B-420) and Solar Centaur Landfill Gas-Fired Turbine #2 (TP-B-421) shall not exceed 107.44 tons in any consecutive 12 month period.

F. Emissions of carbon monoxide (CO) from this device shall not exceed 7.3 pounds per hour.

G. Emissions of CO from #1 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1821), #2 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1822), #3 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1823), #4 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1824), LFG-Fired Flare #1 (PO-BP-2545), LFG-Fired Flare #2 (PO-B-1927), Leachate Plant Emergency Diesel Generator (PO-B-1791), Solar Centaur Landfill Gas-Fired Turbine #1 (TP-B-420), and Solar Centaur Landfill Gas-Fired Turbine #2 (TP-B-421) shall not exceed 249.0 tons in any consecutive 12 month period.

H. The opacity of emissions of this device shall not exceed 20%.

V. Stack Criteria:

A. The exhaust stack venting this device shall be a minimum of 27.5 feet above ground level with a maximum inside diameter of 0.667 feet.

B. The exhaust stack shall have a vertical and unobstructed discharge to the ambient air.

VI. Performance Testing:

A. Within 60 days of complete installation of the fuel to air ratio controllers on all of the four Caterpillar Model 3516 LFG-Fired Reciprocating Engines and for the purposes of demonstrating compliance with Env-A 1211 and at such other times as required by the Division, T.R.E.E. shall conduct US EPA method stack tests at maximum production rate conditions, and/or at the request of the Division, any other production rate at which maximum emissions may occur.

B. Testing shall be performed for carbon monoxide, carbon dioxide, oxides of nitrogen and oxygen.

C. Testing shall be conducted and the results reported in accordance with 40 CFR 60, Part 60.8(a), (b), (d), (e), and (f) and Appendix A, and the Division's policy "Procedures and Minimum Requirements for Stack Tests". The following test methods or Division approved alternatives shall be used:

Turnkey Recycling and Environmental Enterprises (T.R.E.E.)
#2 Caterpillar Model 3519 Landfill Gas-Fired Reciprocating Engine
PO-B-1822

VI. Performance Testing (continued):

1. Performance tests for the emissions of Carbon Monoxide, Oxides of Nitrogen and Oxygen shall be conducted using US EPA Methods 1 through 4, 7E and 10, or US EPA and Division approved alternate methods.

D. Compliance testing shall be planned and carried out in accordance with the following schedule:

1. At least 30 days prior to the commencement of testing, T.R.E.E. shall submit to the Division a pretest report presenting the following information:

   a. Calibration methods and sample data sheets;
   b. Description of the test methods to be used;
   c. Pretest preparation procedures;
   d. Sample collection and analysis methods;
   e. Process data to be collected; and
   f. Complete test program description.

2. At least 15 days prior to the test date, T.R.E.E. and any contractor that T.R.E.E. retains for the performance of the test shall participate in a pretest conference with a Division representative.

3. Emissions testing shall be carried out under the observation of a Division representative.

4. Within 30 days after completion of testing, T.R.E.E. shall submit a test report to the Division.

E. For performance testing purposes, sampling ports, platforms and access shall be provided by T.R.E.E. in accordance with 40 CFR 60.8(e).

VII. Malfunction

The Division shall be notified by telephone or fax within 8 working hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner, which results in an increase in emissions above any allowable emission limit stated in this permit. In addition, the Division shall be notified in writing within 15 (fifteen) days of any such failure. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed, and the corrective actions taken to restore normal operations. Compliance with this malfunction notification provision shall not excuse, or otherwise constitute a defense to, any violation of this permit or of any laws or regulations, which such a malfunction may cause.

Turnkey Recycling and Environmental Enterprises (T.R.E.E.)
#2 Caterpillar Model 3519 Landfill Gas-Fired Reciprocating Engine
PO-B-1822

VIII. Recordkeeping and Reporting:

Copies of all records shall be retained by the owner or operator for a minimum of four years and shall be made available to the Director and EPA upon request. However, these records shall not be discarded, removed or destroyed thereafter without the express written approval of the Director in accordance with Env-A 901.09.

A. A daily operating log shall be kept. This operating log shall include the following information:

1. Hours of operation for each engine;
2. Landfill gas flow rate of each engine;
3. Electrical generating loads.

B. T.R.E.E. shall report the information required under condition VIII.A. of this permit and total emissions of each regulated pollutant listed in section IV for #1 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1821), #2 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1822), #3 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1823), #4 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1824) for each month of the previous calendar year in writing to the Division, no later than April 15 of each calendar year.

IX. Emission-Based Fee Requirements:

A. The facility shall pay an emission-based fee annually as calculated each calendar year pursuant to Env-A 704.03 for this device.

B. The facility shall determine the total actual annual emissions from this device for each calendar year in accordance with the methods specified in Env-A 620.

C. The facility shall calculate the annual emission-based fee for each calendar year in accordance with the procedures specified in Env-A 704.03 and the following equation:

$$\mathbf{FEE = E * DPT * CPIm * ISF}$$

Where:

FEE =	The annual emission-based fee for each calendar year as specified in Env-A 704.
E =	The emission-based multiplier is based on the calculation of total annual emissions as specified in Env-A 704.02 and the provisions specified in Env-A 704.03(a).
DPT =	The dollar per ton fee the Division has specified in Env-A 704.03(b).
CPIm=	The Consumer Price Index Multiplier as calculated in Env-A 704.03(c).
ISF =	The Inventory Stabilization Factor as specified in Env-A 704.03(d).

Turnkey Recycling and Environmental Enterprises (T.R.E.E.)
#2 Caterpillar Model 3519 Landfill Gas-Fired Reciprocating Engine
PO-B-1822

IX. Emission-Based Fee Requirements (continued):

D. Each calendar year the facility shall obtain from the Division the value of the Inventory Stabilization Factor.

E. Each calendar year the facility shall obtain from the Division the value of the Consumer Price Index Multiplier.

F. The facility shall submit, to the Division, payment of the emission-based fee and a summary of the calculations referenced in conditions IX.B. and IX.C. of this permit for each calendar year by October 15th of the following calendar year in accordance with Env-A 704.04. The emission-based fee and summary of the calculations shall be submitted to the following address:

New Hampshire Department of Environmental Services
Air Resources Division
64 North Main Street
P.O. Box 2033
Concord, NH 03302-2033
ATTN: Emissions Inventory

G. The Division shall notify the facility of any under payments or over payments of the annual emission-based fee in accordance with Env-A 704.05.

STATE OF NEW HAMPSHIRE
Department of Environmental Services
Air Resources Division

State Permit to Operate

Permit No: **PO-B-1823**
County: **Strafford**
Date Issued: **May 18, 1998 - Amended**

This certifies that:

Waste Management of New Hampshire, Inc.
Turnkey Recycling and Environmental Enterprises (T.R.E.E.)
97 Rochester Neck Road, Rochester, NH

has been granted a permit for:

#3 Caterpillar Model 3516 Landfill Gas Fired Reciprocating Engine

A device which emits air pollutants into the ambient air as set forth in equipment registration forms (ARD 1-6), filed with this Division under the date of **June 24, 1996**, in accordance with RSA 125-C of the New Hampshire laws. Request for permit renewal prior to expiration of this State Permit to Operate is subject to Division requirements and must be accompanied by the appropriate equipment registration forms. This permit is valid until **March 31, 2002.**

This permit is valid provided the device is operated in accordance with all the legally enforceable conditions specified below:

I. The owner or operator of the device as specified by this permit shall be subject to the New Hampshire Rules Governing the Control of Air Pollution.

II. All equipment, facilities and systems installed and used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible to minimize air pollutant emissions.

SEE ATTACHED SHEETS FOR ADDITIONAL PERMIT CONDITIONS

The owner or operator of the device covered by this permit shall submit a written request for a permit amendment to the Director at least 90 days prior to the implementation of any proposed change to the physical structure or operation of the device covered by this permit which increases the amount of a specific air pollutant emitted by such device or which results in the emission of any additional air pollutant. The change shall not take place until a new permit application is submitted and acted upon by the Director pursuant to Env-A 600.

Any unavoidable malfunction, breakdown, or upset of the device, which results in emissions greater than those stipulated in this permit, must be reported to the Division within 8 working hours of the occurrence.

This permit (or a copy) should be appropriately displayed near the device for which it is issued.

Kenneth A. Colburn

Director, Air Resources Division

Turnkey Recycling and Environmental Enterprises (T.R.E.E.)
#3 Caterpillar Model 3519 Landfill Gas-Fired Reciprocating Engine
PO-B-1823

III. Operating Limitations:

A. The maximum gross heat input of this device shall be limited to 10 MMBTU per hour (lower heating value) of landfill gas.

B. This device shall be operated at maximum load conditions, or at load conditions established through the procedure outlined in condition III.E., at all times except for periods of startup, shutdown, or malfunction.

C. For the purposes of this State Permit to Operate, maximum load conditions shall be defined as the range of power output starting at 720 Kilowatts and ending at 880 Kilowatts.

D. Prior to commencing operation of either Solar Centaur Landfill Gas-Fired Turbine #1 (TP-B-420) or Solar Centaur Landfill Gas-Fired Turbine #2 (TP-B-421), T.R.E.E. shall install and operate on this device fuel to air ratio controllers in order to reduce Oxides of Nitrogen emissions to the levels specified in Condition IV.A. of this permit.

E. Operating load conditions for this device other than those listed in condition III.B. may be allowed by the Division provided that T.R.E.E. demonstrates through a division approved performance test that all applicable emission limitations are met at the alternative operating load conditions. All performance testing shall be conducted in accordance with Division rules and policy.

IV. Emission Limitations:

A. Upon commencing operation of Solar Centaur Landfill Gas-Fired Turbine #1 (TP-B-420) or Solar Centaur Landfill Gas-Fired Turbine #2 (TP-B-421) emissions of oxides of nitrogen (NOx) from this device shall not exceed 3.5 pounds per hour.

B. Prior to commencing operation of either Solar Centaur Landfill Gas-Fired Turbine #1 (TP-B-420) or Solar Centaur Landfill Gas-Fired Turbine #2 (TP-B-421) emissions of NOx from this device shall not exceed 5.02 pounds per hour.

C. Emissions of NOx from this device shall not exceed 2.5 grams per brake horsepower hour as specified in Env-A 1211.

D. Prior to commencing operation of either Solar Centaur Landfill Gas-Fired Turbine #1 (TP-B-420) or Solar Centaur Landfill Gas-Fired Turbine #2 (TP-B-421), emissions of NOx from #1 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1821), #2 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1822), #3 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1823), #4 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1824), LFG-Fired Flare #1 (PO-BP-2545), LFG-Fired Flare #2 (PO-B-1927) shall not exceed 111.0 tons in any consecutive 12 month period.

Turnkey Recycling and Environmental Enterprises (T.R.E.E.)
#3 Caterpillar Model 3519 Landfill Gas-Fired Reciprocating Engine
PO-B-1823

IV. Emission Limitations (continued):

E. Emissions of NOx from #1 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1821), #2 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1822), #3 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1823), #4 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1824), LFG-Fired Flare #1 (PO-BP-2545), LFG-Fired Flare #2 (PO-B-1927), Solar Centaur Landfill Gas-Fired Turbine #1 (TP-B-420) and Solar Centaur Landfill Gas-Fired Turbine #2 (TP-B-421) shall not exceed 107.44 tons in any consecutive 12 month period.

F. Emissions of carbon monoxide (CO) from this device shall not exceed 7.3 pounds per hour.

G. Emissions of CO from #1 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1821), #2 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1822), #3 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1823), #4 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1824), LFG-Fired Flare #1 (PO-BP-2545), LFG-Fired Flare #2 (PO-B-1927), Leachate Plant Emergency Diesel Generator (PO-B-1791), Solar Centaur Landfill Gas-Fired Turbine #1 (TP-B-420), and Solar Centaur Landfill Gas-Fired Turbine #2 (TP-B-421) shall not exceed 249.0 tons in any consecutive 12 month period.

H. The opacity of emissions of this device shall not exceed 20%.

V. Stack Criteria:

A. The exhaust stack venting this device shall be a minimum of 27.5 feet above ground level with a maximum inside diameter of 0.667 feet.

B. The exhaust stack shall have a vertical and unobstructed discharge to the ambient air.

VI. Performance Testing:

A. Within 60 days of complete installation of the fuel to air ratio controllers on all of the four Caterpillar Model 3516 LFG-Fired Reciprocating Engines and for the purposes of demonstrating compliance with Env-A 1211 and at such other times as required by the Division, T.R.E.E. shall conduct US EPA method stack tests at maximum production rate conditions, and/or at the request of the Division, any other production rate at which maximum emissions may occur.

B. Testing shall be performed for carbon monoxide, carbon dioxide, oxides of nitrogen and oxygen.

C. Testing shall be conducted and the results reported in accordance with 40 CFR 60, Part 60.8(a), (b), (d), (e), and (f) and Appendix A, and the Division's policy "Procedures and Minimum Requirements for Stack Tests". The following test methods or Division approved alternatives shall be used:

Turnkey Recycling and Environmental Enterprises (T.R.E.E.)
#3 Caterpillar Model 3519 Landfill Gas-Fired Reciprocating Engine
PO-B-1823

VI. Performance Testing (continued):

1. Performance tests for the emissions of Carbon Monoxide, Oxides of Nitrogen and Oxygen shall be conducted using US EPA Methods 1 through 4, 7E and 10, or US EPA and Division approved alternate methods.

D. Compliance testing shall be planned and carried out in accordance with the following schedule:

1. At least 30 days prior to the commencement of testing, T.R.E.E. shall submit to the Division a pretest report presenting the following information:

   a. Calibration methods and sample data sheets;
   b. Description of the test methods to be used;
   c. Pretest preparation procedures;
   d. Sample collection and analysis methods;
   e. Process data to be collected; and
   f. Complete test program description.

2. At least 15 days prior to the test date, T.R.E.E. and any contractor that T.R.E.E. retains for the performance of the test shall participate in a pretest conference with a Division representative.

3. Emissions testing shall be carried out under the observation of a Division representative.

4. Within 30 days after completion of testing, T.R.E.E. shall submit a test report to the Division.

E. For performance testing purposes, sampling ports, platforms and access shall be provided by T.R.E.E. in accordance with 40 CFR 60.8(e).

VII. Malfunction

The Division shall be notified by telephone or fax within 8 working hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner, which results in an increase in emissions above any allowable emission limit stated in this permit. In addition, the Division shall be notified in writing within 15 (fifteen) days of any such failure. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed, and the corrective actions taken to restore normal operations. Compliance with this malfunction notification provision shall not excuse, or otherwise constitute a defense to, any violation of this permit or of any laws or regulations, which such a malfunction may cause.

Turnkey Recycling and Environmental Enterprises (T.R.E.E.)
#3 Caterpillar Model 3519 Landfill Gas-Fired Reciprocating Engine
PO-B-1823

VIII. Recordkeeping and Reporting:

Copies of all records shall be retained by the owner or operator for a minimum of four years and shall be made available to the Director and EPA upon request. However, these records shall not be discarded, removed or destroyed thereafter without the express written approval of the Director in accordance with Env-A 901.09.

A. A daily operating log shall be kept. This operating log shall include the following information:

1. Hours of operation for each engine;
2. Landfill gas flow rate of each engine;
3. Electrical generating loads.

B. T.R.E.E. shall report the information required under condition VIII.A. of this permit and total emissions of each regulated pollutant listed in section IV for #1 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1821), #2 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1822), #3 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1823), #4 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1824) for each month of the previous calendar year in writing to the Division, no later than April 15 of each calendar year.

IX. Emission-Based Fee Requirements:

A. The facility shall pay an emission-based fee annually as calculated each calendar year pursuant to Env-A 704.03 for this device.

B. The facility shall determine the total actual annual emissions from this device for each calendar year in accordance with the methods specified in Env-A 620.

C. The facility shall calculate the annual emission-based fee for each calendar year in accordance with the procedures specified in Env-A 704.03 and the following equation:

$$\mathbf{FEE = E * DPT * CPIm * ISF}$$

Where:

FEE =	The annual emission-based fee for each calendar year as specified in Env-A 704.
E =	The emission-based multiplier is based on the calculation of total annual emissions as specified in Env-A 704.02 and the provisions specified in Env-A 704.03(a).
DPT =	The dollar per ton fee the Division has specified in Env-A 704.03(b).
CPIm=	The Consumer Price Index Multiplier as calculated in Env-A 704.03(c).
ISF =	The Inventory Stabilization Factor as specified in Env-A 704.03(d).

Turnkey Recycling and Environmental Enterprises (T.R.E.E.)
#3 Caterpillar Model 3519 Landfill Gas-Fired Reciprocating Engine
PO-B-1823

IX. Emission-Based Fee Requirements (continued):

D. Each calendar year the facility shall obtain from the Division the value of the Inventory Stabilization Factor.

E. Each calendar year the facility shall obtain from the Division the value of the Consumer Price Index Multiplier.

F. The facility shall submit, to the Division, payment of the emission-based fee and a summary of the calculations referenced in conditions IX.B. and IX.C. of this permit for each calendar year by October 15th of the following calendar year in accordance with Env-A 704.04. The emission-based fee and summary of the calculations shall be submitted to the following address:

New Hampshire Department of Environmental Services
Air Resources Division
64 North Main Street
P.O. Box 2033
Concord, NH 03302-2033
ATTN: Emissions Inventory

G. The Division shall notify the facility of any under payments or over payments of the annual emission-based fee in accordance with Env-A 704.05.

STATE OF NEW HAMPSHIRE
Department of Environmental Services
Air Resources Division

State Permit to Operate

Permit No: **PO-B-1824**
County: **Strafford**
Date Issued: **May 18, 1998 - Amended**

This certifies that:

Waste Management of New Hampshire, Inc.
Turnkey Recycling and Environmental Enterprises (T.R.E.E.)
97 Rochester Neck Road, Rochester, NH

has been granted a permit for:

#4 Caterpillar Model 3516 Landfill Gas Fired Reciprocating Engine

A device which emits air pollutants into the ambient air as set forth in equipment registration forms (ARD 1-6), filed with this Division under the date of **June 24, 1996**, in accordance with RSA 125-C of the New Hampshire laws. Request for permit renewal prior to expiration of this State Permit to Operate is subject to Division requirements and must be accompanied by the appropriate equipment registration forms. This permit is valid until **March 31, 2002.**

This permit is valid provided the device is operated in accordance with all the legally enforceable conditions specified below:

I. The owner or operator of the device as specified by this permit shall be subject to the New Hampshire Rules Governing the Control of Air Pollution.

II. All equipment, facilities and systems installed and used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible to minimize air pollutant emissions.

SEE ATTACHED SHEETS FOR ADDITIONAL PERMIT CONDITIONS

The owner or operator of the device covered by this permit shall submit a written request for a permit amendment to the Director at least 90 days prior to the implementation of any proposed change to the physical structure or operation of the device covered by this permit which increases the amount of a specific air pollutant emitted by such device or which results in the emission of any additional air pollutant. The change shall not take place until a new permit application is submitted and acted upon by the Director pursuant to Env-A 600.

Any unavoidable malfunction, breakdown, or upset of the device, which results in emissions greater than those stipulated in this permit, must be reported to the Division within 8 working hours of the occurrence.

This permit (or a copy) should be appropriately displayed near the device for which it is issued.

Kenneth A. Colburn

Director, Air Resources Division

Turnkey Recycling and Environmental Enterprises (T.R.E.E.)
#4 Caterpillar Model 3519 Landfill Gas-Fired Reciprocating Engine
PO-B-1824

III. Operating Limitations:

A. The maximum gross heat input of this device shall be limited to 10 MMBTU per hour (lower heating value) of landfill gas.

B. This device shall be operated at maximum load conditions, or at load conditions established through the procedure outlined in condition III.E., at all times except for periods of startup, shutdown, or malfunction.

C. For the purposes of this State Permit to Operate, maximum load conditions shall be defined as the range of power output starting at 720 Kilowatts and ending at 880 Kilowatts.

D. Prior to commencing operation of either Solar Centaur Landfill Gas-Fired Turbine #1 (TP-B-420) or Solar Centaur Landfill Gas-Fired Turbine #2 (TP-B-421), T.R.E.E. shall install and operate on this device fuel to air ratio controllers in order to reduce Oxides of Nitrogen emissions to the levels specified in Condition IV.A. of this permit.

E. Operating load conditions for this device other than those listed in condition III.B. may be allowed by the Division provided that T.R.E.E. demonstrates through a division approved performance test that all applicable emission limitations are met at the alternative operating load conditions. All performance testing shall be conducted in accordance with Division rules and policy.

IV. Emission Limitations:

A. Upon commencing operation of Solar Centaur Landfill Gas-Fired Turbine #1 (TP-B-420) or Solar Centaur Landfill Gas-Fired Turbine #2 (TP-B-421) emissions of oxides of nitrogen (NOx) from this device shall not exceed 3.5 pounds per hour.

B. Prior to commencing operation of either Solar Centaur Landfill Gas-Fired Turbine #1 (TP-B-420) or Solar Centaur Landfill Gas-Fired Turbine #2 (TP-B-421) emissions of NOx from this device shall not exceed 5.02 pounds per hour.

C. Emissions of NOx from this device shall not exceed 2.5 grams per brake horsepower hour as specified in Env-A 1211.

D. Prior to commencing operation of either Solar Centaur Landfill Gas-Fired Turbine #1 (TP-B-420) or Solar Centaur Landfill Gas-Fired Turbine #2 (TP-B-421), emissions of NOx from #1 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1821), #2 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1822), #3 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1823), #4 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1824), LFG-Fired Flare #1 (PO-BP-2545), LFG-Fired Flare #2 (PO-B-1927) shall not exceed 111.0 tons in any consecutive 12 month period.

Turnkey Recycling and Environmental Enterprises (T.R.E.E.)
#4 Caterpillar Model 3519 Landfill Gas-Fired Reciprocating Engine
PO-B-1824

IV. Emission Limitations (continued):

E. Emissions of NOx from #1 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1821), #2 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1822), #3 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1823), #4 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1824), LFG-Fired Flare #1 (PO-BP-2545), LFG-Fired Flare #2 (PO-B-1927), Solar Centaur Landfill Gas-Fired Turbine #1 (TP-B-420) and Solar Centaur Landfill Gas-Fired Turbine #2 (TP-B-421) shall not exceed 107.44 tons in any consecutive 12 month period.

F. Emissions of carbon monoxide (CO) from this device shall not exceed 7.3 pounds per hour.

G. Emissions of CO from #1 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1821), #2 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1822), #3 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1823), #4 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1824), LFG-Fired Flare #1 (PO-BP-2545), LFG-Fired Flare #2 (PO-B-1927), Leachate Plant Emergency Diesel Generator (PO-B-1791), Solar Centaur Landfill Gas-Fired Turbine #1 (TP-B-420), and Solar Centaur Landfill Gas-Fired Turbine #2 (TP-B-421) shall not exceed 249.0 tons in any consecutive 12 month period.

H. The opacity of emissions of this device shall not exceed 20%.

V. Stack Criteria:

A. The exhaust stack venting this device shall be a minimum of 27.5 feet above ground level with a maximum inside diameter of 0.667 feet.

B. The exhaust stack shall have a vertical and unobstructed discharge to the ambient air.

VI. Performance Testing:

A. Within 60 days of complete installation of the fuel to air ratio controllers on all of the four Caterpillar Model 3516 LFG-Fired Reciprocating Engines and for the purposes of demonstrating compliance with Env-A 1211 and at such other times as required by the Division, T.R.E.E. shall conduct US EPA method stack tests at maximum production rate conditions, and/or at the request of the Division, any other production rate at which maximum emissions may occur.

B. Testing shall be performed for carbon monoxide, carbon dioxide, oxides of nitrogen and oxygen.

C. Testing shall be conducted and the results reported in accordance with 40 CFR 60, Part 60.8(a), (b), (d), (e), and (f) and Appendix A, and the Division's policy "Procedures and Minimum Requirements for Stack Tests". The following test methods or Division approved alternatives shall be used:

Turnkey Recycling and Environmental Enterprises (T.R.E.E.)
#4 Caterpillar Model 3519 Landfill Gas-Fired Reciprocating Engine
PO-B-1824

VI. Performance Testing (continued):

1. Performance tests for the emissions of Carbon Monoxide, Oxides of Nitrogen and Oxygen shall be conducted using US EPA Methods 1 through 4, 7E and 10, or US EPA and Division approved alternate methods.

D. Compliance testing shall be planned and carried out in accordance with the following schedule:

1. At least 30 days prior to the commencement of testing, T.R.E.E. shall submit to the Division a pretest report presenting the following information:

   a. Calibration methods and sample data sheets;
   b. Description of the test methods to be used;
   c. Pretest preparation procedures;
   d. Sample collection and analysis methods;
   e. Process data to be collected; and
   f. Complete test program description.

2. At least 15 days prior to the test date, T.R.E.E. and any contractor that T.R.E.E. retains for the performance of the test shall participate in a pretest conference with a Division representative.

3. Emissions testing shall be carried out under the observation of a Division representative.

4. Within 30 days after completion of testing, T.R.E.E. shall submit a test report to the Division.

E. For performance testing purposes, sampling ports, platforms and access shall be provided by T.R.E.E. in accordance with 40 CFR 60.8(e).

VII. Malfunction

The Division shall be notified by telephone or fax within 8 working hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner, which results in an increase in emissions above any allowable emission limit stated in this permit. In addition, the Division shall be notified in writing within 15 (fifteen) days of any such failure. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed, and the corrective actions taken to restore normal operations. Compliance with this malfunction notification provision shall not excuse, or otherwise constitute a defense to, any violation of this permit or of any laws or regulations, which such a malfunction may cause.

Turnkey Recycling and Environmental Enterprises (T.R.E.E.)
#4 Caterpillar Model 3519 Landfill Gas-Fired Reciprocating Engine
PO-B-1824

VIII. Recordkeeping and Reporting:

Copies of all records shall be retained by the owner or operator for a minimum of four years and shall be made available to the Director and EPA upon request. However, these records shall not be discarded, removed or destroyed thereafter without the express written approval of the Director in accordance with Env-A 901.09.

A. A daily operating log shall be kept. This operating log shall include the following information:

1. Hours of operation for each engine;
2. Landfill gas flow rate of each engine;
3. Electrical generating loads.

B. T.R.E.E. shall report the information required under condition VIII.A. of this permit and total emissions of each regulated pollutant listed in section IV for #1 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1821), #2 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1822), #3 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1823), #4 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1824) for each month of the previous calendar year in writing to the Division, no later than April 15 of each calendar year.

IX. Emission-Based Fee Requirements:

A. The facility shall pay an emission-based fee annually as calculated each calendar year pursuant to Env-A 704.03 for this device.

B. The facility shall determine the total actual annual emissions from this device for each calendar year in accordance with the methods specified in Env-A 620.

C. The facility shall calculate the annual emission-based fee for each calendar year in accordance with the procedures specified in Env-A 704.03 and the following equation:

$$\mathbf{FEE = E * DPT * CPIm * ISF}$$

Where:

FEE =	The annual emission-based fee for each calendar year as specified in Env-A 704.
E =	The emission-based multiplier is based on the calculation of total annual emissions as specified in Env-A 704.02 and the provisions specified in Env-A 704.03(a).
DPT =	The dollar per ton fee the Division has specified in Env-A 704.03(b).
CPIm=	The Consumer Price Index Multiplier as calculated in Env-A 704.03(c).
ISF =	The Inventory Stabilization Factor as specified in Env-A 704.03(d).

Turnkey Recycling and Environmental Enterprises (T.R.E.E.)
#4 Caterpillar Model 3519 Landfill Gas-Fired Reciprocating Engine
PO-B-1824

IX. Emission-Based Fee Requirements (continued):

D. Each calendar year the facility shall obtain from the Division the value of the Inventory Stabilization Factor.

E. Each calendar year the facility shall obtain from the Division the value of the Consumer Price Index Multiplier.

F. The facility shall submit, to the Division, payment of the emission-based fee and a summary of the calculations referenced in conditions IX.B. and IX.C. of this permit for each calendar year by October 15th of the following calendar year in accordance with Env-A 704.04. The emission-based fee and summary of the calculations shall be submitted to the following address:

New Hampshire Department of Environmental Services
Air Resources Division
64 North Main Street
P.O. Box 2033
Concord, NH 03302-2033
ATTN: Emissions Inventory

G. The Division shall notify the facility of any under payments or over payments of the annual emission-based fee in accordance with Env-A 704.05.

State of New Hampshire
DEPARTMENT OF ENVIRONMENTAL SERVICES
6 Hazen Drive, P.O. Box 95, Concord, NH 03302-0095
(603) 271-1370 FAX (603) 271-1381

April 3, 2001

William Howard
Waste Management of New Hampshire, Inc.
Turnkey Recycling & Environmental Enterprises
PO Box 7065
Rochester, New Hampshire 03839

Re: State Permit to Operate Solar Centaur Landfill Gas-Fired Turbines #1 and #2

Dear Mr. Howard:

The New Hampshire Department of Environmental Services (DES) hereby issues the enclosed permit(s) in accordance with the New Hampshire Administrative Rules Env-A 100 *et seq.*, *NH Rules Governing the Control of Air Pollution.*

Permits previously issued for the same device(s) are hereby canceled and may be disposed of at your discretion.

Enclosed please find a questionnaire distributed by our Public Information and Permitting Unit. We are constantly trying to improve our permit processing and your feedback is greatly appreciated. If you have any questions please contact Elizabeth Nixon of the Air Resources Division, Stationary Source Management Bureau at (603) 271-0883.

Sincerely,

Kenneth A. Colburn
Director
Air Resources Division

KAC/fmc

Enclosure: PO-B-2000 and PO-B-2001

cc: Ida Gagnon, U.S. EPA, Region I
Tim Drew (PIP) w/o Enclosure
City of Rochester
File

STATE OF NEW HAMPSHIRE
Department of Environmental Services
Air Resources Division

State Permit to Operate

Permit No: **PO-B-2001**
County: **Strafford**
Date Issued: **October 29, 1998, Amended April 2, 2001**

This certifies that:

Waste Management of New Hampshire, Inc.
Turnkey Recycling and Environmental Enterprises (T.R.E.E.)
90 Rochester Neck Road, Rochester, NH

has been granted a permit for:

Solar Centaur Landfill Gas-Fired Turbine #2

A device which emits air pollutants into the ambient air as set forth in equipment registration forms (ARD 1-6), filed with this Division under the date of **August 27, 1998 and November 3, 2000**, in accordance with RSA 125-C of the New Hampshire laws. Request for permit renewal prior to expiration of this State Permit to Operate is subject to Division requirements and must be accompanied by the appropriate equipment registration forms. This permit is valid until **October 31, 2003**.

This permit is valid provided the device is operated in accordance with all the legally enforceable conditions specified below:

I. The owner or operator of the device as specified by this permit shall be subject to the New Hampshire Rules Governing the Control of Air Pollution.

II. All equipment, facilities and systems installed and used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible to minimize air pollutant emissions.

SEE ATTACHED SHEETS FOR ADDITIONAL PERMIT CONDITIONS

The owner or operator of the device covered by this permit shall submit a written request for a permit amendment to the Director at least 90 days prior to the implementation of any proposed change to the physical structure or operation of the device covered by this permit which increases the amount of a specific air pollutant emitted by such device or which results in the emission of any additional air pollutant. The change shall not take place until a new permit application is submitted and acted upon by the Director pursuant to Env-A 600.

Any unavoidable malfunction, breakdown, or upset of the device, which results in emissions greater than those stipulated in this permit, must be reported to the Division within 8 working hours of the occurrence.

This permit (or a copy) should be appropriately displayed near the device for which it is issued.

Kenneth A. Colburn

Director, Air Resources Division

Turnkey Recycling and Environmental Enterprises (T.R.E.E.)
Solar Centaur Landfill Gas-Fired Turbine #2
PO-B-2001

III. Operating Limitations:

A. The maximum gross heat input of this device shall be limited to 42 MMBTU per hour (lower heating value) of landfill gas. This is approximately equivalent to 1500 standard cubic feet per minute (scfm) of landfill gas.

B. The maximum landfill gas flow rate through each turbine shall not exceed 1650 cfm at 60° F. and 14.7 psia.

C. The maximum turbine temperature after the combustor (T5) shall not exceed 1170°F.

IV. Emission Limitations:

A. Emissions of oxides of nitrogen (NOx) from this device shall not exceed the standard specified in 40 CFR 60.332(a)(2).

B. Emissions of NOx from this device shall not exceed 55 parts per million by volume at 15% oxygen, dry basis.

C. Emissions of NOx from this device shall not exceed 6.5 pounds per hour.

D. Emissions of NOx from Solar Centaur LFG-Fired Turbine #1 (PO-B-2000), Solar Centaur LFG-Fired Turbine #2 (PO-B-2001), #1 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1821), #2 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1822), #3 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1823), #4 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1824), LFG-Fired Flare #1 (PO-BP-2545), and LFG-Fired Flare #2 (PO-B-1927) shall not exceed 107.44 tons in any consecutive 12 month period.

E. Emissions of carbon monoxide (CO) from this device shall not exceed 6.3 pounds per hour.

F. Emissions of CO from Solar Centaur LFG-Fired Turbine #1 (PO-B-2000), Solar Centaur LFG-Fired Turbine #2 (PO-B-2001), #1 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1821), #2 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1822), #3 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1823), #4 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1824), LFG-Fired Flare #1 (PO-BP-2545), LFG-Fired Flare #2 (PO-B-1927), and the Leachate Plant Emergency Diesel Generator (PO-B-1791) shall not exceed 249.0 tons in any consecutive 12 month period.

G. Emissions of sulfur dioxide (SO2) from this device shall not exceed (3.3) pounds per hour.

H. Emissions of particulate matter less than 10 microns (PM10) shall not exceed 0.62 pounds per hour.

I. Emissions of volatile organic compounds shall not exceed 0.4 pounds per hour.

Turnkey Recycling and Environmental Enterprises (T.R.E.E.)
Solar Centaur Landfill Gas-Fired Turbine #2
PO-B-2001

IV. Emission Limitations (continued):

J. The opacity of emissions of this device shall not exceed 20%.

V. Stack Criteria:

A. The exhaust stack venting this device shall be a minimum of 36.3 feet above ground level with a maximum inside diameter of 4.0 feet.

B. The exhaust stack shall have a vertical and unobstructed discharge to the ambient air.

VI. 40 CFR Part 60, Subpart GG, Standards of Performance for Stationary Gas Turbines:

A. Solar Centaur LFG-Fired Turbine #1 (PO-B-2000) and Solar Centaur LFG-Fired Turbine #2 (PO-B-2001) are affected facilities subject to the provisions of 40 CFR 60, Subpart GG, Standards of Performance for Stationary Gas Turbines.

B. T.R.E.E. shall comply with the provisions of 40 CFR 60, Subpart A and Subpart GG for Solar Centaur LFG-Fired Turbine #1 (PO-B-2000) and Solar Centaur LFG-Fired Turbine #2 (PO-B-2001).

C. Pursuant to 40 CFR 60.4(b), the NH Department of Environmental Services, Air Resources Division ("Division") has been delegated the authority to implement and enforce Subpart GG, all information required to be submitted to EPA under 40 CFR 60.4(a) shall also be submitted to the Division.

VII. Performance Testing:

A. In accordance with Env-A 1211.21, stack testing shall be performed no less frequently than once every three (3) years, in order to demonstrate compliance with the NOx RACT air pollution control requirements specified in Env-A 1211.06. The first test shall occur no later than 3 years from the date of the initial compliance stack test required by Env-A 1211.21(a). T.R.E.E shall also comply with the testing requirements specified in Env-A 800.

B. The owner or operator required to conduct periodic stack testing shall submit a stack test report to the division within 30 days of the date of such stack test.

C. Testing shall be conducted and the results reported in accordance with 40 CFR 60, Part 60.8(a), (b), (d), (e), and (f) and Appendix A, and the Division's policy "Procedures and Minimum Requirements for Stack Tests". The following test methods or Division approved alternatives shall be used:

1. Performance tests for the emissions of Oxides of Nitrogen (NO_x), and a diluent gas (Oxygen $\{O_2\}$ or Carbon Dioxide $\{CO_2\}$) shall be conducted using US EPA Method 20, or US EPA and Division approved alternate methods.

Turnkey Recycling and Environmental Enterprises (T.R.E.E.)
Solar Centaur Landfill Gas-Fired Turbine #2
PO-B-2001

VII. Performance Testing (continued):

D. Compliance testing shall be planned and carried out in accordance with the following schedule:

1. At least 30 days prior to the commencement of testing, T.R.E.E. shall submit to the Division a pretest report presenting the following information:

   a. Calibration methods and sample data sheets;
   b. Description of the test methods to be used;
   c. Pretest preparation procedures;
   d. Sample collection and analysis methods;
   e. Process data to be collected; and
   f. Complete test program description.

2. At least 15 days prior to the test date, T.R.E.E. and any contractor that T.R.E.E. retains for the performance of the test shall participate in a pretest conference with a Division representative.

3. Emissions testing shall be carried out under the observation of a Division representative.

4. Within 30 days after completion of testing, T.R.E.E. shall submit a test report to the Division.

E. For performance testing purposes, sampling ports, platforms and access shall be provided by T.R.E.E. in accordance with 40 CFR 60.8(e).

VIII. Malfunction.

The Division shall be notified by telephone or fax within 8 working hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner, which results in an increase in emissions above any allowable emission limit stated in this permit. In addition, the Division shall be notified in writing within 15 (fifteen) days of any such failure. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed, and the corrective actions taken to restore normal operations. Compliance with this malfunction notification provision shall not excuse, or otherwise constitute a defense to, any violation of this permit or of any laws or regulations, which such a malfunction may cause.

Turnkey Recycling and Environmental Enterprises (T.R.E.E.)
Solar Centaur Landfill Gas-Fired Turbine #2
PO-B-2001

IX. Recordkeeping and Reporting:

Copies of all records shall be retained by the owner or operator for a minimum of four years and shall be made available to the Director and EPA upon request. However, these records shall not be discarded, removed or destroyed thereafter without the express written approval of the Director in accordance with Env-A 901.09.

A. A daily operating log shall be kept. This operating log shall include the following information:

1. Hours of operation for each turbine;
2. Brake horsepower-hours of each turbine;
3. Landfill gas flow rate of each turbine;
4. Landfill gas nitrogen content as percent volume at 15% oxygen content, dry basis; and
5. electrical generating loads.

B. T.R.E.E. shall report the information required under condition IX.A of this permit and total emissions of each regulated pollutant listed in section IV for Solar Centaur LFG-Fired Turbine #1 (PO-B-2000) and Solar Centaur LFG-Fired Turbine #2 (PO-B-2001) for each month of the previous calendar year in writing to the Division, no later than April 15 of each calendar year.

C. Pursuant to 40 CFR 60.334(b)(2), T.R.E.E. shall monitor sulfur according to the alternative sulfur monitoring protocol and custom schedule issued and approved by USEPA on May 19, 1999.

X. Emission-Based Fee Requirements:

A. The facility shall pay an emission-based fee annually as calculated each calendar year pursuant to Env-A 704.03 for this device.

B. The facility shall determine the total actual annual emissions from this device for each calendar year in accordance with the methods specified in Env-A 620.

C. The facility shall calculate the annual emission-based fee for each calendar year in accordance with the procedures specified in Env-A 704.03 and the following equation:

$$\mathbf{FEE = E * DPT * CPIm * ISF}$$

Where:

FEE =	The annual emission-based fee for each calendar year as specified in Env-A 704.
E =	The emission-based multiplier is based on the calculation of total annual emissions as specified in Env-A 704.02 and the provisions specified in Env-A 704.03(a).
DPT =	The dollar per ton fee the Division has specified in Env-A 704.03(b).
CPIm=	The Consumer Price Index Multiplier as calculated in Env-A 704.03(c).
ISF =	The Inventory Stabilization Factor as specified in Env-A 704.03(d).

Turnkey Recycling and Environmental Enterprises (T.R.E.E.)
Solar Centaur Landfill Gas-Fired Turbine #2
PO-B-2001

X. Emission-Based Fee Requirements (continued):

D. Each calendar year the facility shall obtain from the Division the value of the Inventory Stabilization Factor.

E. Each calendar year the facility shall obtain from the Division the value of the Consumer Price Index Multiplier.

F. The facility shall submit, to the Division, payment of the emission-based fee and a summary of the calculations referenced in conditions X.B. and X.C. of this permit for each calendar year by October 15th of the following calendar year in accordance with Env-A 704.04. The emission-based fee and summary of the calculations shall be submitted to the following address:

New Hampshire Department of Environmental Services
Air Resources Division
6 Hazen Drive
P.O. Box 95
Concord, NH 03302-0095
ATTN: Emissions Inventory

G. The Division shall notify the facility of any under payments or over payments of the annual emission-based fee in accordance with Env-A 704.05.

WASTE MANAGEMENT, INC.

TO: Alan Davis
Tom Gravel

FROM: Bill Howard BH

DATE: April 11, 2001

RE: Amended Permits to Operate Turbines 1 and 2

On April 2, 2001 the New Hampshire Department of Environmental Services – Air Resources Division (NHDES-ARD) issued amended Permits to Operate Turbines 1 and 2. These amended permits supercede permits previously issued by the NHDES-ARD on October 29, 1998 which initially authorized the operation of these devices.

Changes to several conditions specified in each of these amended permits are important to note. The most significant change pertains to former permit condition IV.D., which limited NOx emissions from both turbines to 46 tons in any consecutive 12 month period. This "annual" NOx emissions limitation is no longer applicable. The limitation that will regulate NOx emissions under the amended permits applies to the combined operation of all eight (8) landfill gas (LFG) control devices (i.e., 4 engines, 2 turbines and 2 flares) currently in operation at the facility. This "facility-wide" limit requires that NOx emissions from all LFG control devices not exceed 107.44 tons in any consecutive 12 month period.

This change from a device-specific to a facility-wide limitation for NOx emissions is significant because it eliminates a potential environmental liability. NOx emissions from both turbines were above the former device-specific limitation, whereas NOx emissions from the combined operation of all LFG control devices have never exceeded the facility-wide limitation. The change was allowed because of a favorable determination made by the NHDES-ARD, with concurrence from EPA Region I, that the facility-wide limitation for NOx emissions took precedence over the device-specific limitation for the purpose of ensuring the current non-applicability status of the facility with respect to New Source Review (NSR) compliance requirements.

Another amendment pertains to former permit condition IV.G., which limited carbon monoxide (CO) emissions from both turbines to 55.3 tons in any consecutive 12 month period. Similar to the condition pertaining to the device-specific limitation for NOx emissions, this "annual" CO emissions limit is no longer applicable. The limitation that will regulate CO emissions under the amended permits applies to the combined operation of all LFG control devices currently in operation at the facility. This "facility-wide" limit requires that CO emissions from all LFG control devices not exceed 249.0 tons in any consecutive 12 month period.

A third amendment pertains to former permit condition IV.B., which imposed a NOx RACT emissions limit of 42 ppmvd at 15% oxygen. This condition was amended by changing the emissions limit to 55 ppmvd. This amendment actually constitutes a technical correction, because the amended NOx RACT emissions limit (i.e., 55 ppmvd) is now consistent with the requirements of Env-A 1211.06 (c) (2) of the New Hampshire Rules Governing the Control of Air Pollution. In accordance with current emission standards for combustion turbines, an emissions limit of 42 ppmvd is applicable to combined and regenerative cycle turbines, while an emissions limit of 55 ppmvd is applicable to simple cycle turbines, which is the type of turbine operated at the facility.

Finally, former permit conditions III.D. and III.E. also were amended. These conditions previously imposed both an annual and a monthly operating limitation on the mechanical output of each turbine, respectively. These operating limitations are no longer applicable as a result of these amendments.

Copies of each amended permit are attached for your records. Please ensure that a copy of each amended permit is displayed at the Turbine Plant and that the previously issued permits are removed.

If you should have any questions or concerns about these amended permits, please feel free to call me at 2105.

cc: Mike McInerney
Steve Poggi

State of New Hampshire
DEPARTMENT OF ENVIRONMENTAL SERVICES
6 Hazen Drive, P.O. Box 95, Concord, NH 03302-0095
(603) 271-1370 FAX (603) 271-1381

April 18, 2001

RECEIVED APR 19 2001

Mr. William Howard
Waste Management of NH, Inc.
Turnkey Recycling and Environmental Enterprise
P.O. Box 7065
Rochester, NH 03839

Re: State Permit to Operate No. PO-B-2010 for Turbine No. 1

Dear Mr. Howard:

The New Hampshire Department of Environmental Services (DES) hereby issues the enclosed permit in accordance with the New Hampshire Administrative Rules Env-A 100 *et seq.*, *NH Rules Governing the Control of Air Pollution.*

In reviewing our records, DES found that a State Permit to Operate with a similar number (PO-B-2000) had been issued to another source. To correct this duplication, DES administratively amended Waste Management of NH's State Permit to Operate No. PO-B-2000 in accordance with Env-A 612, by changing the permit number to PO-B-2010 for Turbine No. 1.

Permits previously issued for the same device(s) are hereby canceled and may be disposed of at your discretion.

If you have any questions, please contact Elizabeth Nixon of the Air Resources Division, Stationary Source Management Bureau at (603) 271-0883.

Sincerely,

Kenneth A. Colburn

Kenneth A. Colburn
Director
Air Resources Division

KAC/ern

Enclosure: PO-B-2010

cc: Ida Gagnon, U.S. EPA, Region I
Tim Drew (PIP) w/o Enclosure
Elizabeth Nixon, DES
File

STATE OF NEW HAMPSHIRE
Department of Environmental Services
Air Resources Division

State Permit to Operate

Permit No: **PO-B-2010 (formerly PO-B-2000)**
County: **Strafford**
Date Issued: **October 29, 1998, Amended April 2, 2001, Amended April 11, 2001**

This certifies that:

Waste Management of New Hampshire, Inc.
Turnkey Recycling and Environmental Enterprises (T.R.E.E.)
90 Rochester Neck Road, Rochester, NH

has been granted a permit for:

Solar Centaur Landfill Gas-Fired Turbine #1

A device which emits air pollutants into the ambient air as set forth in equipment registration forms (ARD 1-6), filed with this Division under the date of **August 27, 1998 and November 3, 2000**, in accordance with RSA 125-C of the New Hampshire laws. Request for permit renewal prior to expiration of this State Permit to Operate is subject to Division requirements and must be accompanied by the appropriate equipment registration forms. This permit is valid until **October 31, 2003**.

This permit is valid provided the device is operated in accordance with all the legally enforceable conditions specified below:

I. The owner or operator of the device as specified by this permit shall be subject to the New Hampshire Rules Governing the Control of Air Pollution.

II. All equipment, facilities and systems installed and used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible to minimize air pollutant emissions.

SEE ATTACHED SHEETS FOR ADDITIONAL PERMIT CONDITIONS

The owner or operator of the device covered by this permit shall submit a written request for a permit amendment to the Director at least 90 days prior to the implementation of any proposed change to the physical structure or operation of the device covered by this permit which increases the amount of a specific air pollutant emitted by such device or which results in the emission of any additional air pollutant. The change shall not take place until a new permit application is submitted and acted upon by the Director pursuant to Env-A 600.

Any unavoidable malfunction, breakdown, or upset of the device, which results in emissions greater than those stipulated in this permit, must be reported to the Division within 8 working hours of the occurrence.

This permit (or a copy) should be appropriately displayed near the device for which it is issued.

Kenneth A. Colburn

Director, Air Resources Division

Turnkey Recycling and Environmental Enterprises (T.R.E.E.)
Solar Centaur Landfill Gas-Fired Turbine #1
PO-B-2010

III. Operating Limitations:

A. The maximum gross heat input of this device shall be limited to 42 MMBTU per hour (lower heating value) of landfill gas. This is approximately equivalent to 1500 standard cubic feet per minute (scfm) of landfill gas.

B. The maximum landfill gas flow rate through each turbine shall not exceed 1650 cfm at 60° F. and 14.7 psia.

C. The maximum turbine temperature after the combustor (T5) shall not exceed 1170°F.

IV. Emission Limitations:

A. Emissions of oxides of nitrogen (NOx) from this device shall not exceed the standard specified in 40 CFR 60.332(a)(2).

B. Emissions of NOx from this device shall not exceed 55 parts per million by volume at 15% oxygen, dry basis.

C. Emissions of NOx from this device shall not exceed 6.5 pounds per hour.

D. Emissions of NOx from Solar Centaur LFG-Fired Turbine #1 (PO-B-2000), Solar Centaur LFG-Fired Turbine #2 (PO-B-2001), #1 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1821), #2 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1822), #3 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1823), #4 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1824), LFG-Fired Flare #1 (PO-BP-2545), and LFG-Fired Flare #2 (PO-B-1927) shall not exceed 107.44 tons in any consecutive 12 month period.

E. Emissions of carbon monoxide (CO) from this device shall not exceed 6.3 pounds per hour.

F. Emissions of CO from Solar Centaur LFG-Fired Turbine #1 (PO-B-2000), Solar Centaur LFG-Fired Turbine #2 (PO-B-2001), #1 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1821), #2 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1822), #3 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1823), #4 Caterpillar Model 3516 LFG-Fired Reciprocating Engine (PO-B-1824), LFG-Fired Flare #1 (PO-BP-2545), LFG-Fired Flare #2 (PO-B-1927), and the Leachate Plant Emergency Diesel Generator (PO-B-1791) shall not exceed 249.0 tons in any consecutive 12 month period.

G. Emissions of sulfur dioxide (SO2) from this device shall not exceed (3.3) pounds per hour.

H. Emissions of particulate matter less than 10 microns (PM10) shall not exceed 0.62 pounds per hour.

I. Emissions of volatile organic compounds shall not exceed 0.4 pounds per hour.

Turnkey Recycling and Environmental Enterprises (T.R.E.E.)
Solar Centaur Landfill Gas-Fired Turbine #1
PO-B-2010

IV. Emission Limitations (continued):

J. The opacity of emissions of this device shall not exceed 20%.

V. Stack Criteria:

A. The exhaust stack venting this device shall be a minimum of 36.3 feet above ground level with a maximum inside diameter of 4.0 feet.

B. The exhaust stack shall have a vertical and unobstructed discharge to the ambient air.

VI. 40 CFR Part 60, Subpart GG, Standards of Performance for Stationary Gas Turbines:

A. Solar Centaur LFG-Fired Turbine #1 (PO-B-2000) and Solar Centaur LFG-Fired Turbine #2 (PO-B-2001) are affected facilities subject to the provisions of 40 CFR 60, Subpart GG, Standards of Performance for Stationary Gas Turbines.

B. T.R.E.E. shall comply with the provisions of 40 CFR 60, Subpart A and Subpart GG for Solar Centaur LFG-Fired Turbine #1 (PO-B-2000) and Solar Centaur LFG-Fired Turbine #2 (PO-B-2001).

C. Pursuant to 40 CFR 60.4(b), the NH Department of Environmental Services, Air Resources Division ("Division") has been delegated the authority to implement and enforce Subpart GG, all information required to be submitted to EPA under 40 CFR 60.4(a) shall also be submitted to the Division.

VII. Performance Testing:

A. In accordance with Env-A 1211.21, stack testing shall be performed no less frequently than once every three (3) years, in order to demonstrate compliance with the NOx RACT air pollution control requirements specified in Env-A 1211.06. The first test shall occur no later than 3 years from the date of the initial compliance stack test required by Env-A 1211.21(a). T.R.E.E shall also comply with the testing requirements specified in Env-A 800.

B. The owner or operator required to conduct periodic stack testing shall submit a stack test report to the division within 30 days of the date of such stack test.

C. Testing shall be conducted and the results reported in accordance with 40 CFR 60, Part 60.8(a), (b), (d), (e), and (f) and Appendix A, and the Division's policy "Procedures and Minimum Requirements for Stack Tests". The following test methods or Division approved alternatives shall be used:

1. Performance tests for the emissions of Oxides of Nitrogen (NO_x), and a diluent gas (Oxygen $\{O_2\}$ or Carbon Dioxide $\{CO_2\}$) shall be conducted using US EPA Method 20, or US EPA and Division approved alternate methods.

Turnkey Recycling and Environmental Enterprises (T.R.E.E.)
Solar Centaur Landfill Gas-Fired Turbine #1
PO-B-2010

VII. Performance Testing (continued):

D. Compliance testing shall be planned and carried out in accordance with the following schedule:

1. At least 30 days prior to the commencement of testing, T.R.E.E. shall submit to the Division a pretest report presenting the following information:

   a. Calibration methods and sample data sheets;
   b. Description of the test methods to be used;
   c. Pretest preparation procedures;
   d. Sample collection and analysis methods;
   e. Process data to be collected; and
   f. Complete test program description.

2. At least 15 days prior to the test date, T.R.E.E. and any contractor that T.R.E.E. retains for the performance of the test shall participate in a pretest conference with a Division representative.

3. Emissions testing shall be carried out under the observation of a Division representative.

4. Within 30 days after completion of testing, T.R.E.E. shall submit a test report to the Division.

E. For performance testing purposes, sampling ports, platforms and access shall be provided by T.R.E.E. in accordance with 40 CFR 60.8(e).

VIII. Malfunction

The Division shall be notified by telephone or fax within 8 working hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner, which results in an increase in emissions above any allowable emission limit stated in this permit. In addition, the Division shall be notified in writing within 15 (fifteen) days of any such failure. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed, and the corrective actions taken to restore normal operations. Compliance with this malfunction notification provision shall not excuse, or otherwise constitute a defense to, any violation of this permit or of any laws or regulations, which such a malfunction may cause.

Turnkey Recycling and Environmental Enterprises (T.R.E.E.)
Solar Centaur Landfill Gas-Fired Turbine #1
PO-B-2010

IX. Recordkeeping and Reporting:

Copies of all records shall be retained by the owner or operator for a minimum of four years and shall be made available to the Director and EPA upon request. However, these records shall not be discarded, removed or destroyed thereafter without the express written approval of the Director in accordance with Env-A 901.09.

A. A daily operating log shall be kept. This operating log shall include the following information:

1. Hours of operation for each turbine;
2. Brake horsepower-hours of each turbine;
3. Landfill gas flow rate of each turbine;
4. Landfill gas nitrogen content as percent volume at 15% oxygen content, dry basis; and
5. electrical generating loads.

B. T.R.E.E. shall report the information required under condition IX.A of this permit and total emissions of each regulated pollutant listed in section IV for Solar Centaur LFG-Fired Turbine #1 (PO-B-2000) and Solar Centaur LFG-Fired Turbine #2 (PO-B-2001) for each month of the previous calendar year in writing to the Division, no later than April 15 of each calendar year.

C. Pursuant to 40 CFR 60.334(b)(2), T.R.E.E. shall monitor sulfur according to the alternative sulfur monitoring protocol and custom schedule issued and approved by USEPA on May 19, 1999.

X. Emission-Based Fee Requirements:

A. The facility shall pay an emission-based fee annually as calculated each calendar year pursuant to Env-A 704.03 for this device.

B. The facility shall determine the total actual annual emissions from this device for each calendar year in accordance with the methods specified in Env-A 620.

C. The facility shall calculate the annual emission-based fee for each calendar year in accordance with the procedures specified in Env-A 704.03 and the following equation:

$$\mathbf{FEE = E * DPT * CPIm * ISF}$$

Where:

FEE =	The annual emission-based fee for each calendar year as specified in Env-A 704.
E =	The emission-based multiplier is based on the calculation of total annual emissions as specified in Env-A 704.02 and the provisions specified in Env-A 704.03(a).
DPT =	The dollar per ton fee the Division has specified in Env-A 704.03(b).
CPIm=	The Consumer Price Index Multiplier as calculated in Env-A 704.03(c).
ISF =	The Inventory Stabilization Factor as specified in Env-A 704.03(d).

X. Emission-Based Fee Requirements (continued):

D. Each calendar year the facility shall obtain from the Division the value of the Inventory Stabilization Factor.

E. Each calendar year the facility shall obtain from the Division the value of the Consumer Price Index Multiplier.

F. The facility shall submit, to the Division, payment of the emission-based fee and a summary of the calculations referenced in conditions X.B. and X.C. of this permit for each calendar year by October 15th of the following calendar year in accordance with Env-A 704.04. The emission-based fee and summary of the calculations shall be submitted to the following address:

New Hampshire Department of Environmental Services
Air Resources Division
6 Hazen Drive
P.O. Box 95
Concord, NH 03302-0095
ATTN: Emissions Inventory

G. The Division shall notify the facility of any under payments or over payments of the annual emission-based fee in accordance with Env-A 704.05.

WASTE MANAGEMENT, INC.

TO: Tom Gravel

FROM: Bill Howard BH

DATE: April 19, 2001

RE: Amended Permit to Operate Turbine 1

A copy of an amended Permit to Operate Turbine 1 issued by the New Hampshire Department of Environmental Services – Air Resources Division (NHDES-ARD) on April 11, 2001 is enclosed for your records.

The enclosed permit is no different than the permit I previously sent to you, except that its number has been changed from PO-B-2000 to PO-B-2010. The NHDES-ARD decided it was necessary to further amend the permit for Turbine 1, because it discovered during a review of its records that a permit with the same number had been issued to another source. Except for this change in permit number, the permit to operate Turbine 1 issued by the NHDES-ARD on April 2, 2001 is the same as the one that was issued on April 11, 2001.

Please ensure that Page 1 of the enclosed permit is posted at the Turbine Plant in place of the corresponding page from the former permit.

Please call me if you have any questions about this matter.

Enclosure

cc: Alan Davis, w/o enclosure
Steve Poggi, w/o enclosure
File: 05-01-E

State of New Hampshire
DEPARTMENT OF ENVIRONMENTAL SERVICES
6 Hazen Drive, P.O. Box 95, Concord, NH 03302-0095
(603) 271-1370 FAX (603) 271-1381

December 5, 2003

Mr. William Howard
Waste Management of NH, Inc.
Turnkey Recycling & Environmental Enterprise
30 Rochester Neck Road
P.O. Box 7065
Gonic, NH 03839

Re: **NOx RACT Final Determination of Sufficiency**

Dear Mr. Howard:

The New Hampshire Department of Environmental Services, Air Resources Division ("DES"), has completed its review of the permit application submitted on January 28, 2003 with a revision received on April 29, 2003 for the installation of a new portable landfill-gas flare (Flare No. 5) by Waste Management of New Hampshire, Inc. (WMNH) for the Turnkey Recycling and Environmental Enterprise facility located at 30 Rochester Neck Road. As part of this application, WMNH requested to revise its Nitrogen Oxide (NOx) Reasonably Available Control Technology (RACT) Order to incorporate Flare No. 5.

Based on the information provided by WMNH, DES has made a final determination of sufficiency and is issuing the revised proposed RACT Order to WMNH in accordance with Env-A 1211.18. Pursuant to Env-A 1211.18 (c)(4) and (5), within 30 days of the issuance of a proposed RACT order, DES shall issue a public notice of an oral hearing and conduct an oral hearing on the proposed RACT order not less than 30 days after the issuance of the public notice. We will notify you when the public notice is issued and the public hearing is scheduled. Please contact Ms. Elizabeth Nixon by calling (603) 271-0883 if you have any questions regarding the proposed RACT order.

Sincerely,

Robert R. Scott
Director
Air Resources Division

cc: Timothy Drew, PIP Office
David Conroy, US EPA
Michael North, GZA

Enclosures: (Proposed RACT Order ARD 01-001)

RRS/ern

Waste Management of New Hampshire, Inc. Turnkey Recycling & Environmental Enterprise 30 Rochester Neck Road P.O. Box 7065 Gonic, NH 03839	]]]]]]]	**FINAL RACT ORDER** **ARD-01-001** **xxxxxx xx, 2003**

A. Introduction

This NOx RACT Order is issued by the New Hampshire Department of Environmental Services, Air Resources Division, to Waste Management of New Hampshire, Inc. pursuant to RSA 125-C.

B. Parties

1. The New Hampshire Department of Environmental Services, Air Resources Division ("DES"), is a duly constituted administrative agency of the State of New Hampshire having its principal offices at 6 Hazen Drive, Concord, NH 03302-0095, telephone number (603) 271-1370.

2. Waste Management of New Hampshire, Inc., ("WMNH") is a Connecticut corporation, having a mailing address of 30 Rochester Neck Road, P.O. Box 7065, Rochester, NH 03839.

C. Statements of Fact and Law

1. WMNH owns and operates the Turnkey Recycling and Environmental Enterprise (TREE) facility, which encompasses an area of approximately 1,216 acres of land located to the north and south of Rochester Neck Road in Rochester, New Hampshire.

2. TREE ("the Facility") is an integrated solid waste management facility, which is fully permitted to operate as such by DES.

3. Operations at the Facility currently include the maintenance of two (2) closed municipal solid waste landfills (MSWLFs) as well as the management of an active MSWLF, a Materials Recovery Facility (MRF), a leachate treatment plant and two (2) landfill gas-to-energy plants.

4. The active MSWLF is identified as the TLR-III Refuse Disposal Facility and is operated on land located at 90 Rochester Neck Road in Rochester, New Hampshire.

5. Effective May 20, 1994, DES adopted PART Env-A 1211 NITROGEN OXIDES (NOx).

6. WMNH filed a "Compliance Schedule and RACT Evaluation for NOx Emissions" dated September 19, 1994.

7. At the time of the "Compliance Schedule and RACT Evaluation for NOx Emissions" submission, WMNH only operated one flare (Flare No. 1), but had proposed to install an additional flare (Flare No. 2). WMNH installed Flare No. 2 in 1995.

8. WMNH reported to DES in its "Compliance Schedule and RACT Evaluation for NOx Emissions" that the estimated NOx emission rate for Flare No. 1 is 2.39 pounds per hour (lb/hr) and proposed an emission rate of 2.86 lb/hr for Flare No. 2. In 1997, WMNH altered the operation of the blower that is used to move landfill gas to Flare No. 1. This alteration increased the flow of landfill gas to Flare No. 1. By increasing gas flow to this flare, the heat input rating of Flare No. 1 increased from 38 million British Thermal Units per hour (MMBtu/hr) to 41.9 MMBtu/hr. As a result, the estimated NOx emission rate for Flare No. 1 increased to 2.86 lb/hr.

9. WMNH filed a permit application for two proposed candlestick flares dated May 29, 2001 and withdrew the permit application for the two candlestick flares on April 23, 2002.

10. WMNH filed a permit application for an enclosed, Ultra-Low Emission (ULE) flare dated June 15, 2000.

11. WMNH proposes to install the ULE flare to increase the landfill gas control capacity. The proposed flare will have a landfill gas control capacity of 3,900 standard cubic feet per minute (scfm) and a maximum heat input rating of 128.7 MMBtu/hr (3,900 scfm @ 550 BTU/scf).

12. The manufacturer's guaranteed NOx emission rate for the ULE flare is 0.025 lb/MMBtu at the proposed nominal operating temperature of 1600°F. (The device is expected to operate at a temperature that ranges from 1500°F to 1700°F). A NOx emission rate of 2.9 lb/hr will result under these operating conditions.

13. WMNH proposed no controls and no physical or operational modifications to the open flares as RACT (Reasonably Available Control Technology) and it claimed that it was not possible to reduce NOx emissions from the open flares. WMNH stated that because the combustion occurs in the open, combustion staging is not possible. In addition, WMNH stated that because the flame temperature is relatively low, staging combustion was not likely to achieve any further reductions in NOx emissions.

14. WMNH contacted two leading flare vendors, John Zink Company and NOA, Inc. to research the feasibility of add-on NOx control technology. Neither vendor was aware of any installation where add-on NOx controls had been applied to either open or enclosed flares.

15. A search by WMNH of the US EPA Best Available Control Technology/Lowest Achievable Emission Rate (BACT/LAER) Information System database failed to reveal the use of add-on NOx control technology on flares to date.

16. WMNH proposes to use state of the art technology, the ULE flare, as RACT (Reasonably Available Control Technology) because the NOx emission rate is less than half that of traditional enclosed flares (typically 0.060 lb/MMBtu). This type of flare has the lowest NOx emissions of any commercially available landfill gas flare.

17. On April 23, 2002, WMNH submitted a permit application for a portable landfill gas-fired Flare No. 4.

18. WMNH proposed to install Flare No. 4 to control landfill gas migration and the resulting odors and to increase landfill gas control capacity. The proposed Flare No. 4 will have a landfill gas control

capacity of a maximum of 800 standard cubic feet per minute (scfm) and a maximum heat input rating of 26.4 MMBtu/hr (800 scfm @ 550 BTU/scf).

19. Based on EPA's AP-42 emission factors for industrial flares, Flare No. 4 will have a NOx emission rate of 0.068 lb/MMBtu. Assuming a maximum heat input rating of 26.4 MMBtu/hr, Flare No. 4 will have a NOx emission rate of 1.8 lb/hr.

20. On January 28, 2003, WMNH submitted a permit application for a portable landfill gas-fired Flare No. 5. WMNH submitted a revised permit application on April 29, 2003.

21. WMNH proposed to install Flare No. 5 as a back-up flare for additional control of landfill gas migration and emissions. The proposed Flare No. 5 will have a landfill gas control capacity of a maximum of 1200 standard cubic feet per minute (scfm) and a maximum heat input rating of 39.6 MMBtu/hr (1200 scfm @ 550 BTU/scf).

22. Based on EPA's AP-42 emission factors for industrial flares, Flare No. 5 will have a NOx emission rate of 0.068 lb/MMBtu. Assuming a maximum heat input rating of 39.6 MMBtu/hr, Flare No. 5 will have a NOx emission rate of 2.7 lb/hr.

23. To simplify the NOx RACT Order, DES is changing the NOx RACT Order to be a performance-based standard (lb/MMBtu) instead of an emission rate standard (lb/hr). All of the open flare emission rates are based on a performance-based rate of 0.068 lb/MMBtu, based on EPA's AP-42 emission factors. The enclosed flare performance-based rating of 0.025 lb/MMBtu is based on the manufacturer's guarantee.

D. Order

Based upon the above findings and determinations, DES hereby orders WMNH as follows:

1. Comply with a 0.068 lb NOx/MMBtu performance standard for each of the existing open flares—Flare Nos. 1, 2, 4, and 5—and for any future open flares.

2. Comply with a 0.025 lb NOx/MMBtu performance standard for the enclosed ULE flare—Flare No. 3.

3. Operate and maintain Flare Nos. 1, 2, 3, 4, and 5, and any future open flares according to manufacturer's specifications.

4. Maintain at the facility and make available for review by DES and/or EPA upon request a copy of the manufacturer's specifications for each of the flares.

5. Maintain records of any manufacturer-specified maintenance conducted on the flares.

6. Comply with the record keeping and reporting requirements of PART Env-A 900.

Please address any correspondence and communication in reference to this Order to:

Ms. Elizabeth Nixon
NHDES, Air Resources Division
Stationary Source Management Bureau
29 Hazen Drive
P.O. Box 95
Concord, NH 03302-0095
(603) 271-1370

Robert R. Scott, Director
Department of Environmental Services
Air Resources Division

cc: Timothy Drew, PIP Office
David Conroy, US EPA
Town Selectmen

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