AIR EMISSION PERMIT NO. 17100089- 001

IS ISSUED TO

Veolia ES Rolling Hills Landfill Inc.

VEOLIA ES ROLLING HILLS LANDFILL INC.
175 County Road 37 Northeast
Buffalo, Wright County, MN 55313

The emission units, control equipment and emission stacks at the stationary source authorized in this permit are as described in the following permit application(s):

Permit Type	Application Date
Total Facility Operating Permit	12/31/2002 with updates

This permit authorizes the Permittee to operate the stationary source at the address listed above unless otherwise noted in Table A. The Permittee must comply with all the conditions of the permit. Any changes or modifications to the stationary source must be performed in compliance with Minn. R. 7007.1150 to 7007.1500. Terms used in the permit are as defined in the state air pollution control rules unless the term is explicitly defined in the permit.

Permit Type: Federal; Part 70/True Minor for NSR

Issue Date: January 3, 2007

Expiration: January 3, 2012
All Title I Conditions do not expire.

Richard J. Sandberg, Manager
Air Quality Permits Section
Industrial Division

for Brad Moore
Acting Commissioner
Minnesota Pollution Control Agency

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NOTICE TO THE PERMITTEE:

Your stationary source may be subject to the requirements of the Minnesota Pollution Control Agency's (MPCA) solid waste, hazardous waste, and water quality programs. If you wish to obtain information on these programs, including information on obtaining any required permits, please contact the MPCA general information number at:

Metro Area	(651) 296-6300
Outside Metro Area	1-800-657-3864
TTY	(651) 282-5332

The rules governing these programs are contained in Minn. R. chs. 7000-7105. Written questions may be sent to: Minnesota Pollution Control Agency, 520 Lafayette Road North, St. Paul, Minnesota 55155-4194.

Questions about this air emission permit or about air quality requirements can also be directed to the telephone numbers and address listed above.

PERMIT SHIELD:

Subject to the limitations in Minn. R. 7007.1800, compliance with the conditions of this permit shall be deemed compliance with the specific provision of the applicable requirement identified in the permit as the basis of each condition. Subject to the limitations of Minn. R. 7007.1800 and 7017.0100, subp. 2, notwithstanding the conditions of this permit specifying compliance practices for applicable requirements, any person (including the Permittee) may also use other credible evidence to establish compliance or noncompliance with applicable requirements.

FACILITY DESCRIPTION:

Veolia ES Rolling Hills Landfill Inc. (f/k/a Superior FCR Landfill, Inc.) is an existing facility which has accepted Municipal Solid Waste (MSW), industrial waste and demolition debris for disposal. The facility began accepting waste in 1965. Their first application for a Part 70 Title V air permit was received by the MPCA on December 31, 2002. At that time Veolia ES Rolling Hills Landfill Inc was proposing an increase to the design capacity of the landfill from 4.4 million cubic yards (yd^3) to 7.9 million yd^3, to be filled at a rate of 400,000 yd^3 per year. This is consistent with their landfill expansion permit application submitted to the MPCA solid waste section in April of 2002. The landfill was operating under solid waste permit SW-60 at that time, which gave them a permitted design capacity of 4.4 million yd^3, including 2.7 million yd^3 of MSW and 1.7 million yd^3 of industrial waste. They stopped accepting MSW in 1999, when the permitted capacity of 2.7 million yd^3 was filled. The industrial waste and the MSW waste are physically separated in accordance with solid waste permit SW-60.

The main sources of air emissions are Volatile Organic Compounds (VOC) and Particulate Matter (PM) from the landfill surface, combustion emissions from the flare (Carbon Monoxide (CO), Nitrogen Oxide (NOx)), PM from unpaved roads, unloading of fill material, compacting and grading.

The flare stack/vent height is 25 ft with an inside diameter of 0.83 ft. The design exit flow rate is 2,200 scfm. The flare temperature varies between 1,000 and 1,400 Fahrenheit. It has an assumed capture efficiency of 100 percent for VOC's and a destruction efficiency of 98 percent. The flare was installed and started up in April of 1994; the flare was replaced in April 1999. The maximum fuel input is 66.79 MMBTU/hr. All landfill gas collected is routed to the flare. The flare has a chart recorder to record flare combustion temperature continuously during operation (whenever landfill gas is routed to the flare) and automatic shutdown features/controls.

Water spraying is used to control PM and PM_{10} emissions. A capture efficiency of 100 percent and destruction efficiency of 80 percent are assumed. The facility controls fugitive dust as part of its normal operation and maintenance.

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Veolia ES Rolling Hills Landfill Inc

Permit Number: 17100089 - 001

Table A contains limits and other requirements with which your facility must comply. The limits are located in the first column of the table (What To do). The limits can be emission limits or operational limits. This column also contains the actions that you must take and the records you must keep to show that you are complying with the limits. The second column of Table A (Why to do it) lists the regulatory basis for these limits. Appendices included as conditions of your permit are listed in Table A under total facility requirements.

Subject Item: **Total Facility**

What to do	Why to do it
OPERATIONAL REQUIREMENTS	hdr
The Permittee shall comply with National Primary and Secondary Ambient Air Quality Standards, 40 CFR pt. 50, and the Minnesota Ambient Air Quality Standards, Minn. R. 7009.0010 to 7009.0080. Compliance shall be demonstrated upon written request by the MPCA.	40 CFR pt. 50; Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7007.0100, subps. 7A, 7L & 7M; Minn. R. 7007.0800, subps. 1, 2 & 4; Minn. R. 7009.0010-7009.0080.
Circumvention: Do not install or use a device or means that conceals or dilutes emissions, which would otherwise violate a federal or state air pollution control rule, without reducing the total amount of pollutant emitted.	Minn. R. 7011.0020
Air Pollution Control Equipment: Operate all pollution control equipment whenever the corresponding process equipment and emission units are operated, unless otherwise noted in Table A.	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 16(J)
Operation and Maintenance Plan: Retain at the stationary source an operation and maintenance plan for all air pollution control equipment. At a minimum, the O & M plan shall identify all air pollution control equipment and control practices and shall include a preventative maintenance program for the equipment and practices, a description of (the minimum but not necessarily the only) corrective actions to be taken to restore the equipment and practices to proper operation to meet applicable permit conditions, a description of the employee training program for proper operation and maintenance of the control equipment and practices, and the records kept to demonstrate plan implementation.	Minn. R. 7007.0800, subp. 14 and Minn. R. 7007.0800, subp. 16(J)
Operation Changes: In any shutdown, breakdown, or deviation the Permittee shall immediately take all practical steps to modify operations to reduce the emission of any regulated air pollutant. The Commissioner may require feasible and practical modifications in the operation to reduce emissions of air pollutants. No emissions units that have an unreasonable shutdown or breakdown frequency of process or control equipment shall be permitted to operate.	Minn. R. 7019.1000, subp. 4
Fugitive Emissions: Do not cause or permit the handling, use, transporting, or storage of any material in a manner which may allow avoidable amounts of particulate matter to become airborne. Comply with all other requirements listed in Minn. R. 7011.0150.	Minn. R. 7011.0150
Noise: The Permittee shall comply with the noise standards set forth in Minn. R. 7030.0010 to 7030.0080 at all times during the operation of any emission units. This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act.	Minn. R. 7030.0010 - 7030.0080
Inspections: The Permittee shall comply with the inspection procedures and requirements as found in Minn. R. 7007.0800, subp. 9(A).	Minn. R. 7007.0800, subp. 9(A)
The Permittee shall comply with the General Conditions listed in Minn. R. 7007.0800, subp. 16.	Minn. R. 7007.0800, subp. 16
MONITORING REQUIREMENTS	hdr
Monitoring Equipment Calibration: Calibrate all required monitoring equipment (any requirements applying to continuous emission monitors are listed separately in this permit) in accordance with manufacturer's recommendations.	Minn. R. 7007.0800, subp. 4(D)
Operation of Monitoring Equipment: Unless otherwise noted in Tables A, B, and/or C, monitoring a process or control equipment connected to that process is not necessary during periods when the process is shutdown, or during checks of the monitoring systems, such as calibration checks and zero and span adjustments. If monitoring records are required, they should reflect any such periods of process shutdown or checks of the monitoring system.	Minn. R. 7007.0800, subp. 4(D)
RECORDKEEPING	hdr
Recordkeeping: Retain all records at the stationary source for a period of five (5) years from the date of monitoring, sample, measurement, or report. Records which must be retained at this location include all calibration and maintenance records, all original recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Records must conform to the requirements listed in Minn. R. 7007.0800, subp. 5(A).	Minn. R. 7007.0800, subp. 5(C)

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Recordkeeping: Maintain records describing any insignificant modifications (as required by Minn. R. 7007. 1250, subp. 3) or changes contravening permit terms (as required by Minn. R. 7007.1350 subp. 2), including records of the emissions resulting from those changes.	Minn. R. 7007. 0800, subp. 5(B)
REPORTING/SUBMITTALS	hdr
Shutdown Notifications: Notify the Commissioner at least 24 hours in advance of a planned shutdown of any control equipment or process equipment if the shutdown would cause any increase in the emissions of any regulated air pollutant. If the Permittee does not have advance knowledge of the shutdown, notification shall be made to the Commissioner as soon as possible after the shutdown. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 3. At the time of notification, the Permittee shall inform the Commissioner of the cause of the shutdown and the estimated duration. The Permittee shall notify the Commissioner when the shutdown is over.	Minn. R. 7019.1000, subp. 3
Breakdown Notifications: Notify the Commissioner within 24 hours of a breakdown of more than one hour duration of any control equipment or process equipment if the breakdown causes any increase in the emissions of any regulated air pollutant. The 24-hour time period starts when the breakdown was discovered or reasonably should have been discovered by the Permittee. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 2. At the time of notification or as soon as possible thereafter, the Permittee shall inform the Commissioner of the cause of the breakdown and the estimated duration. The Permittee shall notify the Commissioner when the breakdown is over.	Minn. R. 7019.1000, subp. 2
Notification of Deviations Endangering Human Health or the Environment: As soon as possible after discovery, notify the Commissioner or the state duty officer, either orally or by facsimile, of any deviation from permit conditions which could endanger human health or the environment.	Minn. R. 7019.1000, subp. 1
Notification of Deviations Endangering Human Health or the Environment Report: Within 2 working days of discovery, notify the Commissioner in writing of any deviation from permit conditions which could endanger human health or the environment. Include the following information in this written description: 1. the cause of the deviation; 2. the exact dates of the period of the deviation, if the deviation has been corrected; 3. whether or not the deviation has been corrected; 4. the anticipated time by which the deviation is expected to be corrected, if not yet corrected; and 5. steps taken or planned to reduce, eliminate, and prevent reoccurrence of the deviation.	Minn. R. 7019.1000, subp. 1
Application for Permit Amendment: If a permit amendment is needed, submit an application in accordance with the requirements of Minn. R. 7007.1150 through Minn. R. 7007.1500. Submittal dates vary, depending on the type of amendment needed.	Minn. R. 7007.1150 through Minn. R. 7007.1500
Extension Requests: The Permittee may apply for an Administrative Amendment to extend a deadline in a permit by no more than 120 days, provided the proposed deadline extension meets the requirements of Minn. R. 7007.1400, subp. 1(H).	Minn. R. 7007.0400, subp. 2
Emission Inventory Report: due on or before April 1 of each calendar year following permit issuance, to be submitted on a form approved by the Commissioner.	Minn. R. 7019.3000 through Minn. R. 7019.3100
Emission Fees: due 60 days after receipt of an MPCA bill.	Minn. R. 7002.0005 through Minn. R. 7002.0095

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Veolia ES Rolling Hills Landfill Inc

Permit Number: 17100089 - 001

Subject Item: **EU 001 Flare**

Associated Items: CE 001 Flaring

SV 001 Flare

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735. (This is met through the total capacity of the equipment burning landfill gas - total potential to emit is 0.55 lb/hr)	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)
The operation of this flare also controls VOC emissions. Operation of the flare is not necessary in order for the process to meet applicable emissions limits. However, the Permittee wishes to take credit for its operation for the purposes of reporting actual emissions for emission inventory. Therefore, in order for the VOC emissions to be considered controlled for the purposes of emissions inventory, the flare operation must comply with the requirements of CE001.	Minn. Stat. 116.07, subd. 4a; Equipment used under Minn. R. 7019.3020 (G)

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Veolia ES Rolling Hills Landfill Inc

Permit Number: 17100089 - 001

Subject Item: **CE 001 Flaring**

Associated Items: EU 001 Flare

FS 001 MSW Landfill with flare

MR 001

What to do	Why to do it
The operation of this piece of control equipment is not required, nor necessary in order for the process to meet applicable emissions limits. However, the Permittee wishes to take credit for its operation for the purposes of reporting actual emissions for emission inventory. Therefore, in order for the VOC emissions to be considered controlled for the purposes of emissions inventory, the flare must comply with the requirements of this permit during the time credit for control is taken. If the flare is not operated according to the requirements of this permit, then credit for control may not be taken for purposes of reporting actual emissions.	Minn. Stat. 116.07, subd. 4a; Equipment used under Minn. R. 7019.3020 (G)
The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency for Volatile Organic Compounds: greater than or equal to 98 percent control efficiency	Minn. R. 7007.0800, subp. 2
The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame.	Minn. R. 7007.0800, subp. 4
The Permittee shall maintain either a continuous hard copy readout of the temperature (to document the presence of a flame) or maintain a hard copy of manual readings taken at least every 15 minutes.	Minn. R. 7007.0800, subp. 5
The Permittee shall maintain each piece of control equipment according to the manufacturer's specification, shall conduct inspections, and maintain documentation of those actions as required by Minn. R. 7011.0075, subp. 2(A) to 2(I).	Minn. R. 7007.0800, subp. 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Veolia ES Rolling Hills Landfill Inc

Permit Number: 17100089 - 001

Subject Item: **FS 001 MSW Landfill with flare**

Associated Items: CE 001 Flaring

What to do	Why to do it
SOURCE-SPECIFIC REQUIREMENTS	hdr
The Permittee shall calculate an NMOC emission rate for the landfill using the procedures specified in 40 CFR Section 60.754. The NMOC emission rate shall be recalculated annually, except as provided in 40 CFR Section 60.757(b)(1)(ii) of this subpart.	40 CFR Section 60.752(b); Minn. R. 7011.3510, subp. 1
If the calculated NMOC emission rate is less than 50 megagrams per year, the Permittee shall: (i) Submit an annual emission report to the Administrator, except as provided for in 40 CFR Section 60.757(b)(1)(ii); and (ii) Recalculate the NMOC emission rate annually using the procedures specified in 40 CFR Section 60.754(a)(1) until such time as the calculated NMOC emission rate is equal to or greater than 50 megagrams per year, or the landfill is closed.	40 CFR Section 60.752(b)(1); Minn. R. 7011.3510, subp. 1
If the calculated NMOC emission rate is equal to or greater than 50 megagrams per year, the Permittee shall: (i) Submit a collection and control system design plan prepared by a professional engineer to the Administator within 1 year which meets the design requirements of paragraph (b)(2)(ii) of this section, including a discussion of any alternatives to standards and procedures. The system design plan shall conform with specifications in Section 60.759. (ii) Install a collection and control system within 30 months after the first annual report in which the emission rate equals or exceeds 50 megagrams per year, unless Tier 2 or Tier 3 sampling demonstrates that the emission rate is less than 50 megagrams per year, as specified in Section 60.757(c)(1) or (2). (iii) Route all collected gas to a control system that complies with the requirements in either paragraph (b)(2)(iii) (A), (B), or (C) of section 60.752. (iv) Operate the collection and control device	40 CFR Section 60.752(b)(2); Minn. R. 7011.3510, subp. 1
As applicable, the collection and control system may be capped or removed provided that all the conditions of 40 CFR Sections 60.752(b)(2)(v) (A), (B), and (C) are met, including: (A) the landfill shall be a closed landfill as defined in Section 60.751 and a closure report shall be submitted to the Administrator as provided in Section 60.757(d); (B) The collection and control system shall have been in operation a minimum of 15 years; and (C) The calculated NMOC gas produced by the landfill shall be less than 50 megagrams per year on three successive test dates. The test dates shall be no less than 90 days apart, and no more than 180 days apart.	40 CFR Section 60.752(b)(2); Minn. R. 7011.3510, subp. 1
When a MSW landfill subject to this subpart is closed, the Permittee is no longer required to maintain an operating permit under Part 70 for the landfill if the landfill is not otherwise subject to the requirements of Part 70 and if either of the following conditions are met: (1) The landfill was never subject to the requirement for a control system under 40 CFR Section 60.752(b)(2) or (2)The Permittee meets the conditions for control system removal specified in 40 CFR Section 60.752(b)(2)(v).	40 CFR Section 60.752(c); Minn. R. 7011.3510, subp. 1
If a collection and control system is required to be installed, this section includes the operational standards for the system.	40 CFR Section 60.753; Minn. R. 7011.3510, subp. 1
The Permittee shall calculate the NMOC emission rate using either or both of the equations provided in 40 CFR Sections 60.754(a)(1)(i) or (ii). The values to be used in both equations are 0.05 per year for k, 170 cubic meters per megagram for Lo, and 4,000 parts per million by volume as hexane for the CNMOC. The mass of nondegradable solid waste may be subtracted from the total mass of solid waste in a particular section of the landfill when calculating the value of R, if documentation of the nature and amount of such waste is maintained.	40 CFR Section 60.754(a)(1); Minn. R. 7011.3510, subp. 1
Tier I. The Permittee shall compare the calculated NMOC mass emission rate to the standard of 50 megagrams per year.	40 CFR Section 60.754(a)(2); Minn. R. 7011.3510, subp. 1
If the calculated NMOC emission rate is less than 50 megagrams per year, then the Permittee shall submit an emission rate report as provided in Section 60.757(b)(1), and shall recalculate the NMOC mass emission rate annually as required under Section 60.752(b)(1).	40 CFR Section 60.754(a)(2)(i); Minn. R. 7011.3510, subp. 1
If the calculated NMOC emission rate is equal to or greater than 50 megagrams per year, then the Permittee shall either comply with Section 60.752(b)(2), or determine a site-specific NMOC concentration and recalculate the NMOC emission rate using the procedures provided in Section 60.754(a)(3).	40 CFR Section 60.754(a)(2)(ii); Minn. R. 7011.3510, subp. 1

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Tier 2. The Permittee shall determine the NMOC concentration using the following sampling procedure. The Permittee shall install at least two sample probes per hectare of landfill surface that has retained waste for at least 2 years. If the landfill is larger than 25 hectares in area, only 50 samples are required. The sample probes should be located to avoid known areas of nondegradable solid waste. The Permittee shall collect and analyze one sample of landfill gas from each probe to determine the NMOC concentration using Method 25 or 25C of Appendix A of this part or Method 18 of Appendix A of this part and according to the procedures specified in this part.	40 CFR Section 60.754(a)(3); Minn. R. 7011.3510, subp. 1
The Permittee must follow the procedures for use of composite samples, identification of compounds, instrument calibration, and conversion from CNMOC as carbon to CNMOC as hexane as stated in this part. If more than the required number of samples are taken, all samples must be used in the analysis. If the landfill has an active or passive gas removal system in place, Method 25 or 25C samples may be collected from these systems instead of surface probes provided the removal system can be shown to provide sampling as representative as the two sampling probe per hectare requirement. For active collection systems, samples may be collected from the common header pipe before the gas moving or condensate removal equipment. For these systems, a minimum of three samples must be collected from the header pipe.	40 CFR Section 60.754(a)(3) CONTINUED; Minn. R. 7011.3510, subp. 1
The Permittee shall recalculate the NMOC mass emission rate using the equations provided in Section 60.754(a)(1)(i) or (ii) of this section and using the average NMOC concentration from the collected samples instead of the default value in the equation provided in paragraph (a)(1) of this section.	40 CFR Section 60.754(a)(3)(i); Minn. R. 7011.3510, subp. 1
If the resulting mass emission rate calculated using the site-specific NMOC concentration is equal to or greater than 50 megagrams per year, then the Permittee shall either comply with Section 60.752(b)(2), or determine the site-specific methane generation rate constant and recalculate the NMOC emission rate using the site-specific methane generation rate using the procedure specified in Section 60.754(a)(4) [Tier 3].	40 CFR Section 60.754(a)(3)(ii); Minn. R. 7011.3510, subp. 1
If the resulting NMOC mass emission rate is less than 50 megagrams per year, the Permittee shall submit a periodic estimate of the emission rate report as provided in Section 60.757(b)(1) and retest the site-specific NMOC concentration every five years using the methods specified in this section.	40 CFR Section 60.754(a)(3)(iii); Minn. R. 7011.3510, subp. 1
The Permittee may use other methods to determine the NMOC concentration or a site-specific k as an alternative to the methods required in Section 60.754(a)(3) and (a)(4) if the method has been approved by the Administrator.	40 CFR Section 60.754(a)(5); Minn. R. 7011.3510, subp. 1
The Permittee shall submit an NMOC emission rate report to the Administrator annually, except as provided for in Section 60.757(b)(1)(ii) or (b)(3). The Administrator may request such additional information as may be necessary to verify the reported NMOC emission rate.	40 CFR Section 60.757(b); Minn. R. 7011.3510, subp. 1
The NMOC emission rate report shall contain an annual or 5-year estimate of the NMOC emission rate calculated using the formula and procedures provided in 40 CFR Section 60.754(a) or (b), as applicable. (i) The initial NMOC emission rate report may be combined with the initial design capacity report required in paragraph (a) of this section and shall be submitted no later than indicated in paragraphs (b)(1)(i)(A) and (B) of this section. Subsequent NMOC emission rate reports shall be submitted annually thereafter, except as provided for in paragraphs (b)(1)(ii) and (b)(3) of this section. (B) Ninety days after the date of commenced construction, modification, or reconstruction on or after March 12, 1996.	40 CFR Section 60.757(b)(1); Minn. R. 7011.3510, subp. 1
If the estimated NMOC emission rate as reported in the annual report to the Administrator is less than 50 megagrams per year in each of the next five consecutive years, the Permittee may elect to submit an estimate of the NMOC emission rate for the next five-year period in lieu of the annual report. This estimate shall include the current amount of solid waste-in-place and the estimate waste acceptance rate for each year of the five years for which an NMOC emission rate is estimated. All data and calculations upon which this estimate is based shall be provided to the Administrator. This estimate shall be revised at least once every five years.	40 CFR Section 60.757(b)(1)(ii); Minn. R. 7011.3510, subp. 1
If the actual waste acceptance rate exceeds the estimated waste acceptance rate in any year reported in the five-year estimate, a revised five-year estimate shall be submitted to the Administrator. The revised estimate shall cover the five-year period beginning with the year in which the actual waste acceptance rate exceeded the estimated waste acceptance rate.	40 CFR Section 60.757(b)(1)(ii) continued; Minn. R. 7011.3510, subp. 1
The NMOC emission rate report shall include all the data, calculations, sample reports and measurements used to estimate the annual or five-year emissions.	40 CFR Section 60.757(b)(2); Minn. R. 7011.3510, subp. 1

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The Permittee subject to the provisions of Section 60.752(b)(2)(i) shall submit a collection and control system design plan within one year of the first report required under Section 60.757(b) in which the emission rate equals or exceeds 50 megagrams per year, except as follows: (1) If the Permittee elects to recalculate the NMOC emission rate after Tier 2 NMOC sampling and analysis as provided in Section 60.754(a)(3) and the resulting rate is less than 50 megagrams per year, annual periodic reporting shall be resumed, using the Tier 2 determined site-specific NMOC concentration, until the calculated emission rate is equal to or greater than 50 megagrams per year or the landfill is closed. The revised NMOC emission rate report, with the recalculated emission rate based on NMOC sampling and analysis, shall be submitted within 180 days of the first calculated exceedance of 50 megagrams per year.	40 CFR Section 60.757(c) and (c)(1); Minn. R. 7011.3510, subp. 1
If the Permittee elects to recalculate the NMOC emission rate after determining a site-specific methane generation rate constant (k), as provided in Tier 3 in Section 60.754(a)(4), and the resulting NMOC emission rate is less than 50 MG/yr, annual periodic reporting shall be resumed.	40 CFR Section 60.757(c)(2); Minn. R. 7011.3510, subp. 1
The Permittee shall keep, for at least 5 years, up-to-date, readily accessible, on-site records of the design capacity report which triggered Section 60.752(b), the current amount of solid waste in-place, and the year-by-year waste acceptance rate. Off-site records may be maintained if they are retrievable within 4 hours. Either paper copy or electronic formats are acceptable.	40 CFR Section 60.758(a); Minn. R. 7011.3510, subp. 1
Except as provided in Section 60.752(b)(2)(i)(B), the Permittee subject to the provisions of this subpart shall keep for the life of the collection system an up-to-date, readily accessible plot map showing each existing and planned collector in the system and providing a unique identification location label for each collector. *(1) The Permittee subject to the provisions of this subpart shall keep up-to-date, readily accessible records of the installation date and location of all newly installed collectors as specified under Section 60.755(b). (2) The Permittee subject to the provisions of this subpart shall keep readily accessible documentation of the nature, date of deposition, amount, and location of asbestos-containing or nondegradable waste excluded from collection as provided in 40 CFR Section 60.759(a)(3)(i) as well as any nonproductive areas excluded from collection as provided in 40 CFR Section 60.759(a)(3)(ii).	40 CFR Section 60.758(d); Minn. R. 7011.3510, subp. 1
Permittees who convert design capacity from volume to mass or mass to volume to demonstrate that landfill design capacity is less than 2.5 million megagrams or 2.5 million cubic meters, as provided in the definition of "design capacity", shall keep readily accessible, on-site records of the annual recalculation of site-specific density, design capcity, and the supporting documentation. Off-site records may be maintained if they are retrievable within 4 hours. Either paper copy or electronic formats are acceptable.	40 CFR Section 60.758(f); Minn. R. 7011.3510, subp. 1
The Permittee of a landfill shall submit the reports required by 40 CFR Sections 60.752(a), 60.757(a)(1), 60.757(a)(3), and 60.757(b)(1)(i), on the following schedule. A. The Permittee of an active landfill with a solid waste capacity greater than or equal to 2.5 million megagrams, and 2.5 million cubic meters, shall submit an initial solid waste capacity report no later than the submittal of the next annual report required by part 7035.2585. B. [Not applicable] C. The Permittee of a landfill that must submit an NMOC emission rate report to comply with 40 CFR Section 60.757(b), shall submit the initial NMOC emission rate report no later than the submittal of the next annual report required by part 7035.2585 or the submittal of the solid waste management facility permit application that proposes an increase in permitted capacity, whichever occurs earlier.	Minn. R. 7011.3505, subp. 4; Minn. R. 7011.3510, subp. 2
The Permittee of an existing landfill with a design capacity greater than or equal to 2.5 million megagrams, and 2.5 million cubic meters, and with an NMOC emission rate of 50 megagrams per year or more, shall complete installation of gas collection and control equipment capable of meeting the conditions provided in 40 CFR Section 60.752(b)(2)(ii), within 30 months after January 28, 1997. The Permittee of an existing landfill with a design capacity greater than or equal to 2.5 million megagrams, and 2.5 million cubic meters, and an NMOC emission rate less than 50 megagrams per year on January 28, 1997, shall comply with this part within 30 months of the date of the first NMOC emission rate that equals or exceeds 50 megagrams per year.	Minn. R. 7011.3505, subp. 5
The Permittee of an existing landfill that has a landfill gas collection system in place on January 28, 1997, may comply with 40 CFR Section 60.754(a)(5), using the method in 40 CFR Section 60.754(b), if the existing landfill owner or operator can demonstrate to the agency that the system effectively collects landfill gas from all gas producing areas of the landfill, and negative pressure can be maintained at each wellhead without excess air infiltration.	Minn. R. 7011.3505, subp. 7
ASBESTOS DISPOSAL REQUIREMENTS	hdr

Facility Name: Veolia ES Rolling Hills Landfill Inc

Permit Number: 17100089 - 001

At the end of each operating day, or at least once every 24-hour period while the site is in continuous operation, the asbestos-containing waste material which was deposited at the site during the operating day or previous 24-hour period shall be covered with at least 15 centimeters (6 inches) of compacted nonasbestos-containing material.	40 CFR Section 61.154(c)(1); Minn. R. 7011.9920
For all asbestos-containing waste material received at the active waste disposal site, the Permittee shall maintain waste shipment records on a form which includes the following information: (i) The name, address, and telephone number of the waste generator. (ii) The name, address, and telephone number of the transporter(s). (iii) The quantity of the asbestos-containing waste material in cubic meters (cubic yards).	40 CFR Section 61.154(e)(1); Minn. R. 7011.9920
(iv) The presence of improperly enclosed or uncovered waste, or any asbestos-containing waste material not sealed in leak-tight containers. Report in writing to the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the waste generator (identified in the waste shipment record), and if different, the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the disposal site, by the following working day, the presence of a significant amount of improperly enclosed or uncovered waste. Submit a copy of the waste shipment record along with the report. (v) The date of the receipt.	40 CFR Section 61.154(e)(1) CONTINUED; Minn. R. 7011.9920
For all asbestos-containing waste material received at the active waste disposal site, the Permittee shall, as soon as possible and no longer than 30 days after receipt of the waste, send a copy of the signed waste shipment record to the waste generator.	40 CFR Section 61.154(e)(2); Minn. R. 7011.9920
For all asbestos-containing waste material received at an active waste disposal site, the Permittee shall, upon discovering a discrepancy between the quantity of waste designated on the shipment records and the quantity actually received, attempt to reconcile the discrepancy with the waste generator. If the discrepancy is not resolved within 15 days after receiving the waste, immediately report in writing to the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the waste generator (identified in the waste shipment record), and, if different, the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the disposal site. Describe the discrepancy and attempts to reconcile it, and submit a copy of the waste shipment record along with the report.	40 CFR Section 61.154(e)(3); Minn. R. 7011.9920
For all asbestos-containing waste material received at the active waste disposal site, the Permittee shall retain a copy of all records and reports for at least 2 years.	40 CFR Section 61.154(e)(4); Minn. R. 7011.9920
Maintain, until closure, records of the location, depth and area, and quantity in cubic meters (cubic yards) of asbestos-containing waste material within the disposal site on a map or diagram of the disposal area.	40 CFR Section 61.154(f); Minn. R. 7011.9920
Upon closure, comply with all the provisions of 40 CFR Section 61.151.	40 CFR Section 61.154(g); Minn. R. 7011.9920
Submit to the Administrator, upon closure of the facility, a copy of records of asbestos waste disposal locations and quantities.	40 CFR Section 61.154(h); Minn. R. 7011.9920
Furnish upon request, and make available during normal business hours for inspection by the Administrator, all records required under this section.	40 CFR Section 61.154(i); Minn. R. 7011.9920
Notify the Administrator in writing at least 45 days prior to excavating or otherwise disturbing any asbestos-containing waste material that has been deposited at a waste disposal site and is covered. If the excavation will begin on a date other than the one contained in the original notice, notice of the new start date must be provided to the Administrator at least 10 working days before excavation begins and in no event shall excavation begin earlier than the date specified in the original notification. Include the following information in the notice: (1) Scheduled starting and completion dates. (2) Reason for disturbing the waste. (3) Procedures to be used to control emissions during the excavation, storage, transport, and ultimate disposal of the excavated asbestos-containing waste material. If deemed necessary, the Administrator may require changes in the emission control procedures to be used. (4) Location of any temporary storage site and the final disposal site.	40 CFR Section 61.154(j); Minn. R. 7011.9920

TABLE B: SUBMITTALS

Facility Name: Veolia ES Rolling Hills Landfill Inc

Permit Number: 17100089 - 001

Table B lists most of the submittals required by this permit. Please note that some submittal requirements may appear in Table A or, if applicable, within a compliance schedule located in Table C. Table B is divided into two sections in order to separately list one-time only and recurrent submittal requirements.

Each submittal must be postmarked or received by the date specified in the applicable Table. Those submittals required by parts 7007.0100 to 7007.1850 must be certified by a responsible official, defined in Minn. R. 7007.0100, subp. 21. Other submittals shall be certified as appropriate if certification is required by an applicable rule or permit condition.

Send any application for a permit or permit amendment to:

AQ Permit Technical Advisor
Industrial Division
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

Also, where required by an applicable rule or permit condition, send to the Permit Technical Advisor notices of:
- accumulated insignificant activities,
- installation of control equipment,
- replacement of an emissions unit, and
- changes that contravene a permit term.

Unless another person is identified in the applicable Table, send all other submittals to:

AQ Compliance Tracking Coordinator
Industrial Division
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

Send submittals that are required to be submitted to the U.S. EPA regional office to:

Mr. George Czerniak
Air and Radiation Branch
EPA Region V
77 West Jackson Boulevard
Chicago, Illinois 60604

Send submittals that are required by the Acid Rain Program to:

U.S. Environmental Protection Agency
Clean Air Markets Division
1200 Pennsylvania Avenue NW (6204N)
Washington, D.C. 20460

TABLE B: ONE TIME SUBMITTALS OR NOTIFICATIONS

Facility Name: Veolia ES Rolling Hills Landfill Inc

Permit Number: 17100089 - 001

What to send	When to send	Portion of Facility Affected
Application for Permit Reissuance	due 180 days before expiration of Existing Permit	Total Facility

TABLE B: RECURRENT SUBMITTALS

Facility Name: Veolia ES Rolling Hills Landfill Inc

Permit Number: 17100089 - 001

What to send	When to send	Portion of Facility Affected
Semiannual Deviations Report	due 30 days after end of each calendar half-year following Permit Issuance. The first semiannual report submitted by the Permittee shall cover the calendar half-year in which the permit is issued. The first report of each calendar year covers January 1 - June 30. The second report of each calendar year covers July 1 - December 31. If no deviations have occured, the Permittee shall submit the report stating no deviations.	Total Facility
Compliance Certification	due 31 days after end of each calendar year following Permit Issuance (for the previous calendar year). To be submitted on a form approved by the Commissioner, both to the Commissioner and to the US EPA regional office in Chicago. This report covers all deviations experienced during the calendar year.	Total Facility

APPENDIX MATERIAL
Facility Name: Veolia ES Rolling Hills Landfill, Inc.
Permit Number: 17100089-001

Insignificant Activities and Applicable Requirements

The table below lists the insignificant activities that are **allowed** at the facility and their associated general applicable requirements.

Under Minn. R. 7007.1250, subp. 1(A), the Permittee may add insignificant activities to the stationary source throughout the term of the permit without getting permit amendments. Certain exclusions apply and are listed in Minn. R. 7007.1250, subp.2. In addition, this permit specifically prohibits the Permittee from making any modifications that would make the source major under NSR. The following table is a listing of the insignificant activities that the Permittee is somewhat likely to add and their associated applicable requirements.

Minn. R. 7007.1300, subpart	Rule Description of the Activity	Likely Applicable Requirement
3(A)	Fuel use: space heaters fueled by, kerosene, natural gas, or propane.	Minn. R. 7011.0510/0515
3(B)	Furnaces, boilers, and incinerators:	
	1. infrared electric ovens; and	Minn. R. 7011.0105/0110
	2. fuel burning equipment with a capacity less than 500,000 Btu/hour but only if the total combined capacity of all fuel burning equipment at the stationary source with a capacity less than 500,000 Btu per hour is less than or equal to 2,000,000 Btu/hour. • *The facility has 5 furnaces, in Btu/hr as follows: 75,000, 165,000, 125,000, 125,000 and 125,000 at the main office and in the shop*	Minn. R. 7011.0510/0515 *OR* Minn. R. 7011.0610
3(C)	Fabrication operations: equipment used exclusively for forging, pressing, drawing, spinning, or extruding hot metals.	Minn. R. 7011.0710/0715
3(D)	Processing operations:	
	open tumblers with a batch capacity of 1,000 pounds or less; and	Minn. R. 7011.0710/0715
3(E)	Storage tanks:	
	1. gasoline storage tanks with a combined total tankage capacity of not more than 10,000 gallons; and	Minn. R. 7011.0710/0715 *OR* Minn. R. 7011.1505, subp. 2(B)/1505, subp. 3(B) *OR* Minn. R. 7011.0105/0110
	2. non-hazardous air pollutant VOC storage tanks with a combined total tankage capacity of not more than 10,000 gallons of non-hazardous air pollutant VOCs and with a vapor pressure of not more than 1.0 psia at 60 degrees Fahrenheit.	Minn. R. 7011.0710/0715 *OR* Minn. R. 7011.1505, subp. 2(B)/1505, subp. 3 (B) OR Minn. R. 7011.0105/0110

Minn. R. 7007.1300, subpart	Rule Description of the Activity	Likely Applicable Requirement
3(G)	Emissions from a laboratory, as defined in the subpart.	Minn. R. 7011.0510/0515 + Minn. R. 7011.0610 + Minn. R. 7011.0710/0715
3(H)	Miscellaneous:	
	1. equipment used exclusively for packaging lubricants or greases;	Minn. R. 7011.0710/0715 OR Minn. R. 7011.0105/0110
	2. equipment used for hydraulic or hydrostatic testing;	Minn. R. 7011.0710/0715
	3. brazing, soldering or welding equipment;	Minn. R. 7011.0510/.0515 + Minn. R. 7011.0610 + Minn. R. 7011.0710/0715
	4. blueprint copiers and photographic processes;	Minn. R. 7011.0105/0110
	5. equipment used exclusively for melting or application of wax;	Minn. R. 7011.0510/.0515 + Minn. R. 7011.0610 + Minn. R. 7011.0710/0715
	6. nonasbestos equipment used exclusively for bonding lining to brake shoes; and	Minn. R. 7011.0710/0715
	7. cleaning operations: alkaline/phosphate cleaners and associated cleaners and associated burners.	Minn. R. 7011.0510/.0515 + Minn. R. 7011.0610 + Minn. R. 7011.0710/0715
3(I)	Individual emissions units at a stationary source, each of which have a potential to emit the following pollutants in amounts less than: 1. 4,000 lbs/year of carbon monoxide; and 2. 2,000 lbs/year each of nitrogen oxide, sulfur dioxide, particulate matter, particulate matter less than ten microns, volatile organic compounds (including hazardous air pollutant-containing VOC), and ozone. • *The Permitteee has a 30,000 gallon tank for leachate storage that qualifies under this subpart.*	Minn. R. 7011.0710/0715 *OR* Minn. R. 7011.1505, subp. 2(B)/1505, subp. 3 (B) OR Minn. R. 7011.0105/0110
3(J)	Fugitive Emissions from roads and parking lots.	Minn. R. 7011.0150
3(K)	Infrequent use of spray paint equipment for routine housekeeping or plant upkeep activities not associated with primary production processes at the stationary source, such as spray painting of buildings, machinery, vehicles, and other supporting equipment.	Minn. R. 7011.0710/0715

Insignificant Activities Required to Be Listed for Part 70 sources

Minn. R. 7007.1300, subpart	Rule Description of the Activity	Likely Applicable Requirement
4	Individual emissions units at a stationary source, each of which has: A. Potential emissions of 5.7 pounds per hour or actual emissions of two tons per year of carbon monoxide; B. Potential emissions of 2.28 pounds per hour or actual emissions of one ton per year for particulate matter, particulate matter less than ten microns, nitrogen oxide, sulfur dioxide, and VOCs; and C. For hazardous air pollutants, emissions units with: (1) potential emissions of 25 percent or less of the hazardous air pollutant thresholds listed in subp. 5; or (2) combined HAP actual emissions of one ton per year unless the emissions unit emits one or more of the HAPs listed in this subpart.	Minn. R. 7011.0710/0715

Conditionally Insignificant Activities

	Rule Description of the Activity	Likely Applicable Requirement
Minn. R. 7008.4100	Total VOC Usage at the stationary source less than 200 gallons or 2000 pounds in each calendar year. See Minn. R. 7008.4100 for recordkeeping and calculation requirements for this activity.	Minn. R. 7011.0710/0715
Minn. R. 7008.4110	Emissions from equipment venting particulate matter (PM) or particulate matter less than 10 microns (PM-10) inside a building, provided that emissions from the equipment are: a). filtered through an air cleaning system; and b). vented inside of the building 100% of the time.	Minn. R. 7011.0710/0715

TECHNICAL SUPPORT DOCUMENT
For
AIR EMISSION PERMIT NO. 17100089-001

This technical support document is intended for all parties interested in the permit and to meet the requirements that have been set forth by the federal and state regulations (40 CFR § 70.7(a)(5) and Minn. R. 7007.0850, subp.1). The purpose of this document is to provide the legal and factual justification for each applicable requirement or policy decision considered in the determination to issue the permit.

1. General Information

1.1. Applicant and Stationary Source Location:

Applicant/Address	Stationary Source/Address (SIC Code: 4953)
Veolia ES Rolling Hills Landfill, Inc. PO Box 516 175 County Road 37 NE Buffalo, MN 55313	Veolia ES Rolling Hills Landfill 175 County Road 37 NE Buffalo, MN 55313 Wright County
Contact: Mr. Christopher Basgall, General Manager Phone: (320) 963-3158 Fax: (320) 963-3051	

1.2. Description of the Permit Action

Previously named Onyx FCR Landfill, Superior Forest City Road Landfill, and Yonak Landfill.

Veolia ES Rolling Hills Landfill, Inc. is an existing facility which has accepted municipal solid waste (MSW), industrial waste and demolition debris for disposal. The facility began accepting waste in 1965. Their first application for a Part 70 Title V air permit was received by the MPCA on December 31, 2002. At that time Veolia was proposing an increase to the design capacity of the landfill from 4.4 million cubic yards (yd^3) to 7.9 million yd^3, to be filled at a rate of 400,000 yd^3 per year. This is consistent with their landfill expansion permit application submitted to the MPCA solid waste section in April of 2002. The landfill was operating under solid waste permit SW-60 at that time, which gave them a permitted design capacity of 4.4 million yd^3, including 2.7 million yd^3 of MSW and 1.7 million yd^3 of industrial waste. They stopped accepting MSW in 1999, when the permitted capacity of 2.7 million yd^3 was filled. The industrial waste and the MSW waste are physically separated in accordance with solid waste permit SW-60.

A proposed increase to the design capacity from 4.4 million yd^3 to 7.9 million yd^3, was approved by MPCA's Citizens Board on June 24, 2003 and a Solid Waste permit was issued on June 26, 2003.

The main sources of air emissions are VOCs and PM from the landfill surface, combustion emissions from the flare (CO, NOx), PM from unpaved roads, unloading of fill material, compacting and grading.

The flare stack/vent height is 25 ft with an inside diameter of 0.83 ft. The design exit flow rate is 2,200 scfm. The flare temperature varies between 1,000 and 1,400 F. It has an assumed capture efficiency of 100% for VOC's and a destruction efficiency of 98%. The flare was installed and started up in April of 1999. The maximum fuel input is 66.79 MMBTU/hr. All landfill gas collected is routed to the flare. The flare has a chart recorder to record flare combustion temperature continuously during operation (whenever landfill gas is routed to the flare) and automatic shutdown features/controls.

Water spraying is used to control PM and PM10 emissions. A capture efficiency of 100% and destruction efficiency of 80% are assumed. The facility controls fugitive dust as part of its normal operation and maintenance.

1.3 Description of any Changes Allowed with this Permit Issuance

There are no changes being authorized by this permit action.

1.4 Permit History

The facility has not previously held an air emissions permit.

1.5. Facility Emissions:

Table 1. Total Facility Potential to Emit Summary

	PM tpy	PM_{10} tpy	SO_2 tpy	NO_x tpy	CO tpy	VOC tpy	Single HAP tpy	All HAPs tpy
Total Facility Limited Potential Emissions	24.0	8.3	2.2	5.7	106.9	13.4	1	2.7
Total Facility Actual Emissions	21.7	6.7	1.0	2.7	50.7	6.2	HAPs not reported in emission inventory	

Table 2. Facility Classification

Classification	Major/Affected Source	Synthetic Minor	Minor
PSD	No		Yes
Part 70 Permit Program	Yes / CO		
Part 63 NESHAP	No		Yes

2. Regulatory and/or Statutory Basis

New Source Review

The facility is not a major source under the New Source Review regulations for the following two reasons. First, it cannot be classified in one of the 28 named source categories listed in Section 169 of the CAA. Second, it is not a stationary source that emits or has the potential to emit 250 tons per year or more of any pollutant regulated by the CAA. Fugitive emissions are included in the potential-to-emit calculations, because it is subject to NESHAP 40 CFR pt. 61, Subpart M for asbestos. The facility accepts asbestos-containing material for waste disposal.

Part 70 Permit Program

The facility is a major source under the Part 70 permit program. Per 40 CFR pt. 60.752 (a)(2)(b), each owner or operator of an MSW landfill having a design capacity greater than 2.5 million megagrams is subject to part 70 or 71 permitting requirements.

The facility also has the potential to emit over 100 tons per year of CO which would also make it subject to Part 70 permitting requirements. Fugitive emissions are included in the potential-to-emit calculations, because it is subject to NESHAP 40 CFR pt. 61, Subpart M for asbestos. The facility accepts asbestos-containing material for waste disposal. The facility's actual emissions are not currently over 100 tons per year for CO, but may be in the future as the landfill accepts more waste and more landfill gas is generated.

New Source Performance Standards (NSPS)

The facility is subject to the New Source Performance Standard Subpart WWW – Standards of Performance for Municipal Solid Waste Landfills.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

The facility is not a major source for HAPs. It is subject to NESHAP 40 CFR pt. 61, Subpart M for asbestos disposal.

Minnesota State Rules

The facility is subject to Minn. R. 7011.3505 Standards of Performance for Existing Municipal Solid Waste Landfills. The flare as an emission unit is also subject to Minn. R. 7011.0715 Standards of Performance for Industrial Process Equipment.

Table 3. Regulatory Overview of Facility

EU, GP, or SV	Applicable Regulations	Comments:
FC	General requirements applicable to all facilities	
FS001	40 CFR pt. 60, subp. WWW, 40 CFR pt. 61, subp. M	Federal and State Standards of Performance for MSW Landfills. Annual calculation of NMOC emissions, comparison to 50 MG/yr threshold which would trigger active gas collection. Standards of Performance for Asbestos disposal, includes daily cover.
EU 001	Minn. R. 7011.0715, Standards of Performance for Industrial Process Equipment	Requires use of flare to take credit for purposes of emission inventory. This rule applies to the combustion emissions from the flare. *This is a state-only requirement and is not enforceable by the EPA Administrator and citizens under the Clean Air Act*
CE001	Minn. Stat. 116.07, subd. 4a; Equipment used under Minn. R. 7019.3020 (G)	The facility may take credit towards emissions reductions (VOC) from operation of the flare for purposes of emission inventory.

3. Technical Information

FS001 – Landfill Emissions

Standards of Performance for MSW Landfills

40 CFR pt. 60, Subp. WWW

- **Calculation of Design Capacity** - > 2.5 million cubic megagrams. Information from December 23, 2003 submittal from RW Beck. This table does not reflect reduced capacity for organic fraction as this is not appropriate for purposes of calculating design capacity. Further refinement of the capacity calculation, or inclusion of additional capacity is not required for any further applicability purposes, as they have exceeded the threshold amount.

Area	Waste Volume (CY)	NSPS tons*	NSPS capacity Mg**
Old Landfill [MSW]	1,454,444	654,500	593,631
Phase 1, 2, 3 [61.2% MSW]	939,457	681,106	617,763
Phase 4, 5 [No MSW]	667,350	897,586	814,110
Phase 6 [No MSW]	1,043,468	1,314,770	1,192,496
Phase 7, 8, 9, 10 [No MSW]	3,480,750	4,350,938	3,946,301
TOTAL	7,585,469	7,898,899 tons	7,164,301 Mg

* allows for cover soils to be excluded
** tons x 0.907 = Mg

- **Calculation of NMOC emission rate < 50 Mg/yr**

  The Permittee used the LandGem V3.02 Emissions Estimation Software using waste receipt data through the middle of 2006 to calculate the NMOC emission rate. The assumed growth in applicable waste receipts (organic fraction of industrial waste and demolition debris) through 2012 was 6% per year. Only the mass of degradable solid waste was input into the model, in accordance with 40 CFR Section 60.754. The estimate is attached as Attachment 1 to this TSD. The calculations were prepared in Tier 2 format and indicate the NMOC emission rate in 2008 to be 20.84 Mg/yr. The NMOC concentration will be re-tested in 2008 and reported in accordance with 40 CFR Section 60.754, 757, if Tier 2 analysis is still required. If the actual waste acceptance rate exceeds the estimated waste acceptance rate prior to 2008, a revised 5-year NMOC emission estimate will be submitted.

- **Active Gas Collection System and Flare.** The Landfill currently operates an active landfill gas collection/flare system of the existing Landfill area (Old Landfill and Phases 1-6). The Permittee has stated that the system will continue to operate in accordance with their Solid Waste permit and historical operating practices. The use of the flare is not relied upon to avoid New Source Review, to avoid NESHAPs, nor is it required by either the state of federal standards of performance for MSW Landfills. The Facility has chosen to continue operation of the control equipment (flare), and take credit for the associated emissions reductions for Emissions Inventory purposes. Accordingly, the use of the control equipment is required in the permit for that purpose. (See EU001 – Flare Emissions)

FS002 – Unpaved Roads

- Calculations based upon AP-42 factors, Table 2: Derivation of Fugitive PM and PM10 Emission factors. See Attachment 2.

FS003 – Unloading of Fill Material

- Calculations based upon AP-42 factors, Table 2: Derivation of Fugitive PM and PM10 Emission factors. See Attachment 2.

FS004 – Compacting

- Calculations based upon AP-42 factors, Table 2: Derivation of Fugitive PM and PM10 Emission factors. See Attachment 2.

FS005 – Grading

- Calculations based upon AP-42 factors, Table 2: Derivation of Fugitive PM and PM10 Emission factors. See Attachment 2.

EU001 – Flare Emissions

- Calculations based upon AP-42 factors, 5th Edition, Table 2.4-5 factors for CO, NOx, PM and PM10. SOx emissions based upon Section 2.4.4.1 Equation 7. VOC emissions derived from LandGEM results. HAPs equations are from AP-42, 5th edition, Tables 2.4-1 and 2.4-2. See Attachment 2.

CE001 – Flare as Control Equipment

- If the facility wishes to take credit for operation of the flare to control VOC emissions, they must follow the operating and monitoring requirements in this section. 98% control and continuous monitoring for the presence of a flame.

3.2 Potential-to-Emit Calculations

Attachment 2 to this TSD contains Form GI-07, which summarizes the PTE of the Facility and also contains detailed spreadsheets and supporting information prepared by the Permittee.

3.3 Periodic Monitoring

In accordance with the Clean Air Act, it is the responsibility of the owner or operator of a facility to have sufficient knowledge of the facility to certify that the facility is in compliance with all applicable requirements.

In evaluating the monitoring included in the permit, the MPCA considers the following:

- The likelihood of violating the applicable requirements;
- Whether add-on controls are necessary to meet the emission limits;
- The variability of emissions over time;
- The type of monitoring, process, maintenance, or control equipment data already available for the emission unit;
- The technical and economic feasibility of possible periodic monitoring methods; and
- The kind of monitoring found on similar units elsewhere.

Table 4 summarizes the periodic monitoring requirements for those emission units for which the monitoring required by the applicable requirement is nonexistent or inadequate.

Table 4. Periodic Monitoring

Emission Unit or Group	Requirement (basis)	Additional Monitoring	Discussion
FC	General requirements applicable to all facilities	None	None
FS001	40 CFR pt. 60, subp. WWW, 40 CFR pt. 61, subp. M	None (the facility does operate an active gas collection system, although it is not required for their level of NMOC emissions)	Federal and State Standards of Performance for MSW Landfills. Annual calculation of NMOC emissions, comparison to 50 MG/yr threshold which would trigger active gas collection. Standards of Performance for Asbestos disposal, includes daily cover.

EU 001	Minn. R. 7011.0715	None	Based upon the fuel used and EPA published emission factors, it is highly unlikely that it could violate the applicable requirement. Requires use of flare per CE001 to take credit for purposes of emission inventory.
CE001	Minn. Stat. 116.07, subd. 4a; Equipment used under Minn. R. 7019.3020 (G)	• Operate and maintain to achieve overall control efficiency of 98% for VOC emissions • Presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame.	• The Permittee must maintain either a continuous hard-copy readout of the temperature (to document the presence of a flame) or maintain a hard copy of manual readings taken at least every 15 minutes. • The Permittee must maintain the flare in accordance with manufacturer's specifications.

3.4 Insignificant Activities

Veolia ES Rolling Hills Landfill, Inc. has several operations which are classified as insignificant activities. These are listed as an Appendix to the permit.

The permit is required to include periodic monitoring for all emissions units, including insignificant activities, per EPA guidance. The insignificant activities at this Facility are only subject to general applicable requirements. Using the criteria outlined earlier in this TSD, the following table documents the justification why no additional periodic monitoring is necessary for the current insignificant activities. See Attachment 2 of this TSD for PTE information for the insignificant activities.

Table 5. Insignificant Activities

Insignificant Activity	General Applicable Emission limit	Discussion
Fuel use: space heaters fueled by, kerosene, natural gas, or propane	PM ≤ 0.6 or 0.4 lb/MMBtu, depending on year constructed Opacity ≤ 20% with exceptions (Minn. R. 7011.0510/515)	For this unit, based on the fuels used and EPA published emissions factors, it is highly unlikely that it could violate the applicable requirement. In addition, these types of units are typically operated and vented inside a building, so testing for PM or opacity is not feasible.
Fuel burning equipment with a capacity less than 500,000 Btu/hour, etc. • 75,000 Btu/hr • 165,000 Btu/hr • 125,000 Btu/hr • 125,000 Btu/hr • 125,000 Btu/hr	PM ≤ 0.6 or 0.4, depending on year constructed Opacity ≤ 20% with exceptions (Minn. R. 7011.0510/515)	For these units, based on the fuels used (propane and natural gas) and EPA published emissions factors, it is highly unlikely that they could violate the applicable requirements. In addition, these types of units are typically operated and vented inside a building, so testing for PM or opacity is not feasible.
Individual units with actual emissions less than 2000 lb/year of certain pollutants	PM, variable depending on airflow Opacity ≤ 20% (with exceptions) (Minn. R. 7011.0715 and Minn. R. 7011.610)	The leachate storage tank will not be emitting PM. VOC emissions will be minimal based upon emission factors and size of tank.
Fugitive Emissions from unpaved roads and parking lots	Requirement to take reasonable measures to prevent PM from becoming airborne (Minn. R. 7011.0150)	The facility controls fugitive dust as part of its normal operation and maintenance. It uses water spraying.

3.5 Permit Organization

In general, the permit meets the MPCA Delta Guidance for ordering and grouping of requirements. One area where this permit deviates slightly from Delta guidance is in the use of appendices. While appendices are fully enforceable parts of the permit, in general, any requirement that the MPCA thinks should be tracked (e.g., limits, submittals, etc.), should be in Table A or B. The main reason is that the appendices are word processing sections and are not part of the tracking system. Violation of the appendices can be enforced, but the computer system will not automatically generate the necessary enforcement notices or documents. Staff must generate these.

The landfill itself is listed as a fugitive source (FS001). Since a gas collection system is not required by any applicable requirement, there is no "point source" to be able to identify as an emission unit for the landfill. Flare emissions are listed as EU001, since this is an identifiable source. VOC control from operation of the flare is listed under CE001.

3.6 Comments Received - RESERVED

Public Notice Period: <start date> - <end date>
EPA 45-day Review Period: <start date> - <end date>

Comments were <not> received from the public during the public notice period. <The comments received did <not> include adverse comments on any applicable requirements of the permit. Changes to the permit were <not> made as a result of the comments.

4. Conclusion

Based on the information provided by Veolia ES Rolling Hills Landfill, Inc. the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 17100089-001 and this technical support document, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

Staff Members on Permit Team: Bonnie Nelson (permit writer/engineer)
Emily Hansen (enforcement)
Curt Stock (stack testing)
Fred Jenness (peer reviewer)

Attachments:
1. Facility Description, General Information (GI) and CD Forms
2. PTE Summary and Calculation Spreadsheets
3. LandGEM results and documentation

Attachment 3

From the **Abstract** of the LandGEM Users Guide

The Landfill Gas Emissions Model (LandGEM) is an automated estimation tool with a Microsoft Excel interface that can be used to estimate emission rates for total landfill gas, methane, carbon dioxide, nonmethane organic compounds, and individual air pollutants from municipal solid waste landfills. This guide provides step-by-step guidance for using this software application, as well as an appendix containing background information on the technical basis of LandGEM. LandGEM can use either site-specific data to estimate emissions or default parameters if no site-specific data are available. The model contains two sets of default parameters, CAA defaults and inventory defaults. The CAA defaults are based on federal regulations for MSW landfills laid out by the Clean Air Act (CAA) and can be used for determining whether a landfill is subject to the control requirements of these regulations. The inventory defaults are based on emission factors in EPA's *Compilation of Air Pollutant Emission Factors (AP-42)* and can be used to generate emission estimates for use in emission inventories and air permits in the absence of site-specific test data.

From **Overview of How LandGEM Works – Users Guide**

LandGEM (EPA model) is an automated tool for estimating emission rates for total landfill gas, methane, carbon dioxide, nonmethane organic compounds (NMOCs), and individual air pollutants from MSW landfills. Landfill owners and operators can use LandGEM to determine if a landfill is subject to the control requirements of the federal New Source Performance Standards (NSPS) for new MSW landfills (40 CFR 60 Subpart WWW), the federal Emission Guidelines (EG) for existing MSW landfills (40 CFR Subpart Cc), or the National Emission Standards for Hazardous Air Pollutants (NESHAP) for MSW landfills (40 CFR Subpart AAAA).

LandGEM can use either site-specific data to estimate emissions or default parameters if no site-specific data are available. LandGEM contains two sets of default parameters.

Bonnie - Here is a copy of what I referenced during our meeting on Wednesday regarding use of LandGEM for NMOC estimating. If you have further questions, please give me a call. Scott is our LFG expert and did the modeling for this project; you can also contact him at 608-833-6846.

Fred J. Doran
R. W. Beck
1380 Corporate Center Curve, Suite 305
St. Paul, MN 55121
651-994-8415
651-994-8396 FAX

From: Coon, Scott
Sent: Tuesday, September 05, 2006 9:36 PM
To: 'Connie Doran'; Doran, Fred
Subject: Use of LandGEM

This is the best information I have. The description Bonnie quotes under 60.754 was from the original 1996 Version of the CAA and NSPS requirements. This was before LandGEM was released. While there is no direct comparison between the LandGEM equation and that referenced in 60.754, they are nearly identical. The LandGEM model is basically a third generation version of the original which the EPA supports as a refinement and more accurate modeling tool. I've attached both the LandGEM user's guide and a word document which highlights it's use. The users guide specifically states that the LandGEM model can be used for determining compliance with the NSPS -EG, CAA.

We have modeled MNOC emissions for NSPS purposes seveal times, in several States, and in all but one case, we used the LandGEM model. The exception was Little Rock which was modeled in 1996 using the 60.754 version of the equation, before LandGEM was released (and we subsequently updated the estimate using LandGEM). I have seen literally dozens of compliance determinations from numerous states and numerous engineering firms. I do not remember one, not using LandGEM. It is ubiquitous in use as a compliance determination tool.

I hope this helps.

Scott
<<landgem-v302-guide.pdf>> <<Landgem Docl.doc>>