

AIR EMISSION PERMIT NO. 08500047- 003
(MODERATE AMENDMENT)

IS ISSUED TO

Waste Management, Inc – Spruce Ridge Resource Management Facility (SRRMF)
12755 137th Street
Glencoe, McLeod County, MN 55336

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):

Application Type	Application Date	Permit Number
Total Facility Operating Permit	06/14/1996	08500047-001
Moderate Amendment	02/01/2007	08500047-003

This permit supersedes permit number 08500047-002 and authorizes the Permittee to operate and construct 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 Permit; Pt 70/True Minor for New Source Review (NSR)	Moderate Amendment
Issue Date: 03/21/2005	Issue Date: March 17, 2008
Expiration: 03/21/2010	

All Title I Conditions do not expire.

Jeff J. Smith, Manager
Air Quality Permits Section
Industrial Division

for Brad Moore
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:

This facility is a municipal solid waste landfill with a design capacity greater than 2.5 million megagrams and greater than 2.5 million cubic meters and with nonmethane organic compound emissions greater than 50 megagrams per year for the term of this permit. This facility first accepted MSW in 1970 and thus is subject to Minnesota's standards of performance for existing landfills, Minn. R. 7011.3500 – 7011.3510.

AMENDMENT DESCRIPTION:**Permit Action 002:**

This permit action is an administrative amendment. The Permittee is requesting an extension on the annual calibration of monitoring equipment requirement.

Permit Action 003:

This permit action is a moderate amendment to the facility's existing Part 70 permit.

This facility currently has a landfill gas collection system consisting of gas collection wells and an open flare. The gas collection system and flare were installed in September of 1996, with initial startup occurring on September 20, 1996. The main sources of air emissions at the facility are volatile organic compounds (VOC) and volatile hazardous air pollutant (HAP) emissions from gas generation from the landfilled waste that consists of municipal solid waste, secondary emissions of carbon monoxide (CO) and nitrogen oxides (NO_x) from the landfill gas (LFG) combustion in the flare, and fugitive particulate from the unpaved roadways and the bulldozer operations on site. The flare has a capacity of 1,620 scfm and operates at a temperature of approximately 1400 degrees Fahrenheit.

Rather than continuing to burn the collected LFG in the existing flare, Spruce Ridge intends to install a LFG-to-energy plant that includes up to four Caterpillar 3516 engine/generator sets to convert the energy content of the LFG into electricity that will be distributed to the grid. The LFG will be sent through a treatment system prior to combustion in the engines, which includes filtering, cooling, dewatering, and compression. The flare will be retained and used as a back-up control system in the event the gas treatment system and/or engines are not operational. Emissions increases consist of combustion byproducts from the engines, primarily CO and NO_x.

Permit and Amendment History			
Permit Type	Application Date	Issuance Date	Permit Action Number
Total Facility Operating Permit	06/14/1996	03/21/2005	001
Administrative Amendment	11/14/2005	12/20/2005	002
Moderate Amendment	02/01/2007	See Above	003

TABLE A: LIMITS AND OTHER REQUIREMENTS

A-1

03/17/08

Facility Name: Waste Management Inc - SRRMF

Permit Number: 08500047 - 003

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
AIR POLLUTION CONTROL EQUIPMENT AND FUGITIVE EMISSIONS CONTROL REQUIREMENTS	hdr
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 shall include a preventative maintenance program for that equipment, a description of (the minimum but not necessarily the only) corrective actions to be taken to restore the equipment 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 the records kept to demonstrate plan implementation.	Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
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.	For equipment subject to NSPS: 40 CFR Section 60.12. For all equipment: Minn. R. 7011.0020
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
MONITORING REQUIREMENTS	hdr
Monitoring Equipment Calibration: Annually calibrate all required monitoring equipment.	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)
NOTIFICATIONS	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 owner or operator 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 owner or operator shall inform the Commissioner of the cause of the shutdown and the estimated duration. The owner or operator 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 owner or operator. 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 owner or operator shall inform the Commissioner of the cause of the breakdown and the estimated duration. The owner or operator shall notify the Commissioner when the breakdown is over.	Minn. R. 7019.1000, subp. 2
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
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

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-2**

03/17/08

Facility Name: Waste Management Inc - SRRMF

Permit Number: 08500047 - 003

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
RECORDKEEPING	hdr
Record keeping: Retain all records at the stationary source for a period of five 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)
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)
PERFORMANCE TESTING	hdr
Performance Testing: Conduct all performance tests in accordance with Minn. R. ch. 7017 unless otherwise noted in Tables A, B, and/or C.	Minn. R. ch. 7017
Performance Test Notifications and Submittals: Performance Tests are due as outlined in Tables A and B of the permit. See Table B for additional testing requirements. Performance Test Notification (written): due 30 days before each Performance Test Performance Test Plan: due 30 days before each Performance Test Performance Test Pre-test Meeting: due 7 days before each Performance Test Performance Test Report: due 45 days after each Performance Test Performance Test Report - Microfiche Copy: due 105 days after each Performance Test The Notification, Test Plan, and Test Report may be submitted in alternative format as allowed by Minn. R. 7017.2018.	For equipment subject to NSPS: 40 CFR Section 60.8(a) regarding performance test reports; 40 CFR Section 60.8(c) regarding information to be supplied; 40 CFR Section 60.8(d) regarding 30-day notification. For all equipment: Minn. R. 7017.2030, subp. 1-4; Minn. R. 7017.2018; Minn. R. 7017.2035, subp. 1-2
Limits set as a result of a performance test (conducted before or after permit issuance) apply until superseded as stated in the MPCA's Notice of Compliance letter granting preliminary approval. Preliminary approval is based on formal review of a subsequent performance test on the same unit as specified by Minn. R. 7017.2025, subp. 3. The limit is final upon issuance of a permit amendment incorporating the change.	Minn. R. 7017.2025, subp. 3
APPLICATIONS	hdr
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
MISCELLANEOUS	hdr
The Permittee shall comply with the General Conditions listed in Minn. R. 7007.0800, subp. 16.	Minn. R. 7007.0800, subp.16
Extension Request: 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. 7007.1400, subp. 1(H)
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)
Emission Inventory Report: due 91 days after end of each calendar year following permit issuance. To be submitted on a form approved by the Commissioner.	Minn. R. 7019.3000 through Minn. R. 7019.3010
Emission Fees: due 60 days after receipt of an MPCA bill.	Minn. R. 7002.0005 through Minn. R. 7002.0095
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 through Minn. R. 7030.0080

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-3**

03/17/08

Facility Name: Waste Management Inc - SRRMF

Permit Number: 08500047 - 003

Subject Item: GP 001 Landfill, Gas Collection and Treatment Systems**Associated Items:** CE 002 Dust Suppression by Water Spray

CE 003 Dust Suppression by Water Spray

CE 008 Landfill Gas Treatment System

EU 002 Landfill Gas Collection System

FS 001 Unpaved Roads

FS 002 Bulldozer Operations

FS 003 Leaks from Valves & Seals

What to do	Why to do it
A. STANDARDS FOR AIR EMISSIONS	hdr
A.01. Design and installation	hdr
An active collection and control system that captures the gas generated within the landfill as required by 40 CFR Section 60.752(b)(2)(ii)(A) and 40 CFR Section 60.752(b)(2)(iii).	40 CFR Section 60.752(b)(2)(ii); Minn. R. 7011.3510
CONTINUED The active collection system shall: (1) Be designed to handle the maximum expected gas flow rate from the entire area of the landfill that warrants control over the intended use period of the gas control or treatment system equipment; (2) Collect gas from each area, cell, or group of cells in the landfill in which the initial solid waste has been placed for a period of: (i) 5 years or more if active; or (ii) 2 years or more if closed or at final grade. (3) Collect gas at a sufficient extraction rate; (4) Be designed to minimize off-site migration of subsurface gas.	CONTINUED: 40 CFR Section 60.752(b)(2)(ii); Minn. R. 7011.3510
The collection and control system must extend into each new cell or area of the bioreactor prior to initiating liquids addition in that area, instead of the schedule in 40CFR 60.752(b)(2)(ii)(A)(2).	40 CFR Section 63.1955(d)(2); Minn. R. 7011.7390
A.02. Emission limits	hdr
Route all the collected gas to a control system that complies with the requirements of this section. Route the collected gas to a treatment system that processes the collected gas for subsequent sale or use. All emissions from any atmospheric vent from the gas treatment system shall be subject to the requirements of paragraph (b)(2)(iii) (A) or (B) of 40 CFR Section 60.752.	40 CFR Section 60.752(b)(2)(iii)(C); Minn. R. 7011.3510
When not routed through the gas treatment system, all collected gas shall be routed to an open flare designed and operated in accordance with Section 60.18 except as noted in Section 60.754(e).	40 CFR Section 60.752(b)(2)(iii)(A) ; Minn. R. 7011.3510
A.03. System operation	hdr
The reduction efficiency or parts per million by volume are established by an initial performance testing or subsequent performance testing, using the test methods specified in 40 CFR Section 60.754(d). [reference C. TEST METHODS AND PROCEDURES] If the Permittee chooses to measure the reduction efficiency described above, inlet gas shall be sampled immediately upstream of the control device to minimize any effects of dilution due to air infiltration. The control device shall be operated within the parameter ranges established during the initial or most recent performance test. The operating parameters to be monitored are specified in 40 CFR Section 60.756.	40 CFR Section 60.752(b)(2)(iii)(B); Minn. R. 7011.3510
Operate the collection and control device installed to comply with 40 CFR pt. 60, subp. WWW, in accordance with the provisions of 40 CFR Section 60.753 [B. OPERATIONAL STANDARDS FOR COLLECTION AND CONTROL SYSTEMS], 40CFR Section 60.755 [D. COMPLIANCE PROVISIONS] and 40 CFR Section 60.756 [E. MONITORING OF OPERATIONS].	40 CFR Section 60.752(b)(2)(iv) ; Minn. R. 7011.3510
A.04. System retirement	hdr
The collection and control system may be capped or removed provided that all the conditions of paragraphs (A), (B), and (C) below are met: (A) The landfill shall be a closed landfill as defined in 40 CFR Section 60.751. A closure report shall be submitted as provided in 40 CFR Section 60.757(d); (B) The collection and control system shall have been in operation a minimum of 15 years; and (C) Following the procedures specified in 40 CFR Section 60.754(b) [NMOC emission calculations], 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)(v); 40 CFR Section 63.1947(c); Minn. R. 7011.7390; Minn. R. 7011.3510

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-4**

03/17/08

Facility Name: Waste Management Inc - SRRMF

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When the MSW landfill is closed, the Permittee is no longer subject to the requirement to maintain an operating permit under 40 CFR pts. 70 or 71 for the landfill if the landfill is not otherwise subject to the requirements of either 40 CFR pt. 70 or 40 CFR pt. 71 and if the Permittee meets the conditions for control system removal specified in 40 CFR Section 60.752(b)(2)(v).	40 CFR Section 60.752(d); Minn. R. 7011.3510
B. OPERATIONAL STANDARDS FOR COLLECTION AND CONTROL SYSTEMS	hdr
(additional limits and requirements under G. RECORDKEEPING)	hdr
Operate the collection system such that gas is collected from each area, cell, or group of cells in the MSW landfill in which solid waste has been in place for: (1) 5 years or more if active; or (2) 2 years or more if closed or at final grade	40 CFR Section 60.753(a); Minn. R. 7011.3510
Operate the system such that all collected gases are vented to a control system designed and operated in compliance with 40 CFR Section 60.752(b)(2)(iii) [Control equipment design]. In the event the collection or control system is inoperable, the gas mover system shall be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere shall be closed within 1 hour.	40 CFR Section 60.753(e); Minn. R. 7011.3510
Operate the control or treatment system at all times when the collected gas is routed to the system.	40 Section 60.753(f); Minn. R. 7011.3510
B.01. Operational Limits for the Collection System	hdr
If monitoring demonstrates that the operational requirements below for pressure, temperature, oxygen/nitrogen, or surface methane are not met, corrective action shall be taken as specified in 40 CFR Section 60.755(a)(3) through (5) or 40 CFR Section 60.755(c). If corrective actions are taken as specified in 40 CFR Section 60.755, the monitored exceedance is not a violation of the operational requirements of 40 CFR Section 60.753.	40 CFR Section 60.753(g); Minn. R. 7011.3510
The Permittee may establish a higher operating temperature, nitrogen, or oxygen value at a particular well. A higher operating value demonstration shall show supporting data that the elevated parameter does not cause fires or significantly inhibit anaerobic decomposition by killing methanogens. Request made to MPCA for alternate operating temperatures, nitrogen values, or oxygen values for a particular well will be kept on file at the facility. Requests made to the MPCA for alternate operating values will be assumed to be acceptable unless the facility is otherwise directed by MPCA.	40 CFR Section 60.753(c); Minn. R. 7011.3510 regarding changes to oxygen and temperature limits
B.01.a. Pressure at wellhead	hdr
Operate the collection system with negative pressure at each wellhead except under the following conditions: (1) A fire or increased well temperature. The owner or operator shall record instances when positive pressure occurs in efforts to avoid a fire. These records shall be submitted with the annual reports as provided in 40 CFR Section 60.757(f)(1); (2) Use of a geomembrane or synthetic cover. The owner or operator shall develop acceptable pressure limits in the design plan; (3) A decommissioned well. A well may experience a static positive pressure after shut down to accommodate for declining flows. All design changes shall be submitted for approval.	40 CFR Section 60.753(b); Minn. R. 7011.3510
B.01.c. Temperature at wellhead	hdr
Temperature: less than or equal to 55.0 degrees C (131.0 degrees F) for each interior wellhead in the collection system, unless a higher operating temperature value at a particular well has been approved.	40 CFR Section 60.753(c); Minn. R. 7011.3510 regarding temperature limits
Specific wells may operate at temperatures up to 62.0 degrees C (145.0 degrees F), these wells must be identified and have prior approval of the Commissioner.	CONTINUED 40 CFR Section 60.753(c); Minn. R. 7011.3510 regarding temperature limits
B.01.c. Oxygen/nitrogen at wellhead	hdr
For each interior wellhead in the collection system, Oxygen: less than 5 percent or Nitrogen: less than 20 percent unless a higher operating temperature value at a particular well has been approved.	40 CFR Section 60.753(c); Minn. R. 7011.3510 regarding oxygen/nitrogen limits
For each interior wellhead, the nitrogen level shall be determined using Method 3C	40 CFR Section 60.753(c); Minn. R. 7011.3510 regarding nitrogen monitoring
The oxygen shall be determined by an oxygen meter using Method 3A or 3C except that: (i) The span shall be set so that the regulatory limit is between 20 and 50 percent of the span; (ii) A data recorder is not required; (iii) Only two calibration gases are required, a zero and span, and ambient air may be used as the span; (iv) A calibration error check is not required; (v) The allowable sample bias, zero drift, and calibration drift are plus-or-minus 10 percent.	40 CFR Section 60.753(c); Minn. R. 7011.3510 regarding oxygen monitoring
B.01.d. Surface methane	hdr
Operate the collection system so that the methane concentration is less than 500 parts per million above background at the surface of the landfill.	40 CFR Section 60.753(d); Minn. R. 7011.3510 regarding the methane limit
B.02. Evaluating surface methane	hdr

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-5**

03/17/08

Facility Name: Waste Management Inc - SRRMF

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To determine if the surface methane level is exceeded, the Permittee shall conduct surface testing around the perimeter of the collection area and along a pattern that traverses the landfill at 30 meter intervals and where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover. The Permittee may establish an alternative traversing pattern that ensures equivalent coverage. A surface monitoring design plan shall include a topographical map with the monitoring route and the rationale for any site-specific deviations from the 30 meter intervals.	40 CFR Section 60.753(d); Minn. R. 7011.3510
CONTINUED The Permittee shall conduct a visual inspection of the dangerous areas excluded from the surface scan route.	CONTINUED 40 CFR Section 60.753(d); Minn. R. 7011.3510
CONTINUED If, at any time, evidence of leaking landfill gas is present (e.g., hissing sounds, vegetative damage, leachate outbreaks, odors), the Permittee shall monitor surface emissions in that area to determine if an exceedance of the methane surface emission limit is occurring.	CONTINUED 40 CFR Section 60.753(d); Minn. R. 7007.0800, subp. 2; Minn. R. 7011.3510
CONTINUED The Permittee may exclude the following from the surface testing pattern: - roads; - the active area; - truck traffic areas; - slopes steeper than or equal to 4:1; - areas with ongoing construction or reconstruction of the gas collection system	CONTINUED 40 CFR Section 60.753(d); 40 CFR Section 60.752(b)(2)(i); Minn. R. 7011.3510 regarding alternatives
C. TEST METHODS AND PROCEDURES	hdr
After the installation of a collection and control system in compliance with 40 CFR Section 60.755, the Permittee shall calculate the NMOC emission rate for purposes of determining when the system can be removed as provided in 40 CFR Section 60.752(b)(2)(v) by following the procedures of 40 CFR Section 60.754(b).	40 CFR Section 60.754(b); Minn. R. 7011.3510
When calculating emissions for PSD purposes, the Permittee shall estimate the NMOC emission rate for comparison to the PSD major source and significance levels in 40 CFR Section 51.166 or 40 CFR Section 52.21 using AP-42, Section 2.4 (4/95 AP-42), or other approved measurement procedures.	40 CFR Section 60.754(c); Minn. R. 7011.3510
D. COMPLIANCE PROVISIONS	hdr
At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions, in accordance with 40 CFR Section 60.11(d).	40 CFR Section 60.11(d); Minn. R. 7017.2015, subp. 2(B)
D.01 Well parameters	hdr
For the purpose of demonstrating whether the gas collection system flow rate is sufficient to determine compliance with 40 CFR Section 60.752(b)(2)(ii)(A)(3) [Collect at a sufficient rate], the Permittee shall measure guage pressure in the gas collection header at each individual well, monthly.	40 CFR Section 60.755(a)(3); Minn. R. 7011.3510 regarding requirement to monitor
If a positive pressure exists in the gas collection header at an individual well, action shall be initiated to correct the exceedance within 5 calendar days, except for the conditions allowed by this permit. If negative pressure cannot be achieved without excess air infiltration within 15 calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial measurement of positive pressure. Any attempted corrective measure shall not cause exceedances of other operational or performance standards. An alternative timeline for correcting the exceedance may be submitted for approval. The Permittee is not required to expand the system as required above during the first 180 days after gas collection system startup.	40 CFR Section 60.755(a)(3) regarding response to positive pressure; 40 CFR Section 60.755(a)(4); Minn. R. 7011.3510
For the purpose of identifying whether excess air infiltration into the landfill is occurring, the Permittee shall monitor each well monthly for temperature and nitrogen or oxygen as provided in 40 CFR Section 60.753(c) [Wellhead monitoring].	40 CFR Section 60.755(a)(5); Minn. R. 7011.3510 regarding requirement to monitor
If a well exceeds operating parameter limits for temperature or nitrogen or oxygen, action shall be initiated to correct the exceedance within 5 calendar days. If correction of the exceedance cannot be achieved within 15 calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial exceedance. Any attempted corrective measure shall not cause exceedances of other operational or performance standards. An alternative timeline for correcting the exceedance may be submitted for approval.	40 CFR Section 60.755(a)(5); Minn. R. 7011.3510 regarding response to exceedances
For purposes of compliance with 40 CFR Section 60.753(a) [Operate to collect all gas], the Permittee shall place each well or design component as specified in the approved design plan as provided in 40 CFR Section 60.752(b)(2)(i) [Design submittal]. Each well shall be installed no later than 60 days after the date on which the initial solid waste has been in place for a period of: (1) 5 years or more if active; or (2) 2 years or more if closed or at final grade.	40 CFR Section 60.755(b); Minn. R. 7011.3510

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-6**

03/17/08

Facility Name: Waste Management Inc - SRRMF

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D.02. Surface methane	hdr
D.02.a. Surface monitoring methodology	hdr
After installation of the collection system, the Permittee shall monitor surface concentrations of methane along the entire perimeter of the collection area and along a pattern that traverses the landfill at 30 meter intervals (or a site-specific established spacing) for each collection area on a quarterly** basis using an organic vapor analyzer, flame ionization detector, or other portable monitor meeting the specifications provided in 40 CFR Section 60.755(d). ** Or in accordance with the timetable established in the approved collection and control system design plan required by 40 CFR Section 60.752(b)(2)(i).	40 CFR Section 60.755(c)(1); Minn. R. 7011.3510
Each owner or operator of a landfill that must monitor surface methane concentrations shall comply with 40 CFR Section 60.755(c)(1), except that the owner or operator shall conduct the monitoring at least three times per year, once during each of the following time periods: March 14 to May 14, June 21 to September 23, and October 21 to November 21.	Minn. R. 7011.3505, subp. 2
The background concentration shall be determined by moving the probe inlet upwind and downwind outside the boundary of the landfill at a distance of at least 30 meters from the perimeter wells.	40 CFR Section 60.755(c)(2); Minn. R. 7011.3510
Surface emission monitoring shall be performed in accordance with section 4.3.1 of Method 21 of 40 CFR pt. 60, Appendix A, except that the probe inlet shall be placed within 5 to 10 centimeters of the ground. Monitoring shall be performed during typical meteorological conditions.	40 CFR Section 60.755(c)(3); Minn. R. 7011.3510
D.02.b. Excess methane detection	hdr
For any reading of 500 parts per million or more above background at any location, actions specified in item (i) through (v) below shall be taken. As long as the specified actions are taken, the exceedance is not a violation of the operational requirements of 40 CFR Section 60.753(d) [Surface methane limit].	40 CFR Section 60.755(c)(4); Minn. R. 7011.3510
CONTINUED (i) The location of each monitored exceedance shall be marked and the location recorded.	CONTINUED 40 CFR Section 60.755(c)(4); Minn. R. 7011.3510
CONTINUED (ii) Cover maintenance or adjustments to the vacuum of the adjacent wells to increase the gas collection in the vicinity of each exceedance shall be made and then the location shall be re-monitored. The Permittee will log the range of days available for the surface monitoring, pursuant to 40 CFR Section 60.755(c)(1) or 40 CFR Section 60.756(f); the scheduled date of the surface monitoring; a 5-day weather forecast on the scheduled date, together with a 5-day weather forecast from all earlier days within the range of days available; the current weather conditions; and the cap conditions. The log will be kept with the NSPS files.	CONTINUED 40 CFR Section 60.755(c)(4); 40 CFR Section 60.753(d); Minn. R. 7011.3510 regarding alternatives to timelines
CONTINUED The location shall be re-monitored within 10 calendar days of detecting the exceedance, or the log will include a justification of why the additional time for repairs is needed, and the date the repairs are made will be documented. The remonitoring of the cover after repairs are made will occur as quickly as possible. In no instance will the delay in remonitoring exceed 30 days.	CONTINUED 40 CFR Section 60.755(c)(4); 40 CFR Section 60.753(d); Minn. R. 7011.3510 regarding alternatives to timelines
CONTINUED (iii) If the re-monitoring of the location shows a second exceedance, additional corrective action shall be taken and the location shall be monitored again within 10 days of the second exceedance. If the re-monitoring shows a third exceedance for the same location, the action specified in 40 CFR Section 40.755(c)(4)(v) shall be taken, and no further monitoring of that location is required until the action specified in 40 CFR Section 40.755(c)(4)(v) has been taken.	CONTINUED 40 CFR Section 60.755(c)(4); Minn. R. 7011.3510
CONTINUED (iv) Any location that initially showed an exceedance but has a methane concentration less than 500 ppm methane above background at the 10-day re-monitoring specified in 40 CFR Section 60.755(c)(4) (ii) or (iii) shall be re-monitored 1 month (no fewer than 20 days but no more than 30 days) from the initial exceedance. If the 1-month remonitoring shows a concentration less than 500 parts per million above background, no further monitoring of that location is required until the next quarterly monitoring period. If the 1-month remonitoring shows an exceedance, the actions specified in 40 CFR Section 60.755(c)(4) (iii) or (v) shall be taken.	CONTINUED 40 CFR Section 60.755(c)(4); 40 CFR Section 60.752(b)(2)(i); Minn. R. 7011.3510 regarding alternatives to timelines
CONTINUED (v) For any location where monitored methane concentration equals or exceeds 500 parts per million above background three times within a quarterly period, a new well or other collection device shall be installed within 120 calendar days of the initial exceedance. An alternative remedy to the exceedance, such as upgrading the blower, header pipes or control device, and a corresponding timeline for installation may be submitted for approval.	CONTINUED 40 CFR Section 60.755(c)(4); Minn. R. 7011.3510
D.02.c. Monthly surface monitoring program	hdr
The Permittee shall implement a program to monitor for cover integrity and implement cover repairs as necessary on a monthly basis.	40 CFR Section 60.755(c)(5); Minn. R. 7011.3510
D.02.d. Analyzer requirements	hdr

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-7**

03/17/08

Facility Name: Waste Management Inc - SRRMF

Permit Number: 08500047 - 003

The portable analyzer shall meet the instrument specifications provided in section 3 of Method 21 of Appendix A of this part, except that "methane" shall replace all references to VOC.	40 CFR Section 60.755(d)(1); Minn. R. 7011.3510
The calibration gas shall be methane, diluted to a nominal concentration of 500 parts per million in air.	40 CFR Section 60.755(d)(2); Minn. R. 7011.3510
To meet the performance evaluation requirements in section 3.1.3 of Method 21 of 40 CFR pt. 60, Appendix A, the instrument evaluation procedures of section 4.4 of Method 21 of 40 pt. CFR 60, Appendix A shall be used.	40 CFR Section 60.755(d)(3); Minn. R. 7011.3510
The calibration procedures provided in section 4.2 of Method 21 of 40 CFR pt. 60, Appendix A shall be followed immediately before commencing a surface monitoring survey.	40 CFR Section 60.755(d)(4); Minn. R. 7011.3510
D.03. Applicability	hdr
The provisions of this permit applicable pursuant to 40 CFR pt. 60, subp. WWW, apply at all times, except during periods of start-up, shutdown, or malfunction, provided that the duration of start-up, shutdown, or malfunction shall not exceed 5 days for collection systems and shall not exceed 1 hour for treatment or control devices.	40 CFR Section 60.755(e); Minn. R. 7011.3510
D.04. Compliance and Deviations	hdr
D.04.a. Compliance with 40 CFR pt. 60, subp. WWW, including performance testing, monitoring of the collection system, continuous parameter monitoring, and other credible evidence, is a requirement for compliance with 40 CFR pt. 63, subp. AAAA.	40 CFR Section 63.1960; Minn. R. 7011.7390
D.04.b. CONTINUED Compliance demonstration with the operating conditions for control systems includes continuous parameter monitoring data, collected under 40 CFR Section 60.756(d) [devices other than an open flare or and enclosed combustor].	CONTINUED 40 CFR Section 63.1960; Minn. R. 7011.7390
D.04.c. CONTINUED If a deviation occurs, the Permittee has failed to meet the control device operating conditions described in 40 CFR pt. 63, subp. AAAA and have deviated from the requirements of 40 CFR pt. 63, subp. AAAA.	CONTINUED 40 CFR Section 63.1960; Minn. R. 7011.7390
D.04.d. CONTINUED Develop and implement a written startup, shutdown, and malfunction plan (SSMP) according to the provisions in 40 CFR Section 63.6(e)(3). A copy of the SSMP must be maintained on site. Failure to write, implement, or maintain a copy of the SSMP is a deviation. See also Subject Item: GP 004 Activities Subject to MACT (40 CFR pt. 63) in Table A for additional SSMP requirements.	CONTINUED 40 CFR Section 63.1960; Minn. R. 7011.7390
E. MONITORING OF OPERATIONS	hdr
E.01 Well Monitoring	hdr
Install a sampling port and a thermometer, other temperature measuring device, or an access port for temperature measurements at each wellhead and: (1) Measure the gauge pressure in the gas collection header on a monthly basis as provided in 40 CFR Section 60.755(a)(3); and (2) Monitor nitrogen or oxygen concentration in the landfill gas on a monthly basis as provided in 40 CFR Section 60.755(a)(5); and (3) Monitor temperature of the landfill gas on a monthly basis as provided in 40 CFR Section 60.755(a)(5).	40 CFR Section 60.756(a); Minn. R. 7011.3510
E.02. Control device monitoring	hdr
E.02.a. Each owner or operator seeking to comply with Section 60.752(b)(2)(iii) using an open flare shall install, calibrate, maintain, and operate according to the manufacturer's specifications the following equipment: A heat sensing device, such as an ultraviolet beam sensor or thermocouple, at the pilot light or the flame itself to indicate the continuous presence of a flame.	40 CFR Section 60.756(c)(1); 40 CFR 63.1960; Minn. R. 7011.7390; Minn. R. 7011.3510
E.02.b. Each owner or operator seeking to comply with Section 60.752(b)(2)(iii) using an open flare shall install, calibrate, maintain, and operate according to the manufacturer's specifications the following equipment: A device that records flow to or bypass of the flare. The owner or operator shall either: (i) Install, calibrate, and maintain a gas flow rate measuring device that shall record the flow to the control device at least every 15 minutes; or (ii) Secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line.	40 CFR Section 60.756(c)(2) ; Minn. R. 7011.3510

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-8**

03/17/08

Facility Name: Waste Management Inc - SRRMF

Permit Number: 08500047 - 003

E.02.c. Each landfill owner or operator seeking to comply with 40 CFR Section 60.752(b)(2)(iii), may confirm that there is no means to bypass the control device in the design plan, submitted in accordance with 40 CFR Section 60.752(b)(2)(i), in lieu of complying with the requirements in 40 CFR Sections 60.756(b)(2) and 60.756(c)(2).	Minn. R. 7011.3505, subp 3; Minn. R. 7011.3510
E.02.d. Each owner or operator seeking to demonstrate compliance with 40 CFR Section 60.752(b)(2)(iii) using a device other than an open flare or an enclosed combustor shall provide information satisfactory to the Administrator as provided in 40 CFR Section 60.752(b)(2)(i)(B) describing the operation of the control device, the operating parameters that would indicate proper performance, and appropriate monitoring procedures. The Administrator shall review the information and either approve it, or request that additional information be submitted. The Administrator may specify additional appropriate monitoring procedures.	40 CFR Section 60.756(d); 40 CFR Section 63.1960; Minn. R. 7011.7390; Minn. R. 7011.3510 regarding gas treatment system
The information submitted as required by 40 CFR Section 60.756(d) shall comply with Minn. R. 7007.0800 Subp. 4(B). The device shall be operated and monitored according to the information submitted as required by 40 CFR Section 60.756(d) and Minn. R. 7007.0800 Subp. 4(B) until otherwise notified by the Administrator. The device shall be operated and monitored according to the information submitted as required by 40 CFR Section 60.756(d) and Minn. R. 7007.0800 Subp. 4(B) starting on or before submittal of the information.	Minn. R. 7007.0800 Subp. 4(B)
E.03. Surface methane monitoring	hdr
Monitor surface concentrations of methane according to the instrument specifications and procedures provided in 40 CFR Section 60.755(d) [Surface monitoring instrumentation]. Any closed landfill that has no monitored exceedances of the operational standard in three consecutive quarterly monitoring periods may skip to annual monitoring. Any methane reading of 500 ppm or more above background detected during the annual monitoring returns the frequency for that landfill to quarterly monitoring.	40 CFR Section 60.756(f); Minn. R. 7011.3510
F. REPORTING REQUIREMENTS	hdr
F.01. System retirement	hdr
The Permittee shall submit a closure report within 30 days of waste acceptance cessation. Additional information may be requested as may be necessary to verify that permanent closure has taken place in accordance with the requirements of 40 CFR Section 258.60. If a closure report has been submitted, no additional wastes may be placed into the landfill without filing a notification of modification as described under 40 CFR Section 60.7(a)(4).	40 CFR Section 60.757(d); Minn. R. 7011.3510
Submittal: due 30 days before Equipment Removal and/or Dismantlement. The Permittee shall submit an equipment removal report 30 days prior to removal or cessation of operation of the control equipment. (1) The equipment removal report shall contain all of the following items: (i) A copy of the closure report submitted in accordance with 40 CFR Section 60.757(d); (ii) A copy of the initial performance test report demonstrating that the 15 year minimum control period has expired; and (iii) Dated copies of three successive NMOC emission rate reports demonstrating that the landfill is no longer producing 50 megagrams or greater of NMOC per year. (2) Additional information may be requested as may be necessary to verify that all of the conditions for removal in 40 CFR Section 60.752(b)(2)(v) [Removal criteria] have been met.	40 CFR Section 60.757(e); Minn. R. 7011.3510
F.02. Semi-annual report	hdr
The Permittee shall submit semi-annual reports of the recorded information in (1) through (6) below. The initial semi-annual report shall be submitted within 180 days of installation and start-up of the collection and control system, and shall include the initial performance test report required under 40 CFR Section 60.8. For devices other than enclosed combustion devices and flares, reportable exceedances are defined under 40 CFR Section 60.758(c).	40 CFR Section 60.757(f); 40 CFR Section 63.1980(e); 40 CFR Section 60.752(b)(2)(i); Minn. R. 7011.3510
CONTINUED (1) Value and length of time for exceedance of applicable parameters monitored under 40 CFR Section 60.756(a) [Wellhead temperature and nitrogen/oxygen] and 40 CFR Section 60.756(b) [Enclosed combustion temperature (or oxygen) and gas flow]. (2) Description and duration of all periods when the gas stream is diverted from the control device through a bypass line or the indication of bypass flow as specified under 40 CFR Section 60.756 [Monitoring of Operations]. (3) Description and duration of all periods when the control device was not operating for a period exceeding 1 hour and length of time the control device was not operating.	CONTINUED 40 CFR Section 60.757(f); 40 CFR Section 60.752(b)(2)(i); Minn. R. 7011.3510

TABLE A: LIMITS AND OTHER REQUIREMENTS
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Facility Name: Waste Management Inc - SRRMF

Permit Number: 08500047 - 003

CONTINUED (4) All periods when the collection system was not operating in excess of 5 days. (5) The location of each exceedance of the 500 parts per million methane concentration as provided in 40 CFR Section 60.753(d) [Surface monitoring] and the concentration recorded at each location for which an exceedance was recorded in the previous month. (6) The date of installation and the location of each well or collection system expansion added pursuant to 40 CFR Section 60.755(a)(3) [Additional well to achieve negative pressure], 40 CFR Section 60.755(b) [Design plan installation timetable], and 40 CFR Section 60.755(c)(4) [Surface leak corrections].	CONTINUED 40 CFR Section 60.757(f); Minn. R. 7011.3510
G. RECORDKEEPING	hdr
G.01. Recordkeeping under 40 CFR pt. 60	hdr
G.01.a. General Recordkeeping	hdr
Recordkeeping: Maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the facility including; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.	40 CFR Section 60.7(b); Minn. R. 7019.0100, subp. 1
Recordkeeping: Maintain a file of all measurements, maintenance, reports and records required under 40 CFR Section 60.7(f) for at least five years.	40 CFR Section 60.7(f); Minn. R. 7019.0100, subp. 1
Monitoring Data: Reduce all temperature monitoring device, and gas flow rate measuring device data to 1-hour averages, in accordance with 40 CFR Section 60.13(h). 1-hour averages shall be computed from four or more data points equally spaced over each 1-hour period.	40 CFR Section 60.13(h); Minn. R. 7017.1010, subp. 1(A) regarding continuous monitoring systems other than COMS
The Permittee shall keep for at least 5 years up-to-date, readily accessible, on-site records of the design capacity report which triggered 40 CFR 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
The Permittee 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 shall keep up-to-date, readily accessible records of the installation date and location of all newly installed collectors as specified under 40 CFR Section 60.755(b) [Design plan installation timetable]. (2) The Permittee 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) [Exclusion for nondegradable waste] as well as any nonproductive areas excluded from collection as provided in 40 CFR Section 60.759(a)(3)(ii) [Exclusion for nonproductive waste].	40 CFR Section 60.758(d); Minn. R. 7011.3510
The Permittee shall keep for at least 5 years up-to-date, readily accessible records of all collection and control system exceedances of the operational standards in 40 CFR Section 60.753 [Operational Standards], the reading in the subsequent month whether or not the second reading is an exceedance, and the location of each exceedance.	40 CFR Section 60.758(e); Minn. R. 7011.3510
G.01.b. Measurements during the initial performance test or compliance determination	hdr
The Permittee shall keep up-to-date, readily accessible records for the life of the control equipment of the data listed in (1) below as measured during the initial performance test or compliance determination. Records of subsequent tests or monitoring shall be maintained for a minimum of 5 years. Records of the control device vendor specifications shall be maintained until removal. (1) Regarding collection and control: (i) The maximum expected gas generation flow rate as calculated in 40 CFR Section 60.755(a)(1) [Ongoing rate calculations]. The Permittee may use another method to determine the maximum gas generation flow rate, if the method has been approved. (ii) The density of wells, horizontal collectors, surface collectors, or other gas extraction devices determined using the procedures specified in 40 CFR Section 60.759(a)(1) [Professional engineer certification].	40 CFR Section 60.758(b)(1); Minn. R. 7011.3510
Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with Section 60.752(b)(2)(iii)(A) through use of an open flare, the flare type (i.e., steam-assisted, air-assisted, or non-assisted), all visible emission readings, heat content determination, flow rate or bypass flow rate measurements, and exit velocity determinations made during the performance test as specified in Section 60.18; continuous records of the flare pilot flame or flare flame monitoring and records of all periods of operations during which the pilot flame of the flare flame is absent.	40 CFR Section 60.758(b)(4); Minn. R. 7011.3510
G.01.c. Continuous monitoring system record	hdr

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-10**

03/17/08

Facility Name: Waste Management Inc - SRRMF

Permit Number: 08500047 - 003

The Permittee shall keep for 5 years up-to-date, readily accessible continuous records of the equipment operating parameters specified to be monitored in 40 CFR Section 60.756 [Monitoring of Operations] as well as up-to-date, readily accessible records for periods of operation during which the parameter boundaries established during the most recent performance test are exceeded.	40 CFR Section 60.758(c); Minn. R. 7011.3510
G.01.c.(1). CONTINUED The following constitutes exceedances that shall be recorded and reported under 40 CFR Section 60.757(f) [Annual/semiannual report]:	CONTINUED 40 CFR Section 60.758(c); Minn. R. 7011.3510
G.01.c.(1)(a). The Permittee shall keep up-to-date, readily accessible continuous records of the indication of flow to the control device or the indication of bypass flow or records of monthly inspections of car-seals or lock-and-key configurations used to seal bypass lines, specified under 40 CFR Section 60.756.[Monitoring of Operations]	40 CFR Section 60.758(c)(2); Minn. R. 7011.3510
Each owner or operator seeking to comply with the provisions of this subpart by use of an open flare shall keep up-to-date, readily accessible continuous records of the flame or flare pilot flame monitoring specified under Section 60.756(c), and up-to-date, readily accessible records of all periods of operation in which the flame or flare pilot flame is absent.	40 CFR Section 60.758(c)(4); Minn. R. 7011.3510
G.02. Recordkeeping under 40 CFR pt. 63	hdr
If the Permittee adds any liquids other than leachate in a controlled fashion to the waste mass and does not comply with the bioreactor requirements in 40 CFR Section 63.1947, 40 CFR Section 63.1955(c) and 40 CFR Section 63.1980(c) through (f), the Permittee must keep a record of calculations showing that the percent moisture by weight expected in the waste mass to which liquid is added is less than 40 percent. The calculation must consider the waste mass, moisture content of the incoming waste, mass of water added to the waste including leachate recirculation and other liquids addition and precipitation, and the mass of water removed through leachate or other water losses. Moisture level sampling or mass balances calculations can be used. The Permittee must document the calculations and the basis of any assumptions. The Permittee must keep the record of the calculations until liquids addition ceases. This requirement is effective beginning February 1, 2005.	40 CFR Section 63.1980(g); 40 CFR Section 63.1945(b); Minn. R. 7011.7390 regarding compliance time
3-hour block averages are calculated in the same way as they are calculated in 40 CFR pt. 60, subp. WWW, except that the data collected during the events listed in items (a), (b), (c), and (d) below are not to be included in any average computed under 40 CFR pt. 60, subp. WWW: (a) Monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments. (b) Startups. (c) Shutdowns. (d) Malfunctions.	40 CFR Section 63.1975; Minn. R. 7011.7390
H. SPECIFICATIONS FOR ACTIVE COLLECTION SYSTEMS	hdr
The Permittee shall site active collection wells, horizontal collectors, surface collectors, or other extraction devices at a sufficient density throughout all gas producing areas using the following procedures, including all alternative procedures approved in the collection and control system design plan (Plan).	40 CFR Section 60.759(a); Minn. R. 7011.3510
CONTINUED (1) The collection devices within the interior and along the perimeter areas shall be certified to achieve comprehensive control of surface gas emissions by a professional engineer. The following issues shall be addressed in the design: depths of refuse, refuse gas generation rates and flow characteristics, cover properties, gas system expandability, leachate and condensate management, accessibility, compatibility with filling operations, integration with closure end use, air intrusion control, corrosion resistance, fill settlement, and resistance to the refuse decomposition heat.	CONTINUED 40 CFR Section 60.759(a); Minn. R. 7011.3510
CONTINUED (2) The sufficient density of gas collection devices determined in the Plan shall address landfill gas migration issues and augmentation of the collection system through the use of active or passive systems at the landfill perimeter or exterior.	CONTINUED 40 CFR Section 60.759(a); Minn. R. 7011.3510
CONTINUED (3) The placement of gas collection devices determined in the Plan shall control all gas producing areas, except as follows in items (i) and (ii) below: (i) Any segregated area of asbestos or nondegradable material may be excluded from collection if documented as provided under 40 CFR Section 60.758(d). The documentation shall provide the nature, date of deposition, location and amount of asbestos or nondegradable material deposited in the area, and shall be provided upon request. (ii) Any nonproductive area of the landfill may be excluded from control, provided that the total of all excluded areas can be shown to contribute less than 1 percent of the total amount of NMOC emissions from the landfill. The Permittee shall follow the procedures in 40 CFR Section 60.759(a)(3)(ii).	CONTINUED 40 CFR Section 60.759(a); Minn. R. 7011.3510

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-11**

03/17/08

Facility Name: Waste Management Inc - SRRMF

Permit Number: 08500047 - 003

The Permittee shall construct the gas collection devices using the following equipment or procedures: (1) The landfill gas extraction components shall be constructed of polyvinyl chloride (PVC), high density polyethylene (HDPE) pipe, fiberglass, stainless steel, or other nonporous corrosion resistant material of suitable dimensions to: convey projected amounts of gases; withstand installation, static, and settlement forces; and withstand planned overburden or traffic loads. The collection system shall extend as necessary to comply with emission and migration standards. Collection devices such as wells and horizontal collectors shall be perforated to allow gas entry without head loss sufficient to impair performance across the intended extent of control. Perforations shall be situated with regard to the need to prevent excessive air infiltration.	40 CFR Section 60.759(b); Minn. R. 7011.3510
CONTINUED (2) Vertical wells shall be placed so as not to endanger underlying liners and shall address the occurrence of water within the landfill. Holes and trenches constructed for piped wells and horizontal collectors shall be of sufficient cross-section so as to allow for their proper construction and completion including, for example, centering of pipes and placement of gravel backfill. Collection devices shall be designed so as not to allow indirect short circuiting of air into the cover or refuse into the collection system or gas into the air. Any gravel used around pipe perforations should be of a dimension so as not to penetrate or block perforations.	CONTINUED 40 CFR Section 60.759(b); Minn. R. 7011.3510
CONTINUED (3) Collection devices may be connected to the collection header pipes below or above the landfill surface. The connector assembly shall include a positive closing throttle valve, any necessary seals and couplings, access couplings and at least one sampling port. The collection devices shall be constructed of PVC, HDPE, fiberglass, stainless steel, or other nonporous material of suitable thickness.	CONTINUED 40 CFR Section 60.759(b); Minn. R. 7011.3510
The Permittee shall convey the landfill gas to a control system in compliance with 40 CFR Section 60.752(b)(2)(iii) [Control system] through the collection header pipe(s). The gas mover equipment shall be sized to handle the maximum gas generation flow rate expected over the intended use period of the gas moving equipment using the following procedures: (1) For existing collection systems, the flow data shall be used to project the maximum flow rate. If no flow data exists, the procedures in paragraph (2) below shall be used. (2) For new collection systems, the maximum flow rate shall be in accordance with 40 CFR Section 60.755(a)(1).	40 CFR Section 60.759(c); Minn. R. 7011.3510
I. DEFINITIONS	hdr
I.01. Deviation	hdr
Deviation means any instance in which an affected source subject to this subpart [40 CFR pt. 63, subp. AAAAA], or an owner or operator of such a source: (1) Fails to meet any requirement or obligation established by this subpart, including, but not limited to, any emissions limitation (including any operating limit) or work practice standard; (2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or (3) Fails to meet any emission limitation, (including any operating limit), or work practice standard in this subpart during SSM [startup, shutdown, or malfunction], regardless of whether or not such failure is permitted by this subpart.	40 CFR Section 63.1990 for "Deviation"; Minn. R. 7011.7390
A deviation includes the definition contained in 40 CFR Section 63.1990. For the purposes (under 40 CFR pt. 63, subp. AAAAA) of the landfill monitoring and SSMP requirements, deviations include the items (a) through (c) below: (a) A deviation occurs when the control device operating parameter boundaries described in 40 CFR Section 60.758(c)(1) [exceedance recording/reporting] are exceeded. (b) A deviation occurs when 1 hour or more of the hours during the 3-hour block averaging period does not constitute a valid hour of data. A valid hour of data must have measured values for at least three 15-minute monitoring periods within the hour. (c) A deviation occurs when a SSMP is not developed, implemented, or maintained on site.	40 CFR Section 63.1965; Minn. R. 7011.7390
"Deviation" means any noncompliance with an applicable requirement or permit condition.	Minn. R. 7007.0100, subp. 8a
I.02. Emissions limitation	hdr
Emissions limitation means any emission limit, opacity limit, operating limit, or visible emissions limit.	40 CFR Section 63.1990 for "Emissions limitation"; Minn. R. 7011.7390
I.03. Work practice	hdr
Work practice standard means any design, equipment, work practice, or operational standard, or combination thereof, that is promulgated pursuant to section 112(h) of the Clean Air Act.	40 CFR Section 63.1990 for "Work practice"; Minn. R. 7011.7390
I.04. One-hour period (1-hour period)	hdr
One-hour period means any 60-minute period commencing on the hour.	40 CFR Section 63.1990 for "Work practice"; Minn. R. 7011.7390
I.05. Three-hour block average (or 3-hour block average)	hdr

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Waste Management Inc - SRRMF
Permit Number: 08500047 - 003

"Three-hour block average" (or "3-hour block average") means the average of all hourly emission rates measured over discrete three-hour periods beginning at midnight.	Minn. R. 7007.0100, subp. 7a; Minn. R. 7007.0800, subp. 2
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TABLE A: LIMITS AND OTHER REQUIREMENTS**A-13**

03/17/08

Facility Name: Waste Management Inc - SRRMF

Permit Number: 08500047 - 003

Subject Item: GP 002 Flare**Associated Items:** CE 001 Flaring

EU 001 Flare (burning LFG)

What to do	Why to do it
NOTE: This set of Group requirements regulates the open flare both as Control Equipment and as an Emission Unit. Additional requirements for the open flare are contained in the Subject Item: GP001 Landfill and Gas Collection System portion of this permit.	hdr
OPERATIONAL REQUIREMENTS	hdr
The Permittee shall operate and maintain the open flare in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff.	Minn. R. 7007.0800, subp. 14
Flares shall be designed and operated with no visible emissions as determined by the methods specified in paragraph (f), except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.	40 CFR 60.18(c)(1)
Flares used to comply with provisions of this subpart shall be operated at all times when emissions may be vented to them.	40 CFR 60.18(e)

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-14**

03/17/08

Facility Name: Waste Management Inc - SRRMF

Permit Number: 08500047 - 003

Subject Item: GP 003 ICE/Generator Sets (burning LFG)**Associated Items:** CE 004 Direct Flame Afterburner w/Heat Exchanger

CE 005 Direct Flame Afterburner w/Heat Exchanger

CE 006 Direct Flame Afterburner w/Heat Exchanger

CE 007 Direct Flame Afterburner w/Heat Exchanger

EU 003 Engine A

EU 004 Engine B

EU 005 Engine C

EU 006 Engine D

SV 002 Engine A

SV 003 Engine B

SV 004 Engine C

SV 005 Engine D

What to do	Why to do it
NOTE: This set of Group requirements regulates the ICE/Generators both as Control Equipment and as Emission Units.	hdr
A. EMISSION LIMITS	hdr
Opacity: less than or equal to 20.0 percent opacity once operating temperatures have been attained.	Minn. R. 7011.2300, subp. 1
Sulfur Dioxide: less than or equal to 0.50 lbs/million Btu heat input . Performance testing for sulfur dioxide is not required as long as the ICE/Generators burn only landfill gas.	Minn. R. 7011.2300, subp. 2
Fuel Source: Fuel sources shall be limited to treated landfill gas from the Spruce Ridge Resource Management Facility.	Minn. R. 7007.0800, subp. 2 and meets the SO2 requirements of Minn. R. 7011.2300 subp. 2
B. OPERATIONAL REQUIREMENTS	hdr
All collected gas combusted in these units shall be sent to a treatment system prior to combustion. The treatment system shall contain the following processes: filtering, cooling, dewatering, and compression. All emissions from any atmospheric vents from the gas treatment system shall be subject to the requirements of paragraph 40 CFR 60.752(b)(2)(iii)(A) or (B).	40 CFR Section 60.752(b)(2)(iii) EPA Waiver; Minn. R. 7011.3510
The Permittee shall operate and maintain the ICE/Generators in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff.	Minn. R. 7007.0800, subp. 14
If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must monitor and record your fuel usage daily with separate fuel meters to measure the volumetric flow rate of each fuel. In addition, you must operate your stationary RICE in a manner which reasonably minimizes HAP emissions.	40 CFR Section 63.6625(c)
C. PERFORMANCE TESTING	hdr
Initial Performance Test: due 90 days after Initial Startup to measure CO emissions from an ICE/Generator. This requirement applies to one representative ICE/Generator model. If different ICE/Generator models are installed, the initial performance test described above is required for one representative ICE/Generator model. For additional applicable performance test requirements, reference PERFORMANCE TESTING in Table A, Subject Item: Total Facility.	Minn. R. 7017.2020, subp. 1
Initial Performance Test: due 90 days after Initial Startup to measure NOx emissions from an ICE/Generator. This requirement applies to one representative ICE/Generator model. If different ICE/Generator models are installed, the initial performance test described above is required for one representative ICE/Generator model. For additional applicable performance test requirements, reference PERFORMANCE TESTING in Table A, Subject Item: Total Facility.	Minn. R. 7017.2020, subp. 1

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-15**

03/17/08

Facility Name: Waste Management Inc - SRRMF

Permit Number: 08500047 - 003

Initial Performance Test: due 90 days after Initial Startup to measure PM10 emissions from an ICE/Generator. This requirement applies to one representative ICE/Generator model. If different ICE/Generator models are installed, the initial performance test described above is required for one representative ICE/Generator model. For additional applicable performance test requirements, reference PERFORMANCE TESTING in Table A, Subject Item: Total Facility.	Minn. R. 7017.2020, subp. 1
Initial Performance Test: due 90 days after Initial Startup to measure mercury emissions from an ICE/Generator. This requirement applies to one representative ICE/Generator model. If different ICE/Generator models are installed, the initial performance test described above is required for one representative ICE/Generator model. For additional applicable performance test requirements, reference PERFORMANCE TESTING in Table A, Subject Item: Total Facility.	Minn. R. 7017.2020, subp. 1
Initial Performance Test: due 90 days after Initial Startup to measure arsenic emissions from an ICE/Generator. This requirement applies to one representative ICE/Generator model. If different ICE/Generator models are installed, the initial performance test described above is required for one representative ICE/Generator model. For additional applicable performance test requirements, reference PERFORMANCE TESTING in Table A, Subject Item: Total Facility.	Minn. R. 7017.2020, subp. 1
Initial Performance Test: due 90 days after Initial Startup to measure PAH emissions from an ICE/Generator. This requirement applies to one representative ICE/Generator model. If different ICE/Generator models are installed, the initial performance test described above is required for one representative ICE/Generator model. For additional applicable performance test requirements, reference PERFORMANCE TESTING in Table A, Subject Item: Total Facility.	Minn. R. 7017.2020, subp. 1
Initial Performance Test: due 90 days after Initial Startup to measure dioxin emissions from an ICE/Generator. This requirement applies to one representative ICE/Generator model. If different ICE/Generator models are installed, the initial performance test described above is required for one representative ICE/Generator model. For additional applicable performance test requirements, reference PERFORMANCE TESTING in Table A, Subject Item: Total Facility.	Minn. R. 7017.2020, subp. 1
One time testing may be required on subsequent ICE/Generators if the MPCA deems it necessary based on results from tests of previously installed ICE/Generators.	Minn. R. 7017.2020, subp. 1(F)
D. MONITORING	hdr
The permittee must monitor and record fuel usage daily with separate fuel meters to measure the volumetric flow rate of each fuel. In addition, the permittee must operate stationary RICE in a manner which reasonably minimizes HAP emissions.	40 CFR Section 63.6625(c); Minn. R. 7011.8150
The permittee must keep records of daily fuel usage monitors.	40 CFR Section 63.6655(c); Minn. R. 7011.8150
E. REPORTS/SUBMITTALS	hdr
The permittee does not need to comply with requirements in the General Provisions except for the initial notification requirements.	40 CFR Section 63.6665; Minn. R. 7011.8150
Notification should include information in 40 CFR Section 63.9(b)(2)(i) through (v), and a statement that stationary RICE have no additional requirements and explain the basis of the exclusion.	40 CFR Section 63.6645(f); Minn. R. 7011.8150
Compliance Report Content - No Deviations: The report shall contain the following information: 1. Company name and address; 2. Responsible official's statement certifying report content accuracy with official's name, title, and signature; 3. Report date and beginning and ending dates of reporting period; 4. All information in 40 CFR Section 63.10(d)(5)(i) for startup, shutdown, or malfunction for the reporting period (periodic startup, shutdown, and malfunction report); 5. A statement that no deviations occurred, if there were no deviations during the reporting period; and 6. A statement that there were no periods that the CMS was out-of-control, if there were no out-of-control periods during the reporting period.	40 CFR Sections 63.6650(c)(1) through (6); Minn. R. 7011.8150

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-16**

03/17/08

Facility Name: Waste Management Inc - SRRMF

Permit Number: 08500047 - 003

Compliance Report Content - Deviations: For each deviation from an emission or operating limitation, the Permittee shall include information from 40 CFR Section 63.6650(c)(1) through (4) and the following: 1. Date and start/stop time of each malfunction; 2. Date, time, and duration that each CMS was inoperative except for zero (low level) and high level checks; 3. Date, time, and duration that each CMS was out-of-control, including information in 40 CFR Section 63.8(c)(8); 4. Date and time each deviation started and stopped, and whether each deviation occurred during a malfunction or other during another period; 5. A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period;	40 CFR Sections 63.6650(e)(1) through (5); Minn. R. 7011.8150
CONTINUED 6. A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes; 7. A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the stationary RICE at which the CMS downtime occurred during that reporting period; 8. An identification of each parameter and pollutant that was monitored at the stationary RICE; 9. A brief description of the stationary RICE; 10. A brief description of the CMS; 11. The date of the latest CMS certification or audit; and 12. A description of any changes in CMS, processes, or controls since the last reporting period.	CONTINUED 40 CFR Sections 63.6650(e)(6) through (12); Minn. R. 7011.8150
(1) The first Compliance report must cover the period beginning on the initial startup date and ending on June 30 or December 31, whichever date is the first date following the end of the first calendar half after the initial startup date. (2) The first Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date follows the end of the first calendar half after the initial startup. (3) Each subsequent Compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31. (4) Each subsequent Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.	40 CFR Section 63.6650(b); Minn. R. 7011.8150

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-17**

03/17/08

Facility Name: Waste Management Inc - SRRMF

Permit Number: 08500047 - 003

Subject Item: GP 004 Activities Subject to MACT (40 CFR pt. 63)**Associated Items:** CE 001 Flaring

EU 001 Flare (burning LFG)

EU 002 Landfill Gas Collection System

What to do	Why to do it
The Permittee must comply with the following conditions.	40 CFR Section 63.1945(b); 40 CFR Section 63.1980(b); Minn. R. 7011.7390
A. PROHIBITED ACTIVITIES AND CIRCUMVENTION	hdr
Circumvention: No Permittee subject to the provisions of 40 CFR pt. 63 shall build, erect, install, or use any article, machine, equipment, or process to conceal an emission that would otherwise constitute noncompliance with a relevant standard. Such concealment includes, but is not limited to: (1) The use of diluents to achieve compliance with a relevant standard based on the concentration of a pollutant in the effluent discharged to the atmosphere; (2) The use of gaseous diluents to achieve compliance with a relevant standard for visible emissions	40 CFR Section 63.4(b); Minn. R. 7011.7000
Fragmentation: Fragmentation after November 15, 1990 which divides ownership of an operation, within the same facility among various owners where there is no real change in control, will not affect applicability. The Permittee must not use fragmentation or phasing of reconstruction activities (i.e., intentionally dividing reconstruction into multiple parts for purposes of avoiding new source requirements) to avoid becoming subject to new source requirements.	40 CFR Section 63.4(c); Minn. R. 7011.7000
B. PRECONSTRUCTION REVIEW AND NOTIFICATION REQUIREMENTS	hdr
Prior to construction or reconstruction of an "affected source" under the promulgated MACT standards, the Permittee must apply for and obtain an air emission permit.	40 CFR Section 63.5(b)(3); Minn. R. 7011.7000
C. COMPLIANCE WITH STANDARDS AND MAINTENANCE REQUIREMENTS	hdr
C.01. Operation and maintenance requirements.	hdr
Proper Operation and Maintenance: At all times, including periods of startup, shutdown and malfunction, the Permittee shall operate and maintain the emission unit subject to the MACT standard and its associated air pollution control and monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions at least to the levels required by all relevant standards.	40 CFR Section 63.6(e)(1)(i); Minn. R. 7011.7000
Malfunctions shall be corrected as soon as practicable after their occurrence. To the extent that an unexpected event arises during a startup, shutdown, or malfunction, an owner or operator must comply by minimizing emissions during such a startup, shutdown, and malfunction event consistent with safety and good air pollution control practices.	40 CFR Section 63.6(e)(1)(ii); Minn. R. 7011.7000
C.02. Startup, shutdown, and malfunction plan (SSMP)	hdr
The Permittee shall prepare and implement a Startup, Shutdown, and Malfunction Plan (SSMP) for each of the emission units subject to Maximum Control Technology Standards. The SSMP including associated control and monitoring equipment shall be prepared in accordance with 40 CFR Section 63.6(e)(3) and include requirements specified therein. The SSMP must be located at the plant site and must be kept updated. When the SSMP is updated, the Permittee must keep all previous versions of the SSMP for a period of 5 years. The Permittee must submit the SSMP when required.	40 CFR Section 63.6(e)(3)(i); 40 CFR Section 63.6(e)(3)(v); Minn. R. 7011.7000
D. COMPLIANCE WITH NONOPACITY EMISSION STANDARDS	hdr
D.01. Applicability	hdr
The applicable non-opacity emission standards set forth in 40 CFR pt. 63 shall apply at all times except during periods of startup, shutdown, and malfunction, and as otherwise specified in an applicable subpart. If a startup, shutdown, or malfunction of one portion of an affected source does not affect the ability of particular emission points within other portions of the affected source to comply with the non-opacity emission standards set forth in this 40 CFR pt. 63, then that emission point must still be required to comply with the non-opacity emission standards and other applicable requirements.	40 CFR Section 63.6(f)(1); Minn. R. 7011.7000
D.02. Methods for determining compliance	hdr

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-18**

03/17/08

Facility Name: Waste Management Inc - SRRMF

Permit Number: 08500047 - 003

The Administrator will determine compliance with nonopacity emission standards in 40 CFR pt. 63 based on the results of performance tests conducted according to the procedures in 40 CFR Section 63.7, unless otherwise specified in an applicable subpart of 40 CFR pt. 63.	40 CFR Section 63.6(f)(2)(i); Minn. R. 7011.7000
The Administrator will determine compliance with nonopacity emission standards in 40 CFR pt. 63 by evaluation of the Permittee's conformance with operation and maintenance requirements, including the evaluation of monitoring data, as specified in 40 CFR Section 63.6(e) and applicable subparts of 40 CFR pt. 63.	40 CFR Section 63.6(f)(2)(ii); Minn. R. 7011.7000
If the Permittee conducts performance testing at startup to obtain an operating permit, the results of such testing may be used to demonstrate compliance with a relevant standard if (A) The performance test was conducted within a reasonable amount of time before an initial performance test is required to be conducted under the relevant standard; (B) The performance test was conducted under representative operating conditions for the source; (C) The performance test was conducted and the resulting data were reduced using EPA-approved test methods and procedures, as specified in 40 CFR Section 63.7(e); and (D) The performance test was appropriately quality-assured, as specified in 40 CFR Section 63.7(c).	40 CFR Section 63.6(f)(2)(iii); Minn. R. 7011.7000
The Administrator will determine compliance with design, equipment, work practice, or operational emission standards in 40 CFR pt. 63 by review of records, inspection of the source, and other procedures specified in applicable subparts of 40 CFR pt. 63.	40 CFR Section 63.6(f)(2)(iv); Minn. R. 7011.7000
The Administrator will determine compliance with design, equipment, work practice, or operational emission standards in 40 CFR pt. 63 by evaluation of a Permittee's conformance with operation and maintenance requirements, as specified in 40 CFR Section 63.6(e) of and applicable subparts of 40 CFR pt. 63.	40 CFR Section 63.6(f)(2)(v); Minn. R. 7011.7000
E. RECORDKEEPING AND REPORTING REQUIREMENTS (see also the SSMP requirements)	hdr
Recordkeeping: The Permittee shall maintain files of all information required by this part in a form suitable and readily available for expeditious inspection and review. The files should be retained for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. Only the most recent two years of information must be kept on site.	40 CFR Section 63.10(b)(1); Minn. R. 7019.0100, subp. 2(B)
The Permittee shall maintain, at a minimum, the following information in the files: 1) the occurrence and duration of each startup, shutdown, or malfunction of operation; 2) the occurrence and duration of each malfunction of the air pollution control equipment; 3) all maintenance performed on the pollution control equipment; 4) actions taken during periods of startup, shutdown, and malfunction when such actions are different from the procedures specified in the affected source's startup, shutdown, and malfunction plan (SSMP). In this case, the Permittee shall report this action within 2 days of occurrence and follow by a written notification within 7 days of occurrence. 5) all information necessary to demonstrate conformance with the affected source's SSMP and actions taken in accordance with SSMP;	40 CFR Section 63.10(b)(2); Minn. R. 7019.0100, subp. 2(B)
CONTINUED 6) each period during which a continuous monitoring system (CMS) is malfunctioning or inoperative; 7) all required measurements needed to demonstrate compliance with a relevant standard; 8) all results of performance test, CMS performance evaluations, and opacity and visible emission observations; 9) all measurements as may be necessary to determine the conditions of performance tests and performance evaluations; 10) all CMS calibration checks; 11) all adjustments and maintenance performed on CMS; 12) any information demonstrating whether a source is meeting the requirements for a waiver of record keeping or reporting requirements under this part; 13) all documents supporting initial notifications and notifications of compliance status.	CONTINUED 40 CFR Section 63.10(b)(2); Minn. R. 7019.0100, subp. 2(B)
If actions taken during a startup or shutdown (and the startup or shutdown causes the source to exceed any applicable emission limitation in the relevant emission standards) or malfunction of an affected source are consistent with the procedures specified in the SSMP, then the Permittee shall state such information in a startup, shutdown, and malfunction report. Actions taken to minimize emissions during such startups, shutdowns and malfunctions shall be summarized in the report. Reports shall only be required if a startup or shutdown caused the source to exceed any applicable emission standards, or if a malfunction occurred during the reporting period. Such reports shall be delivered or postmarked by the 30th day following the end of each calendar half year.	40 CFR Section 63.10(d)(5)(i); Minn. R. 7019.0100, subp. 2(B)

TABLE B: SUBMITTALS

B-1 03/17/08

Facility Name: Waste Management Inc - SRRMF
Permit Number: 08500047 - 003

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.

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

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 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

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

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.

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

TABLE B: ONE TIME SUBMITTALS OR NOTIFICATIONS**B-2** 03/17/08

Facility Name: Waste Management Inc - SRRMF

Permit Number: 08500047 - 003

What to send	When to send	Portion of Facility Affected
Application for Permit Reissuance	due 180 days before expiration of Existing Permit.	Total Facility
Notification of the Actual Date of Initial Startup	due 15 days after Initial Startup. Notification shall include unit manufacturer and model information. Applies to each unit individually.	GP003
Submittal	due 30 days before Equipment Removal and/or Dismantlement. The Permittee shall submit an equipment removal report 30 days prior to removal or cessation of operation of the control equipment. (see Table A)	GP001
Submittal	due 90 days after Permit Issuance, the owner or operator must submit operation parameters and monitoring procedures according to 40 CFR Section 60.756(d) and Minn. R. 7007.0800 Subp. 4(B).	GP001

TABLE B: RECURRENT SUBMITTALS**B-3** 03/17/08

Facility Name: Waste Management Inc - SRRMF

Permit Number: 08500047 - 003

What to send	When to send	Portion of Facility Affected
Excess Emissions/Downtime Reports (EER's)	due 30 days after end of each calendar quarter following Permit Issuance. (Submit Deviations Reporting Form DRF-1 as amended). The EER shall indicate all periods of monitor bypass and all periods of exceedances of the limit including exceedances allowed by an applicable standard, i.e. during startup, shutdown, and malfunctions.	Total Facility
Semiannual Compliance Report	due 31 days after end of each calendar half-year following Initial Startup. This is the Compliance Report required by 40 CFR Section 63.6650(b). For details regarding the report content, refer to the "Compliance Report Content - No Deviations" and "Compliance Report Content - Deviations" requirements for GP003 in Table A.	GP003
Semiannual Deviations Report	due 30 days after end of each calendar half-year starting 03/21/2005. 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 occurred, the Permittee shall submit the report stating no deviations.	Total Facility
Submittal	due 30 days after end of each calendar half-year starting 03/21/2005. The Permittee shall submit a semi-annual report. (See Table A)	GP001
Annual Report	due 31 days after end of each calendar year following Initial Startup. The permittee must submit an annual report by the date specified. The permittee must report the data specified below: (1) Fuel flow rate of each fuel and heating values that were used in the calculations. The permittee must also demonstrate that the percentage of heat input provided by landfill gas or digester gas is equivalent to 10 percent or more of the total fuel consumption on an annual basis. (2) The operating limits provided in this federally enforceable permit, and any deviations from these limits. (3) Any problems or errors suspected with the meters.	GP003
Compliance Certification	due 30 days after end of each calendar year starting 03/21/2005 (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: Waste Management, Inc. - SRRMF

Permit Number: 08500047-003

Appendix I: Insignificant Activities

Three (3) LFG-burning heaters:

350,000 BTU

150,000 BTU

50,000 BTU

One (1) 100,000 gallon landfill leachate storage tank

Appendix II: Equations

$$H_T = K \sum_{i=1}^n C_i H_i$$

Where:

HT=Net heating value of the sample, MJ/scm; where the net enthalpy per mole of offgas is based on combustion at 25 degrees C and 760 mm Hg, but the standard temperature for determining the volume corresponding to one mole is 20 degrees C

K=Constant=

$$1.740 \times 10^{-7} \left(\frac{1}{ppmv} \right) \left(\frac{g-mole}{scm} \right) \left(\frac{MJ}{kcal} \right)$$

Where:

the standard temperature for (g-mole/scm) is 20 degrees C.

Ci=Concentration of sample component i in ppmv on a wet basis, as measured for organics by Test Method 18 and measured for hydrogen and carbon monoxide by American Society for Testing and Materials (ASTM) D1946-77 or 90 (Reapproved 1994) (incorporated by reference as specified in Sec. 63.14).

Hi=Net heat of combustion of sample component i, kcal/g-mole at 25 degrees C and 760 mm Hg. The heats of combustion may be determined using ASTM D2382-76 or 88 or D4809-95 (incorporated by reference as specified in Sec. 63.14) if published values are not available or cannot be calculated.

n=Number of sample components.

TECHNICAL SUPPORT DOCUMENT
For
AIR EMISSION PERMIT NO. 08500047-003

This technical support document (TSD) 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 preliminary determination to issue the permit.

1. General Information

1.1. Applicant and Stationary Source Location:

Applicant/Address	Stationary Source/Address (SIC Code: 4953)
Waste Management – Spruce Ridge Resource Management Facility	12755 137 th Street Glencoe, Minnesota, McLeod County
Contact: Mark Reinert	Phone: (320) 864-5503

1.2. Description of the Facility

The Spruce Ridge Resource Management Facility (SRRMF) was originally permitted by the MPCA in 1970 under operating Permit SW-6. The Facility authorized by this permit includes a municipal solid waste disposal area from which landfill gas is extracted, lined demolition and construction debris and industrial waste disposal area, tire storage area, concrete, asphalt and wood material storage area, and appliance and scrap metal storage area. Air Permit 08500047-003 applies only to the municipal solid waste disposal area from which landfill gas is extracted.

The facility currently has a landfill gas collection system, consisting of gas collection wells and an open flare. The gas collection system and flare were installed in September of 1996, with initial startup occurring on September 20, 1996. The main sources of air emissions at the facility are volatile organic compounds (VOC) and volatile hazardous air pollutant (HAP) emissions from gas generation from the landfilled waste, secondary emissions of carbon monoxide (CO) and nitrogen oxides (NO_x) from the landfill gas (LFG) combustion in the flare, and fugitive particulate from the unpaved roadways and the bulldozer operations on site. The flare has a capacity of 1,620 scfm and operates at a temperature of approximately 1400°F.

1.3. Description of the Activities Allowed by this Permit Action

Waste Management Inc. (WMI) currently operates a landfill gas (LFG) collection system at the SRRMF and uses an open flare to control the collected LFG. Rather than continuing to burn the collected LFG in the existing flare, Spruce Ridge intends to install a LFG-to-energy plant that includes up to four Caterpillar 3516 engine/generator sets to convert the energy content of the LFG into electricity that will be distributed to the grid. The LFG will be sent through a treatment system prior to combustion in the engines, which includes filtering, cooling, dewatering, and compression. The flare will be retained and used as a back-up control system in the event the gas treatment system and/or engines are not operational.

Emissions increases consist of combustion byproducts from the engines, primarily CO and NO_x. This permit action is a moderate amendment to the facility's existing Part 70 permit. A letter dated June 20, 2007 authorized construction of the four engines.

1.4. Facility Emissions

Table 1. Title I Emissions Increase Summary

Pollutant	Emissions Increase from Modification (tpy)	Limited Emissions Increase from Modification (tpy)	Net Emissions Increase (tpy)	PSD/112(g) Significant Threshold for Minor Source	NSR/112(g) Review Required? (Yes or No)
PM	6.6	6.6	6.6	250	No
PM ₁₀	6.6	6.6	6.6	250	No
NO _x	68.9	68.9	68.9	250	No
SO ₂	0.5	0.5	0.5	250	No
CO	130.1	130.1	130.1	250	No
Ozone (VOC)	0.3	0.3	0.3	250	No
Lead	N/A	N/A	N/A	250	No
MSW Landfill Gas	0.3	0.3	0.3	250	No
Single HAP (Toluene)	0.35	0.35	0.35	10	No
Total HAP	0.88	0.88	0.88	25	No

Table 2. Non-Title I Emissions Increase Summary

Pollutant	After Change (lb/hr)	Before Change (lb/hr)	Net Change (lb/hr)	Insignificant Modification Threshold (lb/hr <)	Minor and Moderate Amendment Threshold (lb/hr < or ≥)	Amendment Type
PM ₁₀	1.51	0.0	1.51	0.855	3.42	Minor
NO _x	15.7	0.0	15.7	2.28	9.13	Moderate
SO ₂	0.12	0.0	0.12	2.28	9.13	Insignificant
CO	29.7	0.0	29.7	5.70	22.80	Moderate
VOC	0.08	0.0	0.08	2.28	9.13	Insignificant
Lead	0.0000	0.0	0.0000	0.025	0.11	Insignificant

Table 3. Total Facility Potential to Emit Summary

Emissions	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	30.7	14.8	3.6	82.8	206.4	23.3	1.66	2.60
Total Facility Actual (2006)	21.64	11.74	3.36	6.05	32.94	8.72	HAPs not reported in emission inventory	

Table 4. Facility Classification

Classification	Major/Affected Source	Synthetic Minor	Minor
PSD			PM, PM ₁₀ , SO ₂ , NO _x , CO, VOC
Part 70 Permit Program	CO		PM, PM ₁₀ , SO ₂ , NO _x , VOC
Part 63 NESHAP	HAP (area source)		

2. Regulatory and/or Statutory Basis

2.1. New Source Review

The facility is an existing minor source under New Source Review regulations, and will continue to remain a true minor source for all pollutants.

2.2. Part 70 Permit Program

The facility is a major source under the Part 70 permit program, and will remain major after this amendment.

2.3. New Source Performance Standards (NSPS)

This facility is subject to the New Source Performance Standards, Subpart WWW, Standards of Performance for Municipal Solid Waste Landfills (found in 40 CFR 60.750-759). Since NMOC emissions have exceeded 50 megagrams/year as of 02/01/05, the landfill must comply with all applicable requirements of Subpart WWW. This adds monitoring and recordkeeping requirements. The affected units are the landfill itself, the gas collection system, the gas treatment system, and the flare.

The landfill gas passes through the treatment system prior to entering the engines. The EPA has made many determinations that landfill gas is no longer regulated under the NSPS after treatment. Therefore, the engines are not covered under the NSPS as they will burn only treated landfill gas. The application for amendment reflected this properly.

The gas treatment system is not control equipment contrary to its designation of CE008. This designation is needed as a Delta place holder. The gas treatment system could also have been designated as an emission unit (EUXXX) in Delta despite the fact it is not. However, the gas treatment system is a control system as prefaced in 40 CFR § 60.752(b)(2)(iii). Therefore, the gas treatment system is subject to 40 CFR § 60.756(d).

Upon closure of the landfill, the Permittee will need to file the appropriate closure reports as set forth in 40 CFR § 60.752(b)(1)(ii)(B), § 60.757(d), and § 60.757(e). The facility is also subject to the NSPS General Provisions, Subpart A (found in 40 CFR § 60.1-19). The NSPS is incorporated by reference in Minnesota Rule 7011.3510. The flare is subject to the design requirements found in 40 CFR § 60.18.

This facility is not subject to New Source Performance Standards, Subpart JJJJ, Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (found in 40 CFR § 60.4230-4248). Since the engines are lean-burn engines, commenced construction (i.e., was ordered) after 6/12/06, have a maximum engine power of 1,147.9 hp (i.e., greater than or equal to 500 hp and less than 1,350 hp), and were manufactured prior to 1/1/08, the engines do not have to comply with the requirements of Subpart JJJJ.

2.4. National Emission Standards for Hazardous Air Pollutants (NESHAP)

This facility is subject to the National Emission Standards for Hazardous Air Pollutants, Subpart AAAA, Municipal Solid Waste Landfills (found in 40 CFR 63.1930-1990), as an affected area source. Since NMOC emissions have exceeded 50 megagrams/year as of 02/01/05, the landfill must comply with all applicable requirements of Subpart AAAA. This adds monitoring and recordkeeping requirements. The affected units are the landfill itself, the gas collection system, the gas treatment system, and the flare.

The landfill gas passes through the treatment system prior to entering the engines. The EPA has made many determinations that landfill gas is no longer regulated under the NESHAP after treatment.

Therefore, the engines are not covered under the NESHAP as they will burn only treated landfill gas. The application for amendment reflected this properly.

This facility is subject to the National Emission Standards for Hazardous Air Pollutants, Subpart ZZZZ, Reciprocating Internal Combustion Engines (found in 40 CFR § 63.6580-6675), as an affected area source. Since the engines to be installed at SRRMF qualify as "new stationary RICE which combusts landfill gas equivalent to 10 % or more of the gross heat input on an annual basis" under 40 CFR § 63.6590(b)(2), each engine must meet the initial notification requirements of 40 CFR § 63.6645(f) and the requirements of § 63.6625(c), § 63.6650(g), and § 63.6655(c).

The facility is also subject to the NESHAP General Provisions, Subpart A (found in 40 CFR § 63.1-15). The NESHAP is incorporated by reference in Minnesota Rule 7011.7390.

2.5. Minnesota State Rules

Portions of the facility are subject to the following Minnesota Standards of Performance:

- Minn. R. 7011.2300 Standards of Performance for Stationary Internal Combustion Engines
- Minn. R. 7011.3505 Standards of Performance for Existing Municipal Solid Waste Landfills

Table 5. Regulatory Overview of Units Affected by the Modification/Permit Amendment

EU, GP, or SV	Applicable Regulations	Comments:
GP 001	Minn. R. 7011.3505	Standards of Performance for Existing Municipal Solid Waste Landfills
GP 003	Minn. R. 7011.2300	Standards of Performance for Stationary Internal Combustion Engines
GP003	Minn. R. 7017.2020, subp. 1	Performance testing for NMOC to verify performance as control equipment. This is a state-only requirement and is not enforceable by the EPA Administrator and citizens under the Clean Air Act.

The language 'This is a state-only requirement and is not enforceable by the EPA Administrator and citizens under the Clean Air Act' refers to permit requirements that are mandated by state law rather than by the federal Clean Air Act. The language is to clarify the distinction between permit conditions that are required by federal law and those that are required by state law. State law requirements are not enforceable by EPA or by citizens under the federal Clean Air Act, but are fully enforceable by the MPCA and citizens under provisions of state law.

3. Technical Information

3.1. Corrections to Application

An updated and certified application was received 01/08/08. A corrected Form GI-02 was received 01/08/08 showing only one landfill gas treatment system supplying the four engines. A letter certifying the engines exemption from 40 CFR Subpart JJJJ was received 01/29/08.

3.2. Calculations of Potential to Emit

Attachment 1 to this TSD contains detailed spreadsheets and supporting information prepared by the MPCA and the Permittee. Most emission rates are based on values from AP-42, Fifth Edition, Chapter 2.4, "Municipal Solid Waste Landfills", 11/98.

Included are stack test results from five stack tests performed at facilities similar to the proposed gas-to-energy plant. Emission factors for CO and NO_x are based on these stack test results. CO and NO_x emission factors used for this permit amendment are based on the maximum measured value from the five tests, plus a safety factor of an additional 25 percent. No credit is taken for capture or destruction efficiency.

Included is the engine manufacturer's specification sheet for the selected engines. Adjusting for BTU content of landfill gas, the emission factors from the stack testing are comparable to the manufacturer's information. Emissions from the flare are assumed to be the same as those calculated for permit action 001.

Emissions from unpaved roads and bulldozer operations are assumed to be the same as those calculated for permit action 001. However, it was discovered that the control efficiency for the unpaved roads used by the applicant's consultant (Barr Engineering) is 70 percent but the

MPCA's contractor that authored the permit used 80 percent in calculations for permit action 001. In addition, the control efficiency for bulldozer operations is 0 percent. Therefore, removal of CE003 (dust suppression by water spray) is possible. It was also discovered that MPCA emission calculations do not match SRRMF's calculations for CO and NO_x. The three aforementioned discoveries are not addressed in this permit action but noted in Delta to be addressed at reissuance.

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

Table 6. Periodic Monitoring

Emission Unit or Group	Requirement (basis)	Additional Monitoring	Discussion
ICEs: GP 003	Annual emissions calculations (Minn. R. 7007.0800, subp. 4 and 5)	Recordkeeping: Daily records of amount of landfill gas combusted in the engines, and the time periods that landfill gas is flared	Recordkeeping required to track appropriate emission factors (engines vs. flare) for annual emissions calculations.

Emission Unit or Group	Requirement (basis)	Additional Monitoring	Discussion
ICEs: GP 003	SO ₂ <0.5 lb/MMBtu (Minn. R. 7011.2300)	Fuel use restricted to landfill gas.	All units use landfill gas; therefore, the likelihood of violating the emission limit is very small. The Permittee can demonstrate that these units will continue to operate such that emissions are well below the emission limit by only burning landfill gas. Since this is a permit condition, the semi-annual deviations report will document any deviations from this condition. Design based PTE for each unit, using AP-42, is 0.0038 compared to the rule limit of 0.4 lb/MMBtu.

3.4. Permit Organization

In general, the permit meets the MPCA Delta Guidance for ordering and grouping of requirements. The permit reflects NMOC emissions greater than 50 megagrams/year. The permit is modeled after more recent landfill permits (Gas Recovery LLC - Pine Bend Electric and Waste Management Inc - Elk River Landfill).

3.5. Stack Testing Requirements

Stack testing is required for CO, NO_x, PM₁₀, mercury, arsenic, polycyclic aromatic hydrocarbons (PAHs), and dioxins. The testing needs to be conducted on only one representative engine. These tests are required in lieu of an Air Emissions Risk Assessment (AERA) and completion of a Risk Assessment Screening Spreadsheet (RASS). These are state-only requirements, and not enforceable by the EPA Administrator or citizens under the Clean Air Act.

3.6. Comments Received

Public Notice Period: Public Notice is not required for a moderate amendment.

EPA 45-day Review Period: 02/01/08 – 03/17/08

Comments were not received from EPA during their review period.

4. Conclusion

Based on the information provided by Waste Management – Spruce Ridge RMF, the MPCA has reasonable assurance that the operation of the emission facility, as described in the Air Emission Permit No. 08500047-003, and this TSD, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

Staff Members on Permit Team: Jared LaFave (permit writer/engineer)
Jonathan Amos, PE (MPCA contractor/permit writer)
Sarah Kilgriff (enforcement)
Sean O'Connor (compliance)
Dan Sullivan (peer reviewer)

AQ File No. 3692; DQ 1370

Attachments: 1. PTE Emission Calculations
2. Facility Description and CD-01 Forms
3. Engine Manufacturer's Specification Sheet