

AIR EMISSION PERMIT NO. 14100041- 004

IS ISSUED TO

Waste Management Inc

WASTE MANAGEMENT, INC. -ELK RIVER LANDFILL

22460 Highway 169 Northwest

Elk River, Sherburne County, MN 55330

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

Permit Type	Application Date	Permit Action	Issuance Date
Total Facility Operating Permit	6/14/96 and updates	001	03/29/2004
Administrative Amendment	05/12/2005	002	05/28/2005
Major Amendment	MPCA Initiated	003	08/09/2005
Major Amendment	07/18/2005	004	See below
Administrative Amendment	11/14/2005		

This permit 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; Part 70/Limits to Avoid NSR

Authorization to Construct and Operate (40 CFR § 52.21) Issuance Date: January 18, 2006

Authorization to Construct and Operate (40 CFR § 52.21) Effective Date: January 18, 2006

Final Permit Issuance Date: January 18, 2006

Expiration: 03/29/2009

All Title I Conditions do not expire.

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

for Sheryl A. Corrigan
Commissioner
Minnesota Pollution Control Agency

TDD (for hearing and speech impaired only): (651) 282-5332

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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:

The facility is a municipal solid waste landfill with a landfill gas collection system that consists of 31 vertical extraction wells with associated laterals and headers. The collected gas is conveyed to four combustion devices installed to control "Non-Methane Organic Compounds" (NMOCs) – an enclosed flare and three internal combustion engine/generator sets (ICE/Generators). These devices operate in parallel, and control NMOCs from landfill gas to meet the requirements of the federal new source performance standards.

History:

The Elk River Landfill first began accepting waste in 1972. An open flare was installed on February 15, 1996, to control landfill gas emissions. The open flare had a capacity to combust 1050 cubic feet per minute of landfill gas. An internal combustion engine/generator was installed in November of 1998, with a capacity to combust landfill gas in parallel with the flare.

An enclosed flare was installed in November of 2000, with a capacity to combust 2000 cubic feet per minute of landfill gas.

The open flare and single internal combustion engine/generator were removed in April of 2002.

Three internal combustion engine/generators were installed in the fall of 2002 to combust landfill gas in parallel with the enclosed flare. The three generators have a capacity of 800 kilowatts each.

The Permittee's Collection and Control System Design Plan (Plan) was approved on December 10, 2002. The Plan includes regulatory alternatives granted to the facility, and the Title V permit incorporates these alternatives.

Permit Action 001 - Authorized Changes:

The permit authorizes the continued expansion of the landfill gas collection system, including vertical extraction wells, trenches, laterals, and headers, in accordance with the approved Collection and Control System Design Plan. This permit also allows a capacity increase of the enclosed flare.

Permit Action 002 – Administrative Amendment:

This permit amendment authorizes a 120-day extension for submittal of the Fugitive Emissions Control Plan in accordance with Minn. R. 7007.1400, subp. 1(H).

Permit Action 003 – Major Amendment:

Permit action 003 is a MPCA-initiated major amendment under Minn. R. 7007.1600, subp. 1 (D) – mandatory reopenings that are needed to assure compliance with applicable requirements.

The amendment incorporates new limits into the permit. The limits have been imposed through performance testing under Minn. R. 7017.2025, subp. 3. The permit must be reopened in order to reflect the revised limits. See MPCA letters sent on January 24, 2005 and October 10, 2003, to Waste Management, Inc.-Elk River Landfill (Permittee), which set new limits in the Permittee's Part 70 permit based on performance testing under Minn. R. ch. 7017.

PERMIT ACTION 004 - MAJOR AMENDMENT (includes an Administrative)
DESCRIPTION:

This permit amendment authorizes **installation and operation** of a fourth Internal Combustion Engine-Generator at the existing gas-to-energy facility located at the Elk River Landfill. In addition, this permit revises or eliminates conditions related to New Source Performance Standards required control systems (read the TSD for more information). Insignificant Activity list in the Additional Appendix Material is updated with the addition of three units.

On November 14, 2005, the Permittee submitted an administrative amendment for extending the annual calibration of monitoring equipment (deadline in the permit), by 120-days. Therefore, this permit requirement is amended to allow for a one-time 120-day extension to annual calibration.

TABLE A: LIMITS AND OTHER REQUIREMENTS

01/18/06

Facility Name: Waste Management Inc -Elk River Landfill

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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
Unless otherwise specified in this permit, the following conditions apply to the total facility.	Minn. R. 7017.1004, subp. 1(A) regarding state testing and monitoring requirements; 40 CRF 60.11(f) as applicable
SOURCE-SPECIFIC REQUIREMENTS	hdr
Comply with Fugitive Emission Control Plan: The Permittee shall follow the actions and record keeping specified in the control plan. The plan shall identify all fugitive emission sources, primary and contingent control measures, and record keeping. The plan may be amended by the Permittee with the Commissioner's approval. If the Commissioner determines the Permittee is out of compliance with Minn. R. 7011.0150 or the fugitive emission control plan, then the Permittee may be required to amend the control plan and/or to install and operate particulate matter ambient monitors. The Fugitive Control Plan shall include, but not be limited to, PM/PM-10 fugitives and organic emissions from any above-grade gas conveyance devices under positive pressure relative to the atmosphere.	Minn. Stat. Section 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2
OPERATIONAL REQUIREMENTS	hdr
Circumvention: Do not install or use a device or means that conceals or dilutes emissions, which would otherwise violate a federal or state air pollution control rule, without reducing the total amount of pollutant emitted.	Minn. R. 7011.0020; For NSPS facilities: 40 CFR 60.12
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 and Minn. R. 7007.0800, subp. 16(J)
Operation Changes: In any shutdown, breakdown, or deviation the Permittee shall immediately take all practical steps to modify operations to reduce the emission of any regulated air pollutant. The Commissioner may require feasible and practical modifications in the operation to reduce emissions of air pollutants. No emissions units that have an unreasonable shutdown or breakdown frequency of process or control equipment shall be permitted to operate.	Minn. R. 7019.1000, subp. 4
Fugitive Emissions: Do not cause or permit the handling, use, transporting, or storage of any material in a manner which may allow avoidable amounts of particulate matter to become airborne. Comply with all other requirements listed in Minn. R. 7011.0150.	Minn. R. 7011.0150
Noise: The Permittee shall comply with the noise standards set forth in Minn. R. 7030.0010 to 7030.0080 at all times during the operation of any emission units. This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act.	Minn. R. 7030.0010 - 7030.0080
Inspections: The Permittee shall comply with the inspection procedures and requirements as found in Minn. R. 7007.0800, subp. 9(A).	Minn. R. 7007.0800, subp. 9(A)
The Permittee shall comply with the General Conditions listed in Minn. R. 7007.0800, subp. 16.	Minn. R. 7007.0800, subp. 16
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.	Minn. Rs. 7017.2030, subp. 1-4, 7017.2018 and Minn. R. 7017.2035, subp. 1-2

TABLE A: LIMITS AND OTHER REQUIREMENTS

01/18/06

Facility Name: Waste Management Inc -Elk River Landfill

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CONTINUED 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	CONTINUED For NSPS facilities: 40 CFR Section 60.8(a) regarding performance test reports; 40 CFR 60.8(c) regarding information to be supplied; 40 CFR 60.8(d) regarding 30-day notification.
Limits set as a result of a performance test (conducted before or after permit issuance) apply until superseded as specified by Minn. R. 7017.2025 following formal review of a subsequent performance test on the same unit.	Minn. R. 7017.2025
MONITORING REQUIREMENTS	hdr
Monitoring Equipment Calibration: Annually calibrate all required monitoring equipment (any requirements applying to continuous emission monitors are listed separately in this permit). This deadline is extended by one time to 120 days following December 31, 2005.	Minn. R. 7007.0800, subp. 4(D)
Operation of Monitoring Equipment: Unless otherwise noted in Tables A, B, and/or C, monitoring a process or control equipment connected to that process is not necessary during periods when the process is shutdown, or during checks of the monitoring systems, such as calibration checks and zero and span adjustments. If monitoring records are required, they should reflect any such periods of process shutdown or checks of the monitoring system.	Minn. R. 7007.0800, subp. 4(D)
RECORDKEEPING	hdr
Record keeping: Retain all records at the stationary source for a period of five (5) years from the date of monitoring, sample, measurement, or report. Records which must be retained at this location include all calibration and maintenance records, all original recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Records must conform to the requirements listed in Minn. R. 7007.0800, subp. 5(A).	Minn. R. 7007.0800, subp. 5(C)
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)
REPORTS/SUBMITTALS	hdr
Submit all information required to be submitted to EPA under 40 CFR 60.4(a) to the MPCA address shown in the introduction to Table B of this permit.	40 CFR 60.4 as applicable
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
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

01/18/06

Facility Name: Waste Management Inc -Elk River Landfill

Permit Number: 14100041 - 004

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
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.	Minn. R. 7017.1110, subp. 1 & 2. For NSPS facilities: 40 CFR Section 60.7(c); 40 CFR 60.7(d); 40 CFR 60.13(h) regarding CEMS data reduction.
Semiannual Deviations Report: due 30 days after end of each calendar half-year following Permit Issuance. The first semiannual report submitted by the Permittee shall cover the calendar half-year in which the permit is issued. The first report of each calendar year covers January 1 - June 30. The second report of each calendar year covers July 1 - December 31. If no deviations have occurred, the Permittee shall submit the report stating no deviations.	Minn. R. 7007.0800, subp. 6(A)(2); 40 CFR 60.7(c)
Application for Permit Amendment: If a permit amendment is needed, submit an application in accordance with the requirements of Minn. R. 7007.1150 through Minn. R. 7007.1500. Submittal dates vary, depending on the type of amendment needed.	Minn. R. 7007.1150 through Minn. R. 7007.1500
Extension Requests: The Permittee may apply for an Administrative Amendment to extend a deadline in a permit by no more than 120 days, provided the proposed deadline extension meets the requirements of Minn. R. 7007.1400, subp. 1(H).	Minn. R. 7007.1400, subp. 1(H)
Compliance Certification: due 31 days after end of each calendar year following Permit Issuance (for the previous calendar year). To be submitted on a form approved by the Commissioner, both to the Commissioner and to the US EPA regional office in Chicago. This report covers all deviations experienced during the calendar year.	Minn. R. 7007.0800, subp. 6(C)
Emission Inventory Report: due 91 days after end of each calendar year following permit issuance (April 1). 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

TABLE A: LIMITS AND OTHER REQUIREMENTS

01/18/06

Facility Name: Waste Management Inc -Elk River Landfill

Permit Number: 14100041 - 004

Subject Item: GP 002 ICE/Generators**Associated Items:** CE 006 Other

CE 007 Other

CE 008 Other

CE 009 Other

EU 004 ICE/Generator A (#4)

EU 005 ICE/Generator B (#3)

EU 006 ICE/Generator C (#2)

EU 008 ICE/Generator D

SV 004 Generator A (#4)

SV 005 Generator B (#3)

SV 006 Generator C (#2)

SV 007 Generator 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 percent once operating temperatures have been obtained.	Minn. Rules 7011.2300, subp. 1
Sulfur Dioxide: less than or equal to 0.5 lbs/million Btu heat input . Performance testing for sulfur dioxide is not required as long as the ICE/Generators burn only landfill gas.	Minn. Rules 7011.2300, subp. 2
B. OPERATIONAL REQUIREMENTS	hdr
Prior to use as fuel in the IC engines, the landfill gas must be: 1) De-watered through a mesh pad scrubber; 2) Compressed; 3) Sent through a gas-to-gas heat exchanger to raise the temperature; 4) Sent to a gas-to-air cooler to reduce the temperature and water vapor content; 5) Filtered down through a 0.3 - micron filter; and 6) Sent through a heat exchanger to reheat the gas in order to prevent condensation of liquids in the piping or engine fuel system.	40 CFR Section 60.752(b)(2)(iii) - EPA Waiver
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
C. PERFORMANCE TESTING	hdr
Performance Test: due before end of each 60 months starting 05/31/2003. The first test is due 5/31/2008, then every 60 months thereafter. Each engine shall be tested for opacity. For additional applicable performance test requirements, see 'General Performance Test Requirements' in Table A, Subject Item "Total Facility".	Minn. R. 7017.2020, subp. 1
D. MONITORING	hdr
E. REPORTS/SUBMITTALS	hdr

TABLE A: LIMITS AND OTHER REQUIREMENTS

01/18/06

Facility Name: Waste Management Inc -Elk River Landfill

Permit Number: 14100041 - 004

Subject Item: GP 003 Flare**Associated Items:** CE 005 Flaring

EU 003 Flare 2

What to do	Why to do it
NOTE: This set of Group requirements regulates the enclosed flare both as Control Equipment and as an Emission Unit. Additional requirements for the enclosed flare are contained in the "EU 007 Landfill" portion of this permit.	hdr
OPERATIONAL REQUIREMENTS	hdr
The Permittee shall operate and maintain the enclosed 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
INCREASING FLARE CAPACITY	hdr
The Permittee is authorized by this permit to increase the enclosed flare capacity to a maximum of 3000 cfm. The construction authorization does not expire during the life of this permit. The Permittee must keep a record of the dates of installation and start-up on site.	Minn. R. 7007.0800, subp. 2
Notification of any physical or operational change which increases emission rate: due 60 days (or as soon as practical) before the change is commenced. Changes subject to this permit condition include any increases to enclosed flare capacity.	Minn. R. 7007.0800, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

01/18/06

Facility Name: Waste Management Inc -Elk River Landfill

Permit Number: 14100041 - 004

Subject Item: GP 004 Activities subject to MACT (40 CFR pt. 63)**Associated Items:** CE 005 Flaring

CE 006 Other

CE 007 Other

CE 008 Other

CE 009 Other

EU 003 Flare 2

EU 004 ICE/Generator A (#4)

EU 005 ICE/Generator B (#3)

EU 006 ICE/Generator C (#2)

EU 007 Landfill

EU 008 ICE/Generator D

What to do	Why to do it
The Permittee must comply with the following conditions by January 16, 2004.	40 CFR 63.1945(b); 40 CFR 63.1980(b)
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 63.4(b)
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 63.4(c)
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)
C. COMPLIANCE WITH STANDARDS AND MAINTENANCE REQUIREMENTS	hdr
C.01. Operation and maintenance requirements.	hdr
At all times (including periods of startup, shutdown, and malfunction) the Permittee shall operate and maintain the emission unit subject to the applicable standards of 40 CFR pt. 63 and its associated air pollution control equipment in a manner consistent with good air pollution control practices for minimizing emissions, pursuant to the requirements in 40 CFR 63.6(e)(1)(i).	40 CFR Section 63.6(e)(1)(i)
Malfunctions shall be corrected as soon as practicable after their occurrence in accordance with the startup, shutdown, and malfunction plan required by 40 CFR 63.6(e)(3). To the extent that an unexpected event arises during a startup, shutdown, or malfunction, the Permittee 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)
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 shall be prepared in accordance with 40 CFR Section 63.6(e)(3) and shall include requirements specified therein.	40 CFR 63.6(e)(3)(i); 40 CFR 63.6(e)(3)(ix) regarding the need to have an SSMP
During periods of startup, shutdown, and malfunction, the Permittee shall operate and maintain the source in accordance with the procedures specified in the startup, shutdown, and malfunction plan.	40 CFR 63.6(e)(3)(ii); 40 CFR 63.6(e)(3)(ix) regarding operation pursuant to the SSMP

TABLE A: LIMITS AND OTHER REQUIREMENTS

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When actions taken during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) are consistent with the procedures specified in the affected source's SSMP, keep records for that event which demonstrate that the procedures specified in the SSMP were followed. These records may take the form of a "checklist," or other effective form of recordkeeping that confirms conformance with the SSMP for that event.	40 CFR 63.6(e)(3)(iii)
Keep records of these events as specified in 40 CFR 63.10(b), including records of the occurrence and duration of each startup, shutdown, or malfunction of operation and each malfunction of the air pollution control and monitoring equipment. Confirm that actions taken during the relevant reporting period during periods of startup, shutdown, and malfunction were consistent with the affected source's SSMP in the semiannual (or more frequent) startup, shutdown, and malfunction report required in 40 CFR 63.10(d)(5)	
If an action taken during a startup, shutdown, or malfunction (including an action taken to correct a malfunction) is not consistent with the procedures specified in the affected source's SSMP, and the source exceeds any applicable emission limitation in the relevant emission standard, then record the actions taken for that event.	40 CFR 63.6(e)(3)(iv) regarding recordkeeping
The SSMP must be located at the plant site and must be kept updated. The Permittee must make the SSP available upon request for inspection and copying by the Administrator. When the SSMP is updated or revised, the Permittee must keep all previous versions of the SSMP for a period of 5 years. The Permittee must submit the SSMP when required, pursuant to the requirements in 40 CFR 63.6(e)(3)(v). If the affected source ceases operation or is otherwise no longer subject to the 40 CFR pt. 63, the Permittee must retain a copy of the most recent plan for 5 years from the date the source ceases operation or is no longer subject to this part and must make the plan available upon request for inspection and copying by the Administrator.	40 CFR 63.6(e)(3)(v)
To satisfy the requirements of this section to develop a SSMP, the Permittee may use the affected source's standard operating procedures (SOP) manual, or an Occupational Safety and Health Administration (OSHA) or other plan, provided the alternative plans meet all the requirements for the SSMP and are made available for inspection or submitted when requested by the Administrator.	40 CFR 63.6(e)(3)(vi)
The Permittee must make appropriate revisions to an SSMP, if the Administrator finds that the plan: (A) Does not address a startup, shutdown, or malfunction event that has occurred; (B) Fails to provide for the operation of the source (including associated air pollution control and monitoring equipment) during a startup, shutdown, or malfunction event in a manner consistent with the general duty to minimize emissions established by 40 CFR 63.6(e)(1)(i); (C) Does not provide adequate procedures for correcting malfunctioning process and/or air pollution control and monitoring equipment as quickly as practicable; or (D) Includes an event that does not meet the definition of startup, shutdown, or malfunction listed in 40 CFR 63.2.	40 CFR 63.6(e)(3)(vii)
The Permittee may periodically revise the SSMP as necessary to satisfy the requirements of 40 CFR pt. 63 or to reflect changes in equipment or procedures. Unless the Commissioner provides otherwise, the Permittee may make such revisions to the SSMP without prior approval by the Administrator or the Commissioner. Report each revision to the SSMP in the semiannual report required by 40 CFR 63.10(d)(5). If the SSMP fails to address or inadequately addresses an event that meets the characteristics of a malfunction but was not included in the SSMP at the time the Permittee developed the plan, revise the SSMP within 45 days after the event. In the revision, include detailed procedures for operating and maintaining the source during similar malfunction events and a program of corrective action for similar malfunctions of process or air pollution control and monitoring equipment. [CONTINUED BELOW]	40 CFR 63.6(e)(3)(viii)
CONTINUED In the event that the Permittee makes any revision to the SSMP which alters the scope of the activities at the source which are deemed to be a startup, shutdown, or malfunction, or otherwise modifies the applicability of any emission limit, work practice requirement, or other requirement in a standard established under this part, the revised plan shall not take effect until after the Permittee has provided a written notice describing the revision to the Commissioner.	CONTINUED 40 CFR 63.6(e)(3)(viii)
Any revisions made to the SSMP in accordance with the procedures established by 40 CFR pt. 63 shall not be deemed to constitute permit revisions under 40 CFR pt. 70 or pt. 71. None of the procedures specified by the SSMP shall be deemed to fall within the permit shield.	40 CFR 63.6(e)(3)(ix)
D. COMPLIANCE WITH NONOPACITY EMISSION STANDARDS	hdr

TABLE A: LIMITS AND OTHER REQUIREMENTS

01/18/06

Facility Name: Waste Management Inc -Elk River Landfill

Permit Number: 14100041 - 004

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 63.6(f)(1)
D.02. Methods for determining compliance	hdr
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 63.7, unless otherwise specified in an applicable subpart of 40 CFR pt. 63.	40 CFR 63.6(f)(2)(i)
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 63.6(e) and applicable subparts of 40 CFR pt. 63.	40 CFR 63.6(f)(2)(ii)
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 63.7(e); and (D) The performance test was appropriately quality-assured, as specified in 40 CFR 63.7(c).	40 CFR 63.6(f)(2)(iii)
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 63.6(f)(2)(iv)
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 63.6(e) of and applicable subparts of 40 CFR pt. 63.	40 CFR 63.6(f)(2)(v)
E. RECORDKEEPING AND REPORTING REQUIREMENTS (see also the SSMP requirements)	hdr
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.	40 CFR Section 63.10(b)(1); Minn. R. 7007.0800, subp. 5(C) regarding record location
The Permittee shall maintain relevant records for-- (i) The occurrence and duration of each startup, shutdown, or malfunction of operation (i.e., process equipment); (ii) The occurrence and duration of each malfunction of the required air pollution control and monitoring equipment; (iii) All required maintenance performed on the air pollution control and monitoring equipment; (iv) Actions taken during periods of startup, shutdown, and malfunction (including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation) when such actions are different from the procedures specified in the affected source's SSMP; [CONTINUED BELOW]	40 CFR 63.10(b)(2)
CONTINUED (v) All information necessary to demonstrate conformance with the affected source's SSMP when all actions taken during periods of startup, shutdown, and malfunction (including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation) are consistent with the procedures specified in the SSMP. (The information needed to demonstrate conformance with the SSMP may be recorded using a "checklist," or some other effective form of recordkeeping, in order to minimize the recordkeeping burden for conforming events);	CONTINUED 40 CFR 63.10(b)(2)

TABLE A: LIMITS AND OTHER REQUIREMENTS

01/18/06

Facility Name: Waste Management Inc -Elk River Landfill

Permit Number: 14100041 - 004

Periodic Startup, Shutdown, and Malfunction Report Submittal. The Permittee shall submit the Periodic Startup, Shutdown, and Malfunction Report 30 days after end of each calendar half-year following Permit Issuance, but reports shall only be required if a startup, shutdown, or malfunction occurred during the reporting period. The reporting shall be consistent with the requirements in 40 CFR 63.10(d)(5)(i).	40 CFR 63.10(d)(5)(i)
Immediate Startup, Shutdown, and Malfunction Reports. Any time an action taken during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) is not consistent with the procedures specified in the SSMP, contact the commissioner and report the actions taken for that event within 2 working days after commencing actions inconsistent with the plan followed by a letter within 7 working days after the end of the event. The reports shall be in accordance with 40 CFR 63.10(d)(5), unless alternative reporting has been arranged, in advance, with the Administrator. This report is in addition to the Breakdown Notification requirements in the Total Facility portion of this permit.	40 CFR 63.10(d)(5)(ii); 40 CFR Section 63.6(e)(3)(iv) regarding reporting
AVAILABILITY OF INFORMATION AND CONFIDENTIALITY	hdr
Confidentiality. (1) If a Permittee is required to submit information entitled to protection from disclosure under section 114(c) of the Act, the Permittee may submit such information separately. The requirements of section 114(c) shall apply to such information. (2) The contents of a title V permit shall not be entitled to protection under section 114(c) of the Act; however, information submitted as part of an application for a title V permit may be entitled to protection from disclosure.	40 CFR 63.15(b)

TABLE A: LIMITS AND OTHER REQUIREMENTS

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Facility Name: Waste Management Inc -Elk River Landfill

Permit Number: 14100041 - 004

Subject Item: EU 007 Landfill

Associated Items: CE 005 Flaring
CE 006 Other
CE 007 Other
CE 008 Other
CE 009 Other
GP 004 Activities subject to MACT (40 CFR pt. 63)
SV 003 Flare 2
SV 004 Generator A (#4)
SV 005 Generator B (#3)
SV 006 Generator C (#2)
SV 007 Generator D

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 60.752(b)(2)(ii)(A) and 40 CFR 60.752(b)(2)(iii) shall be installed by August 1, 2003.	40 CFR 60.752(b)(2)(ii)
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 60.752(b)(2)(ii)
Notify the commissioner in writing when the landfill gas flow of the collected landfill gases first exceeds 3275 cubic feet per minute (30-day average). The notification shall state that the reason for the notification is to accommodate the increasing quantity of landfill gas generated.	40 CFR 60.752(b)(2)(iii)
Submit permit application within 30 days after the landfill gas flow of the collected landfill gases first exceeds 3275 cubic feet per minute (30-day average), unless an alternative for managing landfill gas has been approved by the Commissioner. The Permittee shall apply for an amendment to increase in control equipment capacity to accommodate additional landfill gas flow.	CONTINUED 40 CFR 60.752(b)(2)(iii)
A.02. Emission limits	CONTINUED 40 CFR 60.752(b)(2)(iii)
Route all the collected gas to a control system that complies with the requirements in either paragraph (b)(2)(iii) (A), (B) or (C) of this section. (A) An open flare designed and operated in accordance with 40 CFR Section 60.18; (B) A control system designed and operated to reduce NMOC by 98 weight-percent, or, when an enclosed combustion device is used for control, to either reduce NMOC by 98 weight percent or reduce the outlet NMOC concentration to less than 20 parts per million by volume, dry basis as hexane at 3 percent oxygen. The reduction efficiency or parts per million by volume shall be established by an initial performance test to be completed no later than 180 days after the initial startup of the approved control system using the test methods specified in 40 CFR Section 60.754(d).	CONTINUED 40 CFR 60.752(b)(2)(iii)

TABLE A: LIMITS AND OTHER REQUIREMENTS

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Facility Name: Waste Management Inc -Elk River Landfill

Permit Number: 14100041 - 004

NSPS Requirement Continued..... (1) If a boiler or process heater is used as the control device, the landfill gas stream shall be introduced into the flame zone. (2) 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; (C) 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.	CONTINUED 40 CFR 60.752(b)(2)(iii)
A.03. System operation	CONTINUED 40 CFR 60.752(b)(2)(iii)
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 60.754(d). [see 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 60.756.	CONTINUED 40 CFR 60.752(b)(2)(iii)
Operate the collection and control device installed to comply with 40 CFR 60, Subpart WWW, in accordance with the provisions of 40 CFR 60.753 [Operational standards for collection and control systems], 40 CFR 60.755 [Compliance provisions] and 40 CFR 60.756 [Monitoring of operations].	40 CFR 60.752(b)(2)(iv)
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 60.751. A closure report shall be submitted as provided in 40 CFR 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 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 60.752(b)(2)(v)
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 part 70 or 71 and if the Permittee meets the conditions for control system removal specified in 40 CFR 60.752(b)(2)(v).	40 CFR 60.752(d)
The Permittee is no longer required to comply with the requirements of 40 CFR pt. 63, subp. AAAAA when the Permittee is no longer required to apply controls as specified in 40 CFR 60.752(b)(2)(v).	40 CFR 63.1950
B. OPERATIONAL STANDARDS FOR COLLECTION AND CONTROL SYSTEMS	hdr
(see 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 60.753(a)
Operate the system such that all collected gases are vented to a control system designed and operated in compliance with 40 CFR. 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 60.753(e)
Operate the control or treatment system at all times when the collected gas is routed to the system.	40 CFR 60.753(f)
B.01. Operational Limits for the Collection System	hdr

TABLE A: LIMITS AND OTHER REQUIREMENTS

01/18/06

Facility Name: Waste Management Inc -Elk River Landfill

Permit Number: 14100041 - 004

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 60.755(a)(3) through (5) or 40 CFR 60.755(c). If corrective actions are taken as specified in 40 CFR 60.755, the monitored exceedance is not a violation of the operational requirements of 40 CFR 60.753.	40 CFR 60.753(g)
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.	40 CFR 60.753(c) 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. 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 60.753(b)
B.01.b. Temperature at wellhead	hdr
Temperature: less than or equal to 55 degrees C (131 degrees F) for each interior wellhead in the collection system, unless a higher operating temperature value at a particular well has been approved. Existing approvals are listed below.	40 CFR 60.753(c) regarding temperature limits
Temperature: less than or equal to 140 degrees F for Well 15R and Well 16	CONTINUED 40 CFR 60.753(c) regarding temperature limits
Temperature: less than or equal to 150 degrees F for Well 21R	CONTINUED 40 CFR 60.753(c) 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	40 CFR 60.753(c) regarding oxygen/nitrogen limits
For each interior wellhead, the nitrogen level shall be determined using Method 3C	40 CFR 60.753(c) 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 60.753(c) 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 60.753(d) regarding the methane limit
B.02. Evaluating surface methane	hdr
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 60.753(d)
CONTINUED The Permittee shall conduct a visual inspection of the dangerous areas excluded from the surface scan route.	CONTINUED 40 CFR 60.753(d)
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 60.753(d); Minn. R. 7007.0800, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

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Facility Name: Waste Management Inc -Elk River Landfill

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<p>CONTINUED</p> <p>The Permittee may exclude the following from the surface testing pattern:</p> <ul style="list-style-type: none"> - 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; - Construction and Demolition Cells D1 and D2 	<p>CONTINUED</p> <p>40 CFR 60.753(d); 40 CFR 60.752(b)(2)(i) regarding alternatives</p>
<p>C. TEST METHODS AND PROCEDURES</p> <p>.</p>	<p>hdr</p>
<p>After the installation of a collection and control system in compliance with 40 CFR 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 60.752(b)(2)(v) by following the procedures of 40 CFR 60.754(b).</p>	<p>40 CFR 60.754(b)</p>
<p>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 51.166 or 40 CFR 52.21 using AP-42 or other approved measurement procedures.</p>	<p>40 CFR 60.754(c)</p>
<p>C.01. Performance Testing</p>	<p>hdr</p>
<p>Performance Test: due before end of each 60 months starting 03/08/2001, to measure NMOC emissions from the enclosed flare using the test methods specified in 40 CFR 60.754(d). The first test is due 03/08/06, then every 60 months thereafter.</p> <p>For additional applicable performance test requirements, see "General Performance Test Requirements" in Table A, Subject Item "Total Facility".</p>	<p>Minn. R. 7017.2020, subp. 1</p>
<p>For the performance tests required above, Method 25, 25C, or Method 18 must be used to determine compliance with the 98 weight-percent efficiency or the 20 ppmv outlet concentration level. Method 3 or 3A shall be used to determine oxygen for correcting the NMOC concentration as hexane to 3 percent. In cases where the outlet concentration is less than 50 ppm NMOC as carbon (8 ppm NMOC as hexane), Method 25A should be used in place of Method 25. If using Method 18, the minimum list of compounds to be tested shall be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42).</p> <p>"Method" means the methods contained in 40 CFR 60, Appendix A.</p>	<p>40 CFR 60.754(d)</p>
<p>The following equation shall be used to calculate efficiency:</p> <p>Control Efficiency = (NMOC_{in} - NMOC_{out})/(NMOC_{in})</p> <p>where,</p> <p>NMOC_{in} = mass of NMOC entering control device NMOC_{out} = mass of NMOC exiting control device</p>	<p>CONTINUED</p> <p>40 CFR 60.754(d)</p>
<p>Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test. Emissions in excess of the level of the applicable emission limit during periods of startup, shutdown, and malfunction shall not be considered a violation of the applicable emission limit.</p>	<p>40 CFR 60.8(c)</p>
<p>Comply with the performance testing requirements of 40 CFR 60.8(d) [Notifications], 40 CFR 60.8(e) [Site preparation], and 40 CFR 60.8(f) [Sampling runs]</p>	<p>40 CFR 60.8(d); 40 CFR 60.8(e); 40 CFR 60.8(f)</p>
<p>D. COMPLIANCE PROVISIONS</p> <p>.</p>	<p>hdr</p>
<p>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 60.11(d).</p>	<p>40 CFR 60.11(d)</p>
<p>D.01. Well parameters</p>	<p>hdr</p>
<p>For the purpose of demonstrating whether the gas collection system flow rate is sufficient to determine compliance with 40 CFR 60.752(b)(2)(ii)(A)(3) [Collect at a sufficient rate], the Permittee shall measure gauge pressure in the gas collection header at each individual well, monthly.</p>	<p>40 CFR 60.755(a)(3) regarding requirement to monitor</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

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<p>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.</p> <p>The Permittee is not required to expand the system as required above during the first 180 days after gas collection system startup.</p>	40 CFR 60.755(a)(3) regarding response to positive pressure; 40 CFR 60.755(a)(4)
<p>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 60.753(c) [Wellhead monitoring].</p>	40 CFR 60.755(a)(5) regarding requirement to monitor
<p>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.</p>	40 CFR 60.755(a)(5) regarding response to exceedances
<p>For purposes of compliance with 40 CFR 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 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:</p> <p>(1) 5 years or more if active; or</p> <p>(2) 2 years or more if closed or at final grade.</p>	40 CFR 60.755(b)
D.02. Surface methane	hdr
D.02.a. Surface monitoring methodology	hdr
<p>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 60.755(d).</p> <p>** Or in accordance with the timetable established in the approved collection and control system design plan required by 40 CFR 60.752(b)(2)(i).</p>	40 CFR 60.755(c)(1)
<p>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.</p>	40 CFR 60.755(c)(2)
<p>Surface emission monitoring shall be performed in accordance with section 4.3.1 of Method 21 of 40 CFR 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.</p>	40 CFR 60.755(c)(3)
D.02.b. Excess methane detection	hdr
<p>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. 60.753(d) [Surface methane limit].</p>	40 CFR 60.755(c)(4)
<p>(i) The location of each monitored exceedance shall be marked and the location recorded.</p>	CONTINUED 40 CFR 60.755(c)(4)
<p>(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 60.755(c)(1) or 40 CFR 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.</p>	CONTINUED 40 CFR 60.755(c)(4); 40 CFR 60.753(d) regarding alternatives to timelines
<p>(ii) CONTINUED</p> <p>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.</p>	CONTINUED 40 CFR 60.755(c)(4); 40 CFR 60.753(d) regarding alternatives to timelines

TABLE A: LIMITS AND OTHER REQUIREMENTS

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(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 40.755(c)(4)(v) shall be taken, and no further monitoring of that location is required until the action specified in 40 CFR 40.755(c)(4)(v) has been taken.	CONTINUED 40 CFR 60.755(c)(4)
(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 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 re-monitoring 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 re-monitoring shows an exceedance, the actions specified in 40 CFR 60.755(c)(4) (iii) or (v) shall be taken.	CONTINUED 40 CFR 60.755(c)(4); 40 CFR 60.752(b)(2)(i) regarding alternatives to timelines
(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 60.755(c)(4)
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 60.755(c)(5)
D.02.d. Analyzer requirements	hdr
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 60.755(d)(1)
The calibration gas shall be methane, diluted to a nominal concentration of 500 parts per million in air.	40 CFR 60.755(d)(2)
To meet the performance evaluation requirements in section 3.1.3 of Method 21 of 40 CFR 60, Appendix A, the instrument evaluation procedures of section 4.4 of Method 21 of 40 CFR 60, Appendix A shall be used.	40 CFR 60.755(d)(3)
The calibration procedures provided in section 4.2 of Method 21 of 40 CFR 60, Appendix A shall be followed immediately before commencing a surface monitoring survey.	40 CFR 60.755(d)(4)
D.03. Applicability	hdr
The provisions of this permit applicable pursuant to 40 CFR, Subpart 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 60.755(e)
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 63.1960
D.04.b. Compliance demonstration with the operating conditions for control systems includes continuous parameter monitoring data, collected under 40 CFR 60.756(b)(1) [combustor temperature monitor (and oxygen monitor)], (c)(1)[open flare temperature monitor], and (d) [alternative combustion].	CONTINUED 40 CFR 63.1960
D.04.c. If a deviation occurs, the Permittee has failed to meet the control device operating conditions described in 40 CFR pt. 63, subp. AAAA and has deviated from the requirements of 40 CFR pt. 63, subp. AAAA.	CONTINUED 40 CFR 63.1960
D.04.d. Develop and implement a written startup, shutdown, and malfunction plan (SSMP) according to the provisions in 40 CFR 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 Items "GP 004 Activities subject to MACT (40 CFR pt. 63)" in Table A for additional SSMP requirements.	CONTINUED 40 CFR 63.1960
E. MONITORING OF OPERATIONS	hdr
E.01. Well monitoring	hdr

TABLE A: LIMITS AND OTHER REQUIREMENTS

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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 60.755(a)(3); and (2) Monitor nitrogen or oxygen concentration in the landfill gas on a monthly basis as provided in 40 CFR 60.755(a)(5); and (3) Monitor temperature of the landfill gas on a monthly basis as provided in 40 CFR 60.755(a)(5).	40 CFR 60.756(a)
E.02. Control device monitoring	hdr
E.02.a. For each enclosed combustor (including enclosed flares and internal combustion engines), calibrate, maintain, and operate according to the manufacturer's specifications, a device that records flow to or bypass of the control device. The Permittee 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 60.756(b)(2)
E.02.b. Combustion monitoring For the enclosed flare, the Permittee shall comply with the requirements in E.02.b.(1).	40 CFR 60.752(b)(2)(i) regarding alternatives
E.02.b.(1). Flare combustion temperature monitoring	hdr
For each enclosed flare, calibrate, maintain, and operate according to the manufacturer's specifications, a temperature monitoring device equipped with a continuous recorder and having a minimum accuracy of plus-or-minus 1 percent of the temperature being measured expressed in degrees Celsius (or degrees Fahrenheit) or plus-or-minus 0.5 degrees Celsius (0.9 degrees Fahrenheit) whichever is greater. (For the purposes of this requirement, "continuous" means "at least once every 15 minutes".)	40 CFR 60.756(b)(1)
The flare temperature monitoring devices and the gas flow rate measuring devices shall be installed and operational prior to conducting performance tests under 40 CFR Sec. 60.8.	40 CFR 60.13(b)
E.03. Surface methane monitoring	hdr
Monitor surface concentrations of methane according to the instrument specifications and procedures provided in 40 CFR 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 60.756(f)
F. REPORTING REQUIREMENTS	hdr
Included in the Semiannual Deviations Report shall be all deviations (as defined in 40 CFR pt. 63, subp. AAAA) that occurred during the 6-month reporting period. (Forms DRF-1 and DRF-2 are subsets of this report.) Deviations for continuous emission monitors or numerical continuous parameter monitors must be determined using a 3 hour monitoring block average.	40 CFR 63.1955(c) regarding report submittals
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 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 60.7(a)(4).	40 CFR 60.757(d)

TABLE A: LIMITS AND OTHER REQUIREMENTS

01/18/06

Facility Name: Waste Management Inc -Elk River Landfill

Permit Number: 14100041 - 004

<p>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.</p> <p>(1) The equipment removal report shall contain all of the following items:</p> <p>(i) A copy of the closure report submitted in accordance with 40 CFR 60.757(d);</p> <p>(ii) A copy of the initial performance test report demonstrating that the 15 year minimum control period has expired; and</p> <p>(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.</p> <p>(2) Additional information may be requested as may be necessary to verify that all of the conditions for removal in 40 CFR 60.752(b)(2)(v) [Removal criteria] have been met.</p>	40 CFR 60.757(e)
F.02. Semi-annual report	hdr
<p>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 60.8. For enclosed combustion devices and flares, reportable exceedances are defined under 40 CFR 60.758(c).</p>	40 CFR 60.757(f); 40 CFR 63.1980(a)
<p>CONTINUED</p> <p>(1) Value and length of time for exceedance of applicable parameters monitored under 40 CFR 60.756(a) [Wellhead temperature and nitrogen/oxygen] and 40 CFR 60.756(b) [Enclosed combustion temperature (or oxygen) and gas flow].</p> <p>(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 Sec. 60.756 [Monitoring of Operations].</p> <p>(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.</p>	CONTINUED 40 CFR 60.757(f)
<p>CONTINUED</p> <p>(4) All periods when the collection system was not operating in excess of 5 days.</p> <p>(5) The location of each exceedance of the 500 parts per million methane concentration as provided in Sec. 60.753(d) [Surface monitoring] and the concentration recorded at each location for which an exceedance was recorded in the previous month.</p> <p>(6) The date of installation and the location of each well or collection system expansion added pursuant to 40 CFR 60.755(a)(3) [Additional well to achieve negative pressure], 40 CFR 60.755(b) [Design plan installation timetable], and 40 CFR 60.755(c)(4) [Surface leak corrections].</p>	CONTINUED 40 CFR 60.757(f)
F.03. Initial Performance Test Submittals	hdr
<p>Submittal: due 45 days after Initial Performance Test, to include the following gas collection system information with the initial performance test report required under Sec. 60.8. Update the information as needed, and include as-builts. If the information is unchanged from that submitted in the design plan, indicate so.</p> <p>(1) A diagram of the collection system showing collection system positioning including all wells, horizontal collectors, surface collectors, or other gas extraction devices, including the locations of any areas excluded from collection and the proposed sites for the future collection system expansion;</p> <p>(2) The data upon which the sufficient density of wells, horizontal collectors, surface collectors, or other gas extraction devices and the gas mover equipment sizing are based;</p>	40 CFR 60.757(g); Minn. R. 7017.2035, subp. 2
<p>CONTINUED</p> <p>(3) The documentation of the presence of asbestos or nondegradable material for each area from which collection wells have been excluded based on the presence of asbestos or nondegradable material;</p> <p>(4) The sum of the gas generation flow rates for all areas from which collection wells have been excluded based on nonproductivity and the calculations of gas generation flow rate for each excluded area; and</p> <p>(5) The provisions for increasing gas mover equipment capacity with increased gas generation flow rate, if the present gas mover equipment is inadequate to move the maximum flow rate expected over the life of the landfill; and</p> <p>(6) The provisions for the control of off-site migration.</p>	CONTINUED 40 CFR 60.757(g)
G. RECORDKEEPING	hdr
G.01. Recordkeeping under 40 CFR pt. 60	hdr
G.01.a. General Recordkeeping	hdr

TABLE A: LIMITS AND OTHER REQUIREMENTS

01/18/06

Facility Name: Waste Management Inc -Elk River Landfill

Permit Number: 14100041 - 004

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 60.7(b); Minn. R. 7019.0100, subp. 1
Recordkeeping: Maintain a file of all measurements, maintenance, reports and records required under 40 CFR 60.7(f) for at least five years.	40 CFR Section 60.7(f)
Monitoring Data: Reduce all temperature monitoring device, exhaust oxygen CEM, and gas flow rate measuring device data to 1-hour averages, in accordance with 40 CFR 60.13(h). 1-hour averages shall be computed from four or more data points equally spaced over each 1-hour period.	40 CFR 60.13(h) 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 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 60.758(a)
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 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. 60.759(a)(3)(i) [Exclusion for nondegradable waste] as well as any nonproductive areas excluded from collection as provided in 40 CFR 60.759(a)(3)(ii) [Exclusion for nonproductive waste].	40 CFR 60.758(d)
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 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 60.758(e)
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 (1) through (4) 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 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 60.759(a)(1) [Professional engineer certification].	40 CFR 60.758(b)
CONTINUED (2) For landfill gas control through the use of an enclosed combustion device other than a boiler or process heater with a design heat input capacity equal to or greater than 44 megawatts: (i) The average combustion temperature measured at least every 15 minutes during the performance test and averaged over the same time period of the performance test. (ii) The percent reduction of NMOC determined as specified in 40 CFR 60.752(b)(2)(iii)(B) [Initial performance test] achieved by the control device.	CONTINUED 40 CFR 60.758(b)
G.01.c. Continuous monitoring system record	hdr
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 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 60.758(c)
G.01.c.(1). The following constitute exceedances that shall be recorded and reported under 40 CFR 60.757(f) [Annual/semiannual report]: - When recording and reporting for the enclosed flare, the Permittee shall comply with the requirements in G.01.c.(1)(a).	CONTINUED 40 CFR 60.758(c)

TABLE A: LIMITS AND OTHER REQUIREMENTS

01/18/06

Facility Name: Waste Management Inc -Elk River Landfill

Permit Number: 14100041 - 004

G.01.c.(1)(a) Enclosed flare - continuous monitoring records	CONTINUED 40 CFR 60.758(c)
Report all periods of operation during which the 3-hour block average combustion temperature for the enclosed flare was more than 28 degrees C (50 degrees F) below the average combustion temperature during the most recent performance test at which compliance with 40 CFR 60.752(b)(2)(iii) [Control system] was determined. The compliance temperature (incorporating the 50-degree F allowance) is shown below.	CONTINUED 40 CFR 60.758(c)
Temperature: greater than or equal to 785.2 degrees F using a 3-hour Block Average at the Enclosed Flare (EU003/CE005). This limit is based on an average temperature of 835.2 degrees F recorded during the 2/11/2004 performance test.	CONTINUED 40 CFR 60.758(c); Minn. R. 7017.2025, subp. 3
G.01.c.(2). 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 60.756.[Monitoring of Operations]	CONTINUED 40 CFR 60.758(c)
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 63.1947, 63.1955(c) and 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 January 16, 2004.	40 CFR 63.1980(g); 40 CFR 63.1945(b) regarding compliance time
3-hour block averages are calculated in the same way as they are calculated in 40 CFR part 60, subpart 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 part 60, subpart WWW: (a) Monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments. (b) Startups. (c) Shutdowns. (d) Malfunctions.	40 CFR 63.1975
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 60.759(a)
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 60.759(a)
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 60.759(a)

TABLE A: LIMITS AND OTHER REQUIREMENTS

01/18/06

Facility Name: Waste Management Inc -Elk River Landfill

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<p>CONTINUED</p> <p>(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:</p> <p>(i) Any segregated area of asbestos or nondegradable material may be excluded from collection if documented as provided under 40 CFR 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.</p> <p>(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 60.759(a)(3)(ii).</p>	<p>CONTINUED</p> <p>40 CFR 60.759(a)</p>
<p>The Permittee shall construct the gas collection devices using the following equipment or procedures:</p> <p>(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.</p>	<p>40 CFR 60.759(b)</p>
<p>(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.</p>	<p>CONTINUED</p> <p>40 CFR 60.759(b)</p>
<p>(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.</p>	<p>CONTINUED</p> <p>40 CFR 60.759(b)</p>
<p>The Permittee shall convey the landfill gas to a control system in compliance with 40 CFR 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:</p> <p>(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.</p> <p>(2) For new collection systems, the maximum flow rate shall be in accordance with 40 CFR 60.755(a)(1).</p>	<p>40 CFR 60.759(c)</p>
<p>I. DEFINITIONS</p>	<p>hdr</p>
<p>I.01. Deviation</p>	<p>hdr</p>
<p>Deviation means any instance in which an affected source subject to this subpart [60 CFR pt. 63, subp. AAAAA], or an owner or operator of such a source:</p> <p>(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;</p> <p>(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</p> <p>(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.</p>	<p>40 CFR 63.1990 for "Deviation"</p>
<p>A deviation includes the definition contained in 40 CFR 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:</p> <p>(a) A deviation occurs when the control device operating parameter boundaries described in 40 CFR 60.758(c)(1) [exceedance recording/reporting] are exceeded.</p> <p>(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.</p> <p>(c) A deviation occurs when a SSMP is not developed, implemented, or maintained on site.</p>	<p>40 CFR 63.1965</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

01/18/06

Facility Name: Waste Management Inc -Elk River Landfill

Permit Number: 14100041 - 004

"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 63.1990 for "Emissions limitation"
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 63.1990 for "Work practice"
I.04. One-hour period (1-hour period)	hdr
One-hour period means any 60-minute period commencing on the hour.	40 CFR 60.2 for "One-hour period"
I.05. Three-hour block average (or 3-hour block average)	hdr
"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

TABLE A: LIMITS AND OTHER REQUIREMENTS

01/18/06

Facility Name: Waste Management Inc -Elk River Landfill

Permit Number: 14100041 - 004

Subject Item: EU 008 ICE/Generator D**Associated Items:** CE 009 Other

GP 002 ICE/Generators

GP 004 Activities subject to MACT (40 CFR pt. 63)

GP 006 ICE/Generators and Enclosed Flare

SV 007 Generator D

What to do	Why to do it
40 CFR Section 63.6590(b)(2): A new stationary RICE which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis must meet the initial notification requirements of 40 CFR Section 63.6645(d) and the requirements of 40 CFR Sections 63.6625(c), 63.6650(g), and 63.6655(c). These stationary RICE do not have to meet the emission limitations and operating limitations of NESHAP Subpart ZZZZ.	40 CFR Section 63.6590(b)(2)

TABLE B: SUBMITTALS

01/18/06

Facility Name: Waste Management Inc -Elk River Landfill
Permit Number: 14100041 - 004

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

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

Send any application for a permit or permit amendment to:

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

Also, where required by an applicable rule or permit condition, send to the Permit Technical Advisor notices of:

- accumulated insignificant activities,
- installation of control equipment,
- replacement of an emissions unit, and
- changes that contravene a permit term.

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

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

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

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

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

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

TABLE B: ONE TIME SUBMITTALS OR NOTIFICATIONS

01/18/06

Facility Name: Waste Management Inc -Elk River Landfill

Permit Number: 14100041 - 004

What to send	When to send	Portion of Facility Affected
Application for Permit Reissuance	due 180 days before expiration of Existing Permit	Total Facility
Fugitive Control Plan	due before 09/25/2004. (See Table A for details). Plan submitted to MPCA on 9/23/2004.	Total Facility
Notification of the Actual Date of Initial Startup	due 15 days after Initial Startup. Applies to each unit individually.	GP002
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)	EU007
Submittal	due 45 days after Initial Performance Test, to include gas collection system information with the initial performance test report required under Sec. 60.8. (See Table A)	EU007
Testing Frequency Plan	due 60 days after Initial Performance Test for NMOC emissions from the flare, following changes that increase the flare's capacity to combust landfill gas.	EU007
Testing Frequency Plan	due 60 days after Initial Performance Test for NMOC emissions. The plan shall specify a testing frequency based on the test data and MPCA guidance. Future performance tests based on one-year (12 month), 36 month, and 60 month intervals, or as applicable, shall be required upon written approval of the MPCA.	EU007

TABLE B: RECURRENT SUBMITTALS

01/18/06

Facility Name: Waste Management Inc -Elk River Landfill

Permit Number: 14100041 - 004

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 starting 05/28/2004 . (See Table A for details)	Total Facility
Semiannual Deviations Report	due 30 days after end of each calendar half-year starting 05/28/2004 . (See Table A for details)	Total Facility
Submittal	due 30 days after end of each calendar half-year following permit issuance . The Permittee shall submit a semi-annual report. (See Table A)	EU007
Compliance Certification	due 31 days after end of each calendar year starting 05/28/2004 (for the previous calendar year). See Table A for details.	Total Facility

APPENDIX MATERIAL

Facility Name: Waste Management Inc -Elk River Landfill

Permit Number: 14100041-004

APPENDIX I

Insignificant Activities Required to be Listed:

- Two Resoner space heaters fueled by LPG, 120,000 Btu/hr each. Located in shop building. Subject to Minnesota Performance Standards for Direct Heating Equipment.
- Bryant furnace fueled by LPG. Heat input of 95,000 Btu/hr. Used to heat office building. Subject to Minnesota Performance Standards for Direct Heating Equipment.
- Leachate recirculation within the MSW Landfill cells. Emissions are accounted for within the EU001 landfill gas emissions.
- Leachate collection system, including 3 underground tanks connected to one above ground tank and loadout area.

Insignificant Activities and Applicable Requirements

Minn. R. 7007.1300, subpart	Rule Description of the Activity	Applicable Requirement
3(A)	Fuel use: space heaters fueled by, kerosene, natural gas, or propane.	Minn. R. 7011.0510/0515
3(B)	Furnaces, boilers, and pathological waste incinerators:	
	infrared electric ovens; and	Minn. R. 7011.0105/0110
	fuel burning equipment with a capacity less than 500,000 Btu/hour but only if the total combined capacity of all fuel burning equipment at the stationary source with a capacity less than 500,000 Btu per hour is less than or equal to 2,000,000 Btu/hour.	Minn. R. 7011.0510/0515 <i>OR</i> Minn. R. 7011.0610 + Minn. R. 7011.1215, subp. 3 <i>(if pathological waste combustor)</i>
3(C)	Fabrication operations: equipment used exclusively for forging, pressing, drawing, spinning, or extruding hot metals.	Minn. R. 7011.0710/0715
3(D)	Processing operations:	
	1. open tumblers with a batch capacity of 1,000 pounds or less; and	Minn. R. 7011.0710/0715
	2. Equipment venting particulate matter (PM) or particulate matter less than 10 microns (PM-10) inside	Minn. R. 7011.0710/0715

Minn. R. 7007.1300, subpart	Rule Description of the Activity	Applicable Requirement
	a building, provided that emissions from the equipment are: a). filtered through an air cleaning system; and b). vented inside of the building 100% of the time.	
3(E)	Storage tanks:	
	1. gasoline storage tanks with a combined total tankage capacity of not more than 10,000 gallons; and	Minn. R. 7011.0710/0715 <i>OR</i> Minn. R. 7011.1505, subp. 2(B)/1505, subp. 3(B) <i>OR</i> Minn. R. 7011.0105/0110 (<i>if not associated with industrial process per the IPE definition</i>)
	2. non-hazardous air pollutant VOC storage tanks with a combined total tankage capacity of not more than 10,000 gallons of non-hazardous air pollutant VOCs and with a vapor pressure of not more than 1.0 psia at 60 degrees Fahrenheit.	Minn. R. 7011.0710/0715 <i>OR</i> Minn. R. 7011.1505, subp. 2(B)/1505, subp. 3 (B) <i>OR</i> Minn. R. 7011.0105/0110 (<i>if not associated with industrial process per the IPE definition</i>)
3(F)	Cleaning operations: commercial laundries, not including dry cleaners and industrial launderers.	Minn. R. 7011.0105/0110 (<i>if industrial process equipment</i>)
3(G)	Emissions from a laboratory, as defined in the subpart.	Minn. R. 7011.0510/0515 + Minn. R. 7011.0610 + Minn. R. 7011.0710/0715
3(H)	Miscellaneous:	
	1. total usage of less than 200 gallons of VOC (including hazardous air pollutant-containing VOC) combined in any consecutive 12 months period at a stationary source;	Minn. R. 7011.0710/0715 <i>OR</i> Minn. R. 7011.0105/0110

Minn. R. 7007.1300, subpart	Rule Description of the Activity	Applicable Requirement
	2. equipment used exclusively for packaging lubricants or grease;	Minn. R. 7011.0710/0715 OR Minn. R. 7011.0105/0110
	3. equipment used for hydraulic or hydrostatic testing;	Minn. R. 7011.0710/0715
	4. brazing, soldering or welding equipment;	Minn. R. 7011.0510/.0515 + Minn. R. 7011.0610 + Minn. R. 7011.0710/0715
	5. blueprint copiers and photographic processes;	Minn. R. 7011.0105/0110
	6. equipment used exclusively for melting or application of wax;	Minn. R. 7011.0510/.0515 + Minn. R. 7011.0610 + Minn. R. 7011.0710/0715
	7. nonasbestos equipment used exclusively for bonding lining to brake shoes; and	Minn. R. 7011.0710/0715
	8. cleaning operations: alkaline/phosphate cleaners and associated cleaners and associated burners.	Minn. R. 7011.0510/.0515 + Minn. R. 7011.0610 + Minn. R. 7011.0710/0715
3(I)	Individual emissions units at a stationary source, each of which have a potential to emit the following pollutants in amounts less than: 1. 4,000 lbs/year of carbon monoxide; and 2. 2,000 lbs/year each of nitrogen oxide, sulfur dioxide, particulate matter, particulate matter less than ten microns, volatile organic compounds (including hazardous air pollutant-containing VOC), and ozone.	As applicable. (No applicable requirements exist for the Leachate Recirculation.)
3(J)	Fugitive Emissions from roads and parking lots.	Minn. R. 7011.0150
3(K)	Infrequent use of spray paint equipment for routine housekeeping or plant upkeep activities not associated with primary production processes at the stationary source, such as spray painting of buildings, machinery, vehicles, and other supporting equipment.	Minn. R. 7011.0710/0715

Minn. R. 7007.1300, subpart	Rule Description of the Activity	Applicable Requirement
4	<p>Emissions units with emissions less than all the following limits but not included in subpart 2 must be listed in a part 70 permit application:</p> <p>A. potential emissions of 5.7 pounds per hour or actual emissions of two tons per year of carbon monoxide;</p> <p>B. potential emissions of 2.28 pounds per hour or actual emissions of one ton per year for particulate matter, particulate matter less than ten microns, nitrogen oxide, sulfur dioxide, and VOCs.</p> <p>1) A 25 hp gasoline-burning portable generator;</p> <p>2) A 8 hp gasoline-burning portable generator;</p> <p>3) A passive solar-powered flare.</p>	Minn. R. 7011.2300 + Minn. R. 7011.0715

TECHNICAL SUPPORT DOCUMENT
For
AIR EMISSION PERMIT NO. 14100041-004

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:

Corporate Owner Address	Stationary Source/Address (SIC Code: 4953)
Waste Management, Inc. 1001 Fannin Suite 4000 Houston, TX 77002	Waste Management, Inc. –Elk River Landfill 22460 Highway 169 NW Elk River, MN Sherburne County
Contact: Stephanie Stolz Phone: (763) 425-3736 ext. 13	

1.2. Description of the Permit Action

The facility is a municipal solid waste landfill with a landfill gas collection system that consists of 31 vertical extraction wells with associated laterals and headers. The collected gas is conveyed to four combustion devices installed to control "non-methane organic compounds" (NMOCs) – an enclosed flare and three internal combustion engine/generator sets (ICE/Generators). These devices operate in parallel, and control NMOCs from landfill gas to meet the requirements of the federal new source performance standards.

History:

The Elk River Landfill (ERL) first began accepting waste in 1972. An open flare was installed on February 15, 1996, to control landfill gas emissions. The open flare had a capacity to combust 1050 cubic feet per minute of landfill gas. An internal combustion engine/generator was installed in November of 1998, with a capacity to combust landfill gas in parallel with the flare.

An enclosed flare was installed in November of 2000, with a capacity to combust 2000 cubic feet per minute of landfill gas. The open flare and single internal combustion engine/generator were removed in April of 2002. Three internal combustion engine/generators were installed in the fall of 2002 to combust landfill gas in parallel with the enclosed flare. The three generators have a capacity of 800 kilowatts each.

The Permittee's Collection and Control System Design Plan (Plan) was approved on December 10, 2002. The Plan includes regulatory alternatives granted to the facility, and the Title V permit incorporates these alternatives.

1.3 Description of the Activities Allowed by this Permit Action

On April 18, 2005, MPCA received an Application for a Major Permit Amendment from Elk River Landfill (ERL) to revise the permit excluding New Source Performance Standards requirements for Internal Combustion Engines at the facility. In addition, ERL requested MPCA to revise the current permit to be consistent with the most recent Collection and Control System Design Plan.

In addition, on July 14, 2005, MPCA received an Application for a Major Permit Amendment from Elk River Landfill (ERL) for the installation and operation of an additional (fourth) Internal Combustion Engine-Generator at the existing gas-to-energy plant.

This permit amendment responds to these applications that authorizes **installation and operation** of a fourth Internal Combustion Engine-Generator at the existing gas-to-energy facility located at the Elk River Landfill. In addition, this permit revises or eliminates conditions related to New Source Performance Standards required control systems.

In a letter to the Permittee, the EPA Region 5 stated:

The landfill gas at ERL has been treated per 40 CFR 60.752(b)(2)(iii)(C), and the gas is no longer subject to the requirements found under the NSPS and NESHAP for MSW landfills. EPA also stated, once the gas has been treated and sent to the IC engines, the treated gas is no longer subject to the requirements of NSPS and NESHAP.

1.4. Facility Emissions:

Table 1. Non-Title I Emissions Increase Summary

Pollutant	After Change (lb/hr)	Before Change (lb/hr)	Net Change (lb/hr)	Insignificant Modification Thresholds (lb/hr <)	Minor and Moderate Amendment Thresholds (lb/hr < or ≥)	Type of Amendment (Minor or Moderate)
PM ₁₀	0.4	-	0.4	0.855	3.42	Minor
NO _x	3.7	-	3.7	2.28	9.13	Minor
SO ₂	0.10	-	0.10	2.28	9.13	Minor
CO	6.9	-	6.9	5.70	22.80	Minor
VOC	0.07	-	0.07	2.28	9.13	Minor
Lead	-	-	-	0.025	0.11	

Table 2. Total Facility Potential to Emit Summary – tons per year

Pollutant	PM	PM ₁₀	SO ₂	NO _x	CO	VOC	All HAPs
Total Facility Limited Potential Emissions (tpy)	95.4	35.8	8.1	93.5	193.0	62.36	24.0
New Emission Unit PTE	1.65	1.65	0.5	16.2	30.3	0.3	0.55

Table 3. Facility Classification

Classification	Major/Affected Source	Synthetic Minor	Minor
PSD		X	
Part 70 Permit Program	X		
Part 63 NESHAP	X		

2. Regulatory and/or Statutory Basis

New Source Review

The facility remains a non-major source under New Source Review regulations.

Part 70 Permit Program

The facility is a major source under the Part 70 permit program.

New Source Performance Standards (NSPS)

There are no new Source Performance Standards applicable to the operations at this facility.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

The facility is a major source under the Part 63 permit program

Minnesota State Rules

Minn. R. 7011.2300 Standards of Performance for Stationary Internal Combustion Engines

Environmental Assessment Worksheet & Air Emissions Risk Analysis

Addition of the fourth engine triggered the need for an environmental assessment worksheet (EAW) as the CO limited emissions exceeded 100 tons per year. EAW triggered the AERA.

Air Emissions Risk Analysis (AERA) was done for this project, and the Risk Manager decision with supporting information can be found in the AQ files. Most of the emission factors were AP-42 or facility specific information. Staff also used CATEF factors to supplement other data.

Table 4. Regulatory Overview of Units Affected by the Modification/Permit Amendment

EU, GP, or SV	Applicable Regulations	Comments:
EU 008 GP 002	Applicable: 40 CFR Part 63; Minn. R. 7011.2300, subp. 1	Standards of Performance for Stationary Internal Combustion Engines. NESHAP Subpart ZZZZ for RICE.

3. Technical Information

3.1 Calculations of Potential to Emit and/or Emissions Increase Analysis: See the enclosed spreadsheets.

3.2 Periodic Monitoring: No additional periodic monitoring is needed as this permit amendment just includes an emission unit similar to existing at the facility.

3.3 Insignificant Activities: A couple of insignificant activities are added to the list, which is attached to the permit.

3.4 Permit Organization: Meets Delta guidance.

3.5 Comments Received: Initial draft permit was emailed to the Permittee on August 31, 2005.

Public Notice Period: November 11, 2005 - December 9, 2005

EPA 45-day Review Period: November 11, 2005 - December 26, 2005

Comments were not received from the public during the public notice period.

4. Conclusion

Based on the information provided by Waste Management, Inc. – Elk River Landfill, the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 14100041-004, and this TSD, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

Staff Members on Permit Team: John Chikkala (permit engineer)
David Crowell (enforcement)
Fred Jenness (peer reviewer)

Attachments: 1. Emissions Increase Calculation Spreadsheets