

AIR EMISSION PERMIT NO. 12300736- 001

IS ISSUED TO

MINNESOTA POLLUTION CONTROL AGENCY

MPCA Portable Air Curtain Incinerator
Portable
St. Paul, Ramsey County, MN 55155

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

Permit Type	Application Date
Total Facility Operating Permit	12/1/2003

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; Pt 70/Limits to Avoid NSR

Issue Date: September 29, 2004

Expiration: September 29, 2009
All Title I Conditions do not expire.

Richard Sandberg
Air Quality Permit Section Manager
Industrial Division

for Sheryl A. Corrigan
Commissioner
Minnesota Pollution Control Agency

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NOTICE TO THE PERMITTEE:

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

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

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

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

PERMIT SHIELD:

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

FACILITY DESCRIPTION:

The facility is a trench-burner version of an air curtain incinerator. It is a portable source that also contains a diesel engine to run the air curtain blower. Truck traffic and fuel loading equipment are fugitive sources.

The air curtain incinerator was purchased by the MPCA for the “Emergency Response And Large Facility Cleanup” Unit. The facility operates in response to disasters, such as tornado damage. The unit can be installed at disaster sites and can be used to incinerate trees, limbs, and other debris that fits the federal definitions of “Wood waste” and “Clean lumber”.

The air curtain incinerator can also be used for animal carcass disposal. For example, Minnesota may face an outbreak of Chronic Wasting Disease (CWD) or Bovine Spongiform Encephalopathy (BSE, a.k.a., Mad Cow Disease), resulting in deaths or euthanasia of infected animals. To prevent further spread of the disease, MPCA would bring the air curtain incineration equipment to the outbreak location and incinerate the carcasses on site. Limited experimental evidence to date indicates that complete destruction of malformed prions requires that tissue be exposed to a sustained temperature of at least 1,800 Fahrenheit. If reconnaissance of the Minnesota deer or elk herd indicates the presence of chronic wasting disease, the Permittee should consult with MPCA management before using the air-curtain incineration method to dispose of tissue from animals known to be infected with that disease.

TABLE A: LIMITS AND OTHER REQUIREMENTS

09/29/04

Facility Name: MPCA Portable Air Curtain Incinerator

Permit Number: 12300736 - 001

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

Subject Item:	Total Facility
What to do	Why to do it
Unless otherwise specified in this permit, the following conditions apply to the total facility.	Minn. R. 7017.1004, subp. 1(A) regarding state monitoring requirements; Minn. R. 7017.2001, subp. 1 regarding state testing requirements; 40 CRF 60.11(f) as applicable
SOURCE-SPECIFIC REQUIREMENTS	hdr
Portable Sources: The Permittee is authorized to operate the air curtain incinerator anywhere within the state of Minnesota, subject to Items (1) and (2) below: (1) The Permittee must comply with the conditions of this permit. (2) The Permittee may not operate in a non-attainment area if such operation is prohibited. (At the time of permit issuance, no non-attainment areas existed in the state of Minnesota.)	Minn. R. 7007.0800, subp. 12(A); Minn. R. 7007.0800, subp. 12(B); Minn. R. 7007.0800, subp. 12(D)
This permit shall not alter or affect the liability of an owner or operator for any violation of applicable requirements prior to or at the time of permit issuance.	Minn. R. 7007.1800 (C)(2)
Comply with Fugitive Emission Control Plan: The Permittee shall follow the actions and record keeping specified in the control plan. 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 control plan, then the Permittee may be required to amend the control plan and/or to install and operate particulate matter ambient monitors as requested by the Commissioner.	Minn. Stat. Section 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2
Labeling Requirements: Within 60 days of permit issuance, the Permittee shall permanently affix the manufacturer's serial number to the Air Curtain Incinerator. If the serial number is not available, a unique number shall be assigned to the device and permanently affixed. The number shall be maintained so that it is readable and visible at all times from a safe distance.	Minn. Stat. 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2
OPERATIONAL REQUIREMENTS	hdr
Operating Hours: less than or equal to 565 hours/year using 12-month Rolling Sum to be calculated by the 15th day of each month for the previous 12-month period.	Title I Condition: Limit to avoid classification as major source and modification under 40 CFR Section 52.21; Limit to avoid Minnesota Environmental Review under Minn. R. ch. 4410
The Permittee shall not operate this facility within 500 meters of any home, apartment building, long-term care facility, hospital, day care center, school, business establishment, or other human-occupied structure.	Minn. R. 7009.0020
The Permittee shall not operate this facility within 500 meters of any campground, playground, park, or other regularly-used recreational area.	
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
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

TABLE A: LIMITS AND OTHER REQUIREMENTS

09/29/04

Facility Name: MPCA Portable Air Curtain Incinerator

Permit Number: 12300736 - 001

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. - Performance Test Notification (written): due 30 days before each Performance Test, or at a mutually agreeable date between the Permittee and the Administrator - Performance Test Plan: due 30 days before each Performance Test, or at a mutually agreeable date between the Permittee and the Administrator - Performance Test Pre-test Meeting: due 7 days before each Performance Test - Performance Test Report: due 45 days after each Performance Test - Performance Test Report - Microfiche Copy: due 105 days after each Performance Test The Notification, Test Plan, and Test Report may be submitted in alternative format as allowed by Minn. R. 7017.2018.	Minn. R. 7017.2030, subp. 1-4 and Minn. R. 7017.2035, subp. 1-2. 40 CFR 60.8(c) regarding information to be supplied; 40 CFR 60.8(d) regarding 30-day notification; 40 CFR 60.7(a)(6) regarding advance notice; 40 CFR 60.19(f) regarding deadlines
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).	Minn. R. 7007.0800, subp. 4(D)
RECORDKEEPING	hdr
Daily Recordkeeping. On each day of operation, the Permittee shall record the hours that the air curtain incinerator was operating. The facility may assume a reasonable burn-down time of approximately 2 hours following the last charge of combustible material into the air curtain incinerator.	Title I Condition: Monitoring for Limit to avoid classification as major source under 40 CFR 52.21 and Minn. R. 7007.3000
Monthly Recordkeeping - Operating Hours for the Air Curtain Incinerator. By the 15th of the month, the Permittee shall calculate and record the 12 month rolling sum hours of operation for the previous 12 month period by summing the monthly operating hours for the previous 12 months.	Minn. R. 7007.0800, subp. 4 and 5
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)
REPORTING/SUBMITTALS	hdr
Shutdown Notifications: Notify the Commissioner at least 24 hours in advance of a planned shutdown of any control equipment or process equipment if the shutdown would cause any increase in the emissions of any regulated air pollutant. If the 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

TABLE A: LIMITS AND OTHER REQUIREMENTS

09/29/04

Facility Name: MPCA Portable Air Curtain Incinerator

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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
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
Fugitive Emissions Control Plan: The Permittee shall submit a fugitive emissions control plan within 60 days of the date of permit issuance for review and approval by the Commissioner. The plan shall identify all fugitive emission sources, primary and contingent control measures, and record keeping. The Permittee shall follow the actions and record keeping specified in the control plan. 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.	Minn. Stat. Section 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2
Relocation Notification Form: due 10 days before change in location, or as soon as possible in response to an emergency. Submit notification on a form approved by the Commissioner. At the time of permit issuance, the form was available on the MPCA website at "www.pca.state.mn.us/air/permits/re-01.pdf"	Minn. R. 7007.0800, subp. 12(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)
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. 7019.3100
Emission Fees: due 60 days after receipt of an MPCA bill.	Minn. R. 7002.0005 through Minn. R. 7002.0095

TABLE A: LIMITS AND OTHER REQUIREMENTS

09/29/04

Facility Name: MPCA Portable Air Curtain Incinerator

Permit Number: 12300736 - 001

Subject Item: EU 001 Diesel Engine**Associated Items:** SV 001 Generator Engine

What to do	Why to do it
EMISSION LIMITS	hdr
Opacity: less than or equal to 20 percent opacity once operating temperatures have been attained.	Minn. R. 7011.2300, subp. 1
Sulfur Dioxide: less than or equal to 0.5 lbs/million Btu heat input . The Permittee satisfies this limit when burning No. 2 fuel oil with a sulfur content not exceeding 0.5% by weight.	Minn. R. 7011.2300, subp. 2
OPERATING CONDITIONS	hdr
Fuel type: Distillate fuel oil only.	Minn. R. 7005.0100, subp. 35a
RECORDING/KEEPING REQUIREMENTS	hdr
Fuel Supplier Certification: Obtain and maintain a fuel supplier certification for each shipment of distillate fuel oil, certifying that the sulfur content does not exceed 0.5% by weight.	Minn. R. 7007.0800, subps. 4 & 5

TABLE A: LIMITS AND OTHER REQUIREMENTS

09/29/04

Facility Name: MPCA Portable Air Curtain Incinerator

Permit Number: 12300736 - 001

Subject Item: FS 001 Air Curtain Incinerator

What to do	Why to do it
APPLICABILITY	hdr
Except during malfunctions, the requirements citing 40 CFR 60.2000 through 60.2265 apply at all times, and each malfunction must not exceed 3 hours.	40 CFR 60.2250(b); 40 CFR 60.11(c)
EMISSION LIMITS	hdr
Within 60 days after the air curtain incinerator reaches the charge rate at which it will operate, but no later than 180 days after its initial startup, the Permittee must meet the two limitations specified in Items 1 and 2 below.	40 CFR 60.2250(a)
(1) Except as described in Item (2) below, the opacity limitation is as follows: Opacity: less than or equal to 10 percent opacity using 6-minute Average	CONTINUED 40 CFR 60.2250(a)
(2) During the startup period that is within the first 30 minutes of operation, the following limit applies: Opacity: less than or equal to 35 percent opacity using 6-minute Average	CONTINUED 40 CFR 60.2250(a)
OPERATING LIMITS	hdr
The Permittee shall burn only the following substances: - Clean lumber (see DEFINITIONS) - Wood waste (see DEFINITIONS) - 100 percent mixture of only wood waste, clean lumber, and/or yard waste, but the mixture must be primarily wood waste and clean lumber - Primarily wood waste and clean lumber, together with pathological waste (see DEFINITIONS). - Distillate oil (see DEFINITIONS), but only in small quantities to the extent required for start-up of the unit as recommended by the manufacturer	40 CFR 60.2260(a)(3); Minn. R. 7007.0800, subp. 2, to ensure that the facility complies with the allowances or exemptions contained in the following rules: 40 CFR 60.2020(a) regarding pathological waste; (continued below)
(citations continued from above)	CONTINUED 40 CFR 60.50c regarding pathological waste; 40 CFR 60.2245(b) regarding wood waste, clean lumber, and/or yard waste; 40 CFR 60.2250 regarding startup with distillate oil; Minn. R. 7011.1201, subp. 46
The Permittee shall not allow waste or fuel to protrude into or above the air curtain (the controlled high velocity air across the upper portion of the combustion chamber).	Minn. R. 7007.0800, subp. 2
The Permittee shall check for pit wall integrity once every 24 hours. The pit shall not exceed a width of 12 feet at any location.	Minn. R. 7007.0800, subp. 2
The Permittee shall start up the air curtain incinerator in accordance with manufacturer instructions	Minn. R. 7007.0800, subp. 2
No owner or operator shall build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard, pursuant to 40 CFR 60.12	40 CFR Section 60.12
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).	40 CFR 60.11(d)
TESTING AND MONITORING	hdr
Initial Performance Test: due 60 days after achieving maximum capacity but not later than 180 days after initial startup to measure opacity emissions.	40 CFR 60.2255(b); 40 CFR 60.8(a) regarding testing dates; 40 CFR 60.11(e)(1) regarding timetables
Extensions to this timetable shall be done pursuant to 40 CFR 60.11(e)(1).	
Performance Test: due no more than 12 calendar months following the date of the previous test for opacity, to measure opacity.	40 CFR 60.2255(c); 40 CFR 60.8(b)
If the air curtain incinerator is not in operation 12 calendar months following the date of the previous test, performance testing shall be conducted at the time when the air curtain incinerator resumes operation.	
Opacity shall be measured by conducting observations in accordance with Reference Method 9, and shall be conducted and reported, pursuant to the conditions described in 40 CFR 60.11(e)(1)-(3).	40 CFR 60.2255(a); 40 CFR 60.8(f); 40 CFR 60.11(b); 40 CFR 60.11(e)(1); 40 CFR 60.11(e)(2); 40 CFR 60.11(e)(3)
For the Initial Performance Test for opacity, the minimum total time of observations shall be 3 hours (30 6-minute averages) for the performance test."	

TABLE A: LIMITS AND OTHER REQUIREMENTS

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If after 30 days notice for an initially scheduled performance test, there is a delay (due to operational problems, etc.) in conducting the scheduled performance test, notify the commissioner as soon as possible of any delay in the original test date, either by providing at least 7 days prior notice of the rescheduled date of the performance test, or by arranging a rescheduled date with the commissioner by mutual agreement.	40 CFR 60.8(d) regarding changes after the 30-day notice
The Permittee shall prepare for the performance testing facilities as required by 40 CFR 60.8(e) [items/services to provide], when relevant and applicable.	40 CFR 60.8(e)
Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test, nor shall emissions in excess of the level of the applicable emission limit during periods of startup, shutdown, and malfunction be considered a violation of the applicable emission limit.	40 CFR 60.8(c) regarding nonrepresentative testing conditions
RECORDKEEPING	hdr
The Permittee shall record, on a daily basis: - the weight of pathological waste burned - the weight (or number of cords) of wood burned in the unit - the weight (or number of gallons) of diesel oil burned - the weight of any other fuels or wastes burned in the unit (whether or not they are allowed by permit)	Minn. R. 7007.0800, subp. 5 regarding daily records
Keep records on a calendar quarter basis of the weight of pathological waste and the weight of all other fuels and wastes burned in the unit. For the purposes of calculating weights burned, the Permittee may use the following default values: - 2.69 tons per cord of wood burned - 7.206 pounds per gallon of diesel oil	Minn. R. 7007.0800, subp. 4(B) regarding representative monitoring; Minn. R. 7007.0800, subp. 2, to ensure that the facility complies with the allowances or exemptions contained in the following rules: 40 CFR 60.50c(b)(2); 40 CFR 60.2020(a)(2)
Keep records of results of all initial and annual opacity tests onsite in either paper copy or electronic format, unless the Administrator approves another format, for at least 5 years. For the purposes of this requirement, "onsite" means either at the air curtain incinerator location or at the central office of the Minnesota Pollution Control Agency.	40 CFR 60.2260(b)
Make all records available for submittal to the Administrator or for an inspector's onsite review.	40 CFR 60.2260(c)
Keep a copy of the initial and annual reports onsite for a period of 5 years.	40 CFR 60.2260(f)
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(a)(6) regarding advance notice, as applicable; 40 CFR 60.8(d) regarding advance notice, as applicable; Minn. R. 7019.0100, subp. 1
Recordkeeping: Maintain a file of all required measurements, maintenance, reports and records required under 40 CFR 60.7(f) for at least five years	Minn. R. 7019.0100, subp. 1; Minn. R. 7007.0800, subp. 5(C) for the 5-year requirement; 40 CFR Section 60.7(f)
REPORTING AND SUBMITTALS	hdr
Limited experimental evidence to date indicates that complete destruction of malformed prions requires that tissue be exposed to a sustained temperature of at least 1,800 Fahrenheit. If reconnaissance of Minnesota deer, elk or cattle herds indicates the presence of CWD, SBE, or other malformed prion-based disease, the Permittee shall consult with MPCA management before using the air-curtain incineration method to dispose of tissue from animals known to be infected with that disease.	Minn. Stat. 116.07, subd. 4a
Prior to commencing construction on air curtain incinerator, submit Items (1) and (2) below:	40 CFR 60.2260(a)(1); 40 CFR 60.2260(a)(2)
(1) Relocation Notification Form: due 10 days before change in location, or as soon as possible in response to an emergency. Submit notification on a form approved by the Commissioner. At the time of permit issuance, the form was available on the MPCA website at "www.pca.state.mn.us/air/permits/re-01.pdf"	CONTINUED 40 CFR 60.2260(a)(1); 40 CFR 60.2260(a)(2)
(2) Notification of the Anticipated Date of Initial Startup: due 30 days before Anticipated Date of Initial Startup	CONTINUED 40 CFR 60.2260(a)(1); 40 CFR 60.2260(a)(2)
Performance Test Report: due 45 days after Performance Test and within 12 months following the previous Performance Test Report for opacity. Submit the results (each 6-minute average) of the initial opacity tests.	40 CFR 60.2260(d); 40 CFR Section 60.8(a) regarding performance test reports; Minn. R. 7017.2035, subp. 2
Submit, on paper, initial and annual opacity test reports on or before the applicable submittal date.	40 CFR 60.2260(e); Minn. R. 7017.2018 regarding paper submittal

TABLE A: LIMITS AND OTHER REQUIREMENTS

09/29/04

Facility Name: MPCA Portable Air Curtain Incinerator

Permit Number: 12300736 - 001

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
DEFINITIONS	hdr
Pathological waste means waste material consisting of only human or animal remains, anatomical parts, and/or tissue, the bags/containers used to collect and transport the waste material, and animal bedding (if applicable).	40 CFR 60.2265 regarding "Pathological waste"; 40 CFR 60.51c regarding "Pathological waste"
Wood waste means untreated wood and untreated wood products, including tree stumps (whole or chipped), trees, tree limbs (whole or chipped), bark, sawdust, chips, scraps, slabs, millings, and shavings. Wood waste does not include: (1) Grass, grass clippings, bushes, shrubs, and clippings from bushes and shrubs from residential, commercial/retail, institutional, or industrial sources as part of maintaining yards or other private or public lands. (2) Construction, renovation, or demolition wastes. (3) Clean lumber.	40 CFR 60.2265 regarding "Wood Waste"
Clean lumber means wood or wood products that have been cut or shaped and include wet, air-dried, and kiln-dried wood products. Clean lumber does not include wood products that have been painted, pigment-stained, or pressure-treated by compounds such as chromate copper arsenate, pentachlorophenol, and creosote.	40 CFR 60.2265 regarding "Clean lumber"
Distillate oil. "Distillate oil" means grades of oils known as No. 1 and No. 2, as defined in the A.S.T.M. D 396 (1973).	Minn. R. 7011.0500, subp. 6.
"Initial performance test" means the test required under 40 CFR 60.8.	40 CFR 60.8 regarding the definition.

TABLE B: SUBMITTALS

09/29/04

Facility Name: MPCA Portable Air Curtain Incinerator
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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:

Permit Technical Advisor
Permit Section
Air Quality 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:

Supervisor
Compliance Determination Unit
Air Quality 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

09/29/04

Facility Name: MPCA Portable Air Curtain Incinerator

Permit Number: 12300736 - 001

What to send	When to send	Portion of Facility Affected
(2) Notification of the Anticipated Date of Initial Startup	due 30 days before Anticipated Date of Initial Startup	FS001
Application for Permit Reissuance	due 180 days before expiration of Existing Permit	Total Facility
Notification of the Actual Date of Initial Startup	due 15 days after Initial Startup	FS001
Performance Test Report	due 45 days after Performance Test and within 12 months following the previous Performance Test Report for opacity. Submit the results (each 6-minute average) of the initial opacity tests.	FS001

TABLE B: RECURRENT SUBMITTALS

09/29/04

Facility Name: MPCA Portable Air Curtain Incinerator

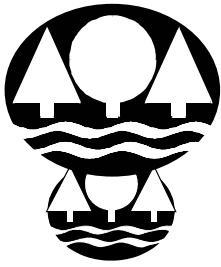
Permit Number: 12300736 - 001

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

APPENDIX MATERIAL

Facility Name:MPCA Portable Air Curtain Incinerator

Permit Number: 12300736-001



MINNESOTA POLLUTION CONTROL AGENCY
MAJORS AND REMEDIATION DIVISION
520 LAFAYETTE ROAD
ST. PAUL, MN 55155-4194

REPORTING FORM **RE-01**
RELOCATION NOTIFICATION
FORM
5/29/02

Provide the following information about your portable plant. Submit a copy of this updated form to the MPCA at least 48 hours in advance of a change in location of your plant. Mail or fax this notice to the MPCA at the following address/phone number:

Beckie Olson
Majors Air and Construction Section
Majors and Remediation Division
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194
FAX: (651) 296-8717

1) Company Name: _____

2) Facility (Plant) Name/No.: _____

3) AQ Permit No. (if applicable): _____

4) Type of Portable Plant (place a check-mark next to the description that most closely matches your plant type):

☐ Crushing/Aggregate Processing Plant *

☐ Hot Mix Asphalt Plant

☐ Concrete Mix Plant

☐ Soil Roaster

☐ Other (specify) _____

5) New Location of Plant

County and nearest city/town: _____

Section, township, range: _____

Nearest crossroads to the plant: _____

Provide detailed directions from crossroads to plant or send plot map showing location

6) Dates plant expected to **operate** at new location: _____ to _____
from _____

7) Contact Information

Printed Name of Person Submitting Form: _____

Phone Number: _____

Date: _____

* A copy of a notification form used to inform another governmental agency will suffice provided it contains equivalent information. Indicate the air quality permit or file number on the copy submitted.

TECHNICAL SUPPORT DOCUMENT
For
AIR EMISSION PERMIT NO. 12300736-001

This Technical Support Document (TSD) is for all the interested parties of the permit. The purpose of this document is to set forth the legal and factual basis for the permit conditions, including references to the applicable statutory or regulatory provisions.

1. General Information

1.1. Applicant and Stationary Source Location:

Owner and Operator Address and Phone Number (list both if different)	Facility Address (SIC Code: 4953)
Minnesota Pollution Control Agency 520 Lafayette Road North St. Paul, MN 55155 Stephen Lee, 651-297-8610	Mobile source Statewide

1.2. Description of the facility

1.2.1 Site Description.

The facility is a trench-burner version of an air curtain incinerator. It is a portable source that also contains a diesel engine to run the air curtain blower. Truck traffic and fuel loading equipment are fugitive sources.

1.3 Description of any changes allowed with this permit issuance

This permit authorizes installation and operation of an air curtain incinerator at locations across the state, as allowed by permit.

1.4 Description of all amendments issued since the issuance of the last total facility permit and to be included in the Part 70 Permit.

None. This is a new facility.

1.5. Facility Emissions:

Table 1. Total Facility Potential to Emit Summary:

EU #	SV#	Emission Unit Description	PM tpy	PM10 tpy	SO2 tpy	NOx tpy	CO tpy	VOC tpy	Pb tpy	Single HAP tpy	All HAPs tpy
001	001	Diesel Engine	0.03	0.03	0.03	0.45	0.10	0.04	neg.	neg.	neg.

FS #	SV #	Fugitive Source Description	PM tpy	PM10 tpy	SO2 tpy	NOx tpy	CO tpy	VOC tpy	Pb tpy	Single HAP tpy	All HAPs tpy
001	---	Air Curtain Incinerator	51.41	19.53	0.40	15.82	94.90	75.13	0.003	1.20	2.42
002	---	Vehicle traffic	2.11	0.45	---	---	---	---	---	---	---

	PM tpy	PM10 tpy	SO2 tpy	NOx tpy	CO tpy	VOC tpy	Pb tpy	Single HAP tpy	All HAPs tpy
Total Facility Limited Potential Emissions*	53.55	20.01	0.42	16.26	95.00	75.17	0.003	1.20	2.42

*These are the limited potential emissions from column 3 in GI-07 from Delta. They may differ from those in the permit application sent by the State in that they have been verified and corrected as need be by MPCA staff. These are the potential emissions that would appear in a public notice.

Table 2. Facility(TF) and Permit Classification

Classification (put x in appropriate box)	Major/Affected Source	*Synthetic Minor	*Minor
PSD (list pollutant)		PM, PM ₁₀ , NO _x , VOC, CO	SO ₂ , Lead
NAAR (list pollutant)		N/A	N/A
Part 70 Permit Program (list pollutant)	**	PM ₁₀ , NO _x , VOC, CO, Single HAP, All HAPs	SO ₂ , Lead

* Refers to potential emissions that are less than those specified as major by 40 CFR § 52.21, 40 CFR pt. 51 Appendix S, and 40 CFR pt. 70.

** This stationary source category is required to obtain a part 70 operating permit under Sec. 129 of the Clean Air Act (Waste Combustion).

2. Regulatory and/or Statutory Basis

Summary Regulatory and/or Statutory Basis of the Emission or Operational Limit

New Source Review

The facility has accepted limits on hours of operation such that it is 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)

The air curtain incinerator is subject to the following New Source Performance Standards:

- 40 CFR pt. 60, subp. CCCC—Standards of Performance for Commercial and Industrial Solid Waste Incineration Units for Which Construction Is Commenced After November 30, 1999 or for Which Modification or Reconstruction Is Commenced on or After June 1, 2001.
- 40 CFR pt. 60, subp. A—General Provisions

National Emission Standards for Hazardous Air Pollutants (NESHAP)

The facility has accepted limits on hours of operation such that it is a non-major source under 40 CFR pt. 63. Also, no NESHAPs have been promulgated for the facility's emission sources. Thus, no NESHAPs apply.

No 40 CFR pt. 61 NESHAPs apply.

Minnesota State Rules

The facility is subject to the standard rules applicable to all Minnesota facilities, as listed in the instructions for permit application Form GI-09.

The internal combustion engine is subject to the following Minnesota Standards of Performance:

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

Regulatory Overview of Facility

*EU, GRP, FS, or SV #	Applicable Regulations	**Comments:
EU 001 FS 001	Minn. R. 7009.0200	Minnesota Ambient Air Quality Standards: The modeled SCREEN3 emission rates were compared to the MAAQS.
EU 001	Minn. R. 7011.2300	Standards of Performance for Stationary Internal Combustion Engines. (The engine powers the blower for the Air Curtain Incinerator.)

FS 001	40 CFR pt. 60, subp. CCCC	Standards of Performance for Commercial and Industrial Solid Waste Incineration Units for Which Construction Is Commenced After November 30, 1999 or for Which Modification or Reconstruction Is Commenced on or After June 1, 2001
FS 001	40 CFR pt. 60, subp. Eb	Standards of Performance for Hospital/Medical/Infectious Waste Incinerators for Which Construction Is Commenced After June 20, 1996 (Permittee is largely exempt from this rule, provided it complies with certain recordkeeping requirements.)
FS 001	40 CFR pt. 60, subp. A	General Provisions

* Insert the number that identifies the level the limit was set on.

** Comments column is for name of the regulation, citations that need further explanation, and to include essential data used to determine the applicability of that particular regulations, standard or permit condition. Most rows should not have any further explanation needed and will contain only the name of the regulation.

3. Technical Information

3.1. Function of the facility

The air curtain incinerator was purchased by the MPCA for the “Emergency Response And Large Facility Cleanup” Unit. The intended use is to operate it in response to disasters, such as tornado damage. The unit will be temporarily installed at the site of a disaster and used to incinerate trees, limbs, and other debris that fits the federal definitions of “Wood waste” and “Clean lumber”.

The air curtain incinerator was also purchased for animal carcass disposal. For example, Minnesota may face an outbreak of Chronic Wasting Disease (CWD) or Bovine Spongiform Encephalopathy (BSE, a.k.a., Mad Cow Disease), resulting in deaths or euthanasia of infected animals. To prevent further spread of the disease, MPCA would bring the air curtain incineration equipment to the outbreak location and incinerate the carcasses on site. Limited experimental evidence, to date, indicates that complete destruction of malformed prions requires that tissue be exposed to a sustained temperature of at least 1,800 Fahrenheit. As time passes, methods of disposal other than air curtain incineration may be favored. If reconnaissance of Minnesota deer, elk or cattle herds indicates the presence of CWD, SBE, or other malformed prion-based disease, the Permittee should consult with MPCA management before using the air-curtain incineration method to dispose of tissue from animals known to be infected with that disease.

3.2. New Source Review

The facility has been permitted as a non-major (synthetic minor) facility under New Source Review. New Source Review does not apply.

3.3. Federal definitions and applicability of performance standards

The facility is an Air Curtain Incinerator as defined in the Commercial and Industrial Solid Waste Incineration (CISWI) rule for new units by 40 CFR § 60.2265:

“Air curtain incinerator means an incinerator that operates by forcefully projecting a curtain of air across an open chamber or pit in which combustion occurs. Incinerators of this type can be constructed above or below ground and with or without refractory walls and floor. (Air curtain incinerators are not to be confused with conventional combustion devices with enclosed fireboxes and controlled air technology such as mass burn, modular, and fluidized bed combustors.)”

This definition appears elsewhere in federal rule, with or without the parenthetical text. The Permittee’s unit is the “pit” variety, below ground and without refractory walls and floor. The Permittee is permitted to operate throughout the state, and may operate on farms or other commercial property. The Permittee may be reimbursed for operation. For these reasons, the incinerator is subject to the CISWI rule.

40 CFR § 60.2555(i)¹ provides a substantial exemption from the CISWI rules for air curtain incinerators that combust only wood waste, clean lumber, and yard waste. The Permittee could not operate economically without this exemption. For the air curtain incinerator, the only fuels allowed by the permit are clean lumber, wood waste, yard waste, and pathological waste. Distillate oil is allowed for unit start-up.

¹ 40 CFR 60.2020(i) Air curtain incinerators. Air curtain incinerators that burn only the materials listed in paragraphs (i)(1) through (3) of this section are only required to meet the requirements under “Air Curtain Incinerators” (Secs. 60.2245 through 60.2260).

- (1) 100 percent wood waste.
- (2) 100 percent clean lumber.
- (3) 100 percent mixture of only wood waste, clean lumber, and/or yard waste.

Likewise, exemptions under both 40 CFR § 60.2020(a)² of the CISWI rule and 40 CFR § 60.50c(b)³ of the Hospital/Medical/Infectious Waste Incinerators (HMIWI) rule provide a substantial exemption from federal rules for incinerators (not just air curtain incinerators) that limit their operation to pathological incineration. And as above, the air curtain incinerator could not operate economically without this exemption.

Federal rules collide when the Permittee wishes to operate the unit as both a pathological waste incinerator and a waste wood/clean lumber/yard waste incinerator. According to CISWI rule 40 CFR § 60.2555(a), the pathological waste incineration exemption requires burning 90 percent or more by weight on a calendar quarter basis (and excluding the weight of auxiliary fuel). If, at a disaster site, the Permittee burns storm debris, the Permittee will be unable to meet the required 90 percent pathological waste minimum.

MPCA staff had dialogue with EPA Region V regarding operation of the unit under two distinct scenarios:

- (1) burning wood waste/clean lumber/yard waste; or
- (2) burning carcasses, with wood waste and/or clean lumber as the auxiliary fuel.

Region V had no objection to MPCA understanding that the “minimum 90 percent pathological waste” requirement applied only when the unit was operating as a pathological waste incinerator. When the unit operated under the “burning only wood waste and clean lumber” exemption, the quantity of material burned in the unit would not count against the pathological waste totals.

The Permittee cannot burn any additional fuels (such as municipal waste, tires, or treated railroad ties) without being subject to further federal regulation. Compliance with these further regulations would be impractical, if not impossible, for the Permittee.

² 40 CFR 60.2020(a) Pathological waste incineration units. Incineration units burning 90 percent or more by weight (on a calendar quarter basis and excluding the weight of auxiliary fuel and combustion air) of pathological waste, low-level radioactive waste, and/or chemotherapeutic waste as defined in Sec. 60.2265 are not subject to this subpart if you meet the two requirements specified in paragraphs (a)(1) and (2) of this section.

(1) Notify the Administrator that the unit meets these criteria.

(2) Keep records on a calendar quarter basis of the weight of pathological waste, low-level radioactive waste, and/or chemotherapeutic waste burned, and the weight of all other fuels and wastes burned in the unit.

³ 40 CFR 60.50c(b) A combustor is not subject to this subpart during periods when only pathological waste, low-level radioactive waste, and/or chemotherapeutic waste (all defined in Sec. 60.51c) is burned, provided the owner or operator of the combustor:

(1) Notifies the Administrator of an exemption claim; and

(2) Keeps records on a calendar quarter basis of the periods of time when only pathological waste, low-level radioactive waste and/or chemotherapeutic waste is burned.

3.4. Minnesota definitions and applicability of performance standards

As long as the air curtain incinerator burns primarily wood, it does not fall under the state definition of “waste combustor” pursuant to Minn. R. 7011.1201, subp. 46:

"Waste combustor" means any emissions unit or emission facility where mixed municipal solid waste, solid waste, or refuse-derived fuel is combusted, and includes incinerators, energy recovery facilities, or other combustion devices. A metals recovery incinerator is a waste combustor. A combustion device combusting primarily wood, or at least 70 percent fossil fuel and wood in combination with up to 30 percent papermill wastewater treatment plant sludge, is not a waste combustor. A soil treatment facility, paint burn-off oven, wood heater, or residential fireplace is not a waste combustor.

The permit requires the Permittee to burn “primarily wood” at all times. “Wood”, as defined in Minn. R. 7011.1201, subp. 48, is:

"Wood" means wood, wood residue, bark, or any derivative fuel or residue thereof, in any form, including sawdust, sander dust, wood chips, wood scraps, slabs, millings, shavings, and processed pellets made from wood and other forest residues.

The federal definitions of “wood waste” and “clean lumber” fall into this definition.

3.5. Fuel quantities

As discussed above, the incinerator is only permitted to burn clean lumber, wood waste, yard waste, and pathological waste. (Distillate oil is allowed as startup fuel.)

The design capacity of the incinerator is 14 tons of wood per hour average throughput, pursuant to vendor specifications. For New Source Review “synthetic minor” purposes, the air curtain incinerator is limited in its hours of operation, and a worst-case scenario of 14 tons of wood per hour is assumed.

To comply for the exemption from the federal HMIWI rule, the facility is required to record the weight of fuels burned (including wood and distillate oil). In the field, the MPCA operators have said that the most practical method of measuring wood is in units of cord (rather than cubic yards or tons). The permit provides a reasonable cords-to-tons conversion factor. The permit contains similar conditions for distillate oil.

3.6. Ambient Air Quality Modeling

The air curtain incinerator operates in a trench, and therefore had a stack height of zero. This means that pollutants are emitted directly to the ambient air.

SCREEN3 modeling was performed under the guidance of MPCA modeling staff. The results are included in **Attachment 1**.

PM-10 was the limiting pollutant. Dispersion results showed that ambient air concentrations drop below regulatory thresholds at 500 meters distance from the air curtain incinerator. The permit requires that the facility be located no closer than 500 meters to an inhabited place (homes, schools, etc.) or any regularly-used recreational area (campgrounds, playgrounds, etc.)

3.7. Operation in more than one location.

The facility must comply with the notification requirements of Minn. R. 7007.0800, subp. 12, when it relocates. The facility is a non-major source (synthetic minor) under New Source Review, so it could at this time operate anywhere in the state. At the time of permit issuance, no non-attainment areas existed in Minnesota. However, because of the uncertainty of future non-attainment areas, the permit prohibits operating in non-attainment areas if such operation violates any non-attainment-related requirements.

3.8. Environmental Review

The facility is permitted to limit potential emissions of all pollutants to less than 100 tons per year. Environmental review is not required.

3.9. Title V Modeling

Title V Computer Dispersion Modeling is not required for this facility because the Potential-to-Emit does not exceed **100** tons per year for PM₁₀, SO₂, or NO_x.

3.10. Insignificant Activities Required to be Listed

No Insignificant Activities are present at this facility.

3.11. Periodic monitoring

The NSPS regulating this facility was promulgated in the year 2000. Periodic monitoring is inherently included in the NSPS requirements contained in this permit.

3.12. Emissions Calculations

The total facility is permitted as a “synthetic minor” source for New Source Review and for Environmental Review. The calculations are included as **Attachment 3**.

3.13. Annotated CD-01

Some of the conditions in this permit have some history behind them that would be helpful for a reader or a future permit writer to know. Those permit conditions are contained in an annotated form of CD-01, which is attached to this document. This attachment does not contain all of the permit's conditions, but does include those conditions (and citations) where an explanation is useful. For example, 40 CFR § 60, Subpart WWW does allow approved alternatives to its requirements. These alternatives are called out in the annotated CD-01 in **Attachment 4**.

3.14. Deviations from Delta Norms

The **DRAFT** permit and this TSD are written in accordance with the norms established for Delta permits and TSD with the following exception. Rule citations of federal regulations do not always contain the word “section.” The norm is to write the citations as “40 CFR Section 62.15160. Given the frequency and length of the citations in the **DRAFT** permit, the “section” was omitted.

3.15. Comments Received

Public comments were received from Mr. Charles J. Lippert of the Mille Lacs Band of Ojibwe on March 16, 2004 during the public notice period (**Attachment 5**). The commenter recommended that in order to reduce the amount of fuel being fed into the incinerator the MPCA notify all Indian tribes sharing contiguous boundaries with the State of the potential of a tribe to salvage disaster waste provided the waste does not pose any health risk. The commenter further recommended that the MPCA develop protocols for the handling of native plant and animal species.

While the comments were adverse, they were unrelated to the applicable requirements in the permit and no changes were made to the permit as a result of the comments. A letter responding to the recommendations of the commenter was sent on July 7, 2004 (**Attachment 6**).

4. Conclusion

Based on the information provided by [staff of the MPCA](#), the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 12300736-001, and this TSD, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

Staff Members on Permit Team: [Peter Torkelson \(engineer\)](#), [Cary Hernandez \(enforcement\)](#), [John Chikkala \(Peer Review\)](#), [Sarah Kilgriff \(compliance\)](#), [Barbara Conti \(Environmental Review\)](#), [Steven Pak \(engineer\)](#), [Beverly Conerton \(AG O\)](#)

Attachment: (1) TSD: [SCREEN3 Modeling Results](#)
(2) TSD: [Selected Federal Regulations](#)
(3) TSD: [Calculations](#)
(4) TSD: [Annotated CD-01](#)
(5) [Public Comment Letter](#)
(6) [Response to Public Comment Letter](#)

TSD: Attachment 1 - SCREEN3 Modeling Results

07/03/03
11:45:11

*** SCREEN3 MODEL RUN ***
*** VERSION DATED 96043 ***

MPCA Portable Air Curtain Incinerator - PM-10

SIMPLE TERRAIN INPUTS:

SOURCE TYPE	=	POINT
EMISSION RATE (G/S)	=	8.72000
STACK HEIGHT (M)	=	.0000
STK INSIDE DIAM (M)	=	3.7800
STK EXIT VELOCITY (M/S)	=	1.0000
STK GAS EXIT TEMP (K)	=	419.0000
AMBIENT AIR TEMP (K)	=	293.0000
RECEPTOR HEIGHT (M)	=	.0000
URBAN/RURAL OPTION	=	RURAL
BUILDING HEIGHT (M)	=	.3000
MIN HORIZ BLDG DIM (M)	=	.3000
MAX HORIZ BLDG DIM (M)	=	12.1900

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

BUOY. FLUX = 10.534 M**4/S**3; MOM. FLUX = 2.498 M**4/S**2.

*** FULL METEOROLOGY ***

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	
DWASH									
100.	2989.	4	15.0	15.0	4800.0	4.57	8.20	4.74	SS
200.	941.0	4	15.0	15.0	4800.0	7.55	15.56	8.58	SS
300.	615.1	4	10.0	10.0	3200.0	12.10	22.61	12.12	SS
400.	468.4	4	8.0	8.0	2560.0	15.25	29.45	15.30	SS
500.	370.4	4	8.0	8.0	2560.0	15.25	36.15	18.32	SS
600.	311.1	4	5.0	5.0	1600.0	24.70	42.72	21.24	SS
700.	276.9	4	5.0	5.0	1600.0	24.70	49.19	24.06	SS
800.	244.6	4	4.5	4.5	1440.0	27.50	55.57	26.81	SS
900.	218.8	4	4.0	4.0	1280.0	31.00	61.88	29.49	SS
1000.	199.0	4	4.0	4.0	1280.0	31.00	68.13	32.09	SS
1100.	182.0	4	3.5	3.5	1120.0	35.50	74.31	34.12	SS
1200.	168.4	4	3.5	3.5	1120.0	35.50	80.44	36.09	SS
1300.	155.9	4	3.5	3.5	1120.0	35.50	86.52	38.00	SS
1400.	161.9	6	1.0	1.0	10000.0	54.07	48.57	23.16	NO
1500.	170.1	6	1.0	1.0	10000.0	54.07	51.41	23.74	NO

1600.	177.7	6	1.0	1.0	10000.0	54.07	54.24	24.32	NO
1700.	184.6	6	1.0	1.0	10000.0	54.07	57.07	24.89	NO
1800.	190.8	6	1.0	1.0	10000.0	54.07	59.89	25.46	NO
1900.	196.4	6	1.0	1.0	10000.0	54.07	62.71	26.02	NO
2000.	201.3	6	1.0	1.0	10000.0	54.07	65.52	26.58	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 100. M:
 100. 2989. 4 15.0 15.0 4800.0 4.57 8.20 4.74 SS

DWASH= MEANS NO CALC MADE (CONC = 0.0)
 DWASH=NO MEANS NO BUILDING DOWNWASH USED
 DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
 DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
 DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

*** REGULATORY (Default) ***
 PERFORMING CAVITY CALCULATIONS
 WITH ORIGINAL SCREEN CAVITY MODEL
 (BRODE, 1988)

*** CAVITY CALCULATION - 1 ***		*** CAVITY CALCULATION - 2 ***	
CONC (UG/M**3) =	.1229E+07	CONC (UG/M**3) =	.3776E+08
CRIT WS @10M (M/S) =	2.59	CRIT WS @10M (M/S) =	3.42
CRIT WS @ HS (M/S) =	2.59	CRIT WS @ HS (M/S) =	3.42
DILUTION WS (M/S) =	1.29	DILUTION WS (M/S) =	1.71
CAVITY HT (M) =	.43	CAVITY HT (M) =	.30
CAVITY LENGTH (M) =	2.84	CAVITY LENGTH (M) =	.42
ALONGWIND DIM (M) =	.30	ALONGWIND DIM (M) =	12.19

END OF CAVITY CALCULATIONS

 *** SUMMARY OF SCREEN MODEL RESULTS ***

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
SIMPLE TERRAIN	2989.	100.	0.
BLDG. CAVITY-1	.1229E+07	3.	-- (DIST = CAVITY LENGTH)
BLDG. CAVITY-2	.3776E+08	0.	-- (DIST = CAVITY LENGTH)

 ** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **

TSD: Attachment 2 - Selected Federal Regulations

Large Municipal Waste Combustors.

The following rule excerpt shows that a trench burner of greater than 250 ton/day that burns municipal solid waste is subject to the requirements of 40 CFR 60, Subpart Eb.

Subpart Eb--Standards of Performance for Municipal Waste Combustors
for Which Construction is Commenced After September 20, 1994

Sec. 60.50b Applicability and delegation of authority.

(a) The affected facility to which this subpart applies is each municipal waste combustor unit located within a municipal waste combustor plant with an aggregate municipal waste combustor plant capacity greater than 35 megagrams per day of municipal solid waste for which construction is commenced after September 20, 1994 or for which modification or reconstruction is commenced after June 19, 1996.

...

(k) Air curtain incinerators, as defined under Sec. 60.51b, located at a plant that meet the capacity specifications in paragraph (a) of this section and that combust a fuel stream composed of 100 percent yard waste are exempt from all provisions of this subpart except the opacity limit under Sec. 60.56b, the testing procedures under Sec. 60.58b(l), and the reporting and recordkeeping provisions under Sec. 60.59b (e) and (i).

(l) Air curtain incinerators located at plants that meet the capacity specifications in paragraph (a) of this section combusting municipal solid waste other than yard waste are subject to all provisions of this subpart.

Attachment #3 - TSD: Calculations
MPCA Portable Air Curtain Incinerator

Totals

95 ton/yr = Maximum single pollutant limit to avoid EAW
 245 ton/yr = Maximum single pollutant limit to avoid NSR

At 8760 hrs:

Pollutant	Trench	Engine	Traffic	Total	Limiting
	tpy	tpy	tpy	tpy	
PM filterable	797	0.49	32.68	830	
PM-10	303	0.49	6.91	310	
SO2	6	0.46		7	
NOx	245	6.91		252	
VOC	1165	0.56		1166	
CO	1472	1.49		1473	CO
Lead	0.05			0.05	
Single HAP	19			19	
Total HAPs	37			37	

1473 = Max

Operating limits are needed for avoiding a 100-tpy EAW

These are the synthetic minor permit limits

Maximum allowable hrs/year of operation

565 hr/yr = 8760 hr/yr * (95 ton/yr / 1473 tpy)

At 95 tons/yr (= 565 hr/yr):

Pollutant	Trench	Engine	Traffic	Total
	FS001	EU001	FS002	
	tpy	tpy	tpy	tpy
PM filterable	51.41	0.03	2.11	53.55
PM-10	19.53	0.03	0.45	20.01
SO2	0.40	0.03		0.42
NOx	15.82	0.45		16.26
VOC	75.13	0.04		75.17
CO	94.90	0.10		95.00
Lead	0.003			0.003
Single HAP	1.20			1.20
Total HAPs	2.42			2.42

Sample calculation:

CO 94.90 tpy = 1472 tpy * (565 hr/yr / 8760 hr/yr)

Operating limits are needed for avoiding 250-tpy NSR applicability

Maximum allowable hrs/year of operation

1457 hr/yr = 8760 hr/yr * (245 ton/yr / 1473 tpy)

At 245 tons/yr (= 1457 hr/yr):

(these are federally-enforceable)

Pollutant	Trench	Engine	Traffic	Total
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	tpy	tpy	tpy	tpy
PM filterable	132.57	0.08	5.44	138.09
PM-10	50.38	0.08	1.15	51.61
SO2	1.02	0.08		1.10
NOx	40.79	1.15		41.94
VOC	193.76	0.09		193.86
CO	244.75	0.25		245.00
Lead	0.01			0.01
Single HAP	3.10			3.10
Total HAPs	6.23			6.23

Sample calculation:

$$\text{CO} \quad 244.75 \text{ tpy} \quad = 1472 \text{ tpy} * (1457 \text{ hr/yr} / 8760 \text{ hr/yr})$$

For use in Table GI-07, Limited				
Pollutant	Trench	Engine	Traffic	Total
	tpy	tpy	tpy	tpy
PM filterable	51.41	0.03	2.11	53.55
PM-10	19.53	0.03	0.45	20.01
SO2	0.40	0.03		0.42
NOx	15.82	0.45		16.26
VOC	75.13	0.04		75.17
CO	94.90	0.10		95.00
Lead	0.003			0.003
Single HAP	1.20			1.20
Total HAPs	2.42			2.42
(see next Worksheet for individual HAPs)				

Attachment 4 -- TSD: Annotated CD-01

Permit conditions that require further explanation or clarification are contained in this document. Not all permit conditions are included.

Total Facility

The Permittee Why	The Permittee What	Comments
Minn. R. 7017.1004, subp. 1(A) regarding state monitoring requirements; Minn. R. 7017.2001, subp. 1 regarding state testing requirements; 40 CRF 60.11(f) as applicable	Unless otherwise specified in this permit, the following conditions apply to the total facility.	Portions of this facility are subject to NSPS, and some testing and monitoring requirements are regulated differently under NSPS than under state rule.
hdr	SOURCE-SPECIFIC REQUIREMENTS	
Minn. R. 7007.0800, subp. 12(A); Minn. R. 7007.0800, subp. 12(B); Minn. R. 7007.0800, subp. 12(D)	<p>Portable Sources: The Permittee is authorized to operate the air curtain incinerator anywhere within the state of Minnesota, subject to Items (1) and (2) below:</p> <p>(1) The Permittee must comply with the conditions of this permit.</p> <p>(2) The Permittee may not operate in a non-attainment area if such operation is prohibited. (At the time of permit issuance, no non-attainment areas existed in the state of Minnesota.)</p>	<p>Minn. R. 7007.0800, subp. 12(A) requires the permit to specify “geographic areas where the stationary source is authorized to operate”.</p> <p>Minn. R. 7007.0800, subp. 12(B) requires the permit to include “conditions that will assure compliance with all applicable requirements at all authorized locations”.</p> <p>Minn. R. 7007.0800, subp. 12(D) requires the permit to include “conditions that assure compliance with all other provisions of parts 7007.0100 to 7007.1850”.</p>
Minn. R. 7007.1800 (C)(2)	This permit shall not alter or affect the liability of an owner or operator for any violation of applicable requirements prior to or at the time of permit issuance.	

Minn. Stat. Section 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2	Comply with Fugitive Emission Control Plan: The Permittee shall follow the actions and record keeping specified in the control plan. 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 control plan, then the Permittee may be required to amend the control plan and/or to install and operate particulate matter ambient monitors as requested by the Commissioner.	This text is based on plans drafted for Utilities.
Minn. Stat. § 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2	Labeling Requirements: Within 60 days of permit issuance, the Permittee shall permanently affix the manufacturer's serial number to the Air Curtain Incinerator. If the serial number is not available, a unique number shall be assigned to the device and permanently affixed. The number shall be maintained so that it is readable and visible at all times from a safe distance.	Language from the Asphalt Plant General permit.
hdr	OPERATIONAL REQUIREMENTS	
Title I Condition: Limit to avoid classification as major source and modification under 40 CFR Section 52.21; Limit to avoid Minnesota Environmental Review under Minn. R. ch. 4410	Operating Hours: less than or equal to 565 hours/year using 12-month Rolling Sum to be calculated by the 15th day of each month for the previous 12-month period.	The annual hourly limit was calculated based on the assumption that all three emission sources – the air curtain incinerator, the diesel engine, and the fugitive vehicle particulate – are operating simultaneously at full capacity. Combined emissions were calculated to arrive at the hourly limit and keep emissions of all pollutants under 95 TPY. (CO is the limiting pollutant.)
Minn. R. 7009.0020	The Permittee shall not operate this facility within 500 meters of any home, apartment building, long-term care facility, hospital, day care center, school, business establishment, or other human-occupied structure.	SCREEN3 modeling was performed. See TSD text.

	The Permittee shall not operate this facility within 500 meters of any campground, playground, park, or other regularly-used recreational area.	
hdr	PERFORMANCE TESTING	
Minn. R. 7017.2030, subp. 1-4 and Minn. R. 7017.2035, subp. 1-2. 40 CFR 60.8(c) regarding information to be supplied; 40 CFR 60.8(d) regarding 30-day notification; 40 CFR 60.7(a)(6) regarding advance notice; 40 CFR 60.19(f) regarding deadlines	<p>Performance Test Notifications and Submittals:</p> <p>Performance Tests are due as outlined in Tables A and B of the permit. See Table B for additional testing requirements.</p> <ul style="list-style-type: none"> - Performance Test Notification (written): due 30 days before each Performance Test, or at a mutually agreeable date between the Permittee and the Administrator - Performance Test Plan: due 30 days before each Performance Test, or at a mutually agreeable date between the Permittee and the Administrator - 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 <p>The Notification, Test Plan, and Test Report may be submitted in alternative format as allowed by Minn. R. 7017.2018.</p>	<p>These conditions fulfill both the state and federal requirements that apply.</p> <p>The “Performance Test Notification” and “Performance Test Plan” have a default submittal deadline of 30 days, but both state and federal rule allow for alternative dates. Because this incinerator is operating on an as-needed basis with little advance notice, the performance tests most likely will be conducted with short notice. Conversations with Charlie Hall of Region V concluded that this was a reasonable approach.</p>
hdr	MODELING REQUIREMENTS	These requirements are not in permit. The facility has potential emissions of less than 100 TPY for each of PM-10, NOx, and SO2. Therefore, this permit contains no modeling information.
hdr	RECORDKEEPING	
Title I Condition: Monitoring for Limit to avoid	Daily Recordkeeping. On each day of operation, the Permittee shall record the hours that the air curtain	The “reasonable burn-down time of approximately 2 hours” was taken from

classification as major source under 40 CFR 52.21 and Minn. R. 7007.3000	incinerator was operating. The facility may assume a reasonable burn-down time of approximately 2 hours following the last charge of combustible material into the air curtain incinerator.	the Operating Manual supplied by the manufacturer
hdr	REPORTING/SUBMITTALS	
Minn. Stat. Section 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2	Fugitive Emissions Control Plan: The Permittee shall submit a fugitive emissions control plan within 60 days of the date of permit issuance for review and approval by the Commissioner. The plan shall identify all fugitive emission sources, primary and contingent control measures, and record keeping. The Permittee shall follow the actions and record keeping specified in the control plan. 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.	Machinery operation and air curtain ash are the two primary sources of fugitive emissions.
Minn. R. 7007.0800, subp. 12(C); Minn. R. 7007.0800, subp. 2	Relocation Notification Form: due 10 days before change in location, or as soon as possible in response to an emergency. Submit notification on a form approved by the Commissioner. At the time of permit issuance, the form was available on the MPCA website at "www.pca.state.mn.us/air/permits/re-01.pdf"	The phrase "or as soon as possible in response to an emergency" was added recognizing that one of the air curtain incinerator's functions is to respond to emergency situations. A 10-day notification may not be possible.
Minn. R. 7007.0800, subp. 6(C)	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.	Every permittee should receive a copy of the MPCA's Annual Compliance Certification Report. The report forms are used to report all noncompliance during the entire year. Include the requirement to submit a copy to the EPA Regional Office in all Part 70

		permits, including general permits.
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Air Curtain Incinerator

The Permittee Why	The Permittee What	Comments
hdr	APPLICABILITY	
40 CFR 60.2250(b); 40 CFR 60.11(c)	Except during malfunctions, the requirements citing 40 CFR 60.2000 through 60.2265 apply at all times, and each malfunction must not exceed 3 hours.	40 CFR 60.2250(b) is more stringent than 40 CFR 60.11(c), which states: "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."
hdr	EMISSION LIMITS	
40 CFR 60.2250(a)	Within 60 days after the air curtain incinerator reaches the charge rate at which it will operate, but no later than 180 days after its initial startup, the Permittee must meet the two limitations specified in Items 1 and 2 below.	Note that this requirement covers periods of startup.
CONTINUED 40 CFR 60.2250(a)	(1) Except as described in Item (2) below, the opacity limitation is as follows: Opacity: less than or equal to 10 percent opacity using 6-minute Average	
CONTINUED 40 CFR 60.2250(a)	(2) During the startup period that is within the first 30 minutes of operation, the following limit applies: Opacity: less than or equal to 35 percent opacity using 6-minute Average	
hdr	OPERATING LIMITS	
40 CFR 60.2260(a)(3); Minn. R. 7007.0800, subp. 2, to ensure that the facility complies with the allowances or exemptions contained in	The Permittee shall burn only the following substances: - Clean lumber (see DEFINITIONS) - Wood waste (see DEFINITIONS) - 100 percent mixture of only wood waste, clean lumber, and/or yard waste, but the mixture must be primarily wood	40 CFR 60.2260(a)(3) requires "Types of materials that will be burned in the air curtain incinerator." This was provided in the permit application, and is repeated here.

<p>the following rules: 40 CFR 60.2020(a) regarding pathological waste; 40 CFR 60.50c regarding pathological waste; 40 CFR 60.2245(b) regarding wood waste, clean lumber, and/or yard waste; 40 CFR 60.2250 regarding startup with distillate oil; Minn. R. 7011.1201, subp. 46</p>	<p>waste and clean lumber</p> <ul style="list-style-type: none"> - Primarily wood waste and clean lumber, together with pathological waste (see DEFINITIONS). - Distillate oil (see DEFINITIONS), but only in small quantities to the extent required for start-up of the unit as recommended by the manufacturer 	<p>The laundry list of allowable materials to be burned must be strictly followed. Amendments to this list may trigger applicability issues with other rules, and may be made only when all of the applicable rules have been referenced.</p> <p>(1) The air curtain incinerator is exempt from the Commercial and Industrial Solid Waste Incineration rule (40 CFR 60, subp. CCCC) and the Hospital, Medical, and Infectious Waste Incinerator rule (40 CFR 60, subp. Ec) if it limits its fuels to pathological waste (federal definition) and auxiliary fuel (only wood, in this case).</p> <p>(2) The facility is categorize as an air curtain incinerator if it burns only clean lumber, wood waste, and yard waste, and is exempt from the bulk of the Commercial and Industrial Solid Waste Incineration rule</p> <p>(3) The facility is not subject to the Minnesota Waste Combustor rule if it burns primarily wood. (Definition of "Waste Combustor", Minn. R. 7011.1201, subp. 46)</p> <p>(4) Distillate oil is not forbidden during startup, consistent with 40 CFR 60.2250</p>
<p>Minn. R. 7007.0800, subp. 2</p>	<p>The Permittee shall not allow waste or fuel to protrude into or above the air curtain (the controlled high velocity air across the upper portion of the combustion chamber).</p>	<p>These instructions are provided in the Operating Manual supplied by the manufacturer. The air curtain</p>

		technology effectiveness is compromised when items protrude.
Minn. R. 7007.0800, subp. 2	The Permittee shall check for pit wall integrity once every 24 hours. The pit shall not exceed a width of 12 feet at any location.	These instructions are provided in the Operating Manual supplied by the manufacturer. The air curtain technology loses effectiveness when the trench walls degrade.
Minn. R. 7007.0800, subp. 2	The Permittee shall start up the air curtain incinerator in accordance with manufacturer instructions	Instructions are provided in the Operating Manual supplied by the manufacturer
hdr	TESTING AND MONITORING	
40 CFR 60.2255(b); 40 CFR 60.8(a) regarding testing dates; 40 CFR 60.11(e)(1) regarding timetables	Initial Performance Test: due 60 days after achieving maximum capacity but not later than 180 days after initial startup to measure opacity emissions. Extensions to this timetable shall be done pursuant to 40 CFR 60.11(e)(1).	Extensions are allowed under 40 CFR 60.11(e)
40 CFR 60.2255(c); 40 CFR 60.8(b)	Performance Test: due no more than 12 calendar months following the date of the previous test for opacity, to measure opacity. If the air curtain incinerator is not in operation 12 calendar months following the date of the previous test, performance testing shall be conducted at the time when the air curtain incinerator resumes operation.	Delta cannot accommodate this rule language in the S/A screen, so it is entered as a C/D Because the facility is not intended to be operated continuously, the air curtain incinerator may not have an operational site established or a reason to operate when testing is due. The permit recognizes this, and allows flexibility for this. 40 CFR 60.8(b) allows for the Administrator to testing procedures prescribed in specific subparts.
40 CFR 60.2255(a); 40 CFR 60.8(f); 40 CFR 60.11(b);40	Opacity shall be measured by conducting observations in accordance with Reference Method 9, and shall be	The permit shield may apply here. 40 CFR 60.2255(b) states, "Conduct an

CFR 60.11(e)(1); 40 CFR 60.11(e)(2); 40 CFR 60.11(e)(3)	<p>conducted and reported, pursuant to the conditions described in 40 CFR 60.11(e)(1)-(3).</p> <p>For the Initial Performance Test for opacity, the minimum total time of observations shall be 3 hours (30 6-minute averages) for the performance test.”</p>	initial test for opacity as specified in Sec. 60.8”, but does not mention 40 CFR 60.11. A citation to 40 CFR 60.11 would be more appropriate, because Sec. 60.8(f) implies a stack test, with compliance coming from the average of three runs. 40 CFR 60.11 uses the established 6-minute averages. This permit is written assuming that the opacity testing methods of 40 CFR 60.11 take priority over those in 40 CFR 60.8(f).
hdr	RECORDKEEPING	
Minn. R. 7007.0800, subp. 5 regarding daily records	<p>The Permittee shall record, on a daily basis:</p> <ul style="list-style-type: none"> - the weight of pathological waste burned - the weight (or number of cords) of wood burned in the unit - the weight (or number of gallons) of diesel oil burned - the weight of any other fuels or wastes burned in the unit (whether or not they are allowed by permit) 	This is recordkeeping to accompany the fuel limitation requirements of 40 CFR 60.2020(a)
<p>Minn. R. 7007.0800, subp. 4(B) regarding representative monitoring;</p> <p>Minn. R. 7007.0800, subp. 2, to ensure that the facility complies with the allowances or exemptions contained in the following rules:</p> <p>40 CFR 60.50c(b)(2);</p> <p>40 CFR 60.2020(a)(2)</p>	<p>Keep records on a calendar quarter basis of the weight of pathological waste and the weight of all other fuels and wastes burned in the unit.</p> <p>For the purposes of calculating weights burned, the Permittee may use the following default values:</p> <ul style="list-style-type: none"> - 2.69 tons per cord of wood burned - 7.206 pounds per gallon of diesel oil 	<p>The keeping of these records is required to exempt the unit from the majority of the provisions of 40 CFR 60, subp. CCCC. The keeping of these records also exempts them from all of the NSPS for hospital/medical/infectious waste incinerators (40 CFR 60.50c).</p> <p>The “ton per cord of wood” value was calculated from Thomas J. Glover’s “Pocket Ref” using: (1) the density of dry white ash wood; and (2) the conversion factor of cubic feet per cord.</p>

		<p>The “pounds per gallon” of diesel oil was taken from Attachment 3-4, APTI Course 427 Combustion Evaluation, EPA, 1980</p> <p>In a phone conversation with Charlie Hall of Region V on 9/12/2003, we spoke of the following scenario: In October, a unit burns 10 tons of storm debris. In November, a unit burns 10 tons of deer carcasses. The quarterly records show only 50% of the material burned is “pathological waste”, even though clean wood is exempt under 40 CFR 60.2020(i).</p> <p>The full rule reads: What combustion units are exempt from this subpart?</p> <p>(a) Pathological waste incineration units. Incineration units burning 90 percent or more by weight (on a calendar quarter basis and excluding the weight of auxiliary fuel and combustion air) of pathological waste, low-level radioactive waste, and/or chemotherapeutic waste as defined in Sec. 60.2265 are not subject to this subpart if you meet the two requirements specified in paragraphs (a)(1) and (2) of this section.</p>
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		<p>(1) Notify the Administrator that the unit meets these criteria.</p> <p>(2) Keep records on a calendar quarter basis of the weight of pathological waste, low-level radioactive waste, and/or chemotherapeutic waste burned, and the weight of all other fuels and wastes burned in the unit.</p>
40 CFR 60.2260(b)	<p>Keep records of results of all initial and annual opacity tests onsite in either paper copy or electronic format, unless the Administrator approves another format, for at least 5 years.</p> <p>For the purposes of this requirement, "onsite" means either at the air curtain incinerator location or at the central office of the Minnesota Pollution Control Agency.</p>	Because this is a portable unit with no structure associated with it, it is unreasonable to insist that record be kept with the unit. Therefore, the alternative of keeping them at the central office is offered.
Minn. R. 7019.0100, subp. 1; Minn. R. 7007.0800, subp. 5(C) for the 5-year requirement; 40 CFR Section 60.7(f)	Recordkeeping: Maintain a file of all required measurements, maintenance, reports and records required under 40 CFR 60.7(f) for at least five years	The state language of 5 years is more strict than the 2 years mentioned in the NSPS. Minn. R. 7007.0800, subp. 5, requires 5 years.
hdr	REPORTING AND SUBMITTALS	
Minn. Stat. 116.07, subd. 4a	Limited experimental evidence to date indicates that complete destruction of malformed prions requires that tissue be exposed to a sustained temperature of at least 1,800 Fahrenheit. If reconnaissance of Minnesota deer, elk or cattle herds indicates the presence of CWD, SBE, or other malformed prion-based disease, the Permittee shall consult with MPCA management before using the air-curtain incineration method to dispose of tissue from animals known to be infected with that disease.	This requirement is included at the request of the MPCA staff who are tracking Chronic Wasting Disease (CWD) and other prion-based diseases. At this point in history, it is not known if the combustion within an air curtain incinerator is capable of adequately destroying the infecting agent.
40 CFR 60.2260(a)(1); 40 CFR 60.2260(a)(2)	Prior to commencing construction on air curtain incinerator, submit Items (1) and (2) below:	40 CFR 60.2260(a)(3) requires "Types of materials that will be burned in the air

		curtain incinerator.” This was already provided in the permit application.
CONTINUED 40 CFR 60.2260(a)(1); 40 CFR 60.2260(a)(2)	<p>(1) Relocation Notification Form: due 10 days before change in location, or as soon as possible in response to an emergency. Submit notification on a form approved by the Commissioner.</p> <p>At the time of permit issuance, the form was available on the MPCA website at "www.pca.state.mn.us/air/permits/re-01.pdf"</p>	<p>This requirement also appears in the “Total Facility” portion of this permit, for different reasons.</p> <p>40 CFR 60.2260(a)(1) requires “Notification of intent to construct the air curtain incinerators.” No timetable for notification is given in rule. Because the unit is portable, the Relocation Notification Form can be used to satisfy this requirement. “10 days” is required by state rule. The phrase “or as soon as possible in response to an emergency” was added recognizing that one of the air curtain incinerator’s functions is to respond to emergency situations.</p>
CONTINUED 40 CFR 60.2260(a)(1); 40 CFR 60.2260(a)(2)	(2) Notification of the Anticipated Date of Initial Startup: due 30 days before Anticipated Date of Initial Startup	
40 CFR 60.2260(d); 40 CFR Section 60.8(a) regarding performance test reports; Minn. R. 7017.2035, subp. 2	<p>Performance Test Report: due 45 days after Performance Test and within 12 months following the previous Performance Test Report for opacity.</p> <p>Submit the results (each 6-minute average) of the initial opacity tests.</p>	<p>The NSPS requires submittal of the report within 60 days of the initial test. Our state rule of 45 days is more stringent, although it allows flexibility. For consistency with other permits, the 45-day submittal time is included.</p> <p>The “12 months following the previous report” is unusual in permits, and will hopefully be satisfied with the 45-day requirement.</p>

40 CFR 60.2260(e); Minn. R. 7017.2018 regarding paper submittal	Submit, on paper, initial and annual opacity test reports on or before the applicable submittal date.	Although federal rules allow electronic submittals, state rules do not. The option to submit an electronic report has been removed.
40 CFR 60.4 as applicable	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.	The requirement covers the state mailing addresses to be used for report submittal duplicates. Only the portion of the rule that applies to Minnesota facilities is included. Following our Agency reorganization, the address listed in 40 CFR 60.4(b) is now (12/1/2000) out-of-date, as is the one in Table B of our Delta permit template. However, the permit writer does not have editing capabilities for this address. Our State Delegation letter for NSPS states that Minnesota shall receive the submittals in lieu of Region V so this requirement also satisfies 40 CFR 60.4(a) as well.
40 CFR Section 60.7(a)(1); Minn. R. 7019.0100, subp. 1	Notification of the Date Construction Began: due 30 days after Start Of Construction. Submit the name and number of each unit and the date construction of each unit began.	This requirement is not in the permit. The unit already exists, so the rule requirements were fulfilled with the submittal of the permit application.
hdr	DEFINITIONS	
40 CFR 60.2265 regarding "Pathological waste"; 40 CFR 60.51c regarding "Pathological waste"	Pathological waste means waste material consisting of only human or animal remains, anatomical parts, and/or tissue, the bags/containers used to collect and transport the waste material, and animal bedding (if applicable).	The definitions contained in 40 CFR 60.51c and 40 CFR 60.2265 are identical. Please note that the Minnesota definition of "pathological waste" is not relevant here. The air curtain

		incinerator is not subject to the Minnesota Waste Combustor rule as long as it burns primarily wood.
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