AIR EMISSION PERMIT NO. 14100003- 003
IS ISSUED TO

United Power Association

UNITED POWER ASSOCIATION - ELK RIVER
17845 Highway 10 East
Elk River, Sherburne County, Minnesota 553300800

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
Moderate Amendment to Federal Part 70	September 1998
Permit issued on April 1, 1998	

This permit authorizes the Permittee to 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 as defined in the state air pollution control rules unless the term is explicitly defined in the permit.

Permit Type: Moderate Amendment to Federal Part 70 Permit

Issue Date: January 22, 1999

Expiration: Non-expiring
All Title I Conditions do not expire.

Michael J. Sandusky
Division Manager
Air Quality Division

for Lisa J. Thorvig
Acting Commissioner
Minnesota Pollution Control Agency

JSC:lao

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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	(612) 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. Certain requirements which have been determined not to apply are listed in Table A of this permit.

The permit shield, however does not apply to:

1. Any national ambient air quality standards adopted under section 109 of the Clean Air Act or increment or visibility under Part C of Title I of the Clean Air Act,
2. Any state ambient air quality standard under Minn. R. ch. 7009, and
3. The state noise pollution control rules, Minn. R. ch. 7030

FACILITY DESCRIPTION:

The facility covered by the previous Total Facility Permit, Air Emissions Permit No. 14100003-001, United Power Association - Elk River Station (ERS) is an electric power generating station burning Refuse Derived Fuel (RDF). The RDF burned at this facility is processed from municipal solid waste for the facility under a contract with the Elk River Resource Recovery Facility (ERRRF). The facility produces approximately 40 megawatts of electricity.

Energy is produced through combustion of RDF in three spreader, stoker-fired, excess air combustion units. The units are identified in the permit as emissions units 1, 2, and 3 (EU 001, EU 002, and EU 003). Unit 3 is approximately twice the size of units 1 and 2. The units are 128, 128 and 268 Million Btu/hr respectively which equates to 11.7, 11.7 and 24.4 tons of RDF per hour. The combustors can also burn natural gas and fuel oil. Natural gas is used at start-up and as necessary to maintain proper combustion conditions; fuel oil is used as a backup fuel to the natural gas. The combustion units were converted from burning coal to RDF in 1988.

All three of the combustion units (boilers) are connected to common pollution control equipment, a scrubber for the control of acid gasses and a baghouse for the control of Particulate Matter (PM). Exhaust gasses from each boiler are continuously monitored for Carbon Monoxide (CO), Sulfur Dioxide (SO_2), Nitrogen Oxides (NO_x), opacity, and Oxygen (O_2). A number of operating parameters, including scrubber exit/baghouse inlet temperature, and boiler feedwater flow rate, are also monitored continuously.

Hot water for internal use when the EU 001, EU 002, and EU 003 are down is provided by a fuel oil-fired boiler (EU 004). A propane fired generator (EU 005) provides emergency electrical power.

Ash produced in the course of waste combustion is stored in an enclosed area at the facility. The ash is transported using covered trucks to a permitted ash-only cell at the NRG Becker Ash Facility. Other sources of PM emissions are the lime storage silo and RDF receiving building.

The ERS facility has three bulk fuel oil tanks with a total capacity of 846,000 gallons. These tanks have been empty since 1981. Two No. 2 fuel oil tanks (back-up for natural gas) with a total capacity of 50,000 gallons produce insignificant emissions. Two tanks for vehicle fuels (diesel, 1,200 gallons and gasoline, 12,000 gallons) also produce insignificant emissions.

TABLE A: LIMITS AND OTHER REQUIREMENTS

01/22/99

Facility Name: United Power Association - Elk River

Permit Number: 14100003 - 003

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

Subject Item: **Total Facility**

What to do	Why to do it
OPERATIONAL LIMITS	hdr
Operation and or production limits will be placed on emission units based on operating conditions during performance testing. Limits set as a result of a performance test (conducted before or after permit issuance) apply until new operating/production limits are set following formal review of a performance test as specified by Minn. R. 7017.2025.	Minn. R. 7017.2025
ERS shall comply with the General Conditions listed in Minn. R. 7007.0800, subp. 16.	Minn. R. 7007.0800, subp. 16
ERS will operate the facility in accordance with the solid waste management requirements as set forth in Minn. R. 7011.1245 items A to H. Plans required shall identify those required portions of the plan which are not applicable.	Minn. R. 7011.1245(A)-(H); Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Fugitive Dust 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
No emissions of acidic or alkaline substances, in such amount that the downwind fallout rate at any place where an adverse effect could occur, exceed the upwind fallout rate by five or more spots per hour, measured in accordance with Minn. R. 7011.0405.	Minn. R. 7011.0400
Noise: ERS 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 federally enforceable.	Minn. R. 7030.0010 - 7030.0080
Ash Toxicity: Abide by a plan to reduce the level of toxic contaminants in ash, consistent with Minn. R. 7007.0501, subp. 6(A).	Minn. R. 7007.0501, subp. 6; Minn. R. 7007.0800, subp. 2
Ash Sampling: Conduct ash sampling at least quarterly in accordance with Minn. R. 7035.2910.	MInn. R. 7035.2910, subp. 3
Abide by a plan for the disposal and/or utilization of ash and quench water consistent with Minn. R. 7007.0501, subp. 7.	Minn. R. 7007.0501, Subp. 7
Abide by the industrial waste management plan prepared in accordance with Minn. R. 7011.1250.	Minn. R. 7007.0801, subp. 2(E)
PLANS	hdr
INDUSTRIAL SOLID WASTE MANAGEMENT PLAN: ERS shall modify the industrial waste management plan whenever the management practices or solid waste identified in the plan have changed. ERS shall submit the amended plan to the commissioner for approval.	Minn. R. 7011.1250, subp. 3.; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Remit: due 90 days after Permit Issuance the plans as described below identifying which required portions are not applicable. Keep the plans with the Operating Manual. A. security requirements in part 7035.2535, subp. 3; Draft and implement a security plan which describes devices or provisions to prevent unauthorized entry that could lead to injury or disturbance of waste or equipment. B. general inspection requirements in part 7035.2535, subp. 4; Draft and implement a plan which describes inspection schedules and maintenance of inspection records for 5 years. This general inspection plan covers those operations which if malfunctions occur could lead to environmental or human health hazards. (Continued below)	Minn. R. 7011.1245(A)-(H), Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: United Power Association - Elk River

Permit Number: 14100003 - 003

Remit: due 90 days after Permit Issuance (Continued) C. household hazardous waste management requirements of part 7035.2535, subp. 6; Keep the household hazardous waste management plan prepared for the Elk River Resource Recovery Facility, on file at the ERS. D. emergency preparedness and prevention plans and emergency procedures shall be prepared in accordance with parts 7035.2595 and 7035.2605; Update the existing Chemical Emergency Episode Plan to comply with the requirements in 7035.2595 and 7035.2605 as applicable. E. contingency action plans in part 7035.2615; Include as a part of the update to the existing Chemical Emergency Episode Plan, the applicable items of 7035.2615 F. closure plans and procedures in part 7035.2625. G. not applicable. H. infectious waste managment plan (if ERS chooses to accept infectious waste), in accordance with Minn. R. 7035.9100 to 7035.9150.	(Continued) Minn. R. 7011.1245(A)-(H); Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Remit: due 90 days after Permit Issuance a plan for handling waste that has not been processed into refuse derived fuel (RDF).	Minn. R. 7007.0800, subp. 2.
Remit: due before 12/31/02. Provide a waste composition study of the waste from which the RDF burned at ERS is derived every five years as described in Minn. R. 7007.0501, subp. 2A. The Waste Composition Study and Sample Analysis Report is due 45 days after the end of each five years starting 12/1997.	Minn. R. 7011.1270, A(4); Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Fugitive Control Plan: due 60 days after Permit Issuance. The plan shall identify all fugitive emission sources, primary and contingent control measures, and recordkeeping. ERS shall follow the actions and recordkeeping specified in the control plan.	Minn. Stat. Section 116.07, subp. 4a; Minn. R. 7007.0800, subp. 2
Operation and Maintenance Plan: Retain at the stationary source an operation and maintenance plan for all air pollution control equipment. The ERS will incorporate operation and maintenance requirements for the air pollution control equipment into the Operating Manual required under Minn. R. 7011.1275, subp. 3.	Minn. R. 7007.0800, subp. 14; and Minn. R. 7007.0800, subp. 16(J)
Ash Sampling Plan: Submit ash sampling plan and amendments to the plan to the Groundwater and Solid Waste Division for approval. The plan must contain the information in Minn. R. 7035.2910, subp. 6A - H.	Minn. R. 7007.0801, subp. 2(D); Minn. R. 7035.2910, subp. 6;
Computer Dispersion Modeling Protocol: due 1,096 days after permit issuance. This protocol will describe the proposed modeling methodology and input data, in accordance with all requirements of 40 CFR pt. 51, App. W. The protocol will be based on projected operating conditions under the next permit term.	Minn. R. 7009 and 40 CFR pt. 50
Computer Dispersion Modeling Results: due 1,462 days after permit issuance. To be submitted after the MPCA has reviewed and approved the modeling protocol.	Minn. R. 7009 and 40 CFR pt. 50
POLLUTION CONTROL EQUIPMENT	hdr
Air Pollution Control Equipment: Operate all pollution control equipment whenever the corresponding process equipment and emission units are operated, unless otherwise noted in Table A.	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 16(J)
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
Shutdowns: Notify the Commissioner at least 24 hours in advance of shutdown of any process or control equipment if the shutdown would cause an increase in the emission of air contaminants. At the time of notification, notify the Commissioner of the cause of the shutdown and the estimated duration. Notify the Commissioner again when the shutdown is over.	Minn. R. 7019.1000, subp. 3
Breakdowns: Notify the Commissioner immediately of a breakdown of more than one hour duration of any process or control equipment if the breakdown causes an increase in the emission of air contaminants. At the time of notification or as soon thereafter as possible, the permittee shall also notify the Commissioner of the cause of the breakdown and the estimated duration. Notify the Commissioner again when the breakdown is over.	Minn. R. 7019.1000, subp. 2
TESTING REQUIREMENTS	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
MONITORING REQUIREMENTS	hdr
Monitoring Equipment: Install or make needed repairs to all monitoring equipment within 60 days of issuance of the permit if monitoring equipment is not installed and operational on the date the permit is issued.	Minn. R. 7007.0800, subp. 4(D)
Monitoring Equipment Calibration: Calibrate all required monitoring equipment according to manufacturer's recommendations or as described in the Operation and Maintenance Manual (any requirements applying to continuous emission monitors are listed separately in this permit).	Minn. R. 7007.0800, subp. 4(D)

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: United Power Association - Elk River

Permit Number: 14100003 - 003

Operation of Monitoring Equipment: Unless otherwise noted in Tables A, B, and/or C, monitoring a combustion process or control equipment connected to that process is not necessary during periods when the process is shutdown, or during checks of the monitoring systems, such as calibration checks and zero and span adjustments. If monitoring records are required, they should reflect any such periods of process shutdown or checks of the monitoring system.	Minn. R. 7007.0800, subp. 4(D)
RECORDKEEPING	hdr
Recordkeeping: 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)
Recordkeeping: Retain all records at the Elk River Site 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 strip-chart 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)
REPORTING/MISCELLANEOUS	hdr
Oral Notification of Deviations Endangering Human Health or the Environment: Within 24 hours of discovery, orally notify the Commissioner of any deviation from permit conditions which could endanger human health or the environment.	Minn. R. 7007.0800, subp. 6(A)
Deviations Report: due 2 days after Discovery of Deviation. Submit a written description of any deviations endangering human health or the environment to the Commissioner. Include the following information in this written description: cause of the deviation; exact dates of the period of the deviation; if the deviation has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the deviation.	Minn. R. 7007.0800, subp. 6(A)
Semiannual Deviations Report: due 30 days after end of each calendar half-year following Permit Issuance. The first semiannual report submitted by ERS 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. Use of the Quarterly EER is permitted for Deviations Report Form-1.	Minn. R. 7007.0800, subp. 6(A)
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
Application for Permit Reissuance: due 180 days before expiration of Existing Permit.	Minn. R. 7007.0400, subp. 3
Extension Requests: ERS 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 30 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. The report covers all deviations experienced during the calendar year.	Minn. R. 7007.0800, subp. 6 (C)(1).
Remit: due 210 days after Permit Issuance, a fractional analysis of the waste stream from which the refuse derived fuel (RDF) is produced as decribed in Minn. R. 7007.0501, subp 2(A)(1) including a measurement of the noncombustible fraction of solid waste.	Minn. R. 7007.0801, subp. 2.C. Minn. R. 7011.1270, (A)(4); Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Remit: due before end of each year starting 03/15/98 an annual Ash Testing Report to the Commissioner by March 15 of each year. The report must contain at a minimum the information in Minn. R. 7035.2910, subp. 10A - F.	Minn. R. 7035.2910, subp. 10.
Emissions 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 thru Minn. R. 7019.3010
Emission Fees: due 60 days after receipt of an MPCA bill.	Minn. R. 7002.0005 through Minn. R. 7002.0095
Inspections: Upon presentation of credentials and other documents as may be required by law, allow the Agency, or its representative, to enter the Permittee's premises to have access to and copy any records required by this permit, to inspect at reasonable times (which include any time the source is operating) any facilities, equipment, practices or operations, and to sample or monitor any substances or parameters at any location.	Minn. R. 7007.0800, subp. 9(A)

TABLE A: LIMITS AND OTHER REQUIREMENTS

01/22/99

Facility Name: United Power Association - Elk River

Permit Number: 14100003 - 003

Subject Item: **GP 001 Waste Combustors**

Associated Items: EU 001 Unit 1 Boiler

EU 002 Unit 2 Boiler

EU 003 Unit 3 Boiler

What to do	Why to do it
OPERATIONAL LIMITS/REQUIREMENTS	hdr
Fuel Usage: less than 1050 tons/day using 12-month Rolling Average . EU001, EU002, and UE003 combined shall burn 1050 tons per day or less of RDF. ERS shall calculate fuel usage based on truck receipts.	Minn. R. 7007.0800, subp. 2
Fuel Usage: less than 100 tons/day using 30-day Rolling Average . EU001, EU002, and UE003 combined shall 100 tons per day or less of tire derived fuel. ERS shall calculate fuel usage based on truck receipts.	Minn. R. 7007.0800, subp. 2
Fuel Usage: less than 200 tons/day using 24-hour Block Average . EU001, EU002, and UE003 combined shall 200 tons per day or less of tire derived fuel. ERS shall calculate fuel usage based on truck receipts.	Minn. R. 7007.0800, subp. 2
Submit: due 180 days after Permit Issuance, an Operating Manual: Develop and maintain the Operating Manual in accordance with Minn. R. 7011.1275, subp. 3, items A through O; Update the manual following each performance test to include operational changes resulting from emissions performance testing results. Include the revision dates within the Operating Manual; Store the Operating Manual in a location easily accessed by staff, and describe the location in the Operating Manual. Make all attempts to have this location be permanent.	Minn. R. 7011.1275, subp. 3; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Training Program: Implement a training program, based on the Operating Manual, designed to maintain compliance with this permit and Minn. Rules. Individual training must be specific to the position held. ERS will: Implement the required training; Document the nature and length of training for each individual; Report the names of those who have been trained in the Quarterly Report following training.	Minn. R. 7011.1275; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Training Program: Persons with job-related activities affecting air emission must: Initially review the operating manual prior to assumption of any job-related activities affecting air emissions, and; Annually review the operating manual. Persons with newly-assigned job-related activities affecting air emission must review the portions of the operating manual relevant to the newly-assigned position before assumption of the new job-related activities.	Minn. R. 7011.1275, subp. 1(A); Minn. R. 7011.1275, subp. 1(D); Minn. R. 7011.1275, subp. 1(B); Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Training Program: Persons without waste combustor or boiler operation experience must work under the direct supervision of a certified operator or a certified operator's designee for 40 hours before assuming job-related activities affecting air emissions.	Minn. R. 7011.1275, subp. 1(C); Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Training Program: Waste combustor personnel who have responsibilities which affect the operation of the waste combustor must be trained in the operation of the facility. These personnel include, but are not limited to, chief facility operators, shift supervisors, control room personnel, ash handlers, maintenance personnel, and load handlers. ERS will: Identify all people described above who must be trained, and include a separate page for each of these people in the Operating Record; Report the names of those who have been trained and the type of training received in the Quarterly Report following training.	Minn. R. 7011.1275, subp. 1; Minn. R. 7011.1275, subp. 2; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Certified Operator: Comply with the certified operator requirements below. ERS Shall: display documents of full certification prominently at the facility; keep copies of the certificates in the Operating Record; record certified operator shift changes in the Operating Record; maintain time records for all certified operators; allow the Commissioner to review all records related to the full certification of operators, including the facility's program for the examination and certification of operators, the required records, the content of examinations, and the results of an individual's examination.	Minn. R. 7007.0800, subp. 2
Presence of certified operator. The person described in Minn. R. 7011.1240, subp. 1 shall be present at the waste combustor facility at all times when solid waste is being combusted.	Minn. R. 7011.1240, subp. 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Within 24 months of permit issuance, all Shift Supervisors and Chief Facility Operators shall obtain Full Certification.	Minn. R. 7007.0800, subp. 2

Facility Name: United Power Association - Elk River

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Dump Stack Use: The dumpstack must not be used for conducting routine inspection or maintenance on the control equipment or the combustion system without prior approval of the commissioner. A dumpstack shall only be used at an RDFcombustor when plant or worker safety would be in jeopardy without its use; during periods of cold startup with no RDF in the combustor; and during maintenance of the boiler when no fuel is being combusted in the unit. Each period of dumpstack use shall be recorded in the daily operating record required in Minn. R. 7011.1285, subp. 2. The record shall contain the length of time the dumpstack was used, the combustor operating conditions during dumpstack use, and the reason for using the dumpstack.	Minn. R. 7011.1240, subp. 7; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
RECORDKEEPING	hdr
Daily Operating Record: The ERS shall maintain on-site daily records for the operation of the waste combustor. Daily records include such things as the operator log book, operator daily log sheets, trend records, CEMS records, and the daily operating report. The record shall contain: A. the calendar date; B. the hours of operation; C. the weight of RDF combusted; D. the weight of RDF requiring disposal at a solid waste land disposal facility, including separated noncombustibles, excess RDF, and ash; E. the amount and description of industrial solid waste received each day, the generator's name, and the method of handling; F. the measurements and determination of emissions averages as required in part 7011.1260, subpart 6; G. results of performance tests conducted on waste combustor units as required in part 7011.1270; H. instances of dumpstack use;	Minn. R. 7011.1285, subp. 2; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Daily Operating Record (Continued) I. the names of persons who have completed initial review or subsequent annual review of the operating manual; J. the reasons for exceeding any of the average emission rates, percent reductions, or operating parameters specified under Minn. R. 7011.1260, subp. 6, item C, or the opacity limit and a description of corrective actions taken; K. reasons for not obtaining the minimum number of hours of sulfur dioxide or nitrogen oxides emissions or operational data (carbon monoxide emissions, boiler feedwater flow rate, particulate matter control device temperature) and a description of corrective actions taken L. the date of the calibration of all signal conversion elements associated with boiler feedwater flow monitoring as required in Minn. R. 7011.1265, subp. 4a.	Minn. R. 7011.1285, subp. 2 ; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2 (Continued)
Recordkeeping: maintain records of the occurence and duration of any startup, shutdown, or malfunction in the operation of the facility including; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.	40 CFR Section 60.7(b), 40 CFR Section 60.1
Archiving: Retain a permanent record of all continuously measured emission records. Retain all other records for a minimum of five years. Regarding boiler feedwater flow monitoring, permanently retain current records of design, construction, installation, calibration, and use of nozzles and orifices. ERS will: Store the above records at the facility site and make them available upon request.	Minn. R. 7011.1285, subp. 1 Minn. R. 7011.1260, subp. 4 MInn. R. 7011.1260, subp. 6; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
REPORTING	hdr
Reporting of Exceedances of Continuously Monitored Emissions: If accurate and valid data results collected from the sulfur dioxide monitor exceed emission limits, the following procedures shall be followed. (1) Exceedance shall be reported to the commissioner as soon as reasonably possible. (2) Repairs or modifications shall be completed within 72 hours. If compliance cannot be achieved within 72 hours, then the waste combustor shall be shut down. (3) When repairs or modifications have been completed, ERS shall demonstrate to the commissioner that the waste combustor is in compliance. The waste combustor may be started up after ERS has notified the commissioner in writing of the date ERS plans to start up the waste combustor and the date that performance testing is schedule.	Minn. R. 7011.1260, subp. 7; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
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. 7019.2000; 40 CFR Section 60.7(c)
Quarterly Report: due 30 days after end of each calendar quarter following Permit Issuance.	Minn. R. 7011.1285, subp. 3; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2

Quarterly Reports (Continued): The report shall contain the following items: A. calendar date; B. a graphic or tabular presentation of the sulfur dioxide, nitrogen oxide, and carbon monoxide emissions, the maximum or minimum waste combustor unit load level and particulate matter control device temperatures as recorded by Minn. R. 7011.1260, subp. 6, item C, and the daily maximum opacity readings as recorded by Minn. R. 7011.1260, subp. 6, item B, subitem (1). The graphs shall be prepared as follows: (1) the graph shall represent one operating parameter or pollutant; (2) the applicable limit of the parameter or pollutant shall be indicated on the graph; and (3) data shall be expressed in the same units as the applicable operating parameter or emissions limit; C. instances of dumpstack use;	Minn. R. 7011.1285, subp. 3; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2 (Continued)
Quarterly Reports (Continued): D. the identification of operating days when any of the average emission concentrations, percent reductions, operating parameters specified under Minn. R. 7011.1260, subp 6(C), or the opacity level exceeded the applicable limits. The report shall include the emission levels recorded during the exceedance, reasons for such exceedances as well as a description of corrective actions taken; E. the percent of the operating time for the quarter that the opacity CEMS was operating and collecting valid data; F. the identification of operating days for which the minimum number of hours that emission concentrations, percent reductions, operating parameters specified under Minn. R. 7011.1260, subp. 6(C) or the opacity level have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken; G. the results of daily sulfur dioxide, nitrogen oxides, and carbon monoxide CEMS drift tests	Minn. R. 7011.1285, subp. 3; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2 (Continued)
Quarterly Reports (Continued) H. the information required in Minn. R. 7011.1285, subp 2(C), (D), and (E), summarized to reflect quarterly totals; and I. a compliance certification as required in Minn. R. 7007.0800, subp 6(C).	Minn. R. 7011.1285, subp. 3; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2 (Continued)
SO2 CONTINUOUS EMISSIONS MONITORING	hdr
CEMS Installation: Install and use SO2 CEMS upstream of CE004 (spray tower) and downstream of CE005 (Fabric Filter) to measure SO2 emissions and removal according to the procedures listed in 40 CFR pt. 60, Appendix B.	Minn. R. 7011.1260, subp. 3; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
CEMS Relative Accuracy Test Audit (RATA): due before end of each calendar year following Permit Issuance . Follow the procedure in 40 CFR pt. 60, Appendix F. The RATA shall be conducted during the calendar quarter in which a cylinder gas audit (CGA) is not performed.	Minn. R. 7011.1260, subp. 5(G); Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Relative Accuracy Test Audit (RATA) Notification: due 30 days before CEMS Relative Accuracy Test Audit (RATA).	Minn. R. 7007.0800, subp. 2
Relative Accuracy Test Audit (RATA) Results Summary: due 30 days after end of each calendar quarter following CEMS Relative Accuracy Test Audit (RATA).	Minn. R. 7011.1285, subp. 3(G); Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
CEMS Continuous Operation: Monitoring data shall be obtained for at least 75 percent of the hours per day for 90 percent of the days per calendar quarter that the combustor is operating and combusting RDF.	Minn. R. 7011.1260, subp. 5(B); Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
CEMS Daily Calibration Drift (CD) Test: The CD shall be quantified and recorded at zero (low-level) and upscale (high-level) gas concentrations at least once daily. 40 CFR pt. 60, Appendix F, shall be used to determine out-of-control periods for CEMS.	Minn. R. 7011.1260, subp. 5(G); Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Cylinder Gas Audit: due before end of each calendar quarter following Permit Issuance but in no more than three calendar quarters per calendar year. The RATA shall be conducted during the calendar quarter in which a CGA is not performed.	Minn. R. 7011.1260, subp. 5(G); Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Cylinder Gas Audit (CGA) Results Summary: due 30 days after end of each calendar quarter following Cylinder Gas Audit.	Minn. R. 7011.1285, subp. 3(G); Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Recordkeeping: The owner or operator must retain records of all CEMS monitoring data and support information for a period of five years from the date of the monitoring sample, measurement or report. Records shall be kept at the Elk River Site.	Minn. R. 7007.0800, subp. 5

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: United Power Association - Elk River

Permit Number: 14100003 - 003

OPACITY CONTINUOUS EMISSIONS MONITORING	hdr
Emissions Monitoring: The owner or operator shall use a continuous opacity monitoring system (COMS) to measure flue gas opacity from SV004.	Minn. R. 7017.1000, subp. 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2; Minn. R. 7011.1260, subp. 3
COMS Continuous Operation: Monitoring data shall be obtained for at least 75 percent of the hours per day for 90 percent of the days per calendar quarter that the combustor is operating and combusting RDF.	Minn. R. 7007.0800, subp. 2 MInn. R. 7017.1000, subp. 6
COMS Daily Calibration Drift (CD) Check: The CD shall be quantified and recorded at zero (low-level) and upscale (high-level) opacity at least once daily from each COMS. The COMS must be adjusted whenever the calibration drift (CD) exceeds twice the specification of PS-1 of 40 CFR 60, Appendix B.	Minn. R. 7017.1000; 40 CFR Section 60.13(d)
COMS Calibration Error Audit: due before end of each calendar half-year following Permit Issuance . Conduct audits at least 3 months apart but no greater than 8 months apart.	Minn. R. 7007.0800, subp. 2
COMS Calibration Error Audit Results Summary: due 30 days after end of each calendar half-year following COMS Calibration Error Audit.	Minn. R. 7007.0800, subp. 2
COMS Monitoring Data: Owners or operators of all COMS shall reduce all data to 6 minute averages. Opacity averages shall be calculated from all equally spaced consecutive 10-second (or shorter) data points in the 6 minute averaging period.	Minn. R. 7007.0800, subp. 2
Recordkeeping: The owner or operator must retain records of all COMS monitoring data and support information for a period of five years from the date of the monitoring sample, measurement or report. Records shall be kept at the Elk River Site.	Minn. R. 7007.0800, subp. 5
TESTING REQUIREMENTS	hdr
Performance Test: due before end of each year starting 08/30/97 to measure front-half PM, Total PM, Total PCDD/PCDF, Opacity, Cd, HCl, Hg and Pb emissions. A year is defined as twelve months. The tests shall be conducted at an interval not to exceed 12 months between test dates. Performance testing shall be conducted in the common exhaust ductwork with all three units operating in accordance with Minn. R. 7011.1265 and include in the report the parameters required by Minn. R. 7011.1265, subp. 4, 4a, 6, 7, 8, and 9.	Minn. R. 7017.2020, subp. 1 Minn. R. 7011.1270(A); Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Performance Test Notification (written): due 30 days before each Performance Test.	Minn. R. 7017.2030, subp. 1
Performance Test Plan: due 30 days before each Performance Test.	Minn. R. 7017.2030, subp. 2 and 3
Performance Test Pre-test Meeting: due 7 days before Performance Test	Minn. R. 7017.2030, subp. 4
Performance Test Pre-test Meeting: due 7 days before Performance Test.	Minn. R. 7017.2030, subp. 4
Performance Test Report: due 45 days after Performance Test or 14 days after receipt of the Performance Test Report by ERS for each Performance Test conducted, whichever is later. Each report must bear the ERS date stamp receipt.	Minn. R. 7017.2035, subp. 1 and 2
Performance Test Report - Microfiche Copy: Due 105 days after Performance Test or 74 days after receipt of Performance Test Report by ERS for each performance test conducted.	Minn. R. 7017.2035, subp. 2
Exceedances of Emission Limits: If accurate and valid data results of a performance test demonstrate an exceedance of a standard of performance as described in Minn. R. 7011.1225 or in the ERS air emissions permit after normal start-up, ERS shall undertake the following actions: (A) The exceedance shall be reported to the Commissioner as soon as reasonably possible, (B) within 30 days of the report of the exceedance, ERS shall undertake appropriate repair or modification to return the waste combustor to compliance or undertake performance testing for a maximum of 30 days, for the purpose of demonstrating compliance with the emission limit.	Minn. R. 7011.1265, subp. 11; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Exceedances of Emission Limits (Continued) (C) If the waste combustor cannot be returned to compliance within 30 days of the report of the initial exceedance, the waste combustor shall be shut down. If the modifications to return the waste combustor to compliance require the ammendment of the air emission facility permit, the waste combustor shall shut down on the 31st day after the report of the exceedance. (D) When repair or modifications have been completed, ERS will demonstrate to the Commissioner that the waste combustor is in compliance. If shut down was required, the waste combustor may be restarted after ERS has notified the Commissioner in writing of the date on which the start-up is planned and when compliance testing is to be completed. ERS shall provide notification at least ten days in advance of the compliance test dates.	Minn. R. 7011.1265, subp. 11; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2 (continued)

TABLE A: LIMITS AND OTHER REQUIREMENTS

01/22/99

Facility Name: United Power Association - Elk River

Permit Number: 14100003 - 003

Subject Item: **EU 001 Unit 1 Boiler**

Associated Items: CE 004 Spray Tower

CE 005 Fabric Filter - High Temperature, i.e., T>250 Degrees F

GP 001 Waste Combustors

MR 017

MR 018

MR 019

MR 030

SV 001

SV 004

What to do	Why to do it
EMISSION LIMITS	hdr
Notwithstanding any transition dates to the contrary, the Permitee has agreed to comply with Minn.R. 7011.1201 through 7011.1285, except as identified in specific conditions of this permit. The Permittee has also agreed to comply immediately with additional conditions contained in Minn. R. 7011.1201 through 7011.1290, when effective, except as indicated in specific conditions of this permit. Therefore, unless otherwise noted elsewhere in this permit, the conditions of this permit are effective upon permit issuance.	Minn. R. 7011.1215, subp. 5; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Applicability of Standards: the standards of Minn. R. 7011.1227 and 7011.1240, subp. 2, the interim emission limits established in this permit, nitrogen oxides limits established in this permit, and control device inlet temperatures apply at all times when RDF is being continuously burned. The Standards do not apply, up to a maximum of three hours, during periods of start-up, shutdown or malfunction. Fugitive emissions standards applicable to the ash conveying system do not apply during periods of maintenance and repair of the ash conveying system.	Minn. R. 7011.1215, subp. 4; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Applicability of Standards: ERS shall not cause to be emitted into the atmosphere from each waste combustor unit gases in excess of the standards of performance shown in parts 7011.1227, the interim emission limits, and the nitrogen oxides limit established in this permit. Emissions (except for opacity) shall be calculated under standard conditions corrected to seven percent oxygen on a dry volume basis.	Minn. R. 7011.1225, subp. 1(A); Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
ERS shall not cause to be emitted into the atmosphere visible emissions of combustion ash from an ash conveying system, including conveyor transfer points, in excess of five percent of the observation period (i.e., 9 minutes per three-hour period), as determined by Code of Federal Regulations, title 40, part 60, Appendix A, Method 22, as amended. This limit does not apply to visible emissions discharged inside buildings or enclosures of ash conveying systems; however, the emission limit does cover visible emissions discharged to the atmosphere from buildings or enclosures of ash conveying systems.	Minn. R. 7007.0800, subp. 2
Front-half Particulate Matter: less than or equal to 0.012 grains/dry standard cubic foot , front-half, corrected to seven percent oxygen as determined by performance test in accordance with Minn. R. 7011.1265.	Minn. R. 7011.1227, Table 1, Minn. R. 7011.1225, subp. 1; Minn. R. 7011.1265; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2 40 CFR Section 60.52
Total Particulate Matter: less than or equal to 0.020 grains/dry standard cubic foot , total, corrected to seven percent oxygen as determined by performance test in accordance with Minn. R. 7011.1265.	Minn. R. 7011.1227, Table 1; Minn. R. 7011.1225, subp. 1; Minn. R. 7011.1265; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2 40 CFR Section 60.52
Opacity: less than or equal to 10 percent opacity	Minn. R. 7011.1227, Table 1; Minn. R. 7011.1260, subp. 4(F); Minn. R. 7011.1265, subp. 2 (D); Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Effective on the date of permit issuance, which ever is less stringent of the following:1) 50 percent reduction of sulfur dioxide; or 2) a concentration, corrected to seven percent oxygen, of Sulfur Dioxide: less than or equal to 50 parts per million using 24-hour Geometric Average	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: United Power Association - Elk River

Permit Number: 14100003 - 003

Effective 07/01/1999, which ever is less stringent of the following:1) 60 percent reduction of sulfur dioxide; or 2) a concentration, corrected to seven percent oxygen, of Sulfur Dioxide: less than or equal to 40 parts per million using 24-hour Geometric Average	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Effective 12/19/2000, which ever is less stringent of the following:1) 75 percent reduction of sulfur dioxide; or 2) a concentration, corrected to seven percent oxygen, of Sulfur Dioxide: less than 29 parts per million using 24-hour Geometric Average	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Sulfur Dioxide Emissions: SO2 emission concentration shall be determined by SO2 continuous emissions monitor in accordance with Minn. R. 7011.1260.	Minn. R. 7011.1265, subp. 2 (B); Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp 2.
Complete construction and commence operation: due before 08/31/98 , complete Phase I CO emissions reduction modifications for Unit 1. It is assumed that modifications to the boiler unit to reduce CO emissions will also affect SO2 emissions. All SO2 control modifications determined to be necessary by the Permittee to meet the interim and final SO2 limits will be done simultaneously with Phase II CO control work.	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Notification: due before 08/31/98, notify the Commissioner that the Phase 1 modifications to reduce CO emissions have been completed.	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Monitor SO2 emissions between 09/01/98 to 07/01/99 to ensure compliance with the interim SO2 limit.	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Notification: due before 07/01/99 , notify the Commissioner as to the status of compliance with the interim SO2 emission limit for unit #1.	Minn. R. 7011.1227, Table 1, Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
If Unit #1 cannot meet the interim SO2 limit by 07/01/99, begin designing air quality control systems(AQCS) to control SO2.	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Procure and install AQCS modifications by 06/30/00 if determined to be necessary by the Permittee to meet the final SO2 limit.	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Start-up AQCS modifications for SO2 by 07/31/00.	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Meet the final SO2 limit by 12/19/00.	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Notification: due before 12/19/00, notify the Commissioner as to the status of compliance with the final SO2 emission limit.	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Effective on the date of permit issuance, a concentration corrected to 7 percent oxygen, of Carbon Monoxide: less than or equal to 400 parts per million using 24-hour Block Average	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Effective 7/1/1999, a concentration corrected to 7 percent oxygen, of Carbon Monoxide: less than or equal to 300 parts per million using 24-hour Block Average	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Effective12/19/2000, a concentration corrected to 7 percent oxygen, of Carbon Monoxide: less than or equal to 200 parts per million using 24-hour Block Average	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Carbon Monoxide Emissions: CO emission concentrations shall be determined by CO continuous emissions monitors in accordance with Minn. R. 7011.1260.	Minn. R. 7007.0800, subp. 2
Notification: due before 12/31/98. Notify the Commissioner of the status of the design and procurement of the Phase II CO modifications.	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: United Power Association - Elk River

Permit Number: 14100003 - 003

Install: due before 04/30/99 . Install Phase II CO modifications, if determined to be necessary by the Permittee to meet the final CO limit on 12/19/00.	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Startup: due before 05/30/99 . Startup Phase II CO modification equipment.	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Notification of compliance status: due before 07/01/99 . Notify the Commissioner as to the status of compliance with the interim CO limit.	Minn. R. 7011.1227, Table 1, Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Meet the final CO limit by 12/19/00.	Minn. R. 7011.1227, Table 1, Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Notification of compliance status: due before 12/19/00. Notify the Commissioner as to the status of compliance with the final CO limit.	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Effective on the date of permit issuance, a concentration corrected to 7 percent oxygen, of Nitrogen Oxides: less than or equal to 300 parts per million using 24-hour Block Average	Minn. R. 7011.1228; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Effective 7/1/1999, a concentration corrected to 7 percent oxygen, of Nitrogen Oxides: less than or equal to 275 parts per million using 24-hour Block Average	Minn. R. 7011.1228; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Effective 12/20/2000, Nitrogen oxides at a concentration corrected to 7 percent oxygen less than or equal to 230 ppmv when averaged over all combustor units or, for each individual unit a concentration corrected to seven percent oxygen, of Nitrogen Oxides: less than or equal to 250 parts per million using 24-hour Geometric Average	Minn. R. 7011.1228; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Nitrogen Oxides Emissions: NOx emission concentrations shall be determined by NOx continuous emissions monitor in accordance with Minn. R. 7011.1260.	Minn. R. 7011.1265, subp. 2(C); Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Nitrogen Oxides Emissions Averaging: Before ERS may implement emissions averaging to demonstrate compliance with the nitrogen oxides emission limit effective 12/19/2000, ERS shall identify units that are included in the nitrogen oxides emissions averaging plan in either 1) the compliance report required by Minn. R. 7017.2035 that contains the results of the units' initial performance tests required by Minn. R. 7011.1270, item A, subitem (1); or 2) in the annual report required in part 7011.1285, as applicable, prior to implementing the averaging plan. The units being included in the averaging plan may be redesignated every calendar year. Partial year averaging is allowable upon written commissioner approval.	Minn. R. 7011.1228; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Notification: due before 02/28/99. Notify the Commissioner of the status of the design and procurement of the NOx control equipment if required.	Minn. R. 7011.1228; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Complete construction and commence operation: due before 08/31/98 , complete Phase I CO emission reduction modifications for Unit 1. It is assumed that modifications to the boiler unit to reduce CO emissions will also affect NOx emissions. Any NOx control modifications determined to be necessary by the Permittee to meet the interim and final NOx limits will be done subsequent to Phase II CO control work.	Minn. R. 7011.1228; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Monitor NOx and tune boilers (if required to meet final NOx limit) after Phase II CO Equipment Installation: due before 07/01/99	Minn. R. 7011.1228; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Notification of compliance status: due before 07/01/99. Notify the Commisioner as to the status of compliance with the interim NOx limit.	Minn. R. 7011.1228; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: United Power Association - Elk River

Permit Number: 14100003 - 003

Notification: due before 01/01/00. Notify the Commissioner of the status of the design and procurement of NOx control equipment if Phase II CO modifications are required.	Minn. R. 7011.1228; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Phase II NOx Control (if determined to be necessary by the Permittee to meet the final NOx limit) Equipment Installation: due before 06/30/00	Minn. R. 7011.1228; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Monitor NOx and Tune Boilers after Phase II Equipment Installation: due before 11/19/00	Minn. R. 7011.1228; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Meet the final NOX limit by 12/19/00.	Minn. R. 7011.1227, Table 1, Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Notification of compliance status: due before 12/19/00. Notify the Commissioner as to the status of compliance with the final NOx limit.	Minn. R. 7011.1228; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Lead: less than or equal to 440 micrograms/DSCM corrected to seven percent oxygen as determined in accordance with Minn. R. 7011.1265, subp. 3(C).	Minn. R. 7011.1265, subp. 5(A); Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Muni Waste Combust Organics: less than or equal to 30 nanograms/DSCM corrected to seven percent oxygen, measured as Total PCDD/PCDF as determined in accordance with Minn. R. 7011.1265, subp. 3(B).	Minn. R. 7011.1227, Table 1; Minn. R. 7011.1265, subp. 5(D); Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Cadmium compounds: less than or equal to 40 micrograms/DSCM measured as cadmium, corrected to 7% oxygen as determined in accordance with Minn. R. 7011.1265, subp. 3(C).	Minn. R. 7011.1265, subp. 5(B); Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Hydrochloric acid: less than or equal to 29 parts per million corrected to seven percent oxygen; or 95% control, whichever is less stringent. Within one month of permit issuance, UPA will discontinue HCl monitoring and reporting and will begin annual performance testing of HCl in accordance with Minn. R. 7011.1265, subp. 3(A).	Minn. R. 7011.1227, Table 1; MInn. R. 7011.1260, subp. 5(D); Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Mercury: less than or equal to 50 micrograms/DSCM corrected to seven percent oxygen; or 85% removal (short term), whichever is less stringent as determined in accordance with Minn. R. 7011.1265, subp. 3(C) and 3(D).	Minn. R. 7011.1227, Table 1; Minn. R. 7011.1265, subp. 5(C); Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Mercury: less than or equal to 30 micrograms/DSCM corrected to seven percent oxygen; or 85% removal (long-term), whichever is less stringent as determined in accordance with Minn. R. 7011.1265, subp. 3(C) and 3(D).	Minn. R. 7011.1227, Table 1; Minn. R. 7011.1265, subp. 5(C); Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
ERS shall not cause to be emitted into the atmosphere visible emissions of combustor ash from any of the ash conveying system, buildings or enclosures including conveyor transfer points in excess of 5 percent of the observation period (i.e. 9 minutes per three-hour period). 40 CFR pt 60, Appendix A, method 22 as amended shall be used to measure visible emissions. This limit does not apply to visible emissions discharged inside buildings or enclosures of ash conveyor systems.	Minn. R. 7007.0800, subp. 2; MInn. R. 7011.1225, subp. 1 Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
AVERAGING PERIODS	hdr
Averaging Periods: For emission limits or operational limits which are monitored continously the following averaging periods shall be used: A) for particulate matter control device inlet temperature monitoring, four-hour arithmetic block averages calculated from four continuous one-hour arithmetic averages. B) for unit load, a four-hour arithmetic block average C) the averaging period for carbon monoxide shall be a daily 24-hour arithmetic average measured between 12 midnight and the following midnight. The four-hour and 24-hour average shall be calculated from one-hour arithmetic averages. At least four points equally spaced in time shall be used to calculate each one-hour average. Each one-hour average shall be corrected to seven percent oxygen on an hourly basis using the one-hour arithmetic average of the oxygen or carbon dioxide continuous emissions monitoring system.	Minn. R. 7011.1260, subp. 4; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2

Facility Name: United Power Association - Elk River

Permit Number: 14100003 - 003

Averaging Periods (continued) D) for SO2, the geometric average of the 1-hour arithmetic average emission rates concentration during each 24-hour daily period measured from midnight to midnight. At least 4 data points equally spaced in time shall be used to calculate each 1-hour arithmetic average. Each 1-hour average shall be corrected to 7 % O2 on an hourly basis using the one-hour arithmetic average of the O2 or CO2 continuous emissions monitoring system; E) for NOx, the arithmetic average of the 1-hour arithmetic average emission rates concentration during each 24-hour daily period measured from midnight to midnight. At least 4 data points equally spaced in time shall be used to calculate each 1-hour arithmetic average. Each 1-hour average shall be corrected to 7 % O2 on an hourly basis using the 1-hour arithmetic average of the O2 or CO2; F) For opacity, a 6-minute average, calculated using 36 or more data points equally spaced over a 6-minute period.	Minn. R. 7011.1260, subp. 4; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2 (continued)
OPERATIONAL LIMITS	hdr
Start-up on Waste Prohibited: During start-up from a cold furnace, use auxiliary fuel to achieve combustion chamber operating temperature. The use of RDF solely to provide thermal protection of the grate or hearth during the start-up period when RDF is not being fed to the grate is not considered to be continuous burning.	Minn. R. 7011.1240. subp. 3; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Auxiliary Fuel Use: Use natural gas or fuel oil to maintain the operating temperature in the combustion chamber from the time the RDF feed has been discontinued until the combustion chamber is clear of combustible material or active combustion ceases.	Minn. R. 7011.1240. subp. 4; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Maximum Capacity: ERS shall not operate the waste combustor at a level above 110 percent of the maximum demonstrated capacity of the combustion system (feed water flow), without conducting a performance test to establish a new maximum demonstrated capacity under part 7011.1265, which demonstrates compliance with the emission limitations of 7011.1225 except during the annual PCDD/PCDF performance and the two weeks prior to this test as limited below.	Minn. R. 7011.1240, subp. 5; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
During the annual PCDD/PCDF performance test and the two weeks prior to this test, no waste combustor load limitations are applicable. The commissioner shall waive the waste combustor load limits for the purpose of evaluating system performance, URGE Testing, testing new technology or control technologies, diagnostic testing or related activities for the purpose of improving facility performance or advancing the state-of-the-art for controlling facility emissions, provided a written notification is submitted to the commissioner 30 days prior to undertaking any of the activities identified above, with the following information: 1) a desription of the proposed project, and the outcome the project is designed to evaluate; 2) how the project conforms with the activities described above for which the waste combustor load limit can be waived; 3) the length of time the project will take to complete.	Minn. R. 7011.1240, subp. 5; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2 (continued)
Temperature: less than or equal to 30 degrees F above the highest four-hour arithmetic mean temperature measured during four consecutive hours during the most recent PCDD/PCDF performance test that demonstrated compliance, as measured at the exit of the Scrubber.	Minn. R. 7011.1240, subp. 2; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Allowed and Prohibited Fuels: The waste combustor may burn natural gas, fuel oil, RDF as defined in Minn. Stat. 115A.03, subp. 21, tire derived fuel, yard waste generated on site, and other nonhazardous wastes approved through the ERS Industrial Waste Management Plan, except as noted elsewhere in Table A.	Minn. R. 7011.1220, subp.2; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Facility Operation: Properly maintain and operate air pollution control equipment at all times when the waste combustor is in operation and combusting RDF.	Minn. R. 7007.0800, subp. 16(J)
RECORDKEEPING	hdr
Recordkeeping: record in the operating log the highest 4 hour arithmetic mean temperature measured at the baghouse inlet during the most recent PCDD/PCDF performance test.	Minn. R. 7011.1240, subp. 2; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Recordkeeping: record in the daily log the time when RDF begins feeding and the operating status of the steam turbine at that time. Also record the time when the RDF feed to the combustion chamber ceases.	Minn. R. 7007.0800, subp. 2
Recordkeeping: record time when use of auxiliary fuel begins and is discontinued.	Minn. R. 7007.0800, subp. 2
Recordkeeping: ERS shall record in the daily operating record required in Minn. R. 7011.1285, subp. 2, the date of use of the dumpstack, the length of time the dumpstack was used, the operating conditions of the waste combustor during dumpstack use, and the reason for using the dumpstack.	Minn. R. 7011.1240, subp. 7; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: United Power Association - Elk River

Permit Number: 14100003 - 003

Shutdown or Breakdown Reporting Requirements. The owner or operator of a waste combustor shall comply with part 7019.1000 and Minnesota Statutes, section 116.85. Notification of commissioner for any shutdowns/breakdown is not required if RDF feed is planned to be taken off-line in conjunction with a shutdown, or is taken off-line within one hour of a breakdown occurring.	Minn. R. 7011.1240, subp. 8; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Recordkeeping: ERS will install and operate at all times temperature monitors that continuously read and record the temperatures of the flue gas at the inlet of the most efficient particulate control device.	Minn. R. 7011.1260, subp. 2; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
MONITORING REQUIREMENTS	hdr
Continous Monitoring: ERS shall install and operate monitors that continuously read and record: a) unit load level as determined through boiler feedwater measurement b) oxygen concentrations at each location where CO, SO2 and NOx emissions are monitored.	Minn. R. 7011.1260, subp. 3; Minn. R. 7011.1265, subp. 4a; Waste Combustor Rule Variance Dated August 21, 1997; Min. R. 7007.0800, subp. 2
Emissions Monitoring: ERS shall install and operate NOx and CO CEMS to measure NOx and CO emissions from EU001, EU002, and EU003 located after each emission unit and prior to the common manifold according to the procedures listed in 40 CFR pt. 60, Appendix B.	Minn. R. 7011.1260, subp. 3; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
CEMS Relative Accuracy Test Audit (RATA): due before end of each calendar year following Permit Issuance . Follow the procedure in 40 CFR pt. 60, Appendix F. The RATA shall be conducted during the calendar quarter in which a cylinder gas audit (CGA) is not performed.	Minn. R. 7007.0800, subp. 2
Relative Accuracy Test Audit (RATA) Notification: due 30 days before CEMS Relative Accuracy Test Audit (RATA)	Minn. R. 7007.0800, subp. 2.
Relative Accuracy Test Audit (RATA) Results Summary: due 30 days after end of each calendar quarter following CEMS Relative Accuracy Test Audit (RATA)	Minn. R. 7011.1285, subp. 3(G), Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
CEMS Continuous Operation: Monitoring data shall be obtained for at least 75 percent of the hours per day for 90 percent of the days per calendar quarter that the combustor is operating and combusting RDF.	Minn. R. 7011.1260, subp. 5(B); Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
CEMS Daily Calibration Drift (CD) Test: The CD shall be quantified and recorded at zero (low-level) and upscale (high-level) gas concentrations at least once daily. 40 CFR pt. 60, Appendix F, shall be used to determine out-of-control periods for CEMS.	Minn. R. 7011.1260, subp. 5(G); Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Cylinder Gas Audit: due before end of each calendar quarter following Permit Issuance but in no more than three calendar quarters per calendar year. The RATA shall be conducted during the calendar quarter in which a CGA is not performed.	Minn. R. 7011.1260, subp. 5(G); Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Cylinder Gas Audit (CGA) Results Summary: due 30 days after end of each calendar quarter following Cylinder Gas Audit	Minn. R. 7011.1285, subp. 3(G), Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Recordkeeping: ERS shall retain records of all CEMS monitoring data permanently and support information for a period of five years from the date of the monitoring sample, measurement or report. Records shall be kept at the source.	Minn. R. 7007.0800, subp. 5
Recordkeeping: ERS will maintain a permanent record of continuously measured parameters, as specified in Minn. R. 7011.1260, subp. 6(A) to MInn. R. 7011.1260, subp. 6(C).	Minn. R. 7011.1260, subp. 6; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Reporting of Exceedances of Continuously Monitored Emissions: If accurate and valid data results collected from the carbon monoxide, and/or nitrogen oxides monitor exceed emission limits, the following procedures shall be followed. (1) Exceedance shall be reported to the commissioner as soon as reasonably possible. (2) Repairs or modifications shall be completed within 72 hours. If compliance cannot be achieved within 72 hours, then the waste combustor shall be shut down. (3) When repairs or modifications have been completed, UPA shall demonstrate to the commissioner that the waste combustor is in compliance. The waste combustor may be started up after UPA has notified the commissioner in writing of the date UPA plans to start up the waste combustor and of the date that compliance testing is scheduled.	Minn. R. 7011.1260, subp. 7; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: United Power Association - Elk River

Permit Number: 14100003 - 003

Subject Item: **EU 002 Unit 2 Boiler**

Associated Items: CE 004 Spray Tower

CE 005 Fabric Filter - High Temperature, i.e., T>250 Degrees F

GP 001 Waste Combustors

MR 020

MR 021

MR 022

MR 031

SV 002

SV 004

What to do	Why to do it
EMISSION LIMITS	hdr
Notwithstanding any transition dates to the contrary, the Permitee has agreed to comply with Minn.R. 7011.1201 through 7011.1285, except as identified in specific conditions of this permit. The Permittee has also agreed to comply immediately with additional conditions contained in Minn. R. 7011.1201 through 7011.1290, when effective, except as indicated in specific conditions of this permit. Therefore, unless otherwise noted elsewhere in this permit, the conditions of this permit are effective upon permit issuance.	Minn. R. 7011.1215, subp. 5; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Applicability of Standards: the standards of Minn. R. 7011.1227 and 7011.1240, subp. 2, the interim emission limits established in this permit, nitrogen oxides limits established in this permit, and control device inlet temperatures apply at all times when RDF is being continuously burned. The Standards do not apply, up to a maximum of three hours, during periods of start-up, shutdown or malfunction. Fugitive emissions standards applicable to the ash conveying system do not apply during periods of maintenance and repair of the ash conveying system.	Minn. R. 7011.1215, subp. 4; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Applicability of Standards: ERS shall not cause to be emitted into the atmosphere from each waste combustor unit gases in excess of the standards of performance shown in parts 7011.1227, the interim emission limits, and the nitrogen oxides limit established in this permit. Emissions (except for opacity) shall be calculated under standard conditions corrected to seven percent oxygen on a dry volume basis.	Minn. R. 7011.1225, subp. 1(A); Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
ERS shall not cause to be emitted into the atmosphere visible emissions of combustion ash from an ash conveying system, including conveyor transfer points, in excess of five percent of the observation period (i.e., 9 minutes per three-hour period), as determined by Code of Federal Regulations, title 40, part 60, Appendix A, Method 22, as amended. This limit does not apply to visible emissions discharged inside buildings or enclosures of ash conveying systems; however, the emission limit does cover visible emissions discharged to the atmosphere from buildings or enclosures of ash conveying systems.	Minn. R. 7007.0800, subp. 2
Front-half Particulate Matter: less than or equal to 0.012 grains/dry standard cubic foot , front-half, corrected to seven percent oxygen as determined by performance test in accordance with Minn. R. 7011.1265.	Minn. R. 7011.1227, Table 1; Minn. R. 7011.1225, subp. 1; MInn. R. 7011.1265; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2 40 CFR section 60.52
Total Particulate Matter: less than or equal to 0.020 grains/dry standard cubic foot , total, corrected to seven percent oxygen as determined by performance test in accordance with Minn. R. 7011.1265.	Minn. R. 7011.1227, Table 1; Minn. R. 7011.1225, subp. 1; Minn. R. 7011.1265; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Opacity: less than or equal to 10 percent opacity	Minn. R. 7011.1227, Table 1; Minn. R. 7011.1260, subp. 4(F); Minn. R. 7011.1265, subp. 2(D); Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Effective on the date of permit issuance, which ever is less stringent of the following:1) 50 percent reduction of sulfur dioxide; or 2) a concentration, corrected to seven percent oxygen, of Sulfur Dioxide: less than or equal to 50 parts per million using 24-hour Geometric Average	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2

Facility Name: United Power Association - Elk River

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Effective 07/01/1999, which ever is less stringent of the following:1) 60 percent reduction of sulfur dioxide; or 2) a concentration, corrected to seven percent oxygen, of Sulfur Dioxide: less than or equal to 40 parts per million using 24-hour Geometric Average	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Effective 12/19/2000, which ever is less stringent of the following:1) 75 percent reduction of sulfur dioxide; or 2) a concentration, corrected to seven percent oxygen, of Sulfur Dioxide: less than 29 parts per million using 24-hour Geometric Average	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Sulfur Dioxide Emissions: SO2 emission concentration shall be determined by SO2 continuous emissions monitor in accordance with Minn. R. 7011.1260.	Minn. R. 7011.1265, subp. 2(B); Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Complete construction and commence operation: due before 08/31/98 , complete Phase I CO emissions reduction modifications for Unit 2. It is assumed that modifications to the boiler unit to reduce CO emissions will also affect SO2 emissions. Any SO2 control modifications determined to be necessary by the Permittee to meet the interim and final SO2 limits will be done simultaneously with Phase II CO control work.	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Notification: due before 8/31/98, notify the Commissioner that the Phase 1 modifications to reduce CO emissions have been completed.	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Monitor SO2 emissions between 09/01/98 to 07/01/99 to ensure compliance with the interim SO2 limit.	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Notification: due before 07/01/99, notify the Commissioner as to the status of compliance with the interim SO2 emission limit for Unit #2.	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
If Unit #2 cannot meet the interim SO2 limit by 07/01/99, begin designing air quality control systems (AQCS) to control SO2.	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Procure and install AQCS modifications by 06/30/00 if determined to be necessary by the Permittee to meet the final SO2 limit.	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Start-up AQCS modifications for SO2 by 07/31/00.	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Meet the final SO2 limit by 12/19/00.	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Notification: due before 12/19/00, notify the Commissioner as to the status of compliance with the final SO2 emission limit.	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Effective on the date of permit issuance, a concentration corrected to 7 percent oxygen, of Carbon Monoxide: less than or equal to 400 parts per million using 24-hour Block Average	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Effective 07/01/1999, a concentration corrected to 7 percent oxygen, of Carbon Monoxide: less than or equal to 300 parts per million using 24-hour Block Average	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Effective12/19/2000, a concentration corrected to 7 percent oxygen, of Carbon Monoxide: less than or equal to 200 parts per million using 24-hour Block Average	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Carbon Monoxide Emissions: CO emission concentration shall be determined by CO continuous emissions monitor in accordance with Minn. R. 7011.1260.	Minn. R. 7007.0800, subp. 2
Notification: due before 12/31/98. Notify the Commissioner of the status of the design and procurement of the Phase II CO modifications.	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2

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Install: due before 04/30/99 . Install Phase II CO modifications, if determined to be necessary by the Permittee, to meet the final CO limits on 12/19/00.	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Startup: due before 05/30/99 . Startup Phase II CO modification equipment.	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Notifiation of compliance status: due before 07/01/99. Notify the Commissioner as to the status of compliance with the interim CO limit.	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Meet the final CO limit by 12/19/00.	Minn. R. 7011.1227, Table 1, Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Notification of compliance status: due before 12/19/00. Notify the Commissioner as to the status of compliance with the final CO limit.	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Effective on the date of permit issuance, a concentration corrected to 7 percent oxygen, of Nitrogen Oxides: less than or equal to 300 parts per million using 24-hour Block Average	Minn. R. 7011.1228; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Effective 07/01/1999, a concentration corrected to 7 percent oxygen, of Nitrogen Oxides: less than or equal to 275 parts per million using 24-hour Block Average	Minn. R. 7011.1228; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Effective 12/20/2000, Nitrogen Oxides at a concentration corrected to 7 percent oxygen less than or equal to 230 ppmv when averaged over all combustor units or, for each individual unit a concentration corrected to seven percent oxygen, of Nitrogen Oxides: less than or equal to 250 parts per million using 24-hour Geometric Average	Minn. R. 7011.1228; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Nitrogen Oxides Emissions: NOx emission concentration shall be determined by NOx continuous emissions monitor in accordance with Minn. R. 7011.1260.	Minn. R. 7011.1265, subp. 2(C); Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Nitrogen Oxides Emissions Averaging: Before ERS may implement emissions averaging to demonstrate compliance with the nitrogen oxides emission limit effective 12/19/2000, ERS shall identify units that are included in the nitrogen oxides emissions averaging plan in either 1) the compliance report required by Minn. R. 7017.2035 that contains the results of the units' initial performance tests required by Minn. R. 7011.1270, item A, subitem (1); or 2) in the annual report required in part 7011.1285, as applicable, prior to implementing the averaging plan. The units being included in the averaging plan may be redesignated every calendar year. Partial year averaging is allowable upon written commissioner approval.	Minn. R. 7011.1228; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Notification: due before 02/28/99. Notify the Commissioner of the status of the design and procurement of the NOx control equipment if required.	Minn. R. 7011.1228; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Complete construction and commence operation: due before 08/31/99 , complete Phase I CO emission reduction modifications for Unit 2. It is assumed that modifications to the boiler unit to reduce CO emissions will also affect NOx emissions. Any NOx control modifications determined to be necessary by the Permittee to meet the interim and final NOx limits will be done subsequent to Phase II CO control work.	Minn. R. 7011.1228; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Monitor NOx and tune boilers (if required to meet final NOx limit) after Phase II CO Equipment Installation: due before 07/01/99	Minn. R. 7011.1228; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Notification of compliance status: due before 07/01/99. Notify the Commissioner as to the status of compliance with the interim NOx limit.	Minn. R. 7011.1228; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2

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Notification: due before 01/01/00. Notify the Commissioner of the status of the design and procurement of NOx control equipment if Phase II CO modifications are required.	Minn. R. 7011.1228; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Phase II NOx Control (if determined to be necessary by the Permittee to meet the final NOx limit) Equipment Installation: due before 06/30/00	Minn. R. 7011.1228; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Monitor NOx and Tune Boilers after Phase II Equipment Installation: due before 11/19/00	Minn. R. 7011.1228; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Meet the final NOx limit by 12/19/00.	Minn. R. 7011.1227, Table 1, Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Notification of compliance status: due before 12/19/00. Notify the Commissioner as to the status of compliance with the final NOx limit.	Minn. R. 7011.1228; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Lead: less than or equal to 440 micrograms/DSCM corrected to seven percent oxygen as determined in accordance with Minn. R. 7011.1265, subp. 3(C).	Minn. R. 7011.1265, subp. 5(A); Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Muni Waste Combust Organics: less than or equal to 30 nanograms/DSCM corrected to seven percent oxygen, measured as Total PCDD/PCDF as determined in accordance with Minn. R. 7011.1265, subp. 3(B).	Minn. R. 7011.1227, Table 1; Minn. R. 7011.1265, subp. 5(D); Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Cadmium compounds: less than or equal to 40 micrograms/DSCM measured as cadmium, corrected to 7% oxygen as determined in accordance with Minn. R. 7011.1265, subp. 3(C).	Minn. R. 7011.1265, subp. 5(B); Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Hydrochloric acid: less than or equal to 29 parts per million corrected to seven percent oxygen; or 95% control, whichever is less stringent. Within one month of permit issuance, UPA will discontinue HCl monitoring and reporting and will begin annual performance testing of HCl in accordance with Minn. R. 7011.1265, subp. 3(A).	Minn. R. 7011.1227, Table 1; MInn. R. 7011.1260, subp. 3; Minn. R. 7011.1265, subp. 5(D); Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Mercury: less than or equal to 50 micrograms/DSCM corrected to seven percent oxygen; or 85% removal (short term), whichever is less stringent as determined in accordance with Minn. R. 7011.1265, subp. 3(C) and 3(D).	Minn. R. 7011.1227, Table 1; Minn. R. 7011.1265, subp. 5(C); Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Mercury: less than or equal to 30 micrograms/DSCM corrected to seven percent oxygen; or 85% removal (long-term), whichever is less stringent as determined in accordance with Minn. R. 7011.1265, subp. 3(C) and 3(D).	Minn. R. 7011.1227, Table 1; Minn. R. 7011.1265, subp. 5(C); Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
ERS shall not cause to be emitted into the atmosphere visible emissions of combustor ash from any of the ash conveying system, buildings or enclosures including conveyor transfer points in excess of 5 percent of the observation period (i.e. 9 minutes per three-hour period). 40 CFR pt 60, Appendix A, method 22 as amended shall be used to measure visible emissions. This limit does not apply to visible emissions discharged inside buildings or enclosures of ash conveyor systems.	Minn. R. 7007.0800, subp. 2; Minn. R. 7011.1225, subp. 1 Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
AVERAGING PERIODS	hdr
Averaging Periods: For emission limits or operational limits which are monitored continously the following averaging periods shall be used: A) for particulate matter control device inlet temperature monitoring, four-hour arithmetic block averages calculated from four continuous one-hour arithmetic averages. B) for unit load, a four-hour arithmetic block average C) the averaging period for carbon monoxide shall be a daily 24-hour arithmetic average measured between 12 midnight and the following midnight. The four-hour and 24-hour average shall be calculated from one-hour arithmetic averages. At least four points equally spaced in time shall be used to calculate each one-hour average. Each one-hour average shall be corrected to seven percent oxygen on an hourly basis using the one-hour arithmetic average of the oxygen or carbon dioxide continuous emissions monitoring system.	Minn. R. 7011.1260, subp. 4; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2

Facility Name: United Power Association - Elk River

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Averaging Periods (continued) D) for SO2, the geometric average of the 1-hour arithmetic average emission rates concentration during each 24-hour daily period measured from midnight to midnight. At least 4 data points equally spaced in time shall be used to calculate each 1-hour arithmetic average. Each 1-hour average shall be corrected to 7 % O2 on an hourly basis using the one-hour arithmetic average of the O2 or CO2 continuous emissions monitoring system; E) for NOx, the arithmetic average of the 1-hour arithmetic average emission rates concentration during each 24-hour daily period measured from midnight to midnight. At least 4 data points equally spaced in time shall be used to calculate each 1-hour arithmetic average. Each 1-hour average shall be corrected to 7 % O2 on an hourly basis using the 1-hour arithmetic average of the O2 or CO2; F) For opacity, a 6-minute average, calculated using 36 or more data points equally spaced over a 6-minute period.	Minn. R. 7011.1260, subp. 4; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2 (continued)
OPERATIONAL LIMITS	hdr
Start-up on Waste Prohibited: During start-up from a cold furnace, use auxiliary fuel to achieve combustion chamber operating temperature. The use of RDF solely to provide thermal protection of the grate or hearth during the start-up period when RDF is not being fed to the grate is not considered to be continuous burning.	Minn. R. 7011.1240. subp. 3; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Auxiliary Fuel Use: Use natural gas or fuel oil to maintain the operating temperature in the combustion chamber from the time the RDF feed has been discontinued until the combustion chamber is clear of combustible material or active combustion ceases.	Minn. R. 7011.1240. subp. 4; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Maximum Capacity: ERS shall not operate the waste combustor at a level above 110 percent of the maximum demonstrated capacity of the combustion system (feed water flow), without conducting a performance test to establish a new maximum demonstrated capacity under part 7011.1265, which demonstrates compliance with the emission limitations of 7011.1225 except during the annual PCDD/PCDF performance and the two weeks prior to this test as limited below.	Minn. R. 7011.1240, subp. 5; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
During the annual PCDD/PCDF performance test and the two weeks prior to this test, no waste combustor load limitations are applicable. The commissioner shall waive the waste combustor load limits for the purpose of evaluating system performance, URGE Testing, testing new technology or control technologies, diagnostic testing or related activities for the purpose of improving facility performance or advancing the state-of-the-art for controlling facility emissions, provided a written notification is submitted to the commissioner 30 days prior to undertaking any of the activities identified above, with the following information: 1) a desription of the proposed project, and the outcome the project is designed to evaluate; 2) how the project conforms with the activities described above for which the waste combustor load limit can be waived; 3) the length of time the project will take to complete.	Minn. R. 7011.1240, subp. 5; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Temperature: less than or equal to 30 degrees F above the highest four-hour arithmetic mean temperature measured during four consecutive hours during the most recent PCDD/PCDF performance test that demonstrated compliance, as measured at the exit of the Scrubber.	Minn. R. 7011.1240, subp. 2; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Allowed and Prohibited Fuels: The waste combustor may burn natural gas, fuel oil, RDF as defined in Minn. Stat. 115A.03, subp. 21, tire derived fuel, yard waste generated on site, and other nonhazardous wastes approved through the ERS Industrial Waste Management Plan, except as noted elsewhere in Table A.	Minn. R. 7011.1220, subp.2; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Facility Operation: Properly maintain and operate air pollution control equipment at all times when the waste combustor is in operation and combusting RDF.	Minn. R. 7007.0800, subp. 16(J)
RECORDKEEPING	hdr
Recordkeeping: record in the operating log the highest 4 hour arithmetic mean temperature measured at the baghouse inlet during the most recent PCDD/PCDF performance test.	Minn. R. 7011.1240, subp. 2; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Recordkeeping: record in the daily log the time when RDF begins feeding and the operating status of the steam turbine at that time. Also record the time when the RDF feed to the combustion chamber ceases.	Minn. R. 7007.0800, subp. 2
Recordkeeping: record time when use of auxiliary fuel begins and is discontinued.	Minn. R. 7007.0800, subp. 2
Recordkeeping: ERS shall record in the daily operating record required in Minn. R. 7011.1285, subp. 2, the date of use of the dumpstack, the length of time the dumpstack was used, the operating conditions of the waste combustor during dumpstack use, and the reason for using the dumpstack.	Minn. R. 7011.1240, subp. 7; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: United Power Association - Elk River

Permit Number: 14100003 - 003

Shutdown or Breakdown Reporting Requirements. The owner or operator of a waste combustor shall comply with part 7019.1000 and Minnesota Statutes, section 116.85. Notification of commissioner for any shutdowns/breakdown is not required if RDF feed is planned to be taken off-line in conjunction with a shutdown, or is taken off-line within one hour of a breakdown occurring.	Minn. R. 7011.1240, subp. 8; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Recordkeeping: ERS will install and operate at all times temperature monitors that continuously read and record the temperatures of the flue gas at the inlet of the most efficient particulate control device.	Minn. R. 7011.1260, subp. 2; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
MONITORING REQUIREMENTS	hdr
Continous Monitoring: ERS shall install and operate monitors that continuously read and record: a) unit load level as determined through boiler feedwater measurement b) oxygen concentrations at each location where CO, SO2 and NOx emissions are monitored.	Minn. R. 7011.1260, subp. 3; Minn. R. 7011.1265, subp. 4a; Waste Combustor Rule Variance Dated August 21, 1997; Min. R. 7007.0800, subp. 2
Emissions Monitoring: ERS shall install and operate NOx and CO CEMS to measure NOx and CO emissions from EU001, EU002, and EU003 located after each emission unit and prior to the common manifold, according to the procedures listed in 40 CFR pt. 60, Appendix B.	Minn. R. 7011.1260, subp. 3; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
CEMS Relative Accuracy Test Audit (RATA): due before end of each calendar year following Permit Issuance . Follow the procedure in 40 CFR pt. 60, Appendix F. The RATA shall be conducted during the calendar quarter in which a cylinder gas audit (CGA) is not performed.	Minn. R. 7007.0800, subp. 2
Relative Accuracy Test Audit (RATA) Notification: due 30 days before CEMS Relative Accuracy Test Audit (RATA)	Minn. R. 7007.0800, subp. 2.
Relative Accuracy Test Audit (RATA) Results Summary: due 30 days after end of each calendar quarter following CEMS Relative Accuracy Test Audit (RATA)	Minn. R. 7011.1285, subp. 3(G), Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
CEMS Continuous Operation: Monitoring data shall be obtained for at least 75 percent of the hours per day for 90 percent of the days per calendar quarter that the combustor is operating and combusting RDF.	Minn. R. 7011.1260, subp. 5(B); Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
CEMS Daily Calibration Drift (CD) Test: The CD shall be quantified and recorded at zero (low-level) and upscale (high-level) gas concentrations at least once daily. 40 CFR pt. 60, Appendix F, shall be used to determine out-of-control periods for CEMS.	Minn. R. 7011.1260, subp. 5(G); Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Cylinder Gas Audit: due before end of each calendar quarter following Permit Issuance but in no more than three calendar quarters per calendar year. The RATA shall be conducted during the calendar quarter in which a CGA is not performed.	Minn. R. 7011.1260, subp. 5(G); Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Cylinder Gas Audit (CGA) Results Summary: due 30 days after end of each calendar quarter following Cylinder Gas Audit	Minn. R. 7011.1285, subp. 3(G), Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Recordkeeping: ERS shall retain records of all CEMS monitoring data permanently and support information for a period of five years from the date of the monitoring sample, measurement or report. Records shall be kept at the source.	Minn. R. 7007.0800, subp. 5
Recordkeeping: ERS will maintain a permanent record of continuously measured parameters, as specified in Minn. R. 7011.1260, subp. 6(A) to MInn. R. 7011.1260, subp. 6(C).	Minn. R. 7011.1260, subp. 6; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Reporting of Exceedances of Continuously Monitored Emissions: If accurate and valid data results collected from the carbon monoxide, and/or nitrogen oxides monitor exceed emission limits, the following procedures shall be followed. (1) Exceedance shall be reported to the commissioner as soon as reasonably possible. (2) Repairs or modifications shall be completed within 72 hours. If compliance cannot be achieved within 72 hours, then the waste combustor shall be shut down. (3) When repairs or modifications have been completed, UPA shall demonstrate to the commissioner that the waste combustor is in compliance. The waste combustor may be started up after UPA has notified the commissioner in writing of the date UPA plans to start up the waste combustor and of the date that compliance testing is scheduled.	Minn. R. 7011.1260, subp. 7; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: United Power Association - Elk River

Permit Number: 14100003 - 003

Subject Item: **EU 003 Unit 3 Boiler**

Associated Items: CE 004 Spray Tower

CE 005 Fabric Filter - High Temperature, i.e., T>250 Degrees F

GP 001 Waste Combustors

MR 023

MR 024

MR 025

MR 032

SV 003

SV 004

What to do	Why to do it
EMISSION LIMITS	hdr
Notwithstanding any transition dates to the contrary, the Permitee has agreed to comply with Minn.R. 7011.1201 through 7011.1285, except as identified in specific conditions of this permit. The Permittee has also agreed to comply immediately with additional conditions contained in Minn. R. 7011.1201 through 7011.1290, when effective, except as indicated in specific conditions of this permit. Therefore, unless otherwise noted elsewhere in this permit, the conditions of this permit are effective upon permit issuance.	MInn. R. 7011.1215, subp. 5; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Applicability of Standards: the standards of Minn. R. 7011.1227 and 7011.1240, subp. 2, the interim emission limits established in this permit, nitrogen oxides limits established in this permit, and control device inlet temperatures apply at all times when RDF is being continuously burned. The Standards do not apply, up to a maximum of three hours, during periods of start-up, shutdown or malfunction. Fugitive emissions standards applicable to the ash conveying system do not apply during periods of maintenance and repair of the ash conveying system.	Minn. R. 7011.1215, subp. 4; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Applicability of Standards: ERS shall not cause to be emitted into the atmosphere from each waste combustor unit gases in excess of the standards of performance shown in parts 7011.1227, the interim emission limits, and the nitrogen oxides limit established in this permit. Emissions (except for opacity) shall be calculated under standard conditions corrected to seven percent oxygen on a dry volume basis.	Minn. R. 7011.1225, subp. 1(A); Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
ERS shall not cause to be emitted into the atmosphere visible emissions of combustion ash from an ash conveying system, including conveyor transfer points, in excess of five percent of the observation period (i.e., 9 minutes per three-hour period), as determined by Code of Federal Regulations, title 40, part 60, Appendix A, Method 22, as amended. This limit does not apply to visible emissions discharged inside buildings or enclosures of ash conveying systems; however, the emission limit does cover visible emissions discharged to the atmosphere from buildings or enclosures of ash conveying systems.	Minn. R. 7007.0800, subp. 2
Front-half Particulate Matter: less than or equal to 0.012 grains/dry standard cubic foot , front-half, corrected to seven percent oxygen as determined by performance test in accordance with Minn. R. 7011.1265.	Minn. R. 7011.1227, Table 1; Minn. R. 7011.1225, subp. 1; Minn. R. 7011.1265; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2 40 CFR section 60.52
Total Particulate Matter: less than or equal to 0.020 grains/dry standard cubic foot , total, corrected to seven percent oxygen as determined by performance test in accordance with Minn. R. 7011.1265.	Minn. R. 7011.1227, Table 1, Minn. R. 7011.1225, subp. 1; Minn. R. 7011.1265; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Opacity: less than or equal to 10 percent opacity	Minn. R. 7011.1227, Table 1; Minn. R. 7011.1260, subp. 4(F); Minn. R. 7011.1265, subp. 2(D); Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Effective on the date of permit issuance, which ever is less stringent of the following:1) 50 percent reduction of sulfur dioxide; or 2) a concentration, corrected to seven percent oxygen, of Sulfur Dioxide: less than or equal to 50 parts per million using 24-hour Geometric Average	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2

Facility Name: United Power Association - Elk River

Permit Number: 14100003 - 003

Effective 07/01/1999, which ever is less stringent of the following:1) 60 percent reduction of sulfur dioxide; or 2) a concentration, corrected to seven percent oxygen, of Sulfur Dioxide: less than or equal to 40 parts per million using 24-hour Geometric Average	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Effective 12/20/2000, which ever is less stringent of the following:1) 75 percent reduction of sulfur dioxide; or 2) a concentration, corrected to seven percent oxygen, of Sulfur Dioxide: less than 29 parts per million using 24-hour Geometric Average	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Sulfur Dioxide Emissions: SO2 emission concentration shall be determined by SO2 continuous emissions monitor in accordance with Minn. R. 7011.1260.	Minn. R. 7011.1265, subp. 2(B); Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Complete construction and commence operation: due before 08/31/98 , complete Phase I CO emissions reduction modifications for Unit #3. It is assumed that modifications to the boiler unit to reduce CO emissions will also affect SO2 emissions. Any SO2 control modifications determined to be necessary by the Permittee to meet the interim and final SO2 limits will be done simultaneously with Phase II CO control work.	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Notification: due before 08/31/98, notify the Commissioner that the Phase 1 modifications to reduce CO emissions have been completed.	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Monitor SO2 emissions between 09/01/98 to 07/01/99 to ensure compliance with the interim SO2 limit.	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Notification: due before 07/01/99, notify the Commissioner as to the status of compliance with the interim SO2 emission limit for Unit #3.	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
If Unit #3 cannot meet the interim SO2 limit by 07/01/99, begin designing air quality control systems (AQCS) to control SO2.	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Procure and install AQCS modifications by 06/30/00 if determined to be necessary by the Permittee to meet the final SO2 limit.	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Start-up AQCS modifications for SO2 by 07/31/00.	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Meet the final SO2 limit by 12/19/00.	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Notification: due before 12/19/00, notify the Commissioner of the status of compliance with the final SO2 emission limit.	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Effective on the date of permit issuance, a concentration corrected to 7 percent oxygen, of Carbon Monoxide: less than or equal to 400 parts per million using 24-hour Block Average	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Effective 07/01/1999, a concentration corrected to 7 percent oxygen, of Carbon Monoxide: less than or equal to 300 parts per million using 24-hour Block Average	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Effective12/19/2000, a concentration corrected to 7 percent oxygen, of Carbon Monoxide: less than or equal to 200 parts per million using 24-hour Block Average	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Carbon Monoxide Emissions: CO emission concentration shall be determined by CO continuous emissions monitor in accordance with Minn. R. 7011.1260.	Minn. R. 7007.0800, subp. 2
Notification: due before 12/31/98, notify the Commissioner of the status of the design and procurement of the Phase II CO modifications.	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2

Facility Name: United Power Association - Elk River

Permit Number: 14100003 - 003

Install: due before 04/30/99 . Install Phase II CO modifications, if determined to be necessary by the Permittee to meet the final CO limits on 12/19/00.	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Startup: due before 05/30/98 . Startup Phase II CO modification equipment.	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Notification of compliance status: due before 07/01/99. Notify the Commissioner as to the status of compliance with the interim CO limit.	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Mee the final CO limit by 12/19/00.	Minn. R. 7011.1227, Table 1, Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Notification of compliance status: due before 12/19/00. Notify the Commissioner as to the status of compliance with the final CO limit.	Minn. R. 7011.1227, Table 1; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Effective on the date of permit issuance, a concentration corrected to 7 percent oxygen, of Nitrogen Oxides: less than or equal to 300 parts per million using 24-hour Block Average	Minn. R. 7011.1228; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Effective 07/01/1999, a concentration corrected to 7 percent oxygen, of Nitrogen Oxides: less than or equal to 275 parts per million using 24-hour Block Average	Minn. R. 7011.1228; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Effective 12/19/2000, Nitrogen oxides at a concentration corrected to 7 percent oxygen less than or equal to 230 ppmv when averaged over all combustor units or, on each individual unit a concentration corrected to seven percent oxygen, of Nitrogen Oxides: less than or equal to 250 parts per million using 24-hour Geometric Average	Minn. R. 7011.1228; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Nitrogen Oxides Emissions: NOx emission concentration shall be determined by NOx continuous emissions monitor in accordance with Minn. R. 7011.1260.	Minn. R. 7011.1265, subp. 2(C) Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Nitrogen Oxides Emissions Averaging: Before ERS may implement emissions averaging to demonstrate compliance with the nitrogen oxides emission limit effective 12/19/2000, ERS shall identify units that are included in the nitrogen oxides emissions averaging plan in either 1) the compliance report required by Minn. R. 7017.2035 that contains the results of the units' initial performance tests required by Minn. R. 7011.1270, item A, subitem (1); or 2) in the annual report required in part 7011.1285, as applicable, prior to implementing the averaging plan. The units being included in the averaging plan may be redesignated every calendar year. Partial year averaging is allowable upon written commissioner approval.	Minn. R. 7011.1228; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Notification: due before 02/28/99. Notify the Commissioner of the status of the design and procurement of the NOx control equipment if required.	Minn. R. 7011.1228; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Complete construction and commence operation: due before 08/31/98 , complete Phase I CO emission reduction modifications for Unit 3. It is assumed that modifications to the boiler unit to reduce CO emissions will also affect NOx emissions. Any NOx control modifications determined to be necessary by the Permittee to meet the interim and final NOx limits will be done subsequent to Phase II CO control work.	Minn. R. 7011.1228; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Monitor NOx and tune boilers (if required to meet final NOx limit) after Phase II CO Equipment Installation: due before 07/01/99	Minn. R. 7011.1228; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Notification of compliance status: due before 07/01/99. Notify the Commissioner as to the status of compliance with the interim NOx limit.	Minn. R. 7011.1228; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: United Power Association - Elk River

Permit Number: 14100003 - 003

Notification: due before 01/01/00. Notify the Commissioner of the status of the design and procurement of NOx control equipment if Phase II CO modifications are required.	Minn. R. 7011.1228; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Phase II NOx Control (if determined to be necessary by the Permittee to meet the final NOx limit) Equipment Installation: due before 06/30/00	Minn. R. 7011.1228; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Monitor NOx and Tune Boilers after Phase II Equipment Installation: due before 11/19/00	Minn. R. 7011.1228; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Meet the final NOx limit by 12/19/00.	Minn. R. 7011.1227, Table 1, Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Notification of compliance status: due before 12/19/00. Notify the Commissioner as to the status of compliance with the final NOx limit.	Minn. R. 7011.1228; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Lead: less than or equal to 440 micrograms/DSCM corrected to seven percent oxygen as determined in accordance with Minn. R. 7011.1265, subp. 3(C).	Minn. R. 7011.1265, subp. 5(A); Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Muni Waste Combust Organics: less than or equal to 30 nanograms/DSCM corrected to seven percent oxygen, measured as Total PCDD/PCDF as determined in accordance with Minn. R. 7011.1265, subp. 3(B).	Minn. R. 7011.1227, Table 1; Minn. R. 7011.1265, subp. 5(D); Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Cadmium compounds: less than or equal to 40 micrograms/DSCM measured as cadmium, corrected to 7% oxygen as determined in accordance with Minn. R. 7011.1265, subp. 3(C).	Minn. R. 7011.1265, subp. 5(B); Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Hydrochloric acid: less than or equal to 29 parts per million corrected to seven percent oxygen; or 95% control, whichever is less stringent. Within one month of permit issuance, UPA will discontinue HCl monitoring and reporting and will begin annual performance testing of HCl in accordance with Minn. R. 7011.1265, subp. 3(A).	Minn. R. 7011.1227, Table 1; Minn. R. 7011.1260, subp. 3; Minn. R. 7011.1265, subp. 5(D); Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Mercury: less than or equal to 50 micrograms/DSCM corrected to seven percent oxygen; or 85% removal (short term), whichever is less stringent as determined in accordance with Minn. R. 7011.1265, subp. 3(C) and 3(D).	Minn. R. 7011.1227, Table 1; Minn. R. 7011.1265, subp. 5(B); Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Mercury: less than or equal to 30 micrograms/DSCM corrected to seven percent oxygen; or 85% removal (long-term), whichever is less stringent as determined in accordance with Minn. R. 7011.1265, subp. 3(C) and (D).	Minn. R. 7011.1227, Table 1; Minn. R. 7011.1265, subp. 5(B); Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
ERS shall not cause to be emitted into the atmosphere visible emissions of combustor ash from any of the ash conveying system, buildings or enclosures including conveyor transfer points in excess of 5 percent of the observation period (i.e. 9 minutes per three-hour period). 40 CFR pt 60, Appendix A, method 22 as amended shall be used to measure visible emissions. This limit does not apply to visible emissions discharged inside buildings or enclosures of ash conveyor systems.	Minn. R. 7007.0800, subp. 2; Minn. R. 7011.1225, subp. 1 Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
AVERAGING PERIODS	hdr
Averaging Periods: For emission limits or operational limits which are monitored continously the following averaging periods shall be used: A) for particulate matter control device inlet temperature monitoring, four-hour arithmetic block averages calculated from four continuous one-hour arithmetic averages. B) for unit load, a four-hour arithmetic block average C) the averaging period for carbon monoxide shall be a daily 24-hour arithmetic average measured between 12 midnight and the following midnight. The four-hour and 24-hour average shall be calculated from one-hour arithmetic averages. At least four points equally spaced in time shall be used to calculate each one-hour average. Each one-hour average shall be corrected to seven percent oxygen on an hourly basis using the one-hour arithmetic average of the oxygen or carbon dioxide continuous emissions monitoring system.	Minn. R. 7011.1260, subp. 4; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2

Facility Name: United Power Association - Elk River

Permit Number: 14100003 - 003

Averaging Periods (continued) D) for SO2, the geometric average of the 1-hour arithmetic average emission rates concentration during each 24-hour daily period measured from midnight to midnight. At least 4 data points equally spaced in time shall be used to calculate each 1-hour arithmetic average. Each 1-hour average shall be corrected to 7 % O2 on an hourly basis using the one-hour arithmetic average of the O2 or CO2 continuous emissions monitoring system; E) for NOx, the arithmetic average of the 1-hour arithmetic average emission rates concentration during each 24-hour daily period measured from midnight to midnight. At least 4 data points equally spaced in time shall be used to calculate each 1-hour arithmetic average. Each 1-hour average shall be corrected to 7 % O2 on an hourly basis using the 1-hour arithmetic average of the O2 or CO2; F) For opacity, a 6-minute average, calculated using 36 or more data points equally spaced over a 6-minute period.	Minn. R. 7011.1260, subp. 4; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2 (continued)
OPERATIONAL LIMITS	hdr
Start-up on Waste Prohibited: During start-up from a cold furnace, use auxiliary fuel to achieve combustion chamber operating temperature. The use of RDF solely to provide thermal protection of the grate or hearth during the start-up period when RDF is not being fed to the grate is not considered to be continuous burning.	Minn. R. 7011.1240. subp. 3; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Auxiliary Fuel Use: Use natural gas or fuel oil to maintain the operating temperature in the combustion chamber from the time the RDF feed has been discontinued until the combustion chamber is clear of combustible material or active combustion ceases.	Minn. R. 7011.1240. subp. 4; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Maximum Capacity: ERS shall not operate the waste combustor at a level above 110 percent of the maximum demonstrated capacity of the combustion system (feed water flow), without conducting a performance test to establish a new maximum demonstrated capacity under part 7011.1265, which demonstrates compliance with the emission limitations of 7011.1225 except during the annual PCDD/PCDF performance and the two weeks prior to this test as limited below.	Minn. R. 7011.1240, subp. 5; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
During the annual PCDD/PCDF performance test and the two weeks prior to this test, no waste combustor load limitations are applicable. The commissioner shall waive the waste combustor load limits for the purpose of evaluating system performance, URGE Testing, testing new technology or control technologies, diagnostic testing or related activities for the purpose of improving facility performance or advancing the state-of-the-art for controlling facility emissions, provided a written notification is submitted to the commissioner 30 days prior to undertaking any of the activities identified above, with the following information: 1) a desription of the proposed project, and the outcome the project is designed to evaluate; 2) how the project conforms with the activities described above for which the waste combustor load limit can be waived; 3) the length of time the project will take to complete.	Minn. R. 7011.1240, subp. 5; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2 (continued)
Temperature: less than or equal to 30 degrees F above the highest four-hour arithmetic mean temperature measured during four consecutive hours during the most recent PCDD/PCDF performance test that demonstrated compliance, as measured at the exit of the Scrubber.	Minn. R. 7011.1240, subp. 2; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Allowed and Prohibited Fuels: The waste combustor may burn natural gas, fuel oil, RDF as defined in Minn. Stat. 115A.03, subp. 21, tire derived fuel, yard waste generated on site, and other nonhazardous wastes approved through the ERS Industrial Waste Management Plan, except as noted elsewhere in Table A.	Minn. R. 7011.1220, subp.2; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Facility Operation: Properly maintain and operate air pollution control equipment at all times when the waste combustor is in operation and combusting RDF.	Minn. R. 7007.0800, subp. 16(J)
RECORDKEEPING	hdr
Recordkeeping: record in the operating log the highest 4 hour arithmetic mean temperature measured at the baghouse inlet during the most recent PCDD/PCDF performance test.	Minn. R. 7011.1240, subp. 2; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Recordkeeping: record in the daily log the time when RDF begins feeding and the operating status of the steam turbine at that time. Also record the time when the RDF feed to the combustion chamber ceases.	Minn. R. 7007.0800, subp. 2
Recordkeeping: record time when use of auxiliary fuel begins and is discontinued.	Minn. R. 7007.0800, subp. 2
Recordkeeping: ERS shall record in the daily operating record required in Minn. R. 7011.1285, subp. 2, the date of use of the dumpstack, the length of time the dumpstack was used, the operating conditions of the waste combustor during dumpstack use, and the reason for using the dumpstack.	Minn. R. 7011.1240, subp. 7; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2

Facility Name: United Power Association - Elk River

Permit Number: 14100003 - 003

Shutdown or Breakdown Reporting Requirements. The owner or operator of a waste combustor shall comply with part 7019.1000 and Minnesota Statutes, section 116.85. Notification of commissioner for any shutdowns/breakdown is not required if RDF feed is planned to be taken off-line in conjunction with a shutdown, or is taken off-line within one hour of a breakdown occurring.	Minn. R. 7011.1240, subp. 8; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Recordkeeping: ERS will install and operate at all times temperature monitors that continuously read and record the temperatures of the flue gas at the inlet of the most efficient particulate control device.	Minn. R. 7011.1260, subp. 2; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
MONITORING REQUIREMENTS	hdr
Continous Monitoring: ERS shall install and operate monitors that continuously read and record: a) unit load level as determined through boiler feedwater measurement b) oxygen concentrations at each location where CO, SO2 and NOx emissions are monitored.	Minn. R. 7011.1260, subp. 3; Minn. R. 7011.1265, subp. 4a; Waste Combustor Rule Variance Dated August 21, 1997; Min. R. 7007.0800, subp. 2
Emissions Monitoring: ERS shall install and operate NOx and CO CEMS to measure NOx and CO emissions from EU001, EU002, and EU003 located after each emission unit and prior to the common manifold, according to the procedures listed in 40 CFR pt. 60, Appendix B.	Minn. R. 7011.1260, subp. 3; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
CEMS Relative Accuracy Test Audit (RATA): due before end of each calendar year following Permit Issuance . Follow the procedure in 40 CFR pt. 60, Appendix F. The RATA shall be conducted during the calendar quarter in which a cylinder gas audit (CGA) is not performed.	Minn. R. 7007.0800, subp. 2
Relative Accuracy Test Audit (RATA) Notification: due 30 days before CEMS Relative Accuracy Test Audit (RATA)	Minn. R. 7007.0800, subp. 2.
Relative Accuracy Test Audit (RATA) Results Summary: due 30 days after end of each calendar quarter following CEMS Relative Accuracy Test Audit (RATA)	Minn. R. 7011.1285, subp. 3(G), Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
CEMS Continuous Operation: Monitoring data shall be obtained for at least 75 percent of the hours per day for 90 percent of the days per calendar quarter that the combustor is operating and combusting RDF.	Minn. R. 7011.1260, subp. 5(B); Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
CEMS Daily Calibration Drift (CD) Test: The CD shall be quantified and recorded at zero (low-level) and upscale (high-level) gas concentrations at least once daily. 40 CFR pt. 60, Appendix F, shall be used to determine out-of-control periods for CEMS.	Minn. R. 7011.1260, subp. 5(G); Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Cylinder Gas Audit: due before end of each calendar quarter following Permit Issuance but in no more than three calendar quarters per calendar year. The RATA shall be conducted during the calendar quarter in which a CGA is not performed.	Minn. R. 7011.1260, subp. 5(G); Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Cylinder Gas Audit (CGA) Results Summary: due 30 days after end of each calendar quarter following Cylinder Gas Audit	Minn. R. 7011.1285, subp. 3(G), Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Recordkeeping: ERS shall retain records of all CEMS monitoring data permanently and support information for a period of five years from the date of the monitoring sample, measurement or report. Records shall be kept at the source.	Minn. R. 7007.0800, subp. 5
Recordkeeping: ERS will maintain a permanent record of continuously measured parameters, as specified in Minn. R. 7011.1260, subp. 6(A) to MInn. R. 7011.1260, subp. 6(C).	Minn. R. 7011.1260, subp. 6; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Reporting of Exceedances of Continuously Monitored Emissions: If accurate and valid data results collected from the carbon monoxide, and/or nitrogen oxides monitor exceed emission limits, the following procedures shall be followed. (1) Exceedance shall be reported to the commissioner as soon as reasonably possible. (2) Repairs or modifications shall be completed within 72 hours. If compliance cannot be achieved within 72 hours, then the waste combustor shall be shut down. (3) When repairs or modifications have been completed, UPA shall demonstrate to the commissioner that the waste combustor is in compliance. The waste combustor may be started up after UPA has notified the commissioner in writing of the date UPA plans to start up the waste combustor and of the date that compliance testing is scheduled.	Minn. R. 7011.1260, subp. 7; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
NOx CEMS CERTIFICATION BOILER 3	hdr

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: United Power Association - Elk River

Permit Number: 14100003 - 003

CEM Certification Test: due 60 days after Permit Issuance .	Minn.R. 7011.1260, Subp. 5 Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
CEM Certification Test Notification: due 30 days before CEM Certification Test.	Minn.R. 7017.2030, Subp. 1
CEM Certification Test Plan: due 30 days before CEM Certification Test.	Minn.R. 7017.2030, Subp. 2
CEM Certification Test Pretest Meeting: due 7 days before CEM Certification Test .	Minn.R. 7017.2030, Subp. 4
CEM Certification Test Report: due 45 days after CEM Certification Test.	Minn.R. 7017.2035, Subp. 2
CEM Certification Test Report - Microfiche Copy: due 105 days after CEM Certification Test.	Minn.R. 7017.2035, Subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

01/22/99

Facility Name: United Power Association - Elk River

Permit Number: 14100003 - 003

Subject Item: **EU 004 Heating Boiler**

Associated Items: SV 005

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.6 lbs/million Btu heat input	Minn. R. 7011.0510, subp. 1
Sulfur Dioxide: less than or equal to 2.0 lbs/million Btu heat input	Minn. R. 7011.0510, subp. 1
Opacity: less than or equal to 20 percent opacity except that a maximum of 60 percent for 4 minutes in any hour and a maximum of 40 percent for an additional 4 minutes in any hour.	Minn. R. 7011.0510, subp. 2
Performance Test: Upon the request of the Commissioner, testing shall be conducted in accordance with Minn. R. 7017.2001-2060.	Minn. R. 7017.2020, subp. 1

TABLE A: LIMITS AND OTHER REQUIREMENTS

01/22/99

Facility Name: United Power Association - Elk River

Permit Number: 14100003 - 003

Subject Item: **EU 005 Onan Generator**

Associated Items: SV 006

What to do	Why to do it
Opacity: less than or equal to 20 percent opacity for no more than 10 seconds once operating temperatures are obtained.	Minn. R. 7011.2300, subp.1
Performance Test: Upon the request of the Commissioner, testing shall be conducted in accordance with Minn. R. 7017.2001-2060.	Minn. R. 7017.2020, subp. 1
Propane fuel only.	Minn. R. 7007.0800, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

01/22/99

Facility Name: United Power Association - Elk River

Permit Number: 14100003 - 003

Subject Item: **EU 006 Lime Silo**

Associated Items: CE 006 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

What to do	Why to do it
ERS shall not cause or permit avoidable amounts of particulate matter to become airborne from operations conducted at the facility. All persons shall take reasonable measures to prevent the discharge of visible fugitive dust emissions beyond the property line.	Minn. R. 7011.0150
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1.B
Total Particulate Matter: less than or equal to 0.1 grains/dry standard cubic foot	Minn. R. 7011.0715 to 7011.0735
Total Particulate Matter: less than or equal to 30.91 lbs/hour	Minn. R. 7011.0715 to 7011.0735
Visible emissions check: the Permittee shall check visible emissions from EU006 whenever filling the Lime Silo. A checklist meeting the requirements in Appendix I shall be used to indicate whether the control equipment requires attention. In the event the Permittee makes a finding that attention is required, the Permittee shall investigate the control equipment performance and implement corrective action if necessary.	Minn. R. 7007.0800, Subp. 2
Visible emissions checklist: ERS will use a checklist that contains at a minimum the information contained in Appendix I.	Minn. R. 7007.0800, Subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

01/22/99

Facility Name: United Power Association - Elk River

Permit Number: 14100003 - 003

Subject Item: **EU 007 Ash Silo**

Associated Items: CE 007 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

What to do	Why to do it
ERS shall not cause or permit avoidable amounts of particulate matter to become airborne from operations conducted at the facility. All persons shall take reasonable measures to prevent the discharge of visible fugitive dust emissions beyond the property line.	Minn. R. 7011.0150
ERS shall not cause to be emitted into the atmosphere visible emissions of combustor ash from any of the ash conveying system, buildings or enclosures including conveyor transfer points in excess of 5 percent of the observation period (i.e. 9 minutes per three-hour period). Compliance shall be determined by 40 CFR pt 60, Appendix A, method 22 as amended. This limit does not apply to visible emissions discharged inside buildings or enclosures of ash conveyor systems.	Minn. R. 7007.0800, subp. 2; Minn. R. 7011.1225, subp. 1 Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1.B
Total Particulate Matter: less than or equal to 11.84 lbs/hour	Minn. R. 7011.0715 to 7011.0735
Total Particulate Matter: less than or equal to 0.1 grains/dry standard cubic foot	Minn. R. 7011.0715 to 7011.0735
Visible emissions check: the Permittee shall check visible emissions from EU007, once daily looking downstream of the steam plume, when in operation during daylight hours. A checklist meeting the requirements in Appendix I shall be used to indicate whether the control equipment requires attention. In the event the Permittee makes a finding that attention is required, the Permittee shall investigate the process and control equipment performance and implement corrective action if necessary.	Minn. R. 7007.0800, subp. 2
Visible emissions checklist: ERS will use a checklist that contains at a minimum the information contained in Appendix I.	Minn. R. 7007.0800, subp. 2
Baghouse filter on Ash Silo shall be checked weekly and replaced as necessary.	Minn. R. 7007.0800, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: United Power Association - Elk River

Permit Number: 14100003 - 003

Subject Item: **EU 009 Systems Control Generator**

Associated Items: SV 007

What to do	Why to do it
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	Minn. R. 7011.2300, subp. 2
Permitted Fuel: No. 2 fuel oil (diesel) with a sulfur content not exceeding 0.5% by weight.	Minn. R. 7007.0800, subp. 2
Recordkeeping - Fuel Oil Supplier Certification: the Permittee shall obtain a certification from the fuel supplier for each fuel oil delivery specifying the sulfur content of the oil, in percent by weight. Certification records shall be maintained for a minimum of five years from the date of receipt.	Minn. R. 7007.0800, subp. 5
Operating Hours: less than or equal to 500 hours/year using 12-month Rolling Sum ; calculated on a monthly basis.	Title I Condition: limit to avoid major modification status under 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 2
Recordkeeping: On the first day of each month, calculate and record the operating hours for this generator during the previous month (in hours). By the 15th day of each month, calculate and record: the operating hours for this generator during the previous 12-month period.	Title I Condition: limit to avoid major modification status under 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 5
Performance Test: Upon the request of the Commissioner, testing shall be conducted in accordance with Minn. R. 7017.2001-2060.	Minn. R. 7017.2020, subp. 1
Visible Emissions (VE) Check: Once each day of operation, the Permittee shall observe the generator stack/vent during daylight hours to determine if there are any visible emissions.	Minn. R. 7007.0800, subp. 4
Recordkeeping: The Permittee shall keep a record of all VE checks, whether or not any VEs were observed, and of any corrective actions taken.	Minn. R. 7007.0800, subp. 5

TABLE A: LIMITS AND OTHER REQUIREMENTS

01/22/99

Facility Name: United Power Association - Elk River

Permit Number: 14100003 - 003

Subject Item: **CE 005 Fabric Filter - High Temperature, i.e., T>250 Degrees F**

Associated Items: EU 001 Unit 1 Boiler

EU 002 Unit 2 Boiler

EU 003 Unit 3 Boiler

What to do	Why to do it
Pressure Drop: greater than or equal to 1 inches of water column and less than or equal to 12 inches of water column	Minn. R. 7007.0800, subp. 2 and 14
Temperature: less than 30 degrees F above the highest 4-hour arithmetic mean temperature measured during four consecutive hours for this gas stream during the most recent performance test for polychlorinated dibenzo-p-dioxins and polychlorinated dibenzofurans that demonstrated compliance when solid waste is being combusted except during the annual PCDD/PCDF performance test and the two weeks prior to this test as limited below.	Minn. R. 7011.1240, subp. 2; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp.2
(continued) During the annual PCDD/PCDF performance test and the two weeks prior to this test, no particulate matter control device operating temperature limitations are applicable. The commissioner shall waive the particulate matter control device temperature limits for the purpose evaluating system performance, URGE testing, testing new technology or control technologies, diagnostic testing or related activities for the purpose of improving facility performance or advancing the state-of-the-art for controlling facility emissions, provided a written notification is submitted to the commissioner 30 days prior to undertaking any of the activities identified above, with the following information: 1) a desription of the proposed project, and the outcome the project is designed to evaluate; 2) how the project conforms with the activities described above for which the temperature limit can be waived; 3) the length of time the project will take to complete.	Minn. R. 7011.1240, subp. 2; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp.2 (conitnued)
Particulate Matter Control Device Temperature Monitor: ERS shall maintain, calibrate, and operate at all times a temperature monitor that continuously reads and records the temperature of the flue gas at the inlet of the particulate matter control device.	Minn. R. 7011.1260, subp. 2; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Particulate Matter Control Device Temperature Monitoring Averaging Period: The averaging period for the particulate matter control device inlet flue gas temperature monitor shall be a four-hour arithmetic block average calculated from four continuous one-hour arithmetic averages.	Minn. R. 7011.1260, subp. 4; Waste Combustor Rule Variance Dated August 21, 1997; Minn. R. 7007.0800, subp. 2
Instantaneous readings of greater than 10 percent opacity from emissions exiting the fabric filter shall initiate procedures to check the fabric filter system for problems and malfunctions.	Minn. R. 7007.0800, subp. 2 and 14
Inspect quarterly; as required by manufacturing specifications; or as indicated in the Operation and Maintenance Manual, all components that are not subject to wear or plugging including structural components, housings, ducts and hoods except that flue gas ductwork inspections may be conducted during outages at intervals of approximately 6 months. Maintain a written record of the inspection and any action resulting from the inspection.	Minn. R. 7007.0800, subp. 2 and 14
Inspect quarterly, or as required by manufacturing specifications, all components that are subject to wear or plugging for example, bearings, belts hoses, fans, nozzles, orifices and ducts except that flue gas ductwork inspections may be conducted during outages at intervals of approximately 6 months. Maintain a written record of the inspection and any action resulting from the inspection.	Minn. R. 7007.0800, subp. 2 and 14
Calibrate the pressure guage annually, or as often as required by manufacturing specifications, and maintain a written record of the calibration and any action resulting from the calibration.	Minn. R. 7007.0800, subp. 2 and 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

01/22/99

Facility Name: United Power Association - Elk River

Permit Number: 14100003 - 003

Subject Item: **CE 008 Fabric Filter - Low Temperature, i.e., T<180 Degrees F**

Associated Items: EU 008 RDF Recieving Building

What to do	Why to do it
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)
Total Particulate Matter: less than or equal to 0.054 grains/dry standard cubic foot	Minn. R. 7011.0715, subp. 1
Total Particulate Matter: less than or equal to 32.13 lbs/hour	Minn. R. 7011.0715, subp. 1
ERS shall record RDF receiving building baghouse downtime monthly.	Minn. R. 7011.0715, subp. 2

TABLE B: SUBMITTALS

01/22/99

Facility Name: United Power Association - Elk River

Permit Number: 14100003 - 003

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

TABLE B: ONE TIME SUBMITTALS OR NOTIFICATIONS

01/22/99

Facility Name: United Power Association - Elk River

Permit Number: 14100003 - 003

What to send	When to send	Portion of Facility Affected
Application for Permit Reissuance	due 180 days before expiration of Existing Permit	Total Facility
CEM Certification Test Notification	due 30 days before CEM Certification Test .	EU003
CEM Certification Test Plan	due 30 days before CEM Certification Test .	EU003
CEM Certification Test Report - Microfiche Copy	due 105 days after CEM Certification Test .	EU003
CEM Certification Test Report	due 45 days after CEM Certification Test .	EU003
Computer Dispersion Modeling Protocol	due 1,096 days after Permit Issuance . This protocol will describe the proposed modeling methodology and input data, in accordance with all requirements of 40 CFR pt. 51, App. W. The protocol will be based on projected operating conditions under the next permit term.	Total Facility
Computer Dispersion Modeling Results	due 1,462 days after Permit Issuance . To be submitted after the MPCA has reviewed and approved the modeling protocol.	Total Facility
Deviations Report	due 2 days after Discovery of Deviation . Submit a written description of any deviations endangering human health or the environment to the Commissioner. Include the following information in this written description: cause of the deviation; exact dates of the period of the deviation; if the deviation has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the deviation.	Total Facility
Fugitive Control Plan	due 60 days after Permit Issuance . The plan shall identify all fugitive emission sources, primary and contingent control measures, and recordkeeping. ERS shall follow the actions and recordkeeping specified in the control plan.	Total Facility
Notification of compliance status	due before 07/01/99 . Notify the Commisioner as to the status of compliance with the interim NOx limit.	EU001
Notification of compliance status	due before 07/01/99 . Notify the Commissioner as to the status of compliance with the interim CO limit.	EU001, EU002, EU003
Notification of compliance status	due before 07/01/99 . Notify the Commissioner as to the status of compliance with the interim NOx limit.	EU002, EU003
Notification of compliance status	due before 12/19/00 . Notify the Commissioner as to the status of compliance with the final CO limit.	EU001, EU002, EU003
Notification of compliance status	due before 12/19/00 . Notify the Commissioner as to the status of compliance with the final NOx limit.	EU001, EU002, EU003
Notification	due before 01/01/00 . Notify the Commissioner of the status of the design and procurement of NOx control equipment if Phase II CO modifications are required.	EU001, EU002, EU003
Notification	due before 02/28/99 . Notify the Commissioner of the status of the design and procurement of the NOx control equipment if required.	EU001, EU002, EU003
Notification	due before 07/01/99 , notify the Commissioner as to the status of compliance with the interim SO2 emission limit for unit #1.	EU001
Notification	due before 07/01/99 , notify the Commissioner as to the status of compliance with the interim SO2 emission limit for Unit #2.	EU002

TABLE B: ONE TIME SUBMITTALS OR NOTIFICATIONS

Facility Name: United Power Association - Elk River

Permit Number: 14100003 - 003

Notification	due before 07/01/99 , notify the Commissioner as to the status of compliance with the interim SO2 emission limit for Unit #3.	EU003
Notification	due before 08/31/98 , notify the Commissioner that the Phase I modifications to reduce CO emissions have been completed.	EU001, EU002, EU003
Notification	due before 12/19/00 , notify the Commissioner as to the status of compliance with the final SO2 emission limit.	EU001, EU002
Notification	due before 12/19/00 , notify the Commissioner of the status of compliance with the final SO2 emission limit.	EU003
Notification	due before 12/31/98 , notify the Commissioner of the status of the design and procurement of the Phase II CO modifications.	EU003
Notification	due before 12/31/98 . Notify the Commissioner of the status of the design and procurement of the Phase II CO modifications.	EU001, EU002
Performance Test Report - Microfiche Copy	due 105 days after Performance Test or 74 days after receipt of Performance Test Report by ERS for each Performance Test conducted.	GP001
Performance Test Report	due 45 days after Performance Test or 14 days after receipt of the Performance Test Report by ERS for each Performance Test conducted, whichever is later. Each report must bear the ERS date stamp receipt.	GP001
Relative Accuracy Test Audit (RATA) Notification	due 30 days before CEMS Relative Accuracy Test Audit (RATA)	EU001, EU002, EU003, GP001
Submittal	due 180 days after Permit Issuance , an Operating Manual: Develop and maintain the Operating Manual in accordance with Minn. R. 7011.1275, subp. 3, items A through O; Update the manual following each performance test to include operational changes resulting from emissions performance testing results. Include the revision dates within the Operating Manual; Store the Operating Manual in a location easily accessed by staff, and describe the location in the Operating Manual. Make all attempts to have this location be permanent.	GP001
Submittal	due 90 days after Permit Issuance (Continued) C. household hazardous waste management requirements of part 7035.2535, subp. 6; Keep the household hazardous waste management plan prepared for the Elk River Resource Recovery Facility on file at the ERS. D. emergency preparedness and prevention plans and emergency procedures shall be prepared in accordance with parts 7035.2595 and 7035.2605; Update the existing Chemical Emergency Episode Plan to comply with the requirements in 7035.2595 and 7035.2605 as applicable. E. contingency action plans in part 7035.2615; Include as a part of the update to the existing Chemical Emergency Episode Plan, the applicable items of 7035.2615 F. closure plans and procedures in part 7035.2625. G. not applicable. H. infectious waste managment plan (if ERS chooses to accept infectious waste), in accordance with Minn. R. 7035.9100 to 7035.9150.	Total Facility
Submittal	due 90 days after Permit Issuance a plan for handling waste that has not been processed into refuse derived fuel (RDF).	Total Facility

TABLE B: ONE TIME SUBMITTALS OR NOTIFICATIONS

Facility Name: United Power Association - Elk River

Permit Number: 14100003 - 003

Submittal	due 90 days after Permit Issuance the plans as described below identifying which required portions are not applicable. Keep the plans with the Operating Manual. A. security requirements in part 7035.2535, subp. 3; Draft and implement a security plan which describes devices or provisions to prevent unauthorized entry that could lead to injury or disturbance of waste or equipment. B. general inspection requirements in part 7035.2535, subp. 4; Draft and implement a plan which describes inspection schedules and maintenance of inspection records for 5 years. This general inspection plan covers those operations which if malfunctions occur could lead to environmental or human health hazards. (Continued below)	Total Facility
Submittal	due before 12/31/02 . Provide a waste composition study every five years as described in Minn. R. 7007.0501, subp. 2A. The Waste Composition Study and Sample Analysis Report is due 45 days after the end of each five years starting 12/1997.	Total Facility
Submittal	due 210 days after 04/01/1998, a fractional analysis of the waste stream from which the refuse derived fuel (RDF) is produced as decribed in Minn. R. 7007.0501, subp 2(A)(1) including a measurement of the noncombustible fraction of solid waste.	Total Facility

TABLE B: RECURRENT SUBMITTALS

01/22/99

Facility Name: United Power Association - Elk River

Permit Number: 14100003 - 003

What to send	When to send	Portion of Facility Affected
Cylinder Gas Audit (CGA) Results Summary	due 30 days after end of each calendar quarter following Cylinder Gas Audit	EU001, EU002, EU003, GP001
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.	GP001
Quarterly Report	due 30 days after end of each calendar quarter following Permit Issuance	GP001
Relative Accuracy Test Audit (RATA) Results Summary	due 30 days after end of each calendar quarter following CEMS Relative Accuracy Test Audit (RATA)	EU001, EU002, EU003, GP001
COMS Calibration Error Audit Results Summary	due 30 days after end of each calendar half-year following COMS Calibration Error Audit	GP001
Semiannual Deviations Report	due 30 days after end of each calendar half-year following Permit Issuance . The first semiannual report submitted by ERS 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. Use of the Quarterly EER is permitted for Deviations Report Form-1.	Total Facility
Compliance Certification	due 30 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. The report covers all deviations experienced during the calendar year.	Total Facility
Emissions 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.	Total Facility
Performance Test Notification (written)	due 30 days before end of each year starting 08/30/97 (30 days before each Performance Test).	GP001
Performance Test Plan	due 30 days before end of each year starting 08/30/97 (30 days before each Performance Test).	GP001
Submittal	due before end of each year starting 03/15/98 an annual Ash Testing Report to the Commissioner by March 15 of each year. The report must contain at a minimum the information in Minn. R. 7035.2910, subp. 10A - F.	Total Facility

TECHNICAL SUPPORT DOCUMENT
For
DRAFT AIR EMISSION PERMIT NO. 14100003-003

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

1. General Information

1.1. Applicant and Stationary Source Location:

Owner/Operator Address and Phone Number (list both if different)	Facility Address (SIC Code: 4911)
	United Power Association - Elk River Station 17845 Highway 10 East Elk River, Minnesota 55330 (612)241-2205

1.2. Description Of The Facility

The facility covered by the previous Total Facility Permit, Air Emissions Permit No. 14100003-001, United Power Association - Elk River Station (ERS) is an electric power generating station burning Refuse Derived Fuel (RDF). The RDF burned at this facility is processed from municipal solid waste for the facility under a contract with the Elk River Resource Recovery Facility (ERRRF). The facility produces approximately 40 megawatts of electricity.

Energy is produced through combustion of RDF in three spreader, stoker-fired, excess air combustion units. The units are identified in the permit as emissions units 1, 2, and 3 (EU 001, EU 002, and EU 003). Unit 3 is approximately twice the size of units 1 and 2. The units are 128, 128 and 268 Million Btu/hr respectively which equates to 11.7, 11.7 and 24.4 tons of RDF per hour. The combustors can also burn natural gas and fuel oil. Natural gas is used at start-up and as necessary to maintain proper combustion conditions; fuel oil is used as a backup fuel to the natural gas. The combustion units were converted from burning coal to RDF in 1988.

All three of the combustion units (boilers) are connected to common pollution control equipment, a scrubber for the control of acid gasses and a baghouse for the control of Particulate Matter (PM). Exhaust gasses from each boiler are continuously monitored for Carbon Monoxide (CO), Sulfur Dioxide (SO_2), Nitrogen Oxides (NO_x), opacity, and Oxygen (O_2). A number of operating parameters, including scrubber exit/baghouse inlet temperature, and boiler feedwater flow rate, are also monitored continuously.

Hot water for internal use when the EU 001, EU 002, and EU 003 are down is provided by a fuel oil-fired boiler (EU 004). A propane fired generator (EU 005) provides emergency electrical power.

Ash produced in the course of waste combustion is stored in an enclosed area at the facility. The ash is transported using covered trucks to a permitted ash-only cell at the NRG Becker Ash Facility. Other sources of PM emissions are the lime storage silo and RDF receiving building.

The ERS facility has three bulk fuel oil tanks with a total capacity of 846,000 gallons. These tanks have been empty since 1981. Two no. 2 fuel oil tanks (back-up for natural gas) with a total capacity of 50,000 gallons produce insignificant emissions. Two tanks for vehicle fuels (diesel, 1,200 gallons and gasoline, 12,000 gallons) also produce insignificant emissions.

1.3 Description of the Activities Allowed By This Permit Action

This permit modification involves installation of a new 400 KW emergency generator set for the site's transmission system control facility. This permit also includes an administrative amendment to the requirement in the previous permit: Table A, page A-3, to extend the deadline from 90 days to 210 days to allow more time to complete the sampling of the waste stream from which the RDF is produced.

Note: The permit requirements for the new 400 KW emergency generator (EU 009) can be found under "Subject Item" in DELTA system.

1.4. Facility Emissions:

Table 1. Emissions Associated With the Modification

Pollutant	Potential to Emit from the modification (lb/hr)	*Potential to Emit (PTE) from the modification (TPY)	Emission Increases Authorized with this Permit Action (TPY)	Emission Decreases Authorized with this Permit Action	Other contemporaneous emission increases/ decreases (TPY)	Net Emission Change (TPY)	NSR/ 112(g) Threshold Level (TPY)	NSR/ MACT Review Required (Yes or No)
PM	1.36	0.34	0.34	None	None	0.34	NA	No
PM_{10}	1.36	0.34	0.34	None	None	0.34	NA	No
SO_2	1.28	0.32	0.32	None	None	0.32	NA	No
NO_x	19.4	4.85	4.85	None	None	4.85	NA	No
VOC	1.54	0.39	0.39	None	None	0.39	NA	No
CO	4.2	1.05	1.05	None	None	1.05	NA	No

* The PTE from the generator are based on a 500 hours per year of operation (per EPA Memo on "appropriate default assumption")

Table 2. Permit Action Classification_

Classification (put x in appropriate box)	Major/Affected Source	*Synthetic Minor	*Minor
PSD (list pollutant)			PM, PM_{10}, SO_x, NO_x, CO, VOC
NAAR (list pollutant)			
Part 70 Permit Program (list pollutant)			PM_{10}, SO_x, NO_x, CO, VOC

* 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.

2. Regulatory and/or Statutory Basis

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

Regulatory Overview of Units Affected by the Modification

Table 4. Regulatory Overview

EU#	Applicable Regulations	Comments
EU 009	Minn. R. 7011.2300, subp. 1	Minnesota Standards of Performance for Internal Combustion Engines; limits opacity
EU 009	Minn. R. 7011.2300, subp. 2	Minnesota Standards of Performance for Internal Combustion Engines; limits sulfur dioxide emissions
EU 009	Minn. R. 7007.0800, subp. 2	Permitted fuel: No. 2 fuel oil with 0.5% sulfur content only.
EU 009	40 CFR § 52.21; Minn. R. 7007. 0800, subp. 2	Title I Condition: limit the number of operation hours to 500 per year to avoid a major permit amendment classification; number of operation hours calculated as a 12-month Rolling Sum.
EU 009	40 CFR § 52.21; Minn. R. 7007. 0800, subp. 2	Title I Condition: Recordkeeping requirements to avoid a major permit amendment classification
EU 009	Minn. R. 7007.0800, subp. 4, and subp. 5	Visible Emissions (VE) Check; Recordkeeping of VEs Periodic Monitoring Requirements
Facility	Minn. R. 7007.1400, subp. 1 (H)	An amendment to extend the deadline in a permit no more than 120 days; Remit due date extended from 90 days in the previous permit: Table A, page A-3 to 210 days

3. Technical Information

Emission Calculations: Capacity of the new generator = 4.4 MM Btu/hr
Fuel used: No. 2 fuel oil
Number of hours of operation for emergency purposes only is limited to 500 hours per year
Emission Factors for No. 2 fuel oil are AP-42 factors
PM = 0.31 lb/MM Btu * 4.4 MM Btu/hr = 1.36 lb/hr or 0.34 TPY
PM_{10} = 0.31 lb/MM Btu * 4.4 MM Btu/hr = 1.36 lb/hr or 0.34 TPY
SO_x = 0.29 lb/MM Btu * 4.4 MM Btu/hr = 1.28 lb/hr or 0.32 TPY
NO_x = 4.41 lb/MM Btu * 4.4 MM Btu/hr = **19.40 lb/hr** or 4.85 TPY
CO = 0.95 lb/MM Btu * 4.4 MM Btu/hr = 4.2 lb/hr or 1.05 TPY
VOC/TOC = 0.35 lb/MM Btu * 4.4 MM Btu/hr = 1.54 lb/hr or 0.39 TPY

The Minor amendment applicability for NO_x emissions is 9.13 lb/hr. So, this permit amendment does not qualify to be a Minor. This permit amendment also does not qualify to be a Major; the proposed emission rate increases are well below the thresholds for New Source Review Significant Emission Rates. **So, this permit amendment fits the criteria for a Moderate amendment.**

4. Conclusion

Based on the information provided by United Power Association - Elk River, the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 14100003-003, and this TSD, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

Staff Members on Permit Team:

Dave Crowell (Compliance and Enforcement Review Coordinator)
John S. Chikkala (Permit Engineer)

Attachment: CD-01 Forms