

217/782-2113

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT -- REVISED

PERMITTEE

Fox Metro Water Reclamation District  
Attn: Thomas F. Muth  
682 Route 31  
Oswego, Illinois 60543-9417

<u>Application No.:</u> 96080085	<u>I.D. No.:</u> 093015AAE
<u>Applicant's Designation:</u> FOXFESOP	<u>Date Received:</u> September 16, 1999
<u>Subject:</u> Municipal Wastewater Treatment Plant	
<u>Date Issued:</u> November 15, 1999	<u>Expiration Date:</u> May 16, 2002
<u>Location:</u> 682 Route 31, Oswego	

This permit is hereby granted to the above-designated Permittee to OPERATE emission source(s) and/or air pollution control equipment consisting of six natural gas fired boilers with two boilers having distillate fuel oil backup, two flares, two natural gas fired engines, natural gas fired heaters, and a wastewater treatment system with screens, tanks, clarifiers, and aeration equipment pursuant to the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

- 1a. This federally enforceable state operating permit is issued to limit the emissions of air pollutants from the source to less than major source thresholds (i.e., 100 tons/year from NO<sub>x</sub> and 100 tons/year from CO). As a result the source is excluded from the requirement to obtain a Clean Air Act Permit Program (CAAPP) permit. The maximum emissions of this source, as limited by the conditions of this permit, are described in Attachment A.
- b. Prior to issuance, a draft of this permit has undergone a public notice and comment period.
- c. This permit supersedes all operating permits issued for this location.
- 2a. Usage of distillate fuel oil in the boilers shall not exceed 48,000 gallons per month and 48,000 gallons per year.
- b. The amount of digester gas burned by the flares shall not exceed 17,000,000 cubic feet per month and 50,000,000 cubic feet per year.
- c.
  - i. Natural gas may be fired as a backup fuel in the engines.
  - ii. The engines shall not operate for more than 744 hours per month and 1,250 hours per year, each.
- d. Compliance with annual limits shall be determined from a running total of 12 months of data.

3a. NO<sub>x</sub> emissions of equipment shall not exceed the following limits:

<u>Item of Equipment</u>	<u>Emission Factor</u>	<u>NO<sub>x</sub> Emissions</u> <u>(Lb/Mo) (Ton/Yr)</u>	
Engines	0.022 lb/hp-hr	49,104	41.25
Flares	0.068 lb/mmBtu	1,224	1.70
Boilers *	100 lb/mmscf	1,563	9.2
Boilers **	20 lb/1000 gal	956	0.5
Heaters	100 lb/mmscf	476	2.8

\* - Emissions from boilers when fired by natural gas.

\*\* - Emissions from boilers when fired by distillate fuel oil.

These limits are based on standard AP-42 emission factors, the requested hours of operation for the engines with a maximum monthly capacity as indicated in Condition 2, the requested amount of digester gas for the flares with a maximum monthly capacity as indicated in Condition 2, maximum monthly and yearly capacities of the boilers when fired by natural gas, the requested usage of distillate fuel oil when the boilers are fired by distillate fuel oil, and the maximum monthly and yearly capacities of the heaters as indicated in the permit application.

b. CO emissions of equipment shall not exceed the following limits:

<u>Item of Equipment</u>	<u>Emission Factor</u>	<u>CO Emissions</u> <u>(Lb/Mo) (Ton/Yr)</u>	
Engines	0.019 lb/hp-hr	42,458	35.6
Flares	0.370 lb/mmBtu	6,290	9.25
Boilers *	21 lb/mmscf	322	1.9
Boilers **	5 lb/1000 gal	240	0.2
Heaters	21 lb/mmscf	119	0.7

\* - Emissions from boilers when fired by natural gas.

\*\* - Emissions from boilers when fired by distillate fuel oil.

These limits are based on standard AP-42 emission factors, the requested hours of operation for the engines with a maximum monthly capacity as indicated in Condition 2, the requested amount of digester gas for the flares with a maximum monthly capacity as indicated in Condition 2, maximum monthly and yearly capacities of the boilers when fired by natural gas, the requested usage of distillate fuel oil when the boilers are fired by distillate fuel oil, and the maximum monthly and yearly capacities of the heaters as indicated in the permit application.

- c. Compliance with annual limits shall be determined from a running total of 12 months of data.
- 4. In the event that the operation of this source results in an odor nuisance, the Permittee shall take appropriate and necessary actions to minimize odors, including but not limited to, changes in raw material or installation of controls, in order to eliminate the nuisance.
- 5a. The Permittee shall, in accordance with the manufacturer(s) and/or vendor(s) recommendations, perform periodic maintenance on all the above-referenced equipment such that the equipment be kept in proper working condition and not cause a violation of the Environmental Protection Act or regulations promulgated therein.
- b. The Permittee shall maintain an operating log for the equipment, which at a minimum includes any adjustments of the equipment's operating parameters, and the results of inspections, maintenance, and repair activities.
- 6a. The Permittee shall maintain records of the following:
  - i. The amount of distillate fuel oil used in the boilers (gallons per month and gallons per year).
  - ii. The amount of digester gas burned by the flares (cubic feet per month and cubic feet per year).
  - iii. The operating hours of each engine (hours per month and hours per year)
- b. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least three years from the date of entry and shall be made available for inspection and copying by the Illinois EPA and USEPA upon request. Any records retained in an electronic format (e.g., computer) shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to an Illinois EPA request for records during the course of a source inspection.
- 7. If there is an exceedance of the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Unit in Springfield, Illinois within 30 days after the exceedance. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or violation and efforts to reduce emissions and future occurrences.

8. VOM and HAP emissions from the wastewater treatment system shall not exceed 6.9 tons/year. This limit is based on the maximum capacity of the facility of 42 million gallons of wastewater influent and special emission factors developed during the Joint Inventory Program by the California South Coast Air Quality Management District and the TOXCHEM+ HAP Computer Model as indicated in the permit application.
9. Two (2) copies of required reports and notifications concerning equipment operation or repairs, performance testing or a continuous monitoring system shall be sent to:

Illinois Environmental Protection Agency  
Division of Air Pollution Control  
Compliance Section (#40)  
1340 North Ninth Street  
P.O. Box 19276  
Springfield, Illinois 62794-9276

and one (1) copy shall be sent to the Illinois EPA's regional office at the following address unless otherwise indicated:

Illinois Environmental Protection Agency  
Division of Air Pollution Control  
Eisenhower Tower  
1701 South First Avenue  
Maywood, Illinois 60153

Please note that the engine and flare operating and emission limits as requested with a net reduction in permitted emission.

If you have any questions on this, please call Jim Cobb at 217/782-2113.

Donald E. Sutton, P.E.  
Manager, Permit Section  
Division of Air Pollution Control

DES:JDC:jar

cc: IEPA, FOS Region 1  
IEPA, Compliance Section  
USEPA  
PCF #10

Attachment A - Emission Summary

This attachment provides a summary of the maximum emissions from a municipal wastewater treatment plant operating in compliance with the requirements of this federally enforceable permit. In preparing this summary, the Illinois EPA used the annual operating scenario which results in maximum emissions from such a plant. The resulting maximum emissions are well below the levels, e.g., 100 tons/year from NO<sub>x</sub> and 100 tons/year from CO at which this source would be considered a major source for purposes of the Clean Air Act Permit Program. Actual emissions from this source will be less than predicted in this summary to the extent that less material is handled, less operating hours occur, and control measures are more effective than required in this permit.

1. NO<sub>x</sub> emissions from the facility:

<u>Item of Equipment</u>	<u>Emission Factor</u>	<u>NO<sub>x</sub> Emissions</u> <u>(Lb/Mo) (Ton/Yr)</u>	
Engines	0.022 lb/hp-hr	49,104	41.25
Flares	0.068 lb/mmBtu	1,224	1.70
Boilers *	100 lb/mmscf	1,563	9.2
Boilers **	20 lb/1000 gal	956	0.5
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\* - Emissions from boilers when fired by natural gas.

\*\* - Emissions from boilers when fired by distillate fuel oil.

These limits are based on standard AP-42 emission factors, the requested hours of operation for the engines with a maximum monthly capacity as indicated in Condition 2, the requested amount of digester gas for the flares with a maximum monthly capacity as indicated in Condition 2, maximum monthly and yearly capacities of the boilers when fired by natural gas, the requested usage of distillate fuel oil when the boilers are fired by distillate fuel oil, and the maximum monthly and yearly capacities of the heaters as indicated in the permit application.

2. CO emissions from the facility:

<u>Item of Equipment</u>	<u>Emission Factor</u>	<u>CO Emissions</u> <u>(Lb/Mo) (Ton/Yr)</u>	
Engines	0.019 lb/hp-hr	42,458	35.6
Flares	0.370 lb/mmBtu	6,290	9.25
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3. VOM and HAP emissions from facility are 6.9 tons/year. This limit is based on the maximum capacity of the facility of 42 million gallons of wastewater influent and special emission factors developed during the Joint Inventory Program by the California South Coast Air Quality Management District and the TOXCHEM+ HAP Computer Model as indicated in the permit application.

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