

217/782-2113

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT
RENEWAL

PERMITTEE

Danville Correctional Center
Attn: James E. Harms
1301 Concordia Court
Post Office Box 19277
Springfield, Illinois 62794

Application No.: 94050059
Applicant's Designation: DNVLLECRCN
Subject: Correctional Facility
Date Issued: November 27, 2002
Location: Route 136 East, Danville

I.D. No.: 183804AAAY
Date Received: July 23, 2002
Expiration Date: November 27, 2007

This permit is hereby granted to the above-designated Permittee to OPERATE emission unit(s) and/or air pollution control equipment consisting of three fluidized bed combustion boilers, each equipped with bag filter dust collectors and fired with coal and limestone, one natural gas fired boiler (Cleaver Brooks), three coal and limestone boiler hoppers with bag filters, two coal storage silos with bag filters, two limestone storage silos with bag filters, one ash silo with bag filters, 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 for NO_x, SO₂, and 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. The Cleaver Brooks (12 mmBtu/hr) boiler is subject to New Source Performance Standard (NSPS) for small Industrial, Commercial, and Industrial Steam Generating Units, 40 CFR 60, Subparts A and Dc. The Illinois EPA is administering NSPS in Illinois on behalf of the United States EPA under a delegation agreement.
- b. At all times, the Permittee shall maintain and operate the boiler, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions, as required by the NSPS, 40 CFR 60.11(d).

- c. The Permittee shall fulfill applicable notification and recordkeeping requirements of NSPS, 40 CFR 60.7 and 60.48c. That is, records showing the amounts of fuel combusted during each day shall be maintained and readily accessible for two years following the date of such records.
- 3. No person shall cause or allow the emission of carbon monoxide into the atmosphere from each boiler to exceed 200 ppm, corrected to 50% excess air, pursuant to 35 Ill. Adm. Code 216.121.
- 4. Combined emissions and operation of the three coal fired boilers shall not exceed the following limits:

<u>Pollutant</u>	<u>Fuel Usage</u>		<u>Emission Factor</u> (Lb/Ton)	<u>Emissions</u>	
	(Ton/Mo)	(Ton/Yr)		(Ton/Mo)	(Ton/Yr)
NO _x	1,000	3,300	27.2	13.60	44.88
CO	1,000	3,300	18.0	9.00	29.70
SO ₂	1,000	3,300	14.5	7.25	23.93
PM	1,000	3,300	17.0	0.45	1.5

These limits are based on the maximum coal usage and operating rates indicated in the application, standard AP-42 emission factors for carbon monoxide (CO), and special stack test emission factors for nitrogen oxides (NO_x) and sulfur dioxide (SO₂) and a 94.7% control efficiency for the baghouse controlling particulate matter (PM). A conversion factor of 10,800 Btu/lb coal was used. Compliance with annual limits shall be determined from a running total of 12 months of data.

- 5a. Natural gas shall be the only fuel fired in the Cleaver Brooks boiler.
- b. Emissions of the Cleaver Brooks (12 mmBtu/hr) boiler shall not exceed 0.2 tons/year of PM, 2.1 tons/year of NO_x and 0.5 ton/yr of CO based on the use of 305,000 therm/year of natural gas as indicated in the application and standard AP-42 emission factors (140 lb/mmscf for NO_x and 35 lb/mmscf for CO). Conversion factors of 1,000 Btu/scf and 10 therm/mmBtu were used to calculate emissions.
- c. Compliance with annual limits shall be determined from a running total of 12 months of data.
- 6. The Permittee shall maintain records of the following items, and such other items as may be appropriate to allow the Illinois EPA to review compliance with the limits in Conditions 4 and 5.
 - a. Total coal usage for the facility (ton/month and ton/year).
 - b. Natural gas usage for the gas fired boiler (therm/month and therm/year).

7. No person shall cause or allow any visible emissions of fugitive particulate matter from any process, including any material handling or storage activity beyond the property line of the emission source, pursuant to 35 Ill. Adm. Code 212.301.
8. No person shall cause or allow the emission of smoke with an opacity greater than 30 percent into the atmosphere from each boiler, pursuant to 35 Ill. Adm. Code 212.123.
9. This permit is issued based on negligible emissions of PM from each silo and hopper bin vent filter. For this purpose, emissions from each emission source shall not exceed nominal emission rates of 0.1 lb/hour and 0.44 ton/year.
10. The emissions of Hazardous Air Pollutants (HAPs) as listed in Section 112(b) of the Clean Air Act shall not equal or exceed 10 tons per year of any single HAP or 25 tons per year of any combination of such HAPs, or such lesser quantity as USEPA may establish in rule which would require the Permittee to obtain a CAAPP permit from the Illinois EPA. As a result of this condition, this permit is issued based on the emissions of any HAP from this source not triggering the requirement to obtain a CAAPP permit from the Illinois EPA.
11. 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 or 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 or USEPA request for records during the course of a source inspection.
12. 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 Section 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.
13. 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)
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
2009 Mall Street
Collinsville, Illinois 62234

14. The Permittee shall submit the following additional information with the Annual Emissions Report, due May 1st of each year:
 - a. Total coal usage for the facility (tons/year).
 - b. Natural gas usage for each gas fired boiler (therm/year).

If there have been no exceedances during the prior calendar year, the Annual Emission Report shall include a statement to that effect.

It should be noted that the 8,000 gallon gasohol storage tank, 6,000 and 2,5000 gallon diesel tanks, and Kewanee boiler (1.58 MBtu/hour) are exempt from state permit requirements, pursuant to 35 Ill. Adm. Code 201.146(n) and (d), respectively.

It should be noted that this permit has been revised to no longer include operation of 2 gasoline storage tanks.

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

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

DES:RWC:psj

cc: Illinois EPA, FOS Region 3
Illinois EPA, Compliance Section
Lotus Notes

Attachment A - Emission Summary

This attachment provides a summary of the maximum emissions from this correctional facility 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. This scenario is the use of 343,000 therms of natural gas and 3,300 tons of coal. The resulting maximum emissions are well below the levels, e.g., 100 tons per year each for nitrogen oxides (NO_x), sulfur dioxide (SO₂), and carbon monoxide (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 fuel is used, and control measures are more effective than required in this permit.

1. Emissions and operation of equipment shall not exceed the following limits:

<u>Item of Equipment</u>	<u>Pollutant</u>	<u>Pollutant Emissions</u>		
		<u>(Lb/Hr)</u>	<u>(Ton/Mo)</u>	<u>(Ton/Yr)</u>
3 Coal Fired Boilers	NO _x	---	13.60	44.88
	CO	---	9.00	29.70
	SO ₂	---	7.25	23.93
	PM	---	-----	1.5
Cleaver Brooks Boiler	NO _x	---	-----	2.1
	CO	---	-----	0.5
	PM	---	-----	0.2
8 Silo and Hopper Filters	PM	0.8	-----	3.52

These limits are based on maximum coal and natural gas usage, standard AP-42 emission factors, special stack test emission factors for NO_x and SO₂ emissions from the coal boilers, and negligible emissions of regulated air pollutants from the silo and hopper filters. Compliance with annual limits shall be determined from a running total of 12 months of data.

DES:RWC:psj