

217/782-2113

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT - REVISED

PERMITTEE

Hamilton Sundstrand
Attn: Larry Carlson
4747 Harrison Avenue
P.O. Box 7002
Rockford, Illinois 61125-7002

Application No.: 73100101

I.D. No.: 201030AEU

Applicant's Designation:

Date Received: March 9, 2000

Subject: FESOP

Date Issued: March 24, 2000

Expiration Date: November 21, 2001

Location: 2421-11th Street, Rockford

This permit is hereby granted to the above-designated Permittee to OPERATE emission source(s) and/or air pollution control equipment consisting of several natural gas fired Combustion units (Plant 1 boilers, and emergency generator); three engines with 3-way catalytic converters, a diesel fired emergency generator and an emergency fire pump; also Plant 1 surface coating operations and cleaning operations (vapor degreasing, cold cleaning, 4 paint spray booths, etc.); and miscellaneous operations (test cells, storage tanks, welding, packaging foam and cooling towers) 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 each for nitrogen oxides, carbon monoxide and volatile organic materials). As a result the source is excluded from the requirements 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. Emissions and operation of the external combustion units shall not exceed the following limits:

i.	Item of Equipment	E M I S S I O N S					
		Natural Gas Usage (mmscf/Mo)	Natural Gas Usage (mmscf/Yr)	NO _x (Lb/Mo)	NO _x (T/Yr)	CO (Lb/Mo)	CO (T/Yr)
	Combustion Units (Total)(Boilers, Heaters, etc.)	14.2	56.7	1420.0	2.84	284	0.6

<u>Item of Equipment</u>	<u>Horsepower Rating (HP)</u>	<u>Hours of Operation (Hr/Yr)</u>	<u>E M I S S I O N S</u>			
			<u>NO_x (Gr/HP-Hr)</u>	<u>(T/Yr)</u>	<u>CO (Gr/HP-Hr)</u>	<u>(T/Yr)</u>
Emergency Generator	355	100	14.0	0.4	3.03	0.1
Emergency Fire Pump	185	100	14.0	0.2	3.03	0.1
Emergency Generator	248	75	20.0	0.4	35.0	0.7

iii. A. Natural gas consumption and emissions of nitrogen oxides (NO_x), carbon monoxide (CO) and volatile organic materials (VOM) from the 14.9 mmBtu/hr engines shall not exceed the following limits:

Normal Operation:

<u>Emission Unit</u>	<u>Natural Gas Consumption</u>		<u>E M I S S I O N S</u>					
	<u>(mmcf/Mo)</u>	<u>(mmcf/Yr)</u>	<u>NO_x (Lb/Hr)</u>	<u>(T/Yr)</u>	<u>CO (Lb/Hr)</u>	<u>(T/Yr)</u>	<u>VOM (Lb/Hr)</u>	<u>(T/Yr)</u>
Engine (Each)	----	-----	7.5	----	7.7	----	1.5	---
Engines (Total)	14.1	155.1	---	39.1	---	41.0	---	8.4

B. Only natural gas shall be burned in the engines.

C. Compliance with annual limits shall be determined from a running total of the current month and the previous 11 months of data.

D. Emissions of nitrogen oxides (NO_x), carbon monoxide (CO) and volatile organic material (VOM) from the engines shall be controlled by 3-way catalytic converters, which shall be operated to provide 85%, 80%, and 50% control efficiency for NO_x, CO and VOM respectively.

iv. Emissions of NO_x and CO from miscellaneous activities (test cells, etc.) shall not exceed: 1.0 tons/year of NO_x, 2.0 tons/year of CO.

b. Compliance with annual limits shall be determined from a running total of the current month and the previous 11 months of data.

3. Emissions and operation of the coating and cleaning operations shall not exceed the following limits:

<u>Process</u>	<u>Material</u>	<u>Usage Rate</u>		<u>Maximum</u>	<u>VOM</u>	
		<u>(Gal/Mo)</u>	<u>(Gal/Yr)</u>	<u>VOM Content* (Lb/Gal)</u>	<u>Emissions (Lb/Mo) (T/Yr)</u>	
Surface Coating	Coating and Thinner	40	200	7.0	280	0.7
Cleanup	MEK & Methanol	80	800	7.00	560	2.8
Cold Cleaning**	Cleaning Solvent	5000	50000	6.67	3335	16.7

<u>Process</u>	<u>Material</u>	<u>Usage Rate</u>		<u>Maximum</u>	<u>VOM</u>	
		<u>(Gal/Mo)</u>	<u>(Gal/Yr)</u>	<u>VOM Content*</u>	<u>Emissions</u>	
				<u>(Lb/Gal)</u>	<u>(Lb/Mo)</u>	<u>(T/Yr)</u>
IPA Cold Cleaning						
Degreasing	Isopropanol	198	1980	6.60	1307	6.5
Vapor Degreasing/ Cold Cleaning	1-bromopropane	400	4800	11.25	4500	27.0
	Cyclohexane	120	1440	6.50	780	4.7

* Minus water and exempt compounds.

** Emissions assumed to be 10% of solvent used (based on in-house data)

4. 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.
5. This permit is issued based on negligible emissions of particulate matter from the coating operations. For this purpose emissions shall not exceed nominal emission rates of 0.1 lb/hour and 0.44 ton/year.
6. 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 odor nuisance.
7. At all times the Permittee shall to the extent practicable, maintain and operate the equipment, including associated air pollution control equipment, in a manner consistent with good pollution control practices for minimizing emissions.
8. The Permittee shall maintain monthly records of the following items:
 - a. Usage rates of natural gas for Plant 1 Combustion Units (mmscf/mo).
 - b. Fuel consumption of all engines combined (mmcf/month).
 - c. Operation of each 3-way catalytic converter.
 - d. Hours of operation for the emergency pump and generators (hours/mo).
 - e. Usage rates, VOM and HAP content of all paints, thinners, cleaning solvents and degreasing solvents (gal/mo and lb VOM/gal).

9. 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.
10. 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.
11. 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
5415 North University
Peoria, Illinois 61614

12. This permit is issued based on the cold cleaning and vapor degreasers meeting the specific operating requirements of 35 Ill. Adm. Code, Part E, Sections 215.181, 215.182 and 215.183.
13. The Permittee shall submit the following additional information with the Annual Emission Report, due May 1st of each year: type of fuel and fuel usage rates and paint/thinner/solvent usage for the prior calendar year. If there have been no exceedances during the prior calendar year, the Annual Emission Report shall include a statement to that effect.
14. This permit is being issued based on the Apatch test@ process meeting the exemption requirements specified in 35 Ill. Adm. Code 215.181(b). As a result, the emissions from the Apatch test@ process shall not exceed 800 pounds in any calendar month.

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It should be noted that one paint spray booth has been added to this permit.

It should also be noted that the usage limits for cyclohexane have been corrected from 1,200 gallon/month and 14,400 gallon/year to 120 gallon/month and 1,440 gallon/year, respectively.

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

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

DES:RBS:jar\8

cc: Region 2

Attachment A

This attachment provides a summary of the maximum emissions from this 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 is handling 56.7 mmscf/yr of natural gas and specified limits of operation of the emergency generators. The resulting maximum emissions are well below the levels, e.g., 100 tons/year of NO_x 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 and control measures are more effective than required in this permit.

1a. Emissions from the external combustion units:

i.	<u>Item of Equipment</u>	Natural Gas Usage		E M I S S I O N S			
		<u>mmscf/Mo</u>	<u>mmscf/Yr</u>	NO _x		CO	
				<u>lb/mo</u>	<u>tons/yr</u>	<u>lb/mo</u>	<u>tons/yr</u>
	Combustion Units	14.2	56.7	1420.0	2.8	284	0.6

The Emissions of NO_x and CO are based on Standard AP-42 emission factors for natural gas and fuel oil combustion.

ii.	<u>Item of Equipment</u>	Horsepower	Hours of	E M I S S I O N S			
		Rating	Operation	NO _x		CO	
		<u>(HP)</u>	<u>(Hr/Yr)</u>	<u>(Gr/HP-Hr)(T/Yr)</u>		<u>(Gr/HP-Hr)(T/Yr)</u>	
	Emergency Generator	355	100	14.0	0.4	3.03	0.1
	Emergency Fire Pump	185	100	14.0	0.2	3.03	0.1
	Emergency Generator	248	75	20.0	0.4	35.0	0.7

iii. Natural gas consumption and emissions of nitrogen oxides (NO_x), carbon monoxide (CO) and volatile organic materials (VOM) from the 14.9 mmBtu/hr engines shall not exceed the following limits:

Normal Operation:

Emission Unit	Natural Gas Consumption		E M I S S I O N S					
	<u>(mmscf/Mo)</u>	<u>(mmscf/Yr)</u>	NO _x	CO	VOM			
			<u>(Lb/Hr)(T/Yr)</u>	<u>(Lb/Hr)(T/Yr)</u>	<u>(Lb/Hr)(T/Yr)</u>			
Engine (Each)	----	-----	7.5	----	7.7	----	1.5	---
Engines (Total)	14.1	155.1	---	39.1	---	41.0	---	8.4

iv. Emissions of NO_x and CO from miscellaneous activities (test cells, etc.) shall not exceed: 1.0 tons/year of NO_x, 2.0 tons/year of CO.

b. Emissions from the coating and cleaning operations:

Content*	VOM Emissions		Usage Rate		Maximum		
	<u>Process</u> (Lb/Mo)(T/Yr)		<u>Material</u>	(Gal/Mo)(Gal/Yr)	VOM (Lb/Gal)		
	Surface Coating 280	0.7	Coating and Thinner	40 200	7.0		
560	Cleanup 2.8		MEK & Methanol	80 800	7.00		
	Cold Cleaning** IPA Cold Cleaning		Cleaning Solvent	5000 50000	6.67	3335	1
	Degreasing 1307	6.5	Isopropanol	198 1980	6.60		
	Vapor Degreasing/ Cold Cleaning		1-bromopropane	400 4800	11.25		
	4500	27.0	Cyclohexane	120 1440	6.50		
	780	4.7					

* Minus water and exempt compounds.

** Emissions assumed to be 10% of solvent used (based on in-house data)

c. Emissions of VOM from miscellaneous activities (i.e., the gasoline, waste oil, fuel oil and JP-4), storage tanks, welding and packaging foam shall not exceed: 2.0 tons/year.

d. 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.