

217/782-2113

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT - NSPS SOURCES
RENEWAL

PERMITTEE

P. T. Ferro Construction Company
Attn: Mr. Richard L. Rahn
P.O. Box 156
Joliet, Illinois 60434

Application No.: 78120037

I.D. No.: 197809ABU

Applicant's Designation:

Date Received: February 4, 2002

Subject: Asphalt Plant

Date Issued:

Expiration Date:

Location: 2111 Moen Avenue, Rockdale

This permit is hereby granted to the above-designated Permittee to OPERATE emission unit(s) and/or air pollution control equipment consisting of one natural gas-fired, batch-mix asphalt plant with cyclone and baghouse, two 35,000 gallon liquid asphalt storage tanks, one 25,000 gallon liquid asphalt storage tank, two 1.5 mmBtu/hr natural gas-fired asphalt tank heaters, and one crushing plant with water spray bars 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., carbon monoxide less than 100 tons per year). 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. This asphalt plant is subject to New Source Performance Standards (NSPS), 40 CFR 60, Subparts A and I. The Illinois EPA is administering these standards in Illinois on behalf of the United States EPA under a delegation agreement.
- b. The emissions from the asphalt plant shall not contain particulate matter in excess of 0.04 gr/dscf and shall not exhibit 20% opacity or greater, pursuant to the NSPS, 40 CFR 60.92.
- c. At all times the Permittee shall also maintain and operate the asphalt plant, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions, pursuant to the NSPS, 40 CFR 60.11(d).

3. 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 source except when the wind speed is in excess of 25 miles per hour, pursuant to 35 Ill. Adm. Code 212.301 and 212.314.

4a. Operation and emissions of the asphalt plant shall not exceed the following limits:

Asphalt Concrete Production				
	(Ton/Hr)	(Ton/Month)	(Ton/Year)	
	350	98,000	490,000	
<u>Pollutant</u>	<u>Emission Factor</u>		<u>Emissions</u>	
	(Lb/Ton)		(Ton/Mo)	(Ton/Yr)
Particulate Matter	0.042		2.1	10.3
Nitrogen Oxides	0.025		1.3	6.2
Carbon Monoxide	0.400		19.6	98.0
Volatile Organic Material	0.0082		0.4	2.0
Sulfur Dioxide	0.0046		0.3	1.2
	Totals:		23.7	117.7

These limits are based on the standard AP-42 emission factors, maximum asphalt production, and, where applicable, fuel type and consumption. Compliance with annual limits shall be determined from a running total of 12 months of data.

b. This permit is issued based on negligible emissions of volatile organic material from 3 liquid asphalt storage tanks. For this purpose emissions from each emission source shall not exceed nominal emission rates of 0.1 lb/hour and 0.44 ton/yr.

c. Emissions and operation of 2 tank heaters (combined) shall not exceed the following limits:

<u>Natural Gas Usage</u>		<u>Pollutant</u>	<u>Emission Factor</u>	<u>Emissions</u>	
(mmscf/Mo)	(mmscf/Yr)			(Lb/mmscf)	(Ton/Mo)
3	26	NO _x	100	0.2	1.3
		CO	84	0.2	1.1

These limits are based on maximum natural gas usage and standard AP-42 emission factors. Compliance with annual limits shall be determined from a running total of 12 months of data.

d. Emissions and operation of the crushing plant shall not exceed the following limits:

<u>Aggregate Throughput</u>	
(Ton/Mo)	(Ton/Yr)
170,000	850,000

<u>Equipment</u>	<u>Emission Factor</u> (Lb/Ton)	<u>PM Emissions</u>	
		(Ton/Mo)	(Ton/Yr)
2 Crushers	0.0007	0.2	0.6
1 Screen	0.0018	0.2	0.8
10 Conveyors	0.0001	<u>0.1</u>	<u>0.5</u>
	Totals:	0.5	1.9

These limits are based on maximum aggregate throughput and standard, controlled AP-42 emission factors. Compliance with annual limits shall be determined from a running total of 12 months of data.

5. The Permittee shall maintain an operating and maintenance log for the dryer control system, including:
 - a. Incidents of malfunction, with date, duration, description, probable cause, and corrective actions, pursuant to 40 CFR 60.7(b), and
 - b. Maintenance activities, with date and description of inspections, repair actions, and equipment replacements, etc.

This log shall be available for inspection and copying by the Illinois EPA.

- 6a. This crushing plant is subject to New Source Performance Standards (NSPS), 40 CFR 60, Subparts A and 000. The Illinois EPA is administering these standards in Illinois on behalf of the United States EPA under a delegation agreement.
- b. Fugitive emissions of particulate matter from grinding mills, screens (except from truck dumping), bucket elevators, belt conveyors, bagging operations, storage bins, and enclosed truck or railcar loading operations shall not exceed 10 percent opacity, (40 CFR 60.672(b) and (d)).
- c. Fugitive emissions of particulate matter from the crushers (except from truck dumping), shall not exceed 15 percent opacity, (40 CFR 60.672(c) and (d)).
- 7a. Within 90 days after the issue date of this permit, the opacity of the PM emissions from the crushers, screens, and conveyors shall be measured during conditions which are representative of the maximum performance. The Illinois EPA may provide additional time or the performance of this testing upon request from the Permittee which shows that it is not feasible to perform representative testing within 90 days.
 - b. i. The following methods and procedures shall be used for opacity measurements.

USEPA Method 9, 40 CFR 60 Appendix A

- ii. A test shall consist of 30 sets of 24 consecutive observations.
 - c. Opacity measurements shall be performed by a certified observer.
 - d. The Illinois EPA shall be notified prior to these measurements to enable the Illinois EPA to observe these measurements. Notification of the expected date of the measurements shall be submitted to a minimum of thirty (30) days prior to the expected date. Notification of the actual date and expected time of measurement shall be submitted a minimum of five (5) working days prior to the actual date of the measurement. The Illinois EPA may, at its discretion, accept notification with shorter advance notice provided that the Illinois EPA will not accept such notifications if it interferes with the Illinois EPA's ability to observe the measurements.
8. Within 90 days of a written request from the Illinois EPA, pursuant to 35 Ill. Adm. Code Section 201.282, the emissions and opacity from the asphalt plant shall be measured during conditions which are representative of the maximum performance. The Illinois EPA may provide additional time for the performance of this testing upon request from the Permittee which shows that it is not feasible to perform representative testing within 90 days.
9. The Permittee shall maintain monthly records of the following items:
- a. Asphalt concrete production (ton/mo, ton/yr);
 - b. Aggregate throughout (ton/mo, ton/yr); and
 - c. Natural gas usage (mmscf/mo, mmscf/yr).
10. In the event that the operation of this emission unit 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.
11. 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.
12. 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.

13. 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.
14. 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
9511 West Harrison
Des Plaines, Illinois 60016

15. The Permittee shall submit the following additional information with the Annual Emissions Report, due May 1st of each year:
 - a. Asphalt concrete production (ton/yr);
 - b. Aggregate throughout (ton/yr); and
 - c. Natural gas usage (mmscf/yr).

It should be noted that the fuel storage tanks are exempt from state permit requirements, pursuant to 35 Ill. Adm. Code 201.146(d).

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

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

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cc: Illinois EPA, FOS Region 1
Illinois EPA, Compliance Section
Lotus Notes

Attachment A - Emission Summary

This attachment provides a summary of the maximum emissions from the asphalt and crushing plants 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 per year of carbon monoxide 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 and control measures are more effective than required in this permit.

- 1a. Operation and emissions of the asphalt plant shall not exceed the following limits:

Asphalt Concrete Production				
	<u>(Ton/Hr)</u>	<u>(Ton/Month)</u>	<u>(Ton/Year)</u>	
	350	98,000	490,000	
<u>Pollutant</u>	<u>Emission Factor</u>		<u>Emissions</u>	
	<u>(Lb/Ton)</u>		<u>(Ton/Mo)</u>	<u>(Ton/Yr)</u>
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- c. Emissions and operation of 2 tank heaters (combined) shall not exceed the following limits:

Natural Gas Usage		<u>Pollutant</u>	<u>Emission</u>	<u>Emissions</u>	
<u>(mmscf/Mo)</u>	<u>(mmscf/Yr)</u>		<u>Factor</u>	<u>(Ton/Mo)</u>	<u>(Ton/Yr)</u>
3	26	NO _x	100	0.2	1.3
		CO	84	0.2	1.1

These limits are based on maximum natural gas usage and standard AP-42 emission factors. Compliance with annual limits shall be determined from a running total of 12 months of data.

- d. Emissions and operation of the crushing plant shall not exceed the following limits:

	<u>Aggregate Throughout</u>			
	<u>(Ton/Mo)</u>	<u>(Ton/Yr)</u>		
	170,000	850,000		
<u>Equipment</u>	<u>Emission Factor</u>		<u>PM Emissions</u>	
	<u>(Lb/Ton)</u>		<u>(Ton/Mo)</u>	<u>(Ton/Yr)</u>
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10 Conveyors	0.0001		<u>0.1</u>	<u>0.5</u>
		Totals:	0.5	1.9

These limits are based on maximum aggregate throughput and standard, controlled AP-42 emission factors. Compliance with annual limits shall be determined from a running total of 12 months of data.

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PROJECT SUMMARY

I. INTRODUCTION

An application has been submitted by P. T. Ferro Construction Company for renewal of the Federally Enforceable State Operating Permit (FESOP) for its batch-mix asphalt plant and crushing plant located at 2111 Moen Avenue in Rockdale. The limits of this FESOP prevent the asphalt plant from being a major source of emissions so that an operating permit does not have to be obtained under the Clean Air Act Permit Program. These limits are accompanied by recordkeeping and reporting requirements to ensure the plant is operated as non-major source. These conditions are enforceable by both the State of Illinois and USEPA.

II. SOURCE DESCRIPTION

An asphalt plant produces asphalt paving for use on roads, parking lots, and driveways. Asphalt paving is composed of aggregate (crushed rock) which is held together by asphalt.

This plant consists of a rotary asphalt drum, asphalt tanks with heaters, and a crushing operating. Aggregate materials are loaded into the drum along with heated asphalt oil. A large burner inside the drum keeps the material hot while the drum is rotated to mix the materials. Other equipment is sometimes used to crush pieces of asphalt or concrete recovered from roadways being repaired. This recycled material is blended in the dryer with fresh aggregate to make new asphalt.

III. EMISSIONS

The air contaminants of concern for an asphalt plant depend upon the type of plant (batch or drum), the type of fuel used to fire the dryer (natural gas or oil), the type of control used on the mixer exhaust, and whether the plant is located in an attainment area. Emissions generated from the combustion of fuel in the dryer and the asphalt storage tank heaters are nitrogen oxides (NO_x), carbon monoxide (CO), sulfur dioxide (SO₂), and volatile organic material (VOM).

NO_x is formed thermally by the combination of oxygen and nitrogen in the air at the temperature at which fuel is burned. CO and VOM are formed from the incomplete combustion of fuel.

Particulate matter (PM) emissions are generated by the mixer drum and from crushing operations, storage piles, and plant roads. The mixer exhaust is vented to the control, where the majority of the PM is removed before being exhausted into the atmosphere. The crushing equipment has a water spray system, which minimizes fugitive dust emissions. VOM is released during heating and mixing of the liquid asphalt and aggregate.

The batch-mix asphalt plant at this site uses natural gas to fire the dryer, making CO the primary contaminant. The proposed permit limits the potential annual emissions of this contaminant to less than 100 tons per year. This would exempt this plant from the requirements of the Clean Air Act Permit Program.

IV. APPLICABLE EMISSION STANDARDS

All emission sources in Illinois must comply with the Illinois Pollution Control Board emission standards. The Board's emission standards represent the basic requirements of sources in Illinois. The Board has standards for pollutant emissions from asphalt plants. This site readily complies with all applicable Board standards.

V. PROPOSED PERMIT

The conditions of the existing permit contain limitations and requirements to ensure this plant will be operated as a non-major source. The permit sets limitations on the amount of annual asphalt concrete production. These limits are consistent with the historical operation and capacity of the plant.

The permit conditions also establish appropriate compliance procedures, including inspection practices, recordkeeping requirements, and reporting requirements. The Permittee must carry out these procedures on an on-going basis to demonstrate that the asphalt plant is operating within the limitations set by the permit and is properly controlling emissions.

VI. REQUEST FOR COMMENTS

It is the Illinois EPA's preliminary determination that the asphalt plant meets all applicable state and federal air pollution control requirements, subject to the conditions in the existing permit. The Illinois EPA is therefore proposing to renew the FESOP permit for this operation.

Comments are requested on this proposed action by the Illinois EPA and the proposed conditions of the draft permit. If substantial public concern is shown in this matter, the Illinois EPA will consider holding a public hearing in accordance with 35 Ill. Adm. Code Part 166.