

217/782-2113

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT - NSPS SOURCES

PERMITTEE

Orange Crush, L.L.C.
Attn: Mark J. Tubay
231 South Wheeling Road
Wheeling, Illinois 60090

Application No.: 72110742

I.D. No.: 031823AAA

Applicant's Designation:

Date Received: March 11, 2004

Subject: Asphalt Plant

Date Issued:

Expiration Date:

Location: 231 South Wheeling Road, Wheeling

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/baghouse, four liquid asphalt storage tanks, and one 2.256 mmBtu/hr natural gas-fired asphalt tank heater 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. 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, and Section 112(g) of the Clean Air Act.
4. 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.
5. 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.
- 6a. Operation and emissions of the gas fired batch mix asphalt plant shall not exceed the following limits:

<u>Equipment</u>	<u>Asphalt Production</u>		<u>Pollutant</u>	<u>Emission Factor</u>	<u>Emissions</u>	
	<u>(Ton/Mo)</u>	<u>(Ton/Yr)</u>		<u>(Lb/Ton)</u>	<u>(Ton/Mo)</u>	<u>(Ton/Yr)</u>
Gas Fired Drum-Mix Asphalt Plant	60,000	350,000	PM	0.042	1.66	7.35
			CO	0.40	6.55	70.00
			NO _x	0.025	1.31	4.38
			SO ₂	0.0046	0.17	0.81
			VOM	0.0082	1.61	1.44

These limits are based on standard AP-42 emission factors, natural gas as the only fuel fired, and a maximum hourly capacity of 325 tons/hour. 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 4 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 tons/year.
- c. Emissions and operation of 1 tank heater shall not exceed the following limits:

<u>Natural Gas Usage</u>		<u>Pollutant</u>	<u>Emission Factor</u>	<u>Emissions</u>	
<u>(mmscf/Mo)</u>	<u>(mmscf/Yr)</u>		<u>(Lb/mmscf)</u>	<u>(Tons/Mo)</u>	<u>(Tons/Yr)</u>
1.93	19.38	NO _x	100	0.38	3.86
		CO	84	0.32	3.25

These limits are based on maximum natural gas usage, maximum hours of operation 8760 hours per year, and standard AP-42 emission factors. Compliance with annual limits shall be determined from a running total of 12 months of data.

- 7a. Within 90 days of a written request by the Illinois EPA, the particulate matter concentration(s) in its effluent stream shall be measured by an approved independent testing service. During these tests, observations to determine opacity of the effluent stream shall also be conducted.
- b. This testing shall be conducted and data collected in accordance with the test methods and procedures specified in 40 CFR 60.8, 60.11 and 60.93.
- c. At least 60 days prior to the actual date of testing, the Permittee shall submit a written test plan to the Illinois EPA for review and approval. This plan shall include as a minimum:
 - i. The name (or other identification) of the emission unit(s) to be tested and the name and address of the facility at which they are located;
 - ii. The name and address of the independent testing service(s) performing the tests, with the names of the individuals who may be performing sampling and analysis and their experience with similar tests;
 - iii. The specific determinations of emissions and/or performance which are intended to be made, including the site(s) in the ductwork or stack at which sampling will occur;
 - iv. The specific conditions under which testing will be performed, including a discussion of why these conditions will be representative of maximum emissions and minimum control performance, the values of operating parameters for the emission unit, including associated control equipment, at or within which compliance is intended to be shown, and the means by which compliance is intended to be shown, and the means by which the operating parameters will be determined;
 - v. The procedures which will be used for testing, including the test method(s), with the specific analysis method, if the method can be used with different analysis methods, the specific sampling and analytical procedures, and the calibration and other quality control procedures; and
 - vii. A description and justification for any minor changes in standard testing methods and procedures proposed to accommodate the specific circumstances of test and for any proposed use of an alternative test method.
- d.
 - i. The Permittee shall provide the Illinois EPA with written notification of testing at least thirty (30) days prior to testing to enable the Illinois EPA to have an observer present. This notification shall include the name of emission unit(s) to

be tested, scheduled date and time, and contact person with telephone number.

- ii. If testing is delayed, the Permittee shall promptly notify the Illinois EPA by facsimile, at least 5 days prior to the scheduled date of testing or immediately, if the delay occurs in the 5 days prior to the scheduled date. This notification shall also include the new date and time for testing, if set, or a separate notification shall be sent with this information when it is set.
- e. The Permittee shall submit the Test Report for this testing, accompanied by a cover letter stating whether or not compliance was shown, to the Illinois EPA without delay, within 30 days after the results are compiled, but no later than sixty (60) days after the date of testing or sampling. The Test Report shall include as a minimum:
- i. General information describing the test, including the name and identification of the emission source which was tested, date of test, names of personnel performing the tests, and Illinois EPA observers, if any;
 - ii. A summary of results;
 - iii. Description of test procedures, including description of sampling points, test equipment, and test schedule;
 - iv. Detailed description of test conditions, including:
 - A. Process information, i.e., process rate, aggregate type, fuel type, and firing rate.
 - B. Control equipment information, i.e., equipment condition and operating parameters during testing.
 - v. Data and calculations, including copies of all raw data sheets and records of laboratory analyses, sample calculations, and data on equipment calibration.
8. The Permittee shall maintain monthly records of the following items:
- a. Asphalt concrete production (tons/month and tons/year);
 - b. Natural gas usage for the dryer and tank heater (mmscf/month and mmscf/year); and
 - c. Operating and maintenance logs for the dryer control system, including: incidents of malfunction, with date, duration, description, probable cause, and corrective actions, pursuant to 40 CFR 60.7(b), maintenance activities, with date and description of inspections, repair actions, and equipment or filter bag replacements, etc.
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
9511 West Harrison
Des Plaines, Illinois 60016

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

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

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

DES:MJD:psj

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 these plants. 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.

<u>Emission Units</u>	<u>Emissions (Tons/Year)</u>				
	<u>PM</u>	<u>NO_x</u>	<u>CO</u>	<u>VOM</u>	<u>SO₂</u>
Asphalt Plant	7.35	4.38	70.0	1.44	0.81
Asphalt Storage Tanks				1.76	
Tank Heater		3.86		3.25	
Totals	7.35	8.24	73.25	3.22	0.81

MJD:psj

PROJECT SUMMARY

I. INTRODUCTION

An application has been submitted by Orange Crush L.L.C. for renewal of the Federally Enforceable State Operating Permit (FESOP) for its batch-mix asphalt plant and crushing plant located at 231 South Wheeling Road in Wheeling. 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 dryer and asphalt tanks with a tank heater. 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.

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.