

217/782-2113

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT - RENEWAL

PERMITTEE

Midstate Core Company  
Attn: John Phillips  
P.O. Box 25318  
Decatur, Illinois 62525

Application No.: 90050058 I.D. No.: 115015AKA  
Applicant's Designation: Date Received: January 31, 2005  
Subject: Sand Core Manufacturing Equipment  
Date Issued: Expiration Date:  
Location: 225 North Hilton, Decatur

This permit is hereby granted to the above-designated Permittee to OPERATE emission unit(s) and/or air pollution control equipment consisting of three sand storage silos and sand handling system controlled by three baghouses and fourteen core making machines and catalyst repackaging station controlled by the scrubber 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., 10 tons/year for a single hazardous air pollutant (HAP) and 25 tons/year for totaled HAP). 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.
2. Operations and emissions of core making machines (combined) shall not exceed the following limits:

<u>Material</u>	<u>Material Usage</u>		<u>Emission Control</u>		<u>VOM Emissions</u>	
	<u>(Ton/Mo)</u>	<u>(Ton/Yr)</u>	<u>Factor</u> <u>(Wt. %)</u>	<u>Efficiency</u> <u>(%)</u>	<u>(T/Mo)</u>	<u>(T/Yr)</u>
Resins	35	350	1.5	--	0.5	5.3
Catalyst	5	47	100	95	0.3	2.4

These limits define the potential VOM and HAP emissions and are based on the maximum production rate and standard emission factor for resins mixing operations given by AP-42 and assumption of 100% evaporation rate for catalyst. Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months.

3. Operations and emissions of sand receiving and handling operations shall not exceed the following limits:

Sand Usage		Emission	Control	PM Emissions	
(Ton/Mo)	(Ton/Yr)	Factor (Lb/Ton)	Efficiency (%)	(T/Mo)	(T/Yr)
2,000	19,500	3.6	99	0.04	0.4

These limits define the potential particulate matter emission and are based on the maximum production rate and standard emission factor given by FIRE 6.2. Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months.

4. This permit is issued based on negligible emission of particulate matter from core making machines. For this purpose emission shall not exceed nominal emission rates of 0.1 lb/hour and 0.44 ton/yr.
5. The volatile organic materials (VOM) emissions from catalyst repackaging operations shall not exceed 25 lbs/mo and 305 lbs/yr. These limits are based on the catalyst throughput of 43 ton/mo and 515 ton/yr, scrubber overall control efficiency of 90%, and Dimethylethylamine and Triethylamine being catalyst repackaged. VOM emissions from the tank truck loading operation shall be calculated using equation (1) given by AP-42, Section 5.2 (5th edition).
6. The emissions of Hazardous Air Pollutants (HAP) 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 by rule which would require the Permittee to obtain a Clean Air Act Permit Program 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 Clean Air Act Permit Program permit from the Illinois EPA.
7. The Permittee shall maintain monthly records of the following items:
  - a. Names and amount of VOM and HAP-containing raw materials used (ton/mo; ton/yr);
  - b. VOM and HAP content in the raw materials (wt. %);

- c. Type of catalyst being repackaged and its throughput (lbs/month, ton/yr);
  - d. VOM and HAP emission calculations (ton/mo; ton/yr);
  - e. Sulfuric acid usage in the scrubbers (ton/mo, ton/yr) and its concentration (wt. %); and
  - f. Sand usage (ton/mo, ton/yr).
8. 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 the Illinois EPA or USEPA request for records during the course of a source inspection.
9. If there is an exceedance of the requirements of this permit, as determined by the record 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, a copy of the relevant records, and a description of the exceedance or violation, and efforts to reduce emissions and future occurrences.
10. 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 Agency'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

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If you have any questions on this permit, please call Valeriy Brodsky at 217/782-2113.

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

DES:VJB:

cc: Illinois EPA, FOS Region 3  
Lotus Notes

Attachment A - Emissions Summary

This attachment provides a summary of the maximum emission from the sand core manufacturing 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. This is use of 19,500 tons of sand, 350 tons of liquid resins, 47 tons of catalyst being used and 515 tons of catalyst being repackaged per year. The resulting maximum emissions are below the levels, e.g., 10 tons per year for a single HAP, and 25 tons per year for totaled HAP 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 material is handled, and control measures are more effective than required in this permit.

Emission Units	Emissions (tons/yr)			
	VOM	PM	Single HAP	Total HAP
Core Making Machines	7.7	0.44		
Catalyst Repackaging	0.2			
Sand Handling		0.4		
Plant-wide total	7.9	0.8	<10	<25

VJB: