

217/782-2113

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT - NESHA SOURCE

PERMITTEE

John Deere Seeding Group, Cylinder Division
Attn: LeRoy Hill
501 River Drive
Moline, Illinois 61265

<u>Application No.:</u> 02120043	<u>I.D. No.:</u> 161045AAE
<u>Applicant's Designation:</u>	<u>Date Received:</u> December 18, 2002
<u>Subject:</u> Agricultural Equipment Manufacturing	
<u>Date Issued:</u> November 26, 2003	<u>Expiration Date:</u> November 26, 2008
<u>Location:</u> 501 River Drive, Moline	

This permit is hereby granted to the above-designated Permittee to OPERATE emission source(s) and/or air pollution control equipment consisting of:

- 3 Flowcoaters (P24, P25, P26) with Curing Oven (P28) Controlled by Permanent Total Enclosure (PTE), Filters, and Regenerative Thermal Oxidizer (RTO)
- 1 Touchup Coating Booth (P13) with Filters
- 3 Barrel Washers (C12.1, C12.2, C12.3) and Parts Washers
- 2 Nickel Chrome Plating Lines (C2, C49) with Separate Scrubbing Systems for the Chrome and Nickel Plating Tanks
- 1 Chrome Reduction System (C43)
- 4 Boilers (C20, C21, P5, P6) and Process Ovens/Dryers
- 1 10,000-Gallon Solvent Storage Tank (P29)
- 1 Lime Mixing Area

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 VOM, 10 ton/year individual HAP, 25 ton/year combined HAP). 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 Permittee shall operate and maintain the afterburner (RTO) and capture system such that the overall reduction of VOM emissions are at least 96.5% from the flow coating and curing operations. Except as allowed by Condition b below, the parts at the end of the shift will be cured to the touch within the permanent total enclosure and VOM/HAP emissions generated during drying/curing controlled by the RTO.

- b. Pursuant to 35 Ill. Adm. Code 215.106, the afterburner (RTO) is allowed to be shutdown during the period of November 1 of any year to April 1 of the following year. The monthly and annual emissions limitations specified in Condition 4 of this permit shall apply during any shutdown. Separate records documenting flow coating during this period without the afterburner shall be maintained and included within recordkeeping and reporting, documenting material usage and emissions as required by this permit.
- c. This permit is issued based on the flow coating operations complying with the control requirements of 35 Ill. Adm. Code 215.205(b) requiring 81% reduction of overall emissions of volatile organic material from the coating line, and oxidation to carbon dioxide and water of 90% of the non-methane volatile organic material which enters the afterburner. This is an alternative emission limitation for the coatings emission limits established in 35 Ill. Adm. Code 215.204(k) (2) that states heavy off-highway vehicle products not in Macoupin County use coatings not to exceed 4.3 lb VOM/gallon of coating as applied.
- 3a. The Permanent Total Enclosure for the flow coating lines and curing oven shall be constructed to comply with requirements of the Procedure T and meet the criteria of a Permanent Total Enclosure (as defined in 35 Ill. Adm. Code 218, Appendix B, Procedure T).
- b. The afterburner (RTO) shall be equipped with a continuous temperature indicator and temperature recorder.
- c. The afterburner combustion chamber shall be preheated to at least 1511°F at which compliance was demonstrated in the most recent compliance test. This temperature shall be maintained during operation.
- d. The Permittee shall perform maintenance on the capture system and afterburner (RTO) as specified by the manufacturer.
- e. The Permittee shall maintain records of control device monitoring data, equipment operation, and maintenance activities.
- f. The Permanent Total Enclosures and afterburner control system shall be operated in a manner consistent to good air pollution control practices.
- 4a. Emissions and operation of all flow coating operations controlled by RTO (including cleanup solvents) shall not exceed the following limits:

Volatile Organic Material Usage		Volatile Organic Material Emissions	
<u>(Ton/Month)</u>	<u>(Ton/Year)</u>	<u>(Ton/Month)</u>	<u>(Ton/Year)</u>
229	2,277	8.0	79.7

<u>Individual Hazardous Air Pollutant Usage</u>		<u>Individual Hazardous Air Pollutant Emissions</u>	
<u>(Ton/Month)</u>	<u>(Ton/Year)</u>	<u>(Ton/Month)</u>	<u>(Ton/Year)</u>
22.6	226	0.791	7.91
<u>Combined Hazardous Air Pollutant Usage</u>		<u>Combined Hazardous Air Pollutant Emissions</u>	
<u>(Ton/Month)</u>	<u>(Ton/Year)</u>	<u>(Ton/Month)</u>	<u>(Ton/Year)</u>
56.86	568.6	1.99	19.9

These limits are based on the maximum operating rates and an overall reduction of VOM emissions by at least 96.5% (100% capture of the permanent total enclosure and 96.5% destruction of VOM which enters the RTO). Compliance with annual limits shall be determined from a running total of 12 months of data.

- b. This permit is issued based on the flow coater's clean-up solvents being applied within the permanent total enclosure, controlled by the RTO, and are included in the limit above.
- 5a. Emissions and operation of Touch-up Booth (P13) including cleanup shall not exceed the following limits:

<u>VOM/HAP Usage</u>		<u>VOM/HAP Emissions</u>	
<u>(Ton/Month)</u>	<u>(Ton/Year)</u>	<u>(Ton/Month)</u>	<u>(Ton/Year)</u>
0.38	3.81	0.38	3.81

These limits are based on material balance at the maximum material usage indicated in the application. Compliance with annual limits shall be determined from a running total of 12 months of data.

- b. This permit is issued based on the touch-up coating operations complying with the requirements of the coatings emission limits established in 35 Ill. Adm. Code 215.204(k)(2) that states heavy off-highway vehicle products, not in Macoupin County, final repair coat - air dried, use coatings not to exceed 4.8 lb VOM/gallon of coating as applied.
- 6. Emissions and operation of the Barrel Washers and Parts Washers shall not exceed the following limits:

<u>VOM Usage</u>		<u>VOM Emissions</u>	
<u>(Ton/Month)</u>	<u>(Ton/Year)</u>	<u>(Ton/Month)</u>	<u>(Ton/Year)</u>
0.77	7.67	0.77	7.67

These limits are based on material balance at the maximum material usage indicated in the application. Compliance with annual limits shall be determined from a running total of 12 months of data.

7. Emissions and operation from the following fuel combustion units shall not exceed the following limits:

<u>Emission Units</u>	<u>Natural Gas Usage</u>				
	<u>(mmSCF/mo)</u>	<u>(mmSCF/Year)</u>			
Regenerative Thermal Oxidizer, 4 Boilers and Process Ovens/Dryers	56	670			
	E M I S S I O N S				
	NO _x	CO	PM-10	SO ₂	VOM
	<u>(T/Mo) (T/Yr)</u>	<u>(T/Mo) (T/Yr)</u>	<u>(T/Mo) (T/Yr)</u>	<u>(T/Mo) (T/Yr)</u>	<u>(T/Mo) (T/Yr)</u>
	2.79 33.4	2.35 28.1	0.21 2.54	0.017 0.20	0.15 1.84

These limits are based on maximum firing rate at continuous operation and AP-42 emission factors. Compliance with annual limits shall be determined from a running total of 12 months of data.

8. This permit is issued based on negligible emissions of volatile organic material from storage tanks. For this purpose, emissions shall not exceed nominal emission rates of 0.1 lb/hour and 0.44 ton/year.
- 9a. The chromium electroplating tanks in the plating lines are subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for chromium emissions, 40 CFR 63, Subparts A and N. The Illinois EPA is administering this regulation in Illinois on behalf of the United States EPA under a delegation agreement.
- b. The concentration of total chromium from the chromium electroplating operations in the exhaust gas stream discharged to the atmosphere shall not exceed 0.015 milligrams per dry standard cubic meter (mg/dscm) pursuant to the standard in 40 CFR 63.342(c) (1) (i).
- c. The Permittee shall develop and implement work and operational practice to minimize chromium emissions which includes applicable work practice standards described in 40 CFR 63.342(f).
- d. The Permittee shall complete an initial performance test for the chromium plating tanks and associated scrubber system to demonstrate compliance pursuant to 40 CFR 63.343(b) using procedures and tests methods listed in 40 CFR 63.7 and 40 CFR 63.344 and record the information required by 40 CFR 63.344(a) (1) through (9).
10. This permit is issued based on negligible emissions of particulate matter (PM) from the nickel/chrome plating lines. For this purpose, emissions of PM shall not exceed nominal emission rates of 0.1 lb/hour and 0.44 tons/year.
11. At all times, the Permittee shall maintain and operate the coating line and nickel chrome plating line, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions.

- 12a. The Permittee shall maintain records of the following items:
- i. The name and identification of each coating, thinner and cleanup solvent used on each coaters;
 - ii. Usage of each coating (gal/month and gal/year);
 - iii. The VOM and HAP content of each coating as applied (lb/gal);
 - iv. Density of each applied coating (lb/gal);
 - v. Afterburner temperature data; and
 - vi. VOM and HAP emissions (ton/month and ton/year). Separate records of coating usage with VOM and HAP emissions shall be maintained for any period that the afterburner is shutdown and added to the total emissions. Separate records shall be maintained for the touch-up booth.
- b. The Permittee shall maintain records of the following items for barrel and parts washing:
- i. The name and identification of each VOM/HAP containing material used;
 - ii. Usage of each VOM/HAP containing material (gal/month and gal/year);
 - iii. The VOM and HAP content of each material as used for washing (lb/gal);
 - vi. VOM and HAP emissions (ton/month and ton/year).
- c. The Permittee shall maintain the following records for the chromium plating tanks:
- i. Inspection records for the add-on air pollution control device and monitoring equipment, to document that the inspection and maintenance required by the work practice standards of 40 CFR 63.342(f) have taken place.
 - ii. Records of all maintenance performed on the chromium plating tank, the add-on air pollution control device, and monitoring equipment.
 - iii. Records of the occurrence, duration, and cause (if known) of each malfunction of process, add-on air pollution control, and monitoring equipment.
 - iv. Records of actions taken during periods of malfunction when such actions are inconsistent with the operation and maintenance plan.

- v. Test reports documenting results of all performance tests.
 - vi. All measurements as may be necessary to determine the conditions of performance tests.
 - vii. Records of monitoring data required by 40 CFR 63.343(c) that are used to demonstrate compliance with the standard including the date and time the data are collected.
 - viii. The specific identification (i.e., the date and time of commencement and completion) of each period of excess emissions, as indicated by monitoring data.
 - ix. The total process operating time of the chromium plating tank during the reporting period.
- d. The Permittee shall maintain the following records for the nickel plating tanks:
- i. Inspection records for the add-on air pollution control device, to document that the inspection and maintenance required by the work practice standards of 40 CFR 63.342(f) have taken place.
 - ii. Records of all maintenance performed on the nickel plating tank, the add-on air pollution control device.
 - iii. Records of the occurrence, duration, and cause (if known) of each malfunction of process and add-on air pollution controls.
13. The emissions of Hazardous Air Pollutants (HAPs) as listed in Section 112(b) of the Clean Air Act shall not exceed 10 tons per year of any single HAP and 25 tons per year of any combination of such HAPs, or such lesser quantities USEPA may establish in rule that would require the Permittee to obtain a CAAPP permit from 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 requirements to obtain a Clean Air Act Permit Program (CAAPP) permit from the Illinois EPA.
14. All records and logs required by this permit shall be retained at a readily accessible location at the source for a period of 5 years 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 request for records during the course of a source inspection.
15. 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.

16. 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

Please note that the polisher (C1), and small fuel combustion units (less than 10 mmBtu/hour) are exempt by 35 Ill. Adm. Code 201.146(aa) and (d), respectively.

If you have any questions on this permit, please call John Blazis 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 2
Lotus Notes

Attachment A - Emission Summary

This attachment provides a summary of the maximum emissions from operation of this agricultural equipment 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 that results in maximum emissions from such a plant. The resulting maximum emissions are well below the levels (i.e., 100 tons/year for VOM, 10 ton/year individual HAP, 25 ton/year combined 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 less material is handled and control measures are more effective than required in this permit.

<u>Emission Unit</u>	E M I S S I O N S (Tons/Year)					<u>HAPs</u>
	<u>CO</u>	<u>NO_x</u>	<u>PM₁₀</u>	<u>SO₂</u>	<u>VOM</u>	
Coating Operations					79.7	19.9
Barrel Waster and Parts Washer					7.67	
Fuel Combustion	28.1	33.4	2.54	0.19	1.84	
Nickel/Chrome Plating			0.44			0.00251

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