

217/782-2113

CONSTRUCTION PERMIT

PERMITTEE

John Deere Harvester Works-East Moline  
Attn: Charles Busch  
110 - 13th Avenue  
East Moline, Illinois 61244

Application No.: 05020044

I.D. No.: 161025AAH

Applicant's Designation:

Date Received: February 15, 2005

Subject: Header Coating Booth

Date Issued:

Location: 1100 - 13th Avenue, East Moline

Permit is hereby granted to the above-designated Permittee to CONSTRUCT emission source(s) and/or air pollution control equipment consisting of a new spray booth with a drying oven, as described in the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

**1.0 UNIT SPECIFIC CONDITIONS FOR SPECIFIC EMISSION UNITS**

1.1 Coating Booths

1.1.1 Description

As part of the reorganization of the manufacturing and coating operations, a coating booth (HdrSP) will be installed to paint metal headers for combines. The painted metal parts will be baked in low temperature drying ovens.

The booths are sources of volatile organic material (VOM) emissions, due to the solvents contained in the coatings. The booths are also sources of particulate matter (PM) emissions, due to overspray of coatings, and are controlled by filters.

This project relies upon a decrease in emissions of VOM from the existing header spray booths (D400Pr and D561Sp) for the purpose of showing that there will not be a significant increase in VOM emissions. The reduction will result from the removal of existing coating booths that the new booths will replace. This involves an extended transition period over several years, as the new booth is phased in the existing booths will be phased out of operation.

1.1.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
HdrSP	Header Coating Booth and Drying Oven	Filter

1.1.3 Applicable Provisions and Regulations

- a. An "affected coating booth" for the purpose of these unit-specific conditions, is each coating line described in Conditions 1.1.1 and 1.1.2.
- b. Each affected coating booth is subject to 35 IAC 215.204(k) (2) when applying coating to the headers, which provides that no person shall not apply at any time any coating, which contain a volatile organic material (VOM) content that exceeds the following emission limitations as applied (minus water and other exempted compounds):

	<u>kg/l</u>	<u>lb/gal</u>
Extreme Performance Prime Coat	0.42	3.5
Extreme Performance Top Coat (Air Dried)	0.52	4.3
Final Repair Coat (Air Dried)	0.58	4.8

- c. The affected coating booths are subject to 35 IAC 212.321(b) (1), which provides that no person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 IAC 212.321 [35 IAC 212.321(a)].
- d. Emissions of hazardous air pollutants from the source, including the affected coating booths, will make the source subject to National Emission Standards for Hazardous Air Pollutants (NESHAP) for Surface Coating of Miscellaneous Metal Parts and Products, 40 CFR 63 Subpart M. The compliance date for this NESHAP is January 2, 2007.

1.1.4 Non-Applicability of Regulations of Concern

- a. Pursuant to 35 IAC 215.209, the coating booths are not subject to the limitations of 35 IAC 215.301 or 215.302 while coatings are subject to the limitations of IAC 215.204.

- b. i. A. This permit is issued based upon this project not being a major modification for emissions of any criteria pollutants under the Prevention of Significant Deterioration (PSD). The source has addressed the applicability of PSD by establishing 79.9 Ton contemporaneous emissions decrease based on the removal of existing coating booths (D400Pr and D561Sp), which will accompany the reorganization of the coating and manufacturing operations.
- B. For this purpose the Permittee has also addressed projected emission increases on existing coal-fired boilers (7, 8, and 9) that would accompany the new coating operations, which is steam heated (See Attachment 1). The limitations established by this permit are intended to ensure that the construction addressed in this construction permit does not constitute a major modification pursuant to this rule and as further described in Attachment 2.
- ii. A. Beginning 180 days after the start-up of the affected coating booths the emissions of VOM from new and existing booths addressed by this permit shall not exceed the emission limits defined in Condition 1.1.6 (b).
- B. The Permittee shall carryout an orderly program of construction that leads to the permanent shutdown of the existing booths (D400Pr and D561Sp).
- C. If the Permittee elects to retain the operation of an existing booth, e.g. D400Pr, then the Permittee shall apply for a revision to this Construction Permit.

1.1.5 Control Requirements and Work Practices

None

1.1.6 Production and Emission Limitations

- a. The VOM usage of the affected coating booths shall not exceed 30.00 tons/mo and 119.00 tons/yr.
- b. The VOM emissions from the affected coating booths shall not exceed 30.00 tons/mo and 119.00 tons/yr.

- c. This permit is issued based on minimal emissions of PM from each affected coating booth. For this purpose emissions from each affected coating booth shall not exceed 0.55 lb/hr and 2.41 tons/yr.

1.1.7 Testing Requirements

- a. Upon reasonable request by the Illinois EPA, the VOM content of specific coatings used on the affected coating booths shall be determined according to USEPA Reference Methods 24 and 24A of 40 CFR 60 Appendix A and the procedures of 35 IAC 215.105(a) and 215.208(a).
  - i. The VOM content of representative coatings "as applied" on the affected coating lines shall be determined according to USEPA Reference Methods 24 and 24A of 40 CFR 60 Appendix A and the procedures of 35 IAC 215.105(a).

Note: This testing may be performed by the supplier of a material provided that the supplier provides appropriate documentation for such testing to the Permittee and that the Permittee's records directly reflect the application of such material and separately account for any additions of solvent.

1.1.8 Monitoring Requirements

None

1.1.9 Recordkeeping Requirements

- a. The Permittee shall maintain records for the following items for the affected coating booths:
  - i. The name and identification number of each coating as applied;
  - ii. Usage of each raw material containing VOM, organic material or HAP on each group of affected booths (gallons/month and gallons/year);
  - ii. The VOM, individual HAP and total HAP content of such each raw material (lb/gallon), with supporting documentation used on each group of affected booths, including VOM content minus water and other exempted compounds; and
  - iii. VOM, individual HAP\*, and Combined HAP\* emissions from the affected booths (tons/month and tons/year).

\* These requirements for HAP emissions become effective January 1, 2006

- c. For the existing boilers, the Permittee shall keep the following records:
  - i. Before beginning actual construction of the project, the Permittee shall document and maintain a record of the following information [40 CFR 52.21(r)(6)(i)]:
    - A. A description of the project;
    - B. Identification of the emissions unit(s) whose emissions of a regulated PSD pollutant could be affected by the project; and
    - C. A description of the applicability test used to determine that the project is not a major modification for any regulated PSD pollutant, including the baseline actual emissions, the projected actual emissions, the amount of emissions excluded under 40 CFR 52.21(b)(41)(ii)(c) and an explanation for why such amount was excluded, and any netting calculations, if applicable.
  - ii. The Permittee shall keep records for the emissions of any regulated PSD pollutant that could increase as a result of the project and that is emitted by any emissions unit identified in 40 CFR 52.21(r)(6)(i)(b) (See also Condition 1.1.9(c)(i)(B)) and calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of 10 years following resumption of regular operations after the change [40 CFR 52.21(r)(6)(iii)].

1.1.10 Reporting Requirements

- a. The Permittee shall provide the notifications within 30 of the occurrence of the following:
  - i. Start-up of the affected booths;
  - ii. Permanent shutdown of the existing booth(s); and
  - iii. Any significant changes to the transition schedule provided in the application.
- b. The Permittee shall promptly notify the Illinois EPA of deviations of the affected coating booths with the permit requirements. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken.

c. The Permittee shall submit a report to the Illinois EPA and USEPA if the annual emissions, in tons per year, from the project identified in 40 CFR 52.21(r)(6)(i) (See also Condition 1.1.9(c)(i)), exceed the baseline actual emissions (as documented and maintained pursuant to 40 CFR 52.21(r)(6)(i)(c), by a significant amount (as defined in 40 CFR 52.21(b)(23) for that regulated PSD pollutant, and if such emissions differ from the pre-construction projection as documented and maintained pursuant to 40 CFR 52.21(r)(6)(i)(c). Such report shall be submitted to the Illinois EPA and USEPA within 60 days after the end of such year. The report shall contain the following [40 CFR 52.21(r)(6)(v)]:

- i. The name, address and telephone number of the plant;
- ii. The annual emissions as calculated pursuant to 40 CFR 52.21(r)(6)(iii); and
- iii. Any other information that the Permittee wishes to include in the report (e.g., an explanation as to why the emissions differ from the pre-construction projection).

2. The affected coating booths may be operated under this construction permit until modification or renewal of the CAAPP permit has been issued provided a timely application is submitted to amend the CAAPP permit to incorporate the affected booths.

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

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

DES:EEJ:jar

cc: Region 3

Attachment 1

Future Emissions and Emission Increases for Existing Emission Units

Equipment	Future Emissions <sup>a</sup> /Emissions Increases <sup>b</sup> (Tons/Year)					
	SO <sub>2</sub>	NO <sub>x</sub>	VOM	CO	PM	PM <sub>10</sub>
Boilers	1,952/36.05	344.2/3.97	1.30/0.01	248/4.58	23.6/0.27	23.6/0.27
Sum of Increases <sup>c</sup>	36.05	3.97	.01	4.58	0.27	0.27

<sup>a</sup> Future emissions are the "future projected actual emissions", as defined by 40 CFR 52.21(b) (41).

<sup>b</sup> Emissions increases determined from the differences between past actual emissions and future emissions.

<sup>c</sup> Total project increases, not including any contemporaneous emissions decreases or new emission units.

Attachment 2

VOM Netting Analysis

Contemporaneous Time Period: 2001 Through 2005

**Table I - Emissions Increases Associated With The Proposed Project**

<u>Item of Equipment</u>	<u>Permitted Emissions (Tons/Year)</u>	<u>Emission Change (Tons/Year)</u>
HdrSP	119.00	119.00
Existing Boilers	N/A	<u>0.01</u>
	Total:	119.01

**Table II - Source-Wide Creditable Contemporaneous Emission Decreases**

<u>Item of Equipment</u>	<u>Emissions Decrease (Tons/Year)</u>	<u>Permit Number</u>
Existing Coating Booths (D400Pr & D561Sp)	<u>79.9</u>	05020044
	Total:	<u>79.9</u>

**Table III - Net Emissions Change**

Net Increases Associated With Proposed Project	<u>119.01</u>
Creditable Contemporaneous Emission Increases	0.00
Creditable Contemporaneous Emission Decreases	<u>79.90</u>
	39.11

EEJ:jar

## PROJECT SUMMARY

### I. INTRODUCTION

John Deere Harvester Works has submitted a construction permit application for a new coating booth. The conditions in the proposed permit for the project are based on the project not being a major modification under 40 CFR 52.21, Prevention of Significant Deterioration (PSD). The proposed permit conditions include emission limitations, monitoring requirements, recordkeeping requirements, reporting requirements and testing requirements.

### II. PROJECT DESCRIPTION

John Deere Harvester Works applies coatings to manufactured metal headers their Combine production facility. The facility uses various coatings that contain volatile organic materials (VOM) and hazardous air pollutants (HAPs).

### III. EMISSIONS

The principal air contaminants emitted from the coating booth is VOM and HAPs. The VOM and HAPS emissions from these emission unit are based on complete volatilization of the VOM and HAPs contents of the materials. John Deere Harvester Works has also proposed removing the existing header coating booths to offset the proposed increases from the proposed coating booth.

### IV. APPLICABLE EMISSION STANDARDS

All emission sources in Illinois must comply with the Illinois Pollution Control Board emission standards. The Board's emission standard represents the basic requirements for sources in Illinois. The Board has standards for sources of VOM. John Deere Harvester Works complies with all applicable standards through direct compliance.

### V. PROPOSED PERMIT

The conditions of the proposed permit contain limitations and requirements to assure that this source will be operated as a non-major source. This permit sets limitations on the material VOM and HAP usage and emissions. These limitations are consistent with the historical operation. The VOM emissions are based on the amount of material used.

Proposed Permit: The conditions of the permit would contain limitations and requirements that are intended to assure that this project will not trigger the requirements of PSD. The permit conditions establish appropriate compliance procedures, including monitoring requirements, recordkeeping requirements, reporting requirements and testing requirements. The Permittee must carry out these procedures on an on-going basis to demonstrate that the refinery is operating within the limitations set by the permit.

VI. REQUEST FOR COMMENTS

It is the Illinois EPA's preliminary determination that this facility meets all applicable state and federal air pollution control requirements, subject to the conditions proposed in the draft permit. The Illinois EPA is therefore proposing to issue a permit with federally enforceable limits for this project.

The Illinois EPA and the proposed condition of the draft permit request comments on this proposed action. If substantial public interest is shown in this matter, the Illinois EPA will consider holding a public hearing in accordance with 35 Ill. Adm. Code Part 166.

EEJ:05020044:jar