United States Environmental Protection Agency
Region 7
Enforcement and Compliance Assurance Division

Air Branch

**Air Branch Inspection Report**
**Unannounced Partial Compliance Evaluation**
**John Deere Des Moines Works**
825 SW Irvinedale Drive
Ankeny, Iowa 50023
FRS# 110000593402

**Inspection Date(s):**
November 19, 2024

CHARLOTTE PAPP
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Date: 2025.02.21 13:44:40 -06'00'

Charlotte Papp, Inspector, ECAD, Air Branch

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# INSPECTION OVERVIEW

## INSPECTION OBJECTIVE

The objective of the partial compliance evaluation (PCE) inspection was to determine compliance of the facility with the Clean Air Act (CAA), specifically those requirements listed in **Table 1**. The inspection was part of the U.S. Environmental Protection Agency's (EPA) Reducing Air Toxics in Overburdened Communities National Enforcement Compliance Initiative.

**Table 1. APPLICABLE PERMIT CONDITIONS, REGULATIONS AND STANDARDS**

| Code of Federal Regulation | Standard Name |
|---|---|
| 40 CFR Part 63 | Subpart MMMM—National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products |
| 40 CFR Part 63 | Subpart N—National Emission Standards for Chromium Emissions From Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks |
| 40 CFR Part 63 | Subpart CCCCCC—National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities |
| 40 CFR Part 60 | Subpart IIII—Standards of Performance for Stationary Compression Ignition Internal Combustion Engines |
| 40 CFR Part 63 | Subpart ZZZZ—National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines |

**Table 2** lists the inspection team members.

**Table 2. PROJECT TEAM MEMBERS**

| Team Member | Organization | Project Role |
|---|---|---|
| Charlotte Papp | EPA Region 7, ECAD, Air Branch | Lead inspector |
| Riley Plagge | Polk County Public Works – Air Quality Division | Air Permit Engineer |

## FACILITY CONTACT INFORMATION

**Table 3** lists the primary facility contacts alphabetically.

**Table 3. FACILITY CONTACT INFORMATION**

| Name, Title | Phone No. | Email Address |
|---|---|---|
| Scott Hemesath, Environmental Engineering Manager | 515-289-3264 | hemesathscotta@johndeere.com |
| Charles Kerman, Environmental Engineer | 515-289-3111 | kermancharles@johndeere.com |
| Reed Sanders, Environmental Engineer | 309-203-6796 | sandersreed@johndeere.com |

## FACILITY OVERVIEW

The facility was originally constructed in the 1940s by the Department of Defense. John Deere purchased the property in approximately 1953 and began their operations. The facility produces agricultural equipment, primarily combines, sprayers, tillage equipment and seeder cabinets. The facility operates 24-hours a day, averages 5 days a week of operation, and employs between 1,400 and 1,600 people.

According to EPA's Enforcement and Compliance History Online (ECHO) website, the last onsite compliance monitoring activity at the facility was on October 18, 2024, and consisted of a FCE inspection conducted by the Polk County Public Works – Air Quality Division. Polk County likewise completed a Title V certification review on April 4, 2024.

According to the ECHO website, there have been no formal or informal enforcement activities at this facility for at least the past five years.

According to John Deere's Title V operating permit issued by the Iowa Department of Natural Resources (IDNR) on August 18, 2020, the facility is subject to the regulations and standards subject to review during this inspection as noted in **Table 1.** The facility has been issued several construction permits since the issuance of the above operating permit. A summary of the permits is listed below in **Table 4**. According to construction permit modifications in permit 2233 Modified #8, the facility has changed from a major source to a synthetic minor source by taking voluntary restrictions on the quantity of coating subject to Subpart MMMM.

**Table 4. FACILITY PERMIT HISTORY (TAKEN FROM CONSTRUCTION PERMIT 2233 MODIFIED #8)**

| Permit No. | Rescinded Permit No. | Description | Date | Stack Testing |
|---|---|---|---|---|
| 2233 | 1007 Modified#2, 1530 Modified#3, 1607 Modified#2, 1694 Modified, 1835 Modified and 2082 | Placed all wet paint coating operations in one permit. Capped VOC emission limit at 175 TPY and HAP at 10 TPY. | 5/20/2010 | No |
| 2233 Modified | 2233, 0206 | Removed EU 02-16/EP 02-16 and 02-17; EU 03-31/EP 03-31, 03-33, 03-34 and 03-38. | 2/2/2011 | No |
| 2233 Modified #2 | 2233 Modified, 1650, 1651, 1652, 1653 Modified, 1692 Modified, 1815, 1832, 1833, 1834 and 1836 | Combined all natural gas burners and air makeup units associated with wet paint coating operations into one permit. | 11/15/2012 | No |

| | | | | |
|---|---|---|---|---|
| 2233 Modified #3 | 2233 Modified #2 | Limited HAP emission limits to 9.4 TPY Single HAP and 24.4 TPY Total HAPs. Added triggers for daily tracking of HAPs. Removed 4.5 lb/gallon limit for VOC content in paint. | 4/24/2013 | No |
| 2233 Modified #4 | 2233 Modified #3 | Raised VOC limit to 220 TPY. | 10/9/2013 | No |
| 2233 Modified #5 | 2233 Modified #4 | Removed D/20C Spray Booths and Touchup Spray Booths and associated air makeup units. Installed EU 01-TU/EP 01-TU1 and 01-TU2. | 4/9/2014 | No |
| 2233 Modified #6 | 2233 Modified #5 | Added EU 03-AMUN, 03-AMUS and 03-AMUV. Removed EU: 03-22, 03-23, 03-24, 03-26. Removed propane as backup fuel for natural gas combustion units. | 10/16/2017 | No |
| 2233 Modified #7 | 2233 Modified #6 | Reduced HAP limits to 6 TPY Single HAP and 15 TPY Total HAP. Removed EU 03-33 and 18-12. | 9/18/2018 | No |
| 2233 Modified #8 | 2233 Modified #7 | Removed major source 40 CFR 63 MMMM requirement to reclassify the coating operations as an area source for HAPs. Revised PM/PM10/PM2.5 emission limits. | 1/24/2024 | No |
| 2233 Modified #8 | NA | Administrative modification to correct errors made in stack parameters for EP 02-61, 03-03, 03-36 and 03-37 | 9/16/2024 | No |

**FACILITY OPERATIONS SUMMARY**

The facility receives raw product (such as steel sheets) used for the construction of the agricultural equipment. This material is cut and shaped to meet the product specifications, and then pre-treated as necessary using equipment such as shot blast units (abrasion). Components are then coated according to product specifications. Coating types include primers, paints, and powder coatings. Once components are appropriately coated, they are taken to the assembly area to be combined with other components. After being assembled, products will be shipped offsite. Input materials such as diesel fuel and antifreeze are stored onsite at the facility tank farm. Five generators are located onsite for emergency use, and an additional generator is permitted for use with the EcoQuip unit. The facility previously had chrome plating operations; however, this process was discontinued in 2021.

**FIELD ACTIVITIES SUMMARY**

I arrived at the facility on November 19, 2024, at 8:20 a.m. and completed a drive by surveillance inspection. I did not observe visible emissions. I made entry at the security desk and introduced myself and Riley Plagge, presented my credentials, and provided my business card to Mr. Scott Hemesath. I was given a facility safety briefing by Mr. Hemesath. I conducted an opening conference during which I explained that the purpose of the visit was to conduct an inspection to determine compliance with the CAA, specifically, to determine compliance with the regulations and standards listed in **Table 1**. I explained that after asking for some general business information, I would observe emission units, control equipment, and also, review associated records demonstrating compliance with the regulations. I explained to Mr. Hemesath that the facility would have an opportunity to make a claim of business confidentiality at the end of the inspection and provided him with a Confidential Business Information (CBI) form. Mr. Hemesath did not make a claim of confidentiality (**Appendix A**).

The inspection team was given a facility tour by Mr. Hemeseth. I was asked to wear the following PPE for general site safety: steel-toed boots with metatarsal protection, gloves, safety glasses, ear protection, and a hard hat.

The site tour began with Building 1 where we observed the plasma cutting tables and dust collection system. We observed an emergency generator (emission unit 16-01) on our way to the Building 3 tank farm. Inside Building 3, we saw the assembly area as well as some painting operations including the north and south paint booths (emission unit 03-21). A dip tank (emissions unit 03-04) was observed in Building 3 as well. We inspected the lift station emergency generator (emissions unit 10-Gen) and saw the storage area for spare paint booth filters. Next, we continued to the boiler located in Building 3 (emissions units 03-02) Generator 57-Gen was not able to be accessed due to construction in the area. The tour continued to the gasoline tanks and dispensing facility (emission unit T-59), then the shotblast unit with baghouse (emission unit 26-01). Next, an emergency generator 40-01 was visited, and we continued to the Building 40 tank farm. We saw the grinding units (emission units 02-G1 through 12-G06) where off-cut and excess materials are ground down to be recycled offsite or formed into pucks.

We broke for lunch at 12:15 p.m. and returned to the facility at 1:15 p.m. We resumed the site tour with the EcoQuip unit and non-emergency generator (emission unit 28-MB). We arrived at the Building 2 tank farm and the former location of the chrome plating process area. Within Building 2, we observed the powder coating area (emission unit 02-10), emergency generator 2X-Gen, and curing ovens (emission units 02-10 and 02-32). We continued to the top of Building 3 to observe the curing oven exhaust stacks on the neighboring Building 2 with the FLIR camera.

We observed the maintenance area paint booth (emission unit 12-05) as well as the Department 95 touch up booth (emission unit 01-TU). We went back to the conference room at 3:33 p.m. to discuss records. I obtained copies of the records as indicated on the Receipt for Documents (**Appendix B**).

I conducted a closing conference with facility staff listed in **Table 3**. I provided the facility with copies of the Small Business Resources Information Sheet and Receipt for Documents. Some documents were requested to be provided digitally by December 6, 2024. On December 5, 2024, I received all outstanding documents via a Microsoft OneDrive folder. I departed the facility at 4:58 p.m.

**Measurement Activities**

All environmental measurement activities were performed in accordance with the EPA Region 7 quality system. I followed manufacturer and EPA processes for instrument calibration; instrument calibration was documented in an internal equipment management database.

**Table 5** summarizes field measurement activities.

**Table 5. MEASUREMENT ACTIVITIES SUMMARY**

| Date(s) and Time | Method and/or Procedure[1], and Equipment | Measurer Name |
|---|---|---|
| 11/19/2024 | **Region 7 procedure:** *FLIR ThermaCAM™ GasFindIR, GF320, and Similar Infrared Cameras*,<br>**Equipment:** Manufacturer Teledyne FLIR, Model No. GF320, and Serial No. 44402263 | Charlotte Papp |

## INVESTIGATION OBSERVATIONS AND POTENTIAL FINDINGS

Ambient weather, site conditions, and field activities were documented in the field records. All photographs are attached as **Appendix C**. I made the following observations during the inspection. I discussed all observations with facility representatives during the closeout meeting unless otherwise noted in the observation description.

These observations are not final compliance determinations. The EPA Region 7 Air Branch case review team will make the final compliance determinations based on its review of this report and other technical, regulatory, and facility information.

Construction permit 2233 Modification #8 includes voluntary limits that the facility has taken to move from a major source to a synthetic minor source of Volatile Organic Compound (VOC) and Hazardous Air Pollutant (HAP) emissions. Condition 5 of the construction permit lists the following: 220 ton/yr VOC limit, 6.0 ton/yr single HAP limit, and 15 ton/yr total HAP limit. The facility complies with these limits by calculating total VOCs and HAPs emitted from the coating processes. According to the permit, the facility is to assume that 100% of VOC and HAP content in any coatings will be emitted. I requested and reviewed the VOC and HAP calculations used by the facility to demonstrate compliance. The data provided demonstrates that the facility is below the limits for VOCs, single HAPs and total HAPs.

40 CFR Part 60 Subpart Dc imposes a natural gas limit on the facility of 1,340,681 MMBtu/year. According to the documentation submitted, the facility is consistently well under this natural gas usage limit.

The facility staff confirmed that all chrome plating operations were ceased at the facility by 2021. I observed the area where those operations used to take place, and it had been completely converted into a storage area. Given this change, requirements in 40 CFR Part 63 Subpart N no longer apply.

The facility has a gasoline storage tank and dispensing unit that is subject to 40 CFR Part 63 Subpart CCCCCC. Gasoline throughput records confirm that the facility is under the 10,000 gallons per month threshold. The dispensing area appeared well kept, and there was no sign of improperly cleaned spills at the time of the inspection.

I observed five of the six generators kept onsite during my inspection. Each generator appeared to be well maintained and had a non-resettable hour meter. The maintenance records provided appear to demonstrate compliance with applicable usage limits (e.g. less than 100 hours per year of non-emergency use).

The EcoQuip Media Blast unit (28-MB) has a permitted limit of 65,000 lbs of media use per 12 month rolling total. Media usage documentation provided by the facility has confirmed that the facility uses well under 65,000 lbs of blast media per 12 months.

The facility's Title V permit gives the following limits for welding coil usage: 2,800,000 lbs of 70S Weld Wire/Rod used per 12 month rolling period, 10,000 lbs of ER4043 Weld Wire/Rod used per 12 month rolling period, and 35,000 lbs of 70T Weld Wire/Rod used per 12 month rolling period. Material usage records provided by the facility demonstrate compliance with this requirement.

End of report.