

REPORT OF RCRA COMPLIANCE EVALUATION INSPECTION

At

John Deere Ottumwa Works

928 E Vine St.
Ottumwa, IA 52501
(641) 683-2257

EPA ID Number: IAD005291182

On

December 14, 2021

By

Eastern Research Group, Inc.

For

U.S. ENVIRONMENTAL PROTECTION AGENCY

Region 7

Enforcement and Compliance Assurance Division

1.0 INTRODUCTION

At the request of the Enforcement and Compliance Assurance Division/Chemical Branch/RCRA Section (ECAD/CB/RCRA) of the U.S. Environmental Protection Agency (EPA) Region 7, Eastern Research Group, Inc. (ERG) conducted a Resource Conservation and Recovery Act (RCRA) compliance evaluation inspection (CEI) at John Deere Ottumwa Works (JDOW) in Ottumwa, Iowa on December 14, 2021. The CEI was conducted under the authority of Section 3007(a) of RCRA, as amended. Throughout the CEI, data and information were collected to determine compliance with the applicable regulatory and statutory requirements. The inspection report and attachments present the results of the CEI.

2.0 PARTICIPANTS

John Deere Ottumwa Works:

Allison Miller, Environmental Manager

Tyler Carter, Environmental Engineer

EPA Representative, ERG:

Janosh Wolters, Energy Engineer

3.0 INSPECTION PRECEDURES

Due to the COVID-19 pandemic, I contacted the facility via telephone and spoke with Ms. Miller on December 9, 2022 at approximately 16:00. We discussed facility specific safety protocols to ensure the safety of all personnel involved during the inspection and discussed the best time to arrive on-site. Due to the size of the facility and ensure I had enough time to thoroughly inspect the facility, as well as align with facility personnel, we planned to begin the inspection at approximately 06:30.

After arriving announced at JDOW at approximately 06:25, I performed a drive-by of the facility and took a photograph before beginning the inspection and did not note any areas of concern. I then entered the main entrance and signed into the visitor's log. Ms. Miller and Mr. Carter then led me to a conference room with to begin the opening conference at approximately 06:40. I initiated the opening conference with Ms. Miller and Mr. Carter present as the JDOW representatives. I presented them with my inspector credentials and business card, as well as the business card of the EPA Task Order Contracting Officer Representative, Mr. Trevor Urban. I then presented a copy of RCRA Section 3007(a), which contains EPA's inspection authority. I explained my need to collect accurate information and presented them with a copy of Title 18 U.S. Code, Sections 1001 and 1002. I then presented Ms. Miller and Mr. Carter with a copy of the *Notice Regarding Proprietary/Confidential Business Information Submitted to or Collected by EPA in Connection with Inspections* and reviewed JDOW's confidentiality rights. I informed Ms. Miller and Mr. Carter that I would provide a *Confidentiality Notice* at the end of this inspection.

The inspection consisted of a discussion of facility operations, waste generation and waste management, a review of waste management records, and a visual inspection of the waste generation and management areas. Mr. Carter provided a facility layout (see Attachment 1) and explained facility operations and locations of hazardous waste generation and management.

During the visual inspection of the facility, Ms. Miller and Mr. Carter guided me throughout the facility in order to conduct thorough evaluations of the facility's satellite accumulation areas (SAAs) and central accumulation area (CAA). At the time of the inspection, the facility was operating 49 SAAs and one CAA. The facility also handles universal waste throughout the facility before consolidating universal waste in the CAA. All universal waste storage areas were visually inspected. JDOW uses two parts washers on site. All parts washers utilize the same nonhazardous cleaning solution. I conducted an in-depth visual inspection of the SAAs, the CAA, the universal waste storage areas, used oil storage area, and all manufacturing areas.

Seven photographs were collected as inspection documentation and are shown in Attachments 2 and 3. Information collected during the inspection is documented on the *EPA Inspection Checklist* (see Attachment 4). I followed the inspection procedures discussed in the RCRA CEI Standard Operating Procedure (No. 2321.01D), unless noted differently. At the conclusion of the inspection, I provided Ms. Miller with a *Confidentiality Notice*, and *Receipt for Documents and Samples*, which she signed as acknowledgement of receipt (see Attachments 5 and 6 respectively). No confidentiality claims were made by JDOW.

The following inspection documents and compliance assistance handouts were left with JDOW:

RCRA Section 3007(a)

Title 18 U.S. Code, Sections 1001 and 1002

*Notice Regarding Proprietary/Confidential Business Information Submitted to or Collected by
EPA in Connection with Inspections*

Confidentiality Notice (Facility copy)

Receipt of Documents and Samples (Facility copy)

Security Awareness

Commercial Motor Vehicle Transportation

Security Planning

EPA E-Manifest Fact Sheet U.S.

EPA Small Business Resources

U.S. EPA Publication, Managing Your Hazardous Waste

U.S. EPA Publication, Managing Used Oil-Advice for Small Businesses

PowerPoint Presentation, 2013 Solvent Wipes Final Rule

Pollution Engineering Article, 10 Common Questions for Waste Generators

Iowa Department of Natural Resources (IDNR) Waste Exchange Folder and P2 Brochures

IDNR Management of Fluorescent Lamps for Businesses Information Sheets

IDNR Aerosol Can Disposal for Businesses Information Sheet

University of Northern Iowa Waste Reduction Center Information Card

Solvent-Contaminated Wipes Final Rule Summary Chart

4.0 FINDINGS AND OBSERVATIONS

4.1 Facility Information and Operations

JDOW began operating in 1911 and currently employs approximately 800 people. The facility operates on a 24/6 schedule with 8-hour shifts, split amongst three shift teams. The facility has a footprint of approximately 120 acres. JDOW's operations consist of manufacturing large agricultural equipment. The major raw materials used are steel, weld wire, paints, and solvents. The major manufacturing or processing operation that generates waste streams include manufacturing agricultural equipment. The following waste streams are produced: waste paint related material, paint flush, solvent and paint rags, still bottoms, waste paint dip and plastic, aerosol cans, orphan chemicals, adhesive and thinner, dip tank waste, nital etchant, waste batteries, waste pharmaceuticals, parts washer solution, laser dust, coolants, pre-wash wastewater, paint booth filters, oily debris and sorbents, scrap metal and grinder solids, wastewater, used oil, used oil filters, universal wastes, and general trash.

4.2 RCRA Status

According to the *Hazardous Waste Site Info Verification Report for Inspector* (see Attachment 7), JDOW notified as a federal large quantity generator (LQG) of D001, D002, D003, D007, D008, D018, D035, F003, F005, U002, U159, and U220 hazardous wastes. I asked Mr. Carter

and Ms. Miller to review the *Hazardous Waste Site Info Verification Report for Inspector*, which I provided prior to records review and visual inspection of the waste generation areas. Ms. Miller requested I update the facility contact and some waste codes may no longer apply. After reviewing the records and walking through the facility, I determined that the facility is operating as a LQG of D001, D002, D008, D035, and F003 hazardous wastes, a generator of used oil, and a small quantity handler (SQH) of universal waste. JDOW generates more than 1,000 kilograms of hazardous waste monthly based on a review of facility records, a visual inspection of process and waste management areas, and interviewing personnel.

JDOW was previously inspected by an EPA contractor on May 2, 2016. The inspection did not lead to a notice of preliminary findings (NOPFs).

4.3 Facility Waste Streams and Management

A Waste Stream and Waste Handling Table for JDOW is presented below. The table describes waste streams generated, generation process/rates, hazardous waste determinations, and on-site/off-site management.

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#	WASTE STREAM	GENERATION PROCESS	HAZARDOUS WASTE DETERMINATION	ESTIMATED GENERATION RATE	ON-SITE MANAGEMENT	OFF-SITE MANAGEMENT
1	Paint Obsolete / Off-spec Waste Paint (Waste Paint Related Material) (Waste Profile included in Attachment 8)	Paint brushes, rollers, excess left-over paint	D001 (based on process knowledge and knowledge of the product)	800 pounds per month	55-gallon containers in SAAs	Veolia ES Technical Solutions (NID080631369) to Veolia ES Technical Solutions in Menomonee Falls, WI (WID003964148) for fuel blending
2	Paint Flush (Waste Profile included in Attachment 9)	Flushing paint lines	D001, D035 (based on process knowledge and knowledge of the product)	4,700 pounds per month	55-gallon containers in SAAs	Veolia ES Technical Solutions (NID080631369) to Veolia ES Technical Solutions in Menomonee Falls, WI (WID003964148) for fuel blending
3	Hazardous Solvent and Paint Rags (Waste Profile included in Attachment 10)	Wiping excess solvent	D001 (based on process knowledge and knowledge of the product)	200 pounds per month	55-gallon containers in SAAs	Veolia ES Technical Solutions (NID080631369) to Veolia ES Technical Solutions in Menomonee Falls, WI (WID003964148) for fuel blending
4	Reclaimed Paint Flush (HSM Notification included in Attachment 11)	Reclaiming paint gun flush	Hazardous secondary material (HSM) - excluded per 261.4(a)(23)(i)(A) (based on process knowledge and knowledge of the product)	Under 1 ton in 2021. If still is operating, 34 tons per year	55-gallon containers	NA – reclaimed on site

#	WASTE STREAM	GENERATION PROCESS	HAZARDOUS WASTE DETERMINATION	ESTIMATED GENERATION RATE	ON-SITE MANAGEMENT	OFF-SITE MANAGEMENT
5	Still Bottoms (Waste Profile included in Attachment 12)	Distillation unit	D001, D035 (based on process knowledge and knowledge of the product)	300 pounds per year for the 1 ton of reclaimed solvent in 2021	55-gallon container in SAA #40	Veolia ES Technical Solutions (NID080631369) to Veolia ES Technical Solutions in Menomonee Falls, WI (WID003964148) for incineration
7	Waste Paint Dip and Plastic (Waste Profile included in Attachment 13)	Dipping products into product paint tank and excess drippage is accumulated on plastic sheets	D001 (based on process knowledge and knowledge of the product)	1,400 pounds per month	55-gallon containers in SAAs	Veolia ES Technical Solutions (NID080631369) to Veolia ES Technical Solutions in Menomonee Falls, WI (WID003964148) for incineration
8	Aerosol Waste Cans (Waste Profile included in Attachment 14)	Spent aerosol cans	D001 (based on process knowledge and knowledge of the product)	65 pounds per month	55-gallon containers in SAAs	Veolia ES Technical Solutions (NID080631369) to Veolia ES Technical Solutions in Menomonee Falls, WI (WID003964148) for fuel blending
9	Orphan Chemicals (Waste Profile included in Attachment 15)	Expired or unwanted chemicals	Hazardous LabPak (waste codes change with each shipment) (based on process knowledge and knowledge of the product)	32 pounds per month	LabPak in CAA	Veolia ES Technical Solutions (NID080631369) to Veolia ES Technical Solutions in Menomonee Falls, WI (WID003964148) for incineration

#	WASTE STREAM	GENERATION PROCESS	HAZARDOUS WASTE DETERMINATION	ESTIMATED GENERATION RATE	ON-SITE MANAGEMENT	OFF-SITE MANAGEMENT
10	Adhesive and Thinner (Waste Profile included in Attachment 16)	Reaction injection molding process used adhesive	D001, D035 (based on process knowledge and knowledge of the product)	100 pounds per year	55-gallon containers in SAA #20	Veolia ES Technical Solutions (NID080631369) to Veolia ES Technical Solutions in Menomonee Falls, WI (WID003964148) for incineration
11	Dip Tank Cleanout Waste (Waste Profile included in Attachment 17)	Cleanout of paint dip tank once per year	D001 (based on process knowledge and knowledge of the product)	1,500 pounds per year	55-gallon containers moved to CAA immediately during cleanout operations	Veolia ES Technical Solutions (NID080631369) to Veolia ES Technical Solutions in Menomonee Falls, WI (WID003964148) for incineration
12	Nital Etchant	QC for welding	D002 (based on process knowledge and knowledge of the product)	Less than one gallon per year	5-gallon container in SAA #22	Veolia ES Technical Solutions (NID080631369) to Veolia ES Technical Solutions in Port Washington, WI (WID988566543) for incineration
13	Waste Batteries (Broken lead acid batteries)	Broken lead acid batteries	D002, D008 (based on process knowledge and knowledge of the product)	800 pounds per year	55-gallon containers in CAA	Veolia ES Technical Solutions (NID080631369) to Veolia ES Technical Solutions in Port Washington, WI (WID988566543) for recycling

#	WASTE STREAM	GENERATION PROCESS	HAZARDOUS WASTE DETERMINATION	ESTIMATED GENERATION RATE	ON-SITE MANAGEMENT	OFF-SITE MANAGEMENT
14	Waste Pharmaceuticals (Waste Profile included in Attachment 18)	Waste pharmaceutical waste	PHARMS (based on process knowledge and knowledge of the product)	10 pounds in 2020 (Manifest included in Attachment 19)	5-gallon container	Veolia ES Technical Solutions (NID080631369) to Veolia ES Technical Solutions in Port Washington, WI (WID988566543) for incineration
15	Parts Washer Solution (Safety Data Sheet (SDS) included in Attachment 20)	Cleaning small tools	Nonhazardous (based on process knowledge and knowledge of the product)	150 pounds per year	In parts washer	Veolia ES Technical Solutions (NID080631369) to Veolia ES Technical Solutions in Menomonee Falls, WI (WID003964148) for recycling
16	Laser Dust	Dust from metal cutting	Nonhazardous (based on process knowledge and knowledge of the product)	1,400 pounds per month	55-gallon containers	Alter Metal Recycling in Ottumwa, IA for recycling
17	Machining Coolants (SDS included in Attachment 21)	Machine coolant waste	Nonhazardous (based on process knowledge and knowledge of the product)	5,000 gallons per year	One 8,600-gallon tank in Building P	Transported to John Deere Waterloo Works in Waterloo, IA via Sully Transportation for wastewater treatment prior to permitted discharge to City of Waterloo Publicly Owned Treatment Works (POTW)
18	Pre-Wash Wastewater (SDSs included in Attachment 22)	Iron phosphate and zirconium pretreatment solutions	Nonhazardous (based on process knowledge and knowledge of the product)	18,600 gallons per year	Two 18,000-gallon tanks in Building P	Transported to John Deere Waterloo Works in Waterloo, IA via Sully Transportation for wastewater treatment prior to permitted discharge to City of Waterloo POTW

#	WASTE STREAM	GENERATION PROCESS	HAZARDOUS WASTE DETERMINATION	ESTIMATED GENERATION RATE	ON-SITE MANAGEMENT	OFF-SITE MANAGEMENT
19	Paint Booth Filters	Exchanging paint booth filters	Nonhazardous (based on process knowledge and knowledge of the product)	One ton per month	One 30-yard container, 40-yard compactor	Midwest Sanitation in Oskaloosa, IA to City of Ottumwa Landfill in Ottumwa, IA for landfill
20	Oily Debris/Sorbents	Clean up operations	Nonhazardous (based on process knowledge and knowledge of the product)	680 pounds per month	55-gallon containers	Veolia ES Technical Solutions (NID080631369) to Veolia ES Technical Solutions in Menomonee Falls, WI (WID003964148) for fuel blending
21	Scrap Metal and Grinder Solids	Facility operations	Nonhazardous (based on process knowledge and knowledge of the product)	Four 40-yard containers and 12 10-yard containers picked up two to three times per week	40-yard and 10-yard containers	Alter Metal Recycling in Ottumwa, IA for recycling
22	Wastewater	Parts rinsed with only water	Nonhazardous (based on process knowledge and knowledge of the product)	Unknown – not tracked	Discharged to sanitary sewer	Discharged to sanitary sewer for to the POTW of City of Ottumwa (POTW Permit included in Attachment 23)
23	Used Oil (Invoice included in Attachment 24)	Facility maintenance	Excluded (managed as used oil per 40 CFR 279)	4,700 gallons per year	55-gallon and 10,000-gallon used oil tank	Safety-Kleen Systems Inc. in Des Moines, IA (IAD981718000) for recycling

#	WASTE STREAM	GENERATION PROCESS	HAZARDOUS WASTE DETERMINATION	ESTIMATED GENERATION RATE	ON-SITE MANAGEMENT	OFF-SITE MANAGEMENT
24	Used Oil Filters	Punctured and oil hot drained into used oil container and used oil filter added to scrap metal containers	Excluded (not a solid waste as managed) and recycled as scrap metal	Unknown – not tracked	40-yard and 10-yard containers	Alter Metal Recycling in Ottumwa, IA for recycling
25	Universal Waste Lamps	Facility maintenance	Excluded (managed as universal waste per 40 CFR 273)	220 pounds per month	4-foot containers to eight-foot containers	Veolia ES Technical Solutions (NID080631369) to Veolia ES Technical Solutions in Port Washington, WI (WID988566543) for recycling (Manifest included in Attachment 25)
26	Universal Waste Batteries	Facility maintenance	Excluded (managed as universal waste per 40 CFR 273)	420 pounds per year	5-gallon containers	Veolia ES Technical Solutions (NID080631369) to Veolia ES Technical Solutions in Port Washington, WI (WID988566543) for recycling (Manifest included in Attachment 25)
27	General Trash	Facility operations	Nonhazardous (based on process knowledge and knowledge of the product)	Approximately 440,000 pounds per year	20 to 40-yard containers on site	Midwest Sanitation in Oskaloosa, IA to City of Ottumwa Landfill in Ottumwa, IA

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4.4 Less-Than-90-Day Hazardous Waste Accumulation Area

JDOW has one Less-Than-90-Day CAA on site, which is located in a separate small structure as labeled on the facility layout (see Attachment 1). I visually inspected the CAA and observed one 55-gallon of obsolete / off-spec waste paint, one 55-gallon container of paint flush waste, and 55-gallon container which held aerosol cans and paint pens. All three containers were managed as hazardous wastes (see Attachment 3, Photo 6). In addition, I observed a red flammable cabinet placed inside the facility's CAA. The flammable cabinet is used to store orphan chemicals. At the time of the inspection, the cabinet was empty (see Attachment 3, Photo 7). All hazardous waste containers were closed, in good condition, labeled as "Hazardous Waste", and labeled with an indication of the nature of the hazard. The earliest accumulation start date on a hazardous waste container in the CAA was December 9, 2021. December 9, 2021 is within 90 days from the time of the inspection. I also observed two 55-gallon containers of laser dust nonhazardous waste. Lastly, I observed two 30-gallon containers of universal waste batteries, three 4-foot, and two 8-foot universal waste lamp containers. All universal waste containers were closed, in good condition, and labeled as "Universal Waste Batteries" or "Universal Waste Lamps". The earliest accumulation start date observed on a universal waste container was on one of the 30-gallon containers and was "08/10/2021".

I observed adequate aisle space to allow for container inspections and access in the event of a spill. The floor of the container was sloped towards a non-draining sump that could be pumped out in the event of a spill. I observed a fire extinguisher, spill control equipment, and related safety equipment within the CAA. Operators handling hazardous waste are trained to use their two-way radio system in case of emergencies. In addition, a phone was placed directly outside the CAA that could be used to communicate in case of an emergency. In addition, a sign was posted next to the phone outside of the CAA which listed the phone numbers of emergency coordinators and emergency response agencies. I asked Mr. Carter if the facility inspected the CAA. Mr. Carter stated the facility inspected the CAA at least weekly and had weekly inspection logs. During records review, Mr. Carter provided inspection logs for the CAA. I reviewed the logs and determined the facility was adequately performing weekly inspections of the CAA. An example of a CAA log is provided in Attachment 26. During records review, I asked Mr. Carter if the facility has closed a CAA since the last inspection occurred. Mr. Carter and Ms. Miller discussed and stated one CAA was closed. Mr. Carter explained a notice was placed in the facility's operating records and provided me with the document shown in Attachment 27. The document outlines the regulatory requirement in 40 CFR 262.17(a)(8)(i)(A) and shows the facility had a document tracking when the CAA moved and where the previous CAA was located. I determined JDOW was in compliance with the requirements set forth in 40 CFR 262.17(a)(8)(i)(A). I did not note any issues or findings at the CAA during the inspection.

4.5 Satellite Accumulation Areas

I observed 49 satellite areas during the visual inspection. The table below shows the SAA name or location, waste type, volume of waste observed, and container type.

SAA #	SAA Name or Location	Waste Type	Volume of Waste	Container Type
1	Building C-5 Tryout Booth	Paint Obsolete / Off-spec	10 gallons	55-gallon drum
2	Building C-5 South Wall	Paint Obsolete / Off-spec	5 gallons	55-gallon drum
3	Building M-7 MOCO Rework	Solvent / Paint Rags	35 gallons	55-gallon drum
4	Building M-7 Brake Press	Aerosols & Paint Pens	35 gallons	55-gallon drum
5	Building C-4 RB Rework	Paint Obsolete / Off-spec	10 gallons	55-gallon drum
6	Building C-4 RB Rework	Aerosols & Paint Pens	5 gallons	55-gallon drum
7	Building C-9 Rework Paint Booth	Paint Obsolete / Off-spec	5 gallons	55-gallon drum
8	Building C-9 Rework Paint Booth Outside Area	Aerosols & Paint Pens	15 gallons	55-gallon drum
9	Building C-9 Rework Paint Booth Outside Area	Solvent / Paint Rags	5 gallons	55-gallon drum
10	Building C-9 Paint Kitchen	Paint Flush	20 gallons	55-gallon drum
11	Building C-4 Touchup Booth	Aerosols & Paint Pens	5 gallons	55-gallon drum
12	Building C-4 Touchup Booth	Paint Obsolete / Off-spec	5 gallons	55-gallon drum
13	Building C-4 Primer Paint Booth	Paint Flush	40 gallons	55-gallon drum
14	Building C-12 Primer Booth	Solvent / Paint Rags	45 gallons	55-gallon drum
15	Building C-12 Topcoat Booth	Solvent / Paint Rags	15 gallons	55-gallon drum
16	Building C-12 Topcoat Booth	Paint Flush	40 gallons	55-gallon drum
17	Building C-13 Paint Kitchen	Paint Flush	40 gallons	55-gallon drum
18	Building C-8 South Wall	Aerosols & Paint Pens	5 gallons	55-gallon drum
19	Building C-8 Docks Area	Paint Obsolete / Off-spec	5 gallons	55-gallon drum
20	Building C3(S) RIM Area	Adhesive Thinner Waste	45 gallons	55-gallon drum
21	Building R D14 Office	Aerosols & Paint Pens	10 gallons	55-gallon drum

22	Building R D14 Lab	Nital Etchant	Less than one millimeter of material	5-gallon bucket
23	Building R Maintenance Paint Booth	Paint Obsolete / Off-spec	1 gallon	55-gallon drum
24	Building R Maintenance Paint Booth	Solvent / Paint Rags	5 gallons	55-gallon drum
25	Building R Maintenance Paint Booth	Paint Flush	30 gallons	55-gallon drum
26	Building D-8 Maintenance Powerhouse	Paint Obsolete / Off-spec	20 gallons	55-gallon drum
27	Building D-8 Maintenance Powerhouse	Aerosols & Paint Pens	1 gallon	55-gallon drum
28	Building L-2 Experimental Building	Aerosols & Paint Pens	35 gallons	55-gallon drum
29	Building M-8 Overhead Doors	Solvent / Paint Rags	1 gallon	55-gallon drum
30	Building M-2 Column E-17	Solvent / Paint Rags	5 gallons	55-gallon drum
31	Building N-3 Column B-16	Paint Obsolete / Off-spec	10 gallons	55-gallon drum
32	Building A-4 Maintenance Office	Aerosols & Paint Pens	2 gallons	55-gallon drum
33	Building N-6 LSB	Aerosols & Paint Pens	25 gallons	55-gallon drum
34	Building N-6 Column D-39	Paint Obsolete / Off-spec	5 gallons	55-gallon drum
35	Building M-1 Column C-8	Paint Obsolete / Off-spec	5 gallons	55-gallon drum
36	Building E-3 Paint Kitchen	Paint Flush	1 gallon	55-gallon drum
37	Building E-3 Paint Booth	Solvent / Paint Rags	25 gallons	55-gallon drum
38	Building E-3 Paint Booth	Paint Obsolete / Off-spec	0 gallons	55-gallon drum
39	Building E-3 Spray Paint Booth	Paint Flush	25 gallons	55-gallon drum
40	Building W-3 Paint Storage Building	Still Bottoms	10 gallons	55-gallon drum
41	Building W-3 Paint Storage Building	Paint Flush	20 gallons	55-gallon drum
42	Building W-3 Paint Storage Building	Solvent / Paint Rags	5 gallons	55-gallon drum

43	Building W-3 Paint Dock	Aerosols & Paint Pens	20 gallons	55-gallon drum
44	Building E-4 Paint Dock	Solvent / Paint Rags	5 gallons	55-gallon drum
45	Building E-3 Paint Drip Tank	Paint Dip Plastic/Paper	40 gallons	55-gallon drum
46	Building C 1500 Ton Press	Aerosols & Paint Pens	5 gallons	55-gallon drum
47	Building C-6 Column B9	Paint Obsolete / Off-spec	1 gallon	55-gallon drum
48	Building C-6 Column J15	Solvent / Paint Rags	15 gallons	55-gallon drum
49	Health Care Facility	Hazardous Waste Pharmaceuticals	0 gallons	5-gallon bucket

All hazardous waste accumulation containers observed in the SAAs were in good condition, closed, labeled with the indication of the nature of the hazard, and labeled with the words “Hazardous Waste”.

During the visual inspection of the SAAs, I asked Ms. Miller how aerosol cans were managed. Ms. Miller stated the facility uses aerosol cans for touch up paint operations and when the aerosol can is RCRA empty, the entire aerosol can is discarded and managed as a hazardous waste.

I reviewed the management of the SAAs, and no issues or findings were noted.

4.6 Painting Operations and Distillation Unit

During the visual inspection, I observed large paint booths throughout the facility and a distillation unit located in Building W-3. Mr. Carter stated the facility’s distillation unit has not been operational for most of 2021. At the time of the inspection, the distillation unit was not operating, and I observed only one 55-gallon container holding paint flush material awaiting reclamation. Mr. Carter explained that when the distillation is operational, it is used to reclaim the facility’s paint flush waste from flushing paint lines. The container was labeled “Paint Flush Awaiting Reclamation” and had an accumulation start date of December 14, 2021. Mr. Carter explained the facility anticipates the distillation unit to be operational in the near future and this 55-gallon container of paint flush would be reclaimed. I was unable to photograph the distillation unit or 55-gallon container of HSM because all electronics were required to be left outside of the room as a fire prevention measure. Mr. Carter explained the facility uses methyl n-amyl ketone (MAK) to flush automated paint lines on site. The MAK is hard piped via a 55-gallon container and is connected to automated paint lines. The SDS for MAK is provided in Attachment 28. Mr. Carter explained if paint flush was not distilled, it is managed as a hazardous waste. During records review, I observed a manifest showing the paint flush was sent off-site as a D001, D035, F003, and F005 hazardous waste. Mr. Carter explained this must have been a legacy issue and

that the waste is managed as a D001 and D035 waste per the waste profile in Attachment 9. I asked Mr. Carter why the waste profile stated a DOT description of xylene and toluene, and he was not sure because these are not included in the waste stream. Mr. Carter explained the facility keeps the D035 waste code attached to the waste stream because some paints could contain MEK but reiterated that the facility only flushes paint lines with MAK.

I observed one 55-gallon container in SAA #40 holding still bottoms waste. The waste profile for the still bottoms waste is provided in Attachment 12. I asked Mr. Carter why the F003 and F005 were applied to this waste stream. Mr. Carter stated he was not sure because the still bottoms are only generated from the reclamation of MAK. Mr. Carter stated he would update the waste profile. Mr. Carter explained when operational, the facility used engineering judgement based on amount of reclaimed solvent and the efficiency rating of the distillation unit that at least 75 percent of the HSM is reclaimed. Mr. Carter explained the facility reclaims 55-gallons of HSM each batch. The installation manual for the distillation unit is provided in Attachment 29. I asked Mr. Carter if the facility notified EPA of their HSM activity. Mr. Carter stated the facility initially notified EPA of their hazardous waste activity on February 23, 2012. During records review, Mr. Carter provided EPA Form 8700-12 for the original notification and the most recent renotification of the facility HSM activities from 2019. The HSM renotification is provided in Attachment 11.

During the visual inspection, I observed paint flush being accumulated in 55-gallon drums as described above and the facility was managing all drums in manufacturing areas as hazardous waste. The 55-gallon containers were managed as SAA containers. As stated in Section 4.5 of this report, all SAA containers were in good condition, closed, labeled with the indication of the nature of the hazard, and labeled with the words "Hazardous Waste". After conversations with Mr. Carter, Ms. Miller, completed the full compliance checklist for HSM reclaimed on site in Attachment 4, and reviewing documents provided in records review, I determined the facility was in compliance with 261.4(a)(23)(i)(A).

During the visual inspection of the facility's paint booths, I observed multiple 55-gallon containers accumulating aerosol cans and paint pens, solvent and paint rags, and obsolete and off-spec waste paint. The generating processes for these wastes are as described in Table 1 of this report. I asked Ms. Miller and Mr. Carter if all aerosol cans are managed as hazardous waste. Ms. Miller stated it was easier from a management perspective to manage all aerosol cans as a hazardous waste and that she was aware of their ability to manage this type of waste as universal waste if desired. Ms. Miller then explained she was also aware of the multiple exclusions for managing solvent contaminated wipes. Ms. Miller stated the facility preferred to manage the waste as a hazardous waste. I asked Ms. Miller what types of solvents are used on-site. Ms. Miller stated MAK is the only solvent used in painting operations, but the facility maintenance team use a Startex cleaning solution to clean small tools and manufactured parts. Spent rags from this process would be considered hazardous waste. The SDS for Startex is provided in Attachment 30. Ms. Miller explained the maintenance team wipes excess solution off tools or manufactured parts and generated hazardous waste rags. Ms. Miller stated when the rags are

placed into the 55-gallon containers, there is a potential that rags contain free liquids. Therefore, the facility manages them as a hazardous waste. I reviewed the hazardous waste rags waste profile at the time of the inspection. The waste profile for the hazardous waste rags is provided in Attachment 10. I asked Ms. Miller why this waste stream is classified as a F003 listed hazardous waste. Ms. Miller stated the facility was overclassifying the waste stream out of an abundance of caution. Based on how this waste is generated, it appears this waste stream can be managed as a only a D001 characteristic hazardous waste.

I also observed a paint dip tank which is used to dip large, manufactured parts into and allows paint to adhere to the manufactured parts. The manufactured parts are on a hanging conveyor system and excess paint is dripped onto plastic floor covering. The facility manages this plastic covering as a hazardous waste. The waste profile for this waste is provided in Attachment 13. In addition, Mr. Carter explained the dip tank is cleaned out once per year. The cleanout generates a hazardous waste as shown in the dip tank cleanout waste profile provided in Attachment 17.

I asked Ms. Miller how the facility manages paint booth filters waste. Ms. Miller stated paint booth filters do not contain free liquids when replaced and are added to general trash containers. Ms. Miller estimated one ton of paint booth filters are generated monthly.

I reviewed the management of paint booths and manufacturing areas no issues or findings were noted.

4.7 Healthcare Facility

During the visual inspection, I observed a small healthcare facility as labeled on the facility layout (see Attachment 1). The facility managed SAA #49 in this building. Mr. Carter explained the facility rarely generates hazardous waste pharmaceuticals (HWP). Mr. Carter stated the most recent generation of any pharmaceutical waste occurred in 2020. During records review, Mr. Carter provided the most recent manifest generated from a shipment of 10 pounds of HWP. The manifest is provided in Attachment 19. The waste profile for this waste is provided in Attachment 18. This waste was a nonhazardous waste but a pharmaceutical waste. Ms. Miller stated if the facility generated HWP, they would manage HWP waste as a non-creditable HWP. The facility-maintained manifests and land disposable restriction (LDR) forms for HWP dating back three years. During records review, Ms. Miller provided me the training PowerPoint that all employees in the HCF receive. I reviewed the training program and determined the training ensured all personnel would be thoroughly familiar with proper waste handling and emergency procedures relevant to their responsibilities during normal facility operations and emergencies. At the time of the inspection, the facility's container observed in SAA #49 was empty and the facility was not accumulating any HWP. Based on conversations with Mr. Carter, Ms. Miller, and records reviewed, I determined the facility was in compliance with 40 CFR 266.502 and no issues or findings were noted.

4.8 Parts Washers

The facility operates two parts washers, one located in Building L-2 and one in the LSB weld area as labeled on the facility layout (see Attachment 1). The facility uses a nonhazardous parts washer solution. The parts washers are used to clean small tools in both these areas. Ms. Miller explained parts washers are serviced by the facility maintenance team and spent parts washer solution is accumulated in 55-gallon containers and managed as nonhazardous waste. The SDS for the parts washer solution used on-site is provided in Attachment 20. Ms. Miller stated the facility does not commingle wastes in parts washers to ensure the spent solution is nonhazardous. I did not note any issues or findings with any of the parts washers.

4.9 Nital Etchant and Adhesive Thinner Waste

During the visual inspection, I observed one 55-gallon container in SAA #20 of adhesive thinner waste and one 5-gallon container in SAA #22 of nital etchant waste. These two waste streams were the least actively generated amounts of hazardous waste streams observed on site. Ms. Miller explained the adhesive thinner is applied to one specific part to allow for better adhesion during final assembly. Approximately 100 pounds of this waste stream is generated each year. The waste profile is provided in Attachment 16. The nital etchant is generated due to a non-destructive test used to determine if overheating has occurred on a part due to machining, grinding, or welding. Ms. Miller stated the facility generates less than one gallon of this waste when conducting quality assurance tests on welded parts.

4.10 Prewash Wastewater and Machining Coolant

The facility uses multiple prewash solutions during cleaning operations of manufacturing equipment before painting operations take place. All solutions used are nonhazardous and prewash wastewater is accumulated in totes and transported to two 18,000-gallon tanks located in Building D-8 as labeled on the facility layout (see Attachment 1). Ms. Miller stated these prewashes are sent to John Deere Waterloo Works (JDWW) in Waterloo, IA via Sully Transportation for wastewater treatment prior to permitted discharge to City of Waterloo POTW. Ms. Miller stated this prewash wastewater is commingled with the facility machine coolant waste. The coolants are also nonhazardous waste and the SDS for the machine coolant used on site is provided in Attachment 21. The SDS shows the coolant has approximately 3% of a trade secret ingredient. Ms. Miller stated the nonhazardous waste determination was made with confirmation that the trade secret ingredient is nonhazardous. The prewash solution SDSs are provided in Attachment 22. Ms. Miller stated these waste streams are managed separately from the facility's industrial wastewater which is comprised of 100 percent rinse water. This water is managed under the facility's industrial wastewater discharge agreement with the City of Ottumwa (see Attachment 23). I asked Ms. Miller why these wastes are managed separately. Ms. Miller stated the prewash solutions and coolant wastes need pretreatment prior to discharge and that JDOW does not have a wastewater treatment plant. Therefore, JDOW ships this waste stream to JDWW. Ms. Miller explained the rinse water does not contain any solutions or coolants and therefore

does not require pretreatment prior to discharge and is managed under JDOW's industrial wastewater discharge agreement with the City of Ottumwa. I did not observe or note any issues with management practices regarding prewash wastewater, machine coolant, or rinse wastewater during the visual inspection.

4.11 Universal Waste Accumulation Area

JDOW manages universal waste in various locations throughout the facility. Universal wastes are consolidated prior to shipments off site in the CAA. Universal Waste lamps and batteries were observed in CAA as discussed in Section 4.4 of this report. I observed two 30-gallon containers of universal waste batteries, three 4-foot, and two 8-foot universal waste lamp containers. All universal waste containers were closed, in good condition, and labeled as "Universal Waste Batteries" or "Universal Waste Lamps". The earliest accumulation start date observed on a universal waste container was on one of the 30-gallon containers and was "08/10/2021". I also observed universal waste batteries containers located in Building R outside of the D14 lab (see Attachment 3, Photo 4). Both containers were closed, in good condition, and labeled as "Universal Waste Batteries". The containers were labeled with an accumulation start date of "08/10/2021." An example of a manifest used to ship universal waste off site is provided in Attachment 25.

I reviewed the management of all universal waste storage areas throughout the facility and no issues or findings were noted.

4.12 Used Oil

JDOW generates and manages used oil throughout manufacturing areas on site. The facility manages used oil in 55-gallon containers and consolidates used oil in the facility's 10,000 gallon used oil tank (see Attachment 3, Photo 5). Ms. Miller explained 55-gallon containers are brought to the used oil tank and are pumped directly from the container into the used oil tank. Safety-Kleen Systems Inc. services the used oil tank as needed by draining the used oil tank into a vacuum truck. The containers and tank were closed, labeled "Used Oil", and in good condition. I did not note any issues or findings at the used oil storage area.

4.13 Other Regulatory Requirements

Preparedness, Prevention, and Emergency Requirements - Safety and emergency equipment were present and in satisfactory condition in areas throughout the facility, including the hazardous waste container CAA (as noted in Section 4.4 of this report). Appropriate arrangements and coordination were made with necessary State and local emergency agencies.

I reviewed the preparedness, prevention, and emergency requirements and no issues or findings were noted.

Contingency Planning Requirements - The contingency plan (see Attachment 31) was on file

electronically and was reviewed while on site. The contingency plan included emergency evacuation routes, emergency response procedures, emergency coordinators and contact information, and a list of emergency response equipment.

The quick reference guide was included within the contingency plan. The facility had submitted the guide and contingency plan to local emergency response agencies including the local police department, fire department, and hospital. Upon review of the guide, I observed a list and description of hazardous waste with estimated maximum amounts of each waste on site at one time. The guide summarized evacuation and emergency response procedures as well. The guide included a map showing where hazardous waste is generated and accumulated on site, and another map showing the facility in relation to surrounding businesses, schools, and residential areas. Lastly, the guide included references to water supply and fire response equipment locations, identification of on-site notification systems or alarms, and the name and telephone number for the emergency contact for the area. I reviewed the entire RCRA contingency plan, and no findings were noted.

Personnel Training Requirements – Personnel are to be trained to perform hazardous waste duties, and new employees are to be trained within six months of start. The training, at a minimum, must be designed to ensure personnel at JDOW are able to manage hazardous waste relevant to the positions in which they are employed and respond effectively to emergencies by familiarizing them with emergency procedures, emergency equipment, and emergency systems, including:

1. Procedures for using, inspecting, repairing, and replacing facility emergency equipment
2. Communications and alarm systems
3. Response to fires or explosions

Upon reviewing the hazardous waste training employees of JDOW receive, I determined the training to be sufficient. Ms. Miller stated annual refresher trainings are tracked in an excel sheet matrix and organized by facility teams. Ms. Miller showed me this excel spreadsheet and observed a column that flagged all personnel that manage hazardous wastes in their respective teams to ensure all employees are trained annually. In addition, refresher training is held by Ms. Miller or Mr. Carter each quarter for new hires, inter team transfers, or employees who would otherwise have expired training the following quarter. I reviewed all employees who manage hazardous waste and emergency coordinators to ensure all personnel receive an annual hazardous waste refresher training. I determined all emergency coordinators and employees who require annual refresher training were up to date on their trainings. Ms. Miller also provided completed quizzes for all applicable employees which were reviewed during records review. Ms. Miller and Mr. Carter's most recent training certificates are provided in Attachment 32 as examples.

I reviewed the personnel training requirements, and no other findings were noted.

Manifest and Land Disposal Restriction (LDR) Requirements – JDOW maintained records of manifests on site at the time of inspection dating back three years. JDOW generated approximately 207 manifests over the last three years. I reviewed a representative sample of approximately 100 from the last three years. A manifest and corresponding LDR form are

provided in Attachment 33 as an example. I reviewed all other manifest and LDR requirements and no issues or findings were noted.

I observed no issues or findings during this inspection. However, further EPA review may add findings.

**Janosh
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Janosh Wolters
Energy Engineer
Date: February 3, 2022

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Amber Whisnant
Section Chief
ECAD/CB/RCRA, EPA Region 7
Date: _____

Attachments:

1. Facility Layout (1 page)
2. John Deere Ottumwa Works Photolog (1 page)
3. John Deere Ottumwa Works Photos (7 photos/8 pages)
4. EPA Inspection Checklist (56 pages)
5. Confidentiality Notice (1 page)
6. Receipt for Documents and Samples (1 page)
7. Hazardous Waste Site Info Verification Report for Inspector (1 page)
8. Paint Obsolete and Off spec Waste Profile (3 pages)
9. Paint Flush Waste Profile (3 pages)
10. Solvent and Paint Rags Waste Profile (3 pages)
11. HSM Notification (7 pages)
12. Still Bottoms Waste Profile (3 pages)
13. Paint Dip Plastic Waste Profile (3 pages)
14. Aerosol Cans and Paint Pens Waste Profile (3 pages)
15. Orphan Chemicals LabPak Waste Profile (3 pages)
16. Adhesive Thinner Waste Profile (2 pages)
17. Dip Tank Waste Profile (3 pages)
18. Hazardous Pharmaceuticals Waste Profile (3 pages)
19. Hazardous Pharmaceuticals Waste Profile Manifest (1 page)
20. Parts Washer SDS (10 pages)
21. Coolant SDS (5 pages)
22. Water Pretreatment Solutions SDSs (24 pages)
23. POTW Discharge Agreement (16 pages)

- 24. Used Oil Invoice (1 page)
- 25. Universal Waste Manifest (1 page)
- 26. CAA Log (2 pages)
- 27. CAA Closure Notice (3 pages)
- 28. MAK SDS (12 pages)
- 29. Distillation Unit Manual (42 pages)
- 30. Startex SDS (13 pages)
- 31. Contingency Plan (34 pages)
- 32. Training Records (2 pages)
- 33. Manifest & LDR Form (2 pages)