

RCRA Inspection Report

1) Inspector and Author of Report

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U.S. Environmental Protection Agency, Region 4
Enforcement and Compliance Assurance Division
Chemical Safety and Land Enforcement Branch
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2) Facility Information

Ford Motor Company–KY Truck Plant KYD053351227
3001 Chamberlain Lane
Louisville, Jefferson County, Kentucky 40241

3) Responsible Official

Ms. Teresa Douglas
Plant Environmental Engineer

(502) 429-2366
tdougla7@ford.com

4) Inspection Participants

Teresa Douglas, Ford Motor Company
Greg Long, Ford Motor Company
Danny Huffman, Ford Motor Company
Scott Gerstner, Kentucky Department for Environmental Protection
DeAnna Williams, Kentucky Department for Environmental Protection
Travis Velkly, Louisville Metro APCD
Josh McGeorge, Louisville Metro APCD
William Kappler, U. S. Environmental Protection Agency, Region 4

5) Date of Inspection

October 18, 2022

6) Purpose of Inspection

The purpose of this inspection was for the U.S. Environmental Protection Agency, Region 4, and the Kentucky Department for Environmental Protection to conduct a joint unannounced compliance evaluation inspection at Ford Motor Company–KY Truck Plant (hereinafter, “Ford” or the “facility”) to determine compliance with the applicable requirements of the Resource Conservation and Recovery Act (RCRA) and the corresponding Kentucky Department for Environmental Protection (KDEP) regulations. This was an EPA lead inspection.

7) **Applicable Regulations**¹

Resource Conservation and Recovery Act (RCRA) Sections 3002 (42 U.S. Code – Annotated U.S.C.A. §§ 6925 and 6927), Kentucky Revised Statutes Title XVIII, Chapter 224, Subchapter 46-Hazardous Waste *et seq.*, and Title 401 of the Kentucky Administrative Regulations (K.A.R.) Chapters 30 through 38, 43, and [40 Code of Federal Regulation (C.F.R.) Parts 260 - 270, 273, 278, & 279].

Pursuant to 401 KAR 39:080 Section 1 [40 C.F.R. § 262.15(a)], a generator may accumulate as much as 55 gallons of non-acute hazardous waste in containers at or near the point of generation where wastes initially accumulate, which is under the control of the operator of the process generating the waste, without a permit or without having interim status, as required by KRS 224.46-520(1) [Section 3005 of RCRA, 42 U.S.C. § 6925], and without complying with 401 KAR 39:080 Section 1 [40 C.F.R. § 262.16(b) or §262.17(a)], except as required in 401 KAR 39:080 Section 1 [40 C.F.R. § 262.15(a)(7) and (8)], provided that the generator complies with the satellite accumulation area conditions listed in 401 KAR 39:080 Section 1 [40 C.F.R. § 262.15(a)] (hereinafter referred to as the “SAA Permit Exemption”).

Pursuant to 401 KAR 39:080 Section 1 [40 C.F.R. § 262.17], a generator of 1,000 kilograms or greater of hazardous waste in a calendar month is a Large Quantity Generator (LQG) and may accumulate hazardous waste on-site for 90 days or less without a permit or without having interim status, as required by KRS 224.46-520(1) [Section 3005 of RCRA, 42 U.S.C. § 6925], provided that the generator complies with the conditions listed in 401 KAR 39:080 Section 1 [40 C.F.R. § 262.17] (hereinafter referred to as the “LQG Permit Exemption”).

8) **Facility Description**

Ford is located at 3001 Chamberlain Lane, Louisville, Jefferson County, Kentucky, Latitude 38.29166, and Longitude -85.53055. The facility has been at its present location since the late 1960s. The facility employs approximately 10,000 people and operates 24 hours a day, seven days a week, on three shifts. The facility consists of four main manufacturing buildings consisting of approximately six million square feet of space. The primary NAICS code for the facility is 336112, Light Truck and Utility Vehicle Manufacturing.

Ford submitted a RCRA Subtitle C Site Identification Form, 8700-12, of its regulated waste activity to KDEP on March 10, 2021, notifying as a hazardous secondary material (HSM) handler of purge solvent (xylene, MIBK) for reclamation. Ford’s most recent submission of its regulated waste activity to KDEP was on December 17, 2021, notifying as a large quantity generator (LQG) of hazardous waste, a small quantity handler of universal waste (SQHUW), and HSM handler.

Ford assembles the F-Series Super Duty truck and the Ford Expedition and Lincoln Navigator sport utility vehicles (SUVs). The facility cuts, stamps, bonds, rivets, and conducts minor welding of the aluminium body panels, paints the vehicle body, assembles the main components

¹ As the State’s authorized hazardous waste program operates in lieu of the federal RCRA program, the citations of those authorized provisions will be to the authorized State program. However, for ease of reference, the federal citations will follow in brackets.

into the vehicle, and conducts the final assembly of all other components. The facility conducts metal stamping to form the panels for the vehicle's body in the Stamp Shop; bonds, rivets, and performs minor welding of the vehicle panels to form the body in the Weld Shop; conducts undercoat, primer coat, topcoat, and clear coat painting of the vehicle body in a dry and wet paint process in the Paint Building; and assembles the main components (manufactured by offsite suppliers) into the vehicle body in the Assembly Building. Final assembly operations and testing of the vehicle is also performed. Engines and transmissions are received at the facility fully assembled.

Ford operates a wastewater treatment plant (WWTP) for the treatment of wastewater generated from cleaning water-related paints in the paint booth. The wash water is sprayed in the paint booth, captured in a center channel, and discharged to a solids collection pit in the WWTP. The solids in the collection pit are floated and discharged over a weir and dewatered in a belt press. The F019 solids are managed in accordance with a KDEP variance at a Subtitle D lined landfill. Wastewater is also generated from vehicle fit testing.

Ford was issued a Title V permit from the Louisville Metro Air Pollution Control District (permit No.: O-0073-18-V), which expires on March 31, 2024. The facility controls air emissions in accordance with Clean Air Act (CAA) requirements under 40 C.F.R. Parts 60, 61, and 63, and the equipment should be operated, monitored, and repaired in accordance with applicable CAA standards.

9) Previous Inspection History

Ford was last inspected by the KDEP on September 21, 2021, for compliance with the Commonwealth of Kentucky hazardous waste regulations. No issues were observed at the time of the inspection.

Ford was inspected by the EPA on November 2, 2000, for compliance with the RCRA regulations. The facility was cited for the RCRA organic air emission, subpart BB and CC regulations.

10) Opening Conference

On October 18, 2022, the EPA inspector William Kappler, accompanied by KDEP inspectors Scott Gerstner and DeAnna Williams, arrived at Ford at approximately 8:40 a.m. Facility representative, Teresa Douglas, Plant Environmental Engineer, received the inspectors. Ms. Douglas and the inspectors were joined by Ford representatives Greg Long and Danny Huffman for the opening conference. The inspectors introduced themselves, showed their credentials to Ford representatives, and explained the purpose of the visit.

The inspectors described the anticipated use of a digital camera during the inspection and provided a written list of the records needed for review. The EPA inspector explained that the Small Business Regulatory Enforcement Fairness Act's classification of a "small business" is generally set by the Small Business Administration using the business' SIC/NAICS code and annual receipts or number of employees. A copy of the EPA's information sheet for small businesses can be found at <https://www.epa.gov/sites/production/files/2017->

06/documents/smallbusinessinfo.pdf. The EPA inspector also discussed the company's ability, pursuant to 40 C.F.R. §2.203, to assert a business confidentiality claim for information submitted to the EPA. Ford did not assert a business confidentiality claim.

Ford representatives provided an overview of the facility's history and current operations during the opening conference. The inspection participants also discussed health and safety protocols and required personal protective equipment before Ford representatives escorted the inspectors on a tour of the process operations.

11) **Observations**

Paint Building

Warren Bullock, Engineering Manager and Todd Abbott, Paint Maintenance Manager, joined the inspectors in the Paint Building. The inspectors were issued a one-piece protective cover-all, prior to entering the process floor. A dry and a wet paint process is conducted in this building. Both painting processes consist of a zirconium deposition layer, then an electro deposition primer layer, then a topcoat and a finished clearcoat. One paint booth is used for the Ford Expedition and Lincoln Navigator and two paint booths are used for the F-Series Super Duty truck. The paint operation is conducted in an enclosed booth using robotic spray arms. Waste purge solvent is generated when the robotic spray nozzle is cleaned with a solvent and purged in a sealed pot. The purge solvent is discharged from the pot through a pipeline to the outdoor accumulation tanks. Wastewater generated from cleaning the paint booth is discharged through a pipeline to a solids collection pit, floated, clarified, and dewatered in a belt press.

Outdoor Tank Farm

Mike Grossman, MPS and Nolan Pellman, Gage Products Company met inspectors at the outdoor tank farm. The inspectors observed a tank farm with two approximately 9,800-gallon vertical tanks marked as tank number three and tank number four. The tanks were on a sealed concrete pad and surrounded by 12 to 18-inch concrete secondary containment berm. Each tank was raised above the concrete pad by four welded steel support legs mounted on four elevated concrete footings. Tank number three accumulates purge solvent from the SUV paint line and tank number four accumulates purge solvent from the truck paint line. The inspectors observed that the concrete containment was dry, appeared clean, and in good condition. The inspectors observed each tank labeled with the words "hazardous secondary materials, warning flammable". The words "used purge material" were also marked on each tank (Photographs 1 and 2). Tank number one and number two accumulate wastewater.

Super Duty Truck Paint Line

The inspectors observed the paint lines E1 and E2. The inspectors observed the robotic sprayer and purge pot inside the paint spray booth.

SUV Paint Primer Booth

Waste cloth rags contaminated with paint are accumulated in this area as nonhazardous waste.

Maintenance Area

The inspectors observed two 20 to 30-gallon containers accumulating waste aerosol cans and waste batteries. The containers were closed, labeled with the words "universal waste", and

marked with the date March 22, 2022, and August 30, 2022. The container of aerosol cans was labeled with a flammable hazard indicator (Photograph 3).

Super Duty Truck Spot Repair

Minor repairs are performed on the trucks. The inspectors observed paper wipes contaminated with acrylic lacquer (MEK and acetone) in a large garbage container along with other accumulated trash. The contaminated wipes appear to be managed as nonhazardous waste and it appears a waste determination was not made on the contaminated wipes (Photographs 4 and 5).

Pursuant to 401 KAR 39:080 Section 1 [40 C.F.R. § 262.11], a person who generates a solid waste, as defined in 40 C.F.R. § 261.2, must make an accurate determination as to whether that waste is a hazardous waste in order to ensure wastes are properly managed according to applicable RCRA regulations articulated in 401 KAR 39:080 Section 1 [40 C.F.R. § 262.11].

Paint Repair Satellite Accumulation Area

The inspectors observed one 55-gallon container accumulating waste paint and solvent (D001, D018, D035, F003) in the Paint Repair satellite accumulation area (SAA). The container was closed, in good condition, labeled with the words “hazardous waste”, and labeled with a hazard indicator.

WWTP

This area is managed by ABEDNGO, a contractor for Ford. ABEDNGO manages and maintains the chemistry of the wastewater in the solids collection pit and operates the belt press. The inspectors observed a 30 to 40-cubic yard container accumulating waste solids from the belt press dewatering operation (Photograph 7).

The inspectors also observed a release of waste solids to the concrete containment system under the belt press and under a container accumulating waste solids. The inspectors requested that the facility respond to the release of waste solids (Photograph 6).

Part Washer Booth Area

Empty product containers are washed in this booth and the containers are reused. The inspectors observed one 55-gallon container accumulating waste rags, paint chips, gloves and filters that was closed and labeled with the words “nonhazardous waste”. The inspectors observed one 55-gallon container accumulating waste butanol and xylene (D001, D018, D035, F003) in the Part Washer Booth SAA. The container was closed, labeled with words “hazardous waste”, and labeled with a hazard indicator (Photograph 8).

Central Accumulation Area (90-day or less)

Michael Hall is the hazmat operator for this area. Containers of hazardous waste are stored in this area for 90-days or less, prior to offsite shipment to a destination facility. The inspectors observed one 55-gallon container accumulating waste solvent (toluene) and five 55-gallon containers accumulating waste paint and solvent (n-butanol and xylene) on wooden pallets. The containers were closed, in good condition, with aisle space, labeled with the words “hazardous waste”, each marked with an accumulation start date in September 2022, or October 2022, and labeled with hazard indicators (Photograph 9).

The inspectors observed one 55-gallon container accumulating waste paint and solvent in a SAA at the CAA. The container was closed, labeled with the words “hazardous waste”, and labeled with a hazard indicator (Photograph 8).

The inspectors also observed two 30-cubic yard containers accumulating nonhazardous waste secondary heels and empty containers that were closed and labeled with the words “nonhazardous waste”.

Universal waste is also accumulated in this area, prior to offsite shipment to a destination facility. The inspectors observed one 55-gallon container of waste batteries, one 55-gallon container of waste aerosol cans, one container of waste four-foot lamps, and one box of small lamps that were all closed, labeled with the words “universal waste”, and marked with a date less than one year old.

Spill control material and emergency equipment is maintained in this area and communications are conducted by phone line or cell phone.

Main Assembly Building

The main assembly building consists of the stamp shop where the metal parts are fabricated and welded, the body shop where the main components are assembled into the vehicle body, and final assembly area where the seats, consoles, and other components are assembled. There are no SAAs in the stamp shop.

Super Duty Windshield Installation

The inspectors observed one 55-gallon container accumulating waste toluene and methanol in the Super Duty Windshield Installation SAA. The container was closed, labeled with the words hazardous waste, and labeled with a flammable hazard indicator.

Medical Department

Ford maintains a medical department to address minor health and injury issues. Over the counter (OTC) drugs, vaccines, nitroglycerin pills and epinephrine injectable are maintained. The inspectors were escorted to a small closet, identified as the hazardous/infectious room. The inspectors observed one 5-gallon container accumulating waste OTC Pepcid in the Medical Department SAA. The 5-gallon container was closed, labeled with the words “hazardous waste”, labeled with a hazard indicator, and marked with the date August 10, 2022.

SUV Windshield Area

The inspectors observed one 55-gallon container accumulating waste solvent (toluene) in the SUV Windshield SAA. The container was closed, labeled with the words “hazardous waste”, and labeled with a hazard indicator.

Pre-Delivery and Spot Repair Area

The inspectors observed one 55-gallon container accumulating waste paint and solvent in the Pre-Delivery and Spot Repair SAA. The container was closed, labeled with the words “hazardous waste”, and labeled with a hazard indicator. Two additional 55-gallon containers accumulating RCRA empty containers, rags, wipes, gloves, and cups were observed in this area. The containers were closed and labeled with words “nonhazardous waste”.

Waste Management

The facility generates hazardous waste consisting of lead paint chips, waste paint related material, ignitable paint/solvent, paint line cleaner, contaminated gasoline, waste vehicle liquids and solids (antifreeze, oil) waste coating solution, and ignitable solvents. Ford manages containers of hazardous waste in satellite accumulation areas, manages containers of universal waste in various areas of the facility, and containers of hazardous waste and of universal waste in one central accumulation area. Waste purge solvent (D001, F003) generated from the painting operations is accumulated in two approximately 9,800-gallon tanks. Ford manages this waste purge solvent as a hazardous secondary material that is not a solid waste when managed in accordance with 40 C.F.R. 261.4(a)(24). Wastewater generated from paint booth cleaning and from vehicle fit testing is treated in the WWTP. The waste solids (F019) generated from the WWTP's belt press were granted a variance and are managed at a lined Subtitle D municipal or industrial landfill. Waste lamps, batteries, and aerosol cans are also generated and managed on-site as universal waste.

Hazardous secondary material is managed by Ford's contractor MPS. The hazardous secondary material is transported by S&C Transport by tanker truck to Gage Products Company in Ferndale, Michigan for reclamation. MPS conducts the container and tanks inspections.

Employees in process operations that generate hazardous waste accumulate it in containers at the point of generation. Full containers are transferred by Plant Engineering/Central Maintenance (Central) to the central accumulation area for 90-day or less storage. The facility prepares the hazardous waste for packaging and on-site management, prior to shipping the hazardous waste using the manifest system to an offsite treatment, storage, or disposal facility (TSDF).

Ford used the following transporters in 2021 to 2022

S&C Transport, MIK126399684

Clean Earth Specialty Waste Solutions, MNS000110924

Ford used the following TSDFs in 2021 to 2022

Petro Chemical Processing Group of Detroit, MID980615298

Gage Products Company (MID005338801)

Records Review

The hazardous waste manifests, land disposal restriction notifications, and nonhazardous waste manifests from October 5, 2021, to September 9, 2022, were reviewed. The universal waste manifests were reviewed from August 2020 to September 2022. The inspectors observed that Ford maintains the manifest records for 2019 and 2020. The inspectors reviewed four hazardous waste manifests from the EPA's E-Manifest Record System for 2022.

The inspectors reviewed manifests and a summary sheet showing shipments of hazardous secondary material purge solvent for reclamation.

Waste Determination/Profiles/Safety Data Sheets (SDS)

The inspectors reviewed waste profiles, laboratory analysis, and SDS records. The inspectors reviewed the waste determination records for hydro-purge (wastewater and paint) waste rags/wipes, acrylic lacquer, purge solvent, and belt press solids.

The inspectors reviewed container and tanks inspection records from September 2021 to October 2022. The inspectors reviewed the contingency plan, quick reference guide, arrangements with the local authorities, personnel training, job titles, position descriptions, and annual report.

12) **Closing Conference**

The inspectors conducted a closing conference with Teresa Douglas, Greg Long and Danny Huffman, from Ford and Scott Gerstner and DeAnna Williams, from KDEP. During this meeting, the inspectors stated their preliminary conclusions of the inspection.

13) **Sampling Overview**

Sampling was not conducted.

14) **List of Appendices**

Appendix 1 – Photograph Log:
Photos taken on: October 18, 2022
Photos taken by: William Kappler
Samsung Camera (Model WB250F)
EPA Property Tag# S75917

15) **Signed**

WILLIAM KAPPLER

Digitally signed by WILLIAM
KAPPLER

Date: 2022.11.02 16:55:30 -04'00'

William Kappler
Physical Scientist

Date

Concurrence

ARACELI CHAVEZ

Digitally signed by ARACELI CHAVEZ
Date: 2022.11.03 15:45:18 -04'00'

Araceli B. Chavez
Chief
RCRA Enforcement Section

Date

Ford Motor Company-KY Truck Plant
RCRA CEI Photographs
William Kappler, US EPA



Outdoor Tank Farm. HSM Tank #3 waste paint and solvent from SUV paint line. Photograph 1 taken at 9:59 a.m.



Outdoor Tank Farm. HSM Tank #4 waste paint and solvent from super duty truck paint line. Photograph 2 taken at 9:59 a.m.



Paint Building. Maintenance Area. Container of universal waste aerosol cans and batteries. Photograph 3 taken at 10:32 a.m.



Paint Building. Super Duty Truck Spot Repair. Container of acrylic lacquer used in spot repair. Photograph 4 taken at 10:40 a.m.

Ford Motor Company-KY Truck Plant
RCRA CEI Photographs
William Kappler, US EPA



Paint Building. Super Duty Truck Spot Repair. Container of contaminated wipes (acrylic lacquer) accumulated with other trash. Photograph 5 taken at 10:40 a.m.



WWTP. Belt Press used to dewater solids. Observed waste solids in containment area. Photograph 6 taken at 10:49 a.m.



WWTP. Container accumulating waste solids. Photograph 7 taken at 10:50 a.m.



Paint Building. Paint Mix Room. Part wash booth used to wash empty product containers. Photograph 8 taken at 11:00 a.m.

Ford Motor Company-KY Truck Plant
RCRA CEI Photographs
William Kappler, US EPA



Central Accumulation Area. Observed six 55-gallon containers of waste paint and solvent. Photograph 9 taken at 11:26 a.m.