



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, ILLINOIS 60604**

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
Nippon Paint Automotive America, Lansing, Illinois

FROM: Jason Schenandoah, Environmental Engineer
AECAB (IL/IN)

THRU: Nathan Frank, Section Supervisor
AECAB (IL/IN)

TO: File

BASIC INFORMATION

Facility Name: Nippon Paint Automotive America (NPAA)

Facility Location: 2701 E 170th St, Lansing, IL 60438

Date of Inspection: May 30, 2023

EPA Inspector(s):

1. Jason Schenandoah, Environmental Engineer
2. Sasa Dunovic, Environmental Engineer

Other Attendees:

1. Mark Renick, Environmental, Health, and Safety Manager
2. Ken Hutchison, Engineering Manager

Contact Email Address: mark.renick@nipponpaint.us

Purpose of Inspection: To investigate NPAA's emission factors and the effectiveness of the storage tank closed vent systems.

Facility Type: Paint and coating manufacturer

Regulations Central to Inspection: National Emission Standards for Hazardous Air Pollutants for Area Sources: Paints and Allied Products Manufacturing at 40 C.F.R. Part 63, Subpart CCCCCC

Facility Name: Nippon Paint Automotive Americas
Facility Location: 2701 E 170th St, Lansing, IL 60438
Date of Inspection: May 30, 2023

Arrival Time: 9:10 am
Departure Time: 12:30 pm

Inspection Type:

- ☒ Unannounced Inspection
☐ Announced Inspection

OPENING CONFERENCE

- ☒ Presented Credentials
☒ Stated authority and purpose of inspection
☒ Provided Small Business Resource Information Sheet
☐ Small Business Resource Information Sheet not provided. Reason:
☒ Provided CBI warning to facility

The following information was obtained verbally from NPAA personnel unless otherwise noted.

Company Ownership: The name of the company changed from NB Coatings to Nippon Paint Automotive Americas, Inc. in January 2021.

Process Description:

Raw materials for the resin arrive by truck and are stored in one of two tank farms on site. Material stored in the tank farms includes: toluene, xylene, acetone, ethylbenzene, monomers, and oxidizers. The materials are pumped into process vessels and reacted at specific temperatures and pressures to create resins. The resin is pumped into a drum and then transported to the milling area, where it is loaded into a small tank for storage. The resin is pumped from the small tank into the milling process tanks and is combined with pigment. After the resin has been milled to the correct particulate size, it is put into a blending tank. In the blending tank solvent is added and the product is blended until the final product is complete. Samples are pulled from the blending tank and quality is tested in a lab. If the lab results determine that the specifications are off, more raw materials are added to the tank and the blending process continues. If the final product meets specifications, then the product is staged for distribution. Total production takes 1 to 3 days.

Staff Interview: Building 3 contains the resin reactors. Emissions from the resin reactors, the bucket wash, the automated dispensing system, and some storage tanks are controlled by a thermal oxidizer. Building 2 has a small paint plant, a large paint plant, and a bucket wash area. The small paint plant utilizes 30-60 gallon mixing tanks that fill 5 gallon pails upon completion. The large paint plant utilizes 500-3400 gallon mixing tanks and fill 55 gallon drums upon completion. NPAA switched to a new emissions estimation software called Emission Masters.

TOUR INFORMATION

EPA Tour of the Facility: Yes

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Data Collected and Observations:

Two Toxic Vapor Analyzer 2020s (TVAs) were utilized to conduct EPA Method 21 (Method 21) throughout the facility. The closed vent systems on controlled storage tanks were monitored via Method 21, several pieces of equipment on the closed vent system were noted to have detectable emissions. Not all storage tanks had access to monitor closed vent system equipment. VOC concentration was measured in four rooms in Building 2 and along the western outer wall of Building 2 at vent fan locations. Three vent fans on the outer wall of Building 2 were not reachable. Building 2 also has roof ventilation and those vents were not measured either. Method 21 measurements are tabulated in Appendix A: Field Measurement Data. Additional building ventilation is on the roof. All of the doors in the bucket wash room were open; two doors opened to other areas of Building 2 and one door was open to the atmosphere.

Photos and/or Videos: were not taken during the inspection.

Field Measurements: were taken during this inspection.
See Appendix A: Field Measurement Data.

CLOSING CONFERENCE

☒ Provided U.S. EPA point of contact to the facility

Requested documents:

- Air emissions reports for the last three years
- Three separate Emission Masters calculations with supporting information:
 - A batch from clear coat Tank #41
 - A 460-gallon tank from the small paint plant
 - A batch from Tank #21

Compliance Assistance: A list of equipment that had detectable emissions was communicated to NPAA.

Concerns: Ambient air in Building 2 was measured to have volatile organic compound (VOC) concentrations between 50 to 180 parts per million (ppm). Air exiting the vents on the wall of Building 2 had VOC concentrations between 60 and 160 ppm.

DIGITAL SIGNATURES

Report Author: JASON
SCHENANDOAH Digitally signed by JASON
SCHENANDOAH
Date: 2023.07.28
11:09:20 -05'00'

Section Supervisor: Frank,
Nathan Digitally signed by Frank,
Nathan
Date: 2023.07.28
16:20:28 -05'00'

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APPENDICES AND ATTACHMENTS

1. Appendix A: Field Measurement Data

APPENDIX A: FIELD MEASUREMENT DATA

Two TVAs, EPA equipment IDs B37055 and SL1555, were utilized to conduct Method 21 throughout NPAA's facility. Below are tables containing calibration and measurement data.

Calibration Check 10:20 am

Calibration Gas Hydrocarbon Concentration (ppmv)	TVA 2020 Results (ppm)	
	#B37055	#SL1555
550	547	533
1,960	1,965	1,945
10,000	9,965	9,986

Drift Check 12:30 pm

Calibration Gas Hydrocarbon Concentration (ppmv)	TVA 2020 Results (ppm)	
	#B37055	#SL1555
550	555	511
1,960	1,964	1,927
10,000	10,100	9,818

Method 21 Measurements

Equipment Identifier	Equipment Type	TVA #SL1555 Measurement (ppm)	TVA # B37055 Measurement (ppm)	Notes
Tank ST 4	Emergency vent	9,900	10,100	
Tank ST 5	Housing drain	587	No confirmation	
Tank ST 5	Emergency vent	5,725	5,462	
Tank ST 7	Emergency vent	1,624	2,415	
Tank ST 9	Emergency vent	650	630	
Tank ST 12	Emergency vent	1,122	1,015	
Tank ST 14	Emergency vent	21,000	8,760	
Tank ST 18	Emergency vent	3,128	4,700	
Tank TK 32	Manway	27,800	22,200	The manway was covered by insulation, the measurement was made outside of the insulation
Bucket wash area	Ambient air	180		
Bucket wash area	At overhead door	95		
Building 2	Air vent 1	160		
Building 2	Air vent 2	114		
Small paint plant	Ambient air	125		

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Small paint plant	Portable mixer		22,000	Emissions were visible to the naked eye while the operator was actively loading material into the mixer
Large paint plant	Ambient air west room	70		
Large paint plant	Ambient air east room	50		
Building 2	Air vent 3	65		
Building 2	Air vent 4	130		
Building 2	Air vent 5	62		
Building 2	Air vent 6	60		