



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

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
Honda Development & Manufacturing of America, LLC - Indiana Auto
Plant, Greensburg, Indiana

FROM: Carlo Demma, Physical Scientist (Env.)
AECAB (MN/OH)

THRU: Brian Dickens, Section Supervisor
AECAB (MN/OH)

TO: File

BASIC INFORMATION

Facility Name: Honda Development & Manufacturing of America, LLC - Indiana Auto Plant

Facility Location: 2755 N. Michigan Ave. Greensburg, IN 47240

Date of Inspection: April 19, 2023

EPA Inspector(s):

1. Carlo Demma, Physical Scientist, (Environmental)
2. Meghan Pashen, Environmental Engineer

Other Attendees:

1. Amy Rotert, Air Compliance Inspector, IDEM
2. Nicole Sterling, Air Compliance Inspector, IDEM

Facility Attendees:

1. Jonathan Nelson, Green Factory Lead, Honda Development & Manufacturing of America, LLC - Indiana Auto Plant
2. Arnie Banawa, Environmental Engineer, Green Factory Lead, Honda Development & Manufacturing of America, LLC - Indiana Auto Plant
3. Alanie Hooton, Environmental Engineer, Green Factory Lead, Honda Development & Manufacturing of America, LLC - Indiana Auto Plant

Contact Email Address: Jonathan_nelson@na.honda.com

Facility Name: Honda Development & Manufacturing of America, LLC - Indiana Auto Plant

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Date of Inspection: April 19, 2023

Purpose of Inspection: Investigate compliance with autobody and plastic parts coating operations. EPA's evaluation focused solely on the various coatings applied to the vehicles.

Facility Type: Stationary automobile and light-duty trucks manufacturing plant.

Regulations Central to Inspection: Regulations of organic hazardous air pollutants (HAPs) in coatings, thinners, cleaning chemicals and waste containers subject to Subpart IIII - National Emission Standards for Hazardous Air Pollutants: Surface Coating of Automobiles and Light-Duty Trucks (NESHAP Subpart 4I), and the applicable regulations relating to emissions control of organic HAPs material in Title V Permit No. T031-43672-00026 (Title V Permit) such as, the use of RTOs to achieve the required destruction efficiency and individual organic HAP percentage limits.

Arrival Time: 2:15 PM

Departure Time: 5:15 PM

Inspection Type:

☒ Unannounced Inspection

OPENING CONFERENCE

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

The following information was obtained verbally from Jonathan Nelson and Arnie Banawa unless otherwise noted.

Company Ownership: Honda Development & Manufacturing of America (HDMA) and Indiana Auto Plant (IAP) partially consolidated in April of 2021. HDMA - IAP has operated in Greensburg Indiana since 2008.

Process Description:

HDMA - IAP currently manufactures the Honda CRV, Honda Civic, and Honda Civic Hatchback. The vehicles are fully produced and assembled inside the plant and leave the plant as fully functioning automobiles. Raw steel materials are stamped and welded into vehicle body panels; the panels are assembled, sealed, and coated with an anti-corrosive coating. The vehicle shells are then painted using 12 different paints. The interiors and exterior trim pieces are then assembled. The partially assembled engines are placed into the vehicles and then completed. There are three regenerative thermal oxidizer (RTOs) on-site for air pollution control on the coating lines, to which the facility refers to as the "Body Booth RTO", "Body Oven RTO", and "Bumper RTO".

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Staff Interview: The production throughput during EPA's visit at HDMA – IAP was approximately 900-950 vehicles (units) per day. The Title V Permit limits throughput to 285,000 units per 12 month averaging period. The facility maintains monthly emissions reports based on daily limits and usage for paint and plastics operations (PAPO) based on Title V Permit limits.

HDMA – IAP developed a new laser brazed roof process in 2021, which joins the roof of the car to the body for a seamless exterior appearance and an even stronger vehicle body. The laser braze emissions route to a dust collector. The weld consumables contain manganese, copper, and zinc. EPA requested material certifications for the laser abrasion machine and weld consumables for MIG welding processes.

In addition, IAP began performing a new process where spray foam is applied to hollow portions of the vehicle's body structure to reduce noise transmission for a quieter cabin. Plant personnel informed EPA these new processes were permitted and approved in the July 2018 permit modification. HDMA – IAP is planning an expansion to the sealer department because of the addition of new vehicle models.

TOUR INFORMATION

EPA Tour of the Facility: Yes

Data Collected and Observations:

EPA focused on body coatings and observed one vehicle at each process step. Pretreatment begins in Zone A. Prior to surface coating, the vehicle bodies are cleaned, treated, and prepared for painting in the conditioning and phosphate dip system. Grease and dirt are removed from the vehicle bodies utilizing both high-pressure spray and immersion cleaning/rinsing techniques. The vehicles then receive an anti-rust/corrosion treatment in the electrocoat (E-coat) system. The vehicles then move through the E-coat Oven where hot air is applied, and emissions are captured by a hood and controlled by the Body Oven RTO. The November 2020 stack test for the Body Oven RTO demonstrated 100% capture and 98% destruction efficiency. Seam sealer and sound deadener material is applied to the units after the E-coat system. The primer/surfacer step begins in Zone B. The vehicles are routed through the surfacer oven which is controlled by the Body Oven RTO. EPA requested material safety data sheets (MSDS) documentation of the e-coat treatment and surfacer. NESHAP Subpart 4I requires recordkeeping for organic HAP usage and a destruction efficiency of at least 95% for the RTO that controls the E-coat system. EPA requested MSDSs for all coatings, solvents, and hardeners used at the facility and all recent stack tests.

The vehicles then move to the primer booth which is controlled by a downdraft ventilation system to route overspray to a water wash below the booth grating. In the booth, water borne chip primer and water borne surfacer are applied by electrostatic bell applicators. The clear coat spray booths utilize the same type of down draft ventilation system and water wash as the primer, but the emissions are routed to the Body Booth RTO. The final topcoat emissions are routed to the Body Oven RTO, however basecoat emissions are not and left uncontrolled. EPA requested MSDS documentation of the base coat, clear coat, and topcoats applied in the booths and all recent stack tests.

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The plastic parts operation is used to apply coatings to bumpers, side-sills, and service parts. This spray booth utilizes a down draft ventilation system and water wash below the booth grating to control paint overspray. The plastic parts are sent through a pre-treatment system to clean the parts for greases and dirt before they are sent for coating. Water borne primer and solvent borne basecoat and clearcoat are applied by electrostatic bell applicators. Emissions are routed to the Bumper RTO. The 2020 Stack test showed the Bumper Oven RTO to have 100% capture and 97.2% destruction efficiency while the RTO was operated at an average temperature of 1521 degrees fahrenheit.

Photos and/or Videos: were taken during the inspection.

Field Measurements: were not taken during this inspection.

RECORDS REVIEW

While on site, EPA and HDMA – IAP reviewed the following Preventive Maintenance Plans for the facilities (coating lines) and their respective control devices.

- a. PM maintenance and response plan
- b. VOC maintenance and response plan
- c. MACT maintenance and response plan

CLOSING CONFERENCE

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

Requested documents:

- The September 28 correspondence with IDEM relating to NOx exceedances and relevant related information such as IDEM's NOV and email records;
- Most recent stack test reports for the Body Booth, Body Oven, and Bumper RTOs;
- Quarterly Deviation Reports (quarterly reports) for calendar year 2022 to present day (at least 1 Year);
- Malfunctions/shutdown event logs, including but not limited to, the duration of each event, the date of each event, a description of the failure and the resolution, for at least 1 year;
- MSDSs for all coatings, solvents and hardeners applied on the bumper, E-coat, and body coat (basecoat, clearcoat, and topcoat 1&2) lines;
- Material certifications for the laser abrasion machine and weld consumables (rod material) for MIG welding processes.

DIGITAL SIGNATURES

Report Author: CARLO
DEMMA

Digitally signed by
CARLO DEMMA
Date: 2023.06.05
15:03:49 -05'00'

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Date of Inspection: April 19, 2023

Section Supervisor:

VIRGINIA
GALINSKY

Digitally signed by
VIRGINIA GALINSKY
Date: 2023.06.05
15:42:52 -05'00'

(Acting)

Facility Name: Honda Development & Manufacturing of America, LLC - Indiana Auto Plant

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APPENDICES AND ATTACHMENTS

1. APPENDIX A: Digital Image Log

Facility Name: Honda Development & Manufacturing of America, LLC - Indiana Auto Plant

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APPENDIX A: DIGITAL IMAGE LOG

1. Inspector Name: Meaghan Pashen	2. Archival Record Location: https://usepa.sharepoint.com/:f:/r/sites/R5_Work/r5erc/ecad/AECAB%20Library/Enf_HondaD%26MAmerica_IN_23/Enf_HondaAmerica_IN_23_%20InspRpt/photos?csf=1&web=1&e=mo4wzX
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Image Number	File Name	Date and Time (incl. Time zone and DST)	Description of Image
1	IMG_0382.JPG	2023:04:19 15:59:52	Mixing Tanks
2	IMG_0383.JPG	2023:04:19 16:12:47	Bumper RTO Temperature Control
3	IMG_0384.JPG	2023:04:19 16:12:52	Bumper RTO Temperature Control Screen
4	IMG_0385.JPG	2023:04:19 16:13:30	Bumper RTO Temperature Control Screen 2
5	IMG_0386.JPG	2023:04:19 16:13:35	Bumper RTO Burner Set Point
6	IMG_0387.JPG	2023:04:19 16:13:55	RTO 3-hour Average Temperature