

P1224
MawilaDEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: On-site Inspection

P122468773

FACILITY: Ground Effects, LLC		SRN / ID: P1224
LOCATION: 13750 Rotunda Drive, DEARBORN		DISTRICT: Detroit
CITY: DEARBORN		COUNTY: WAYNE
CONTACT:		ACTIVITY DATE: 08/18/2023
STAFF: Stephen Weis	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Compliance inspection of the Ground Effects facility on Rotunda Drive in Dearborn.. The Ground Effects facility is scheduled for inspection in FY 2023.		
RESOLVED COMPLAINTS:		

Location:

Ground Effects, LLC
(SRN P1224)
13750 Rotunda Drive
Dearborn 48120

Date of Activity:

Friday, August 18, 2023

Personnel Present:

Steve Weis, EGLE-AQD Detroit Office
Allen Kinsler, Environmental Engineer, Ground Effects, LLC
Kayla Sizemore, Environmental Coordinator, Ground Effects, LLC

Purpose of Activity

A self-initiated inspection of the Ground Effects, LLC facility (hereinafter "Ground Effects") located on Rotunda Drive in Dearborn was conducted on Friday, August 18, 2023. The Ground Effects facility was on my list of sources targeted for an inspection during FY 2023. The purpose of this inspection was to determine compliance of operations at the Ground Effects facility with applicable rules, regulations and standards as promulgated by Public Act 451 of 1994 (NREPA, Part 55 Air Pollution Control), and with applicable Federal standards. The facility is also subject to the terms and conditions of EGLE-AQD Permit to Install (PTI) No. 105-21.

Facility Site Description

The Ground Effects facility is an automotive coating operation that applies spray-on bedliners for Ford Motor Company pick-up trucks.

The Ground Effects facility is located on the west side of Rotunda Drive west of Schaefer Road. The area to the west of the facility is a wooded lot in the railroad right-of-way, with the Fairlane Commerce Park North lying further west, which includes a mix of commercial, light industrial and institutional/government properties. A Henry Ford College property is located to the east of the facility between Rotunda and Schaefer. The closest residential areas to the Ground Effects facility are located over a quarter mile to the north past the railroad right of way.

Facility Operations

The Ground Effects facility is part of Ground Effects LTD, a Windsor, Ontario based company. According to the company website (www.gfxltd.com), the company is a leading producer of OEM-level automotive accessories and has nearly 40 locations worldwide.

The Dearborn Rotunda facility serves to apply spray-on bedliners to pick-up trucks produced by Ford Motor Company, currently trucks produced at the Dearborn Assembly facility.

The facility currently utilizes four booths to apply the spray-on bedliners. Vehicles enter the building, and the first step is prepping them for the coating process. The vehicles go through a water wash process to remove surface oils. Water from the water wash process is sent through an oil-water separator. The oil portion is collected in a tank and picked up for offsite treatment by Vesco, and the water portion is discharged to the POTW (publicly owned treatment works, or sewer system). The vehicles then go through a prep station through which the surfaces of the truck beds are manually wiped with isopropyl alcohol (IPA) and rags. The used rags are collected in sealed cans. The surfaces of the vehicle outside of the bed area that is to receive the bedliner are masked with tapes and films, and the wheels are covered. After masking, the vehicles go through a robotic scuff booth to prepare the bed to receive the bedliner coating. The vehicles then go through a coating booth. In each of the booths, a bonding agent is applied via a HVLP robotic spray applicator, after which a two-component polyurethane coating is spray-applied to the bed surface. The coating air dries, and the vehicles undergo a final inspection in which any overspray is cleaned from the vehicle with IPA rags (which are collected in a closed can) when the masking is removed from the vehicle. The coating booths are equipped with filters to catch overspray.

The current AQD permit for this Ground Effects facility, PTI No. 105-21 addresses the four bedliner coating lines at the facility. The Emission Unit description for each of the booths describes them as "Coating line with a heated spray booth for polyurethane coating of truck beds. Before entering the booth, the trucks beds are cleaned manually using rags with an inbound cleaning solvent (isopropyl alcohol). Inside the booth, a coating of bonding agent (primer) and a two-component coating are applied by an automated spray process." The description includes that trucks are air-dried before transporting to the customer, and that the spray booth is equipped with particulate control filters.

Inspection Narrative

I arrived at the facility at 11:05am. I was met by Allen, Kayla and another compliance staff person from the company.

We started the site visit by discussing the facility. We went over the conditions in the PTI, and Allen shared records with me that are used to track the facility's compliance with the requirements/conditions of the PTI.

We then walked through the facility. We started at the water wash area, and we discussed the oil-water separator. We then viewed the prep station for one of the coating lines, viewing a truck that was being taped and having its wheels covered prior to coating. We looked at one of the coating booths, watching trucks in the que being moved into one of the booths, and we looked at the final inspection area after the coating booth where overspray is wiped from the truck body using IPA.

After walking through the facility, we had a brief conversation summarizing the site visit and the needed records. I left the facility at 11:45am.

Permits/Regulations/Orders/Other

Permits

The Magna facility currently has an active EGLE-AQD Permit to Install (PTI), PTI No. 105-21, that was approved on December 7, 2021. This permit addresses the installation and operation of four coating lines for the polyurethane coating of truck beds.

The following provides a description of the Ground Effects facility's compliance with the Special Conditions put forth by Permit to Install No. 105-21. The requirements are put forth in two Flexible Group tables.

FG-CoatingLns

This Flexible Group table addresses the requirements associated with the coating lines.

I. Emission Limits

Special Condition (SC) I.1 limits the VOC emissions from the coating lines to 52.8 tons per year on a 12-month rolling time period basis. I was provided with records for 2022 and 2023. For the most recent month, July 2023, the recorded total is 3.9 tons of VOC for the associated 12-month rolling time period. A copy of the VOC emission records is attached to this report. Compliance.

II. Material Limits

SCs II.1 and 2 put forth usage limits on IPA and applicator gun cleaner used. I was provided with usage records for the materials used in the bedliner application process, including IPA and gun cleaner usage. These records are attached to this report for reference. The recorded 12-month rolling IPA usage for July 2023 was 4,804.91 lbs (vs. the permit limit of 88,588 lbs), and the gun cleaner usage was 1,951.38 lbs (vs. the permit limit of 14,778 lbs). SC II.3 limits the VOC content of the primer/bonding agent to 1.6 lb/gallon minus water, as applied. I was shown information for the Ultimate Linings Bonding Agent (attached for reference), which shows that the VOC content was in compliance with the limit in SC II.3.

III. Process/Operational Restrictions

SCs III.1 through 4 address requirements as to the facility's handling (i.e. recovery, recycling, disposal) of waste coatings and materials, and filters. SC III.1 addresses recovery and reclaiming, recycling, or disposal of coatings, thinners, and/or purge and cleanup solvent materials. The facility has a waste and hazardous waste collection area. There are drums with funnels to collect waste liquids, and when the drums are full, they are picked up by Vesco and taken to US Ecology. I was told that the facility revised their cleaning process to avoid using excess amounts of solvents, and to avoid contaminating the solvent so it can be reused and does not need to be reclaimed, thereby reducing solvent usage. The waste materials are kept in closed drums, as required in SC III.2. Spent coating booth filters are collected and put into closed bags, which go into a compactor. I was told that the filters have been tested, and the results show them as non-hazardous waste. The facility is in compliance with the requirements of SCs III.1-4.

IV. Design/Equipment Parameters

SC IV.1 requires that the coating lines in FG-CoatingLns not operate unless their respective exhaust filters are installed, maintained and operated in a satisfactory manner. I was told that this is a strict requirement at all of the Ground Effects facilities. If the filter is not in place or is malfunctioning, the associated coating booth automatically shuts down. SC IV.2 requires that the coating lines be equipped with HVLP applicators or comparable technology. Ground Effects uses HVLP rated spray guns to apply the adhesion promotor/bonding agent, and the bedliner material is applied using an

airless applicator. In a past communication for another Ground Effects facility in the Detroit District, Allen provided that Graco Probler P2 airless spray guns are used to apply the bedliner material, and that guidance documents, such as EPA 560/4-88-004d ("Estimating Chemical Releases from Spray Application of Organic Coatings") show that this type of applicator has a transfer efficiency range of 75-80%, better than HVLP. Compliance.

V. Testing/Sampling

SC V.1 requires that the VOC content of the coating material be determined using Method 24, or manufacturer's formulation data with approval from AQD. Allen has provided communications in the past for the two-component urethane coating showing that Method 24 cannot be used to determine the VOC content for this coating due to its fast and exothermic reactions. It was determined that using a VOC content derived from manufacturer's coating data is the most appropriate way to determine the VOC content. AQD agrees with this approach. A copy of correspondence submitted by Allen for another Ground Effects facility in the Detroit District is attached for reference.

VI. Monitoring/Recordkeeping

The facility is **in compliance** with the special conditions (VI.1 through VI.3) in this section. Per SC VI.1, Ground Effects maintains the required records in the required timeframes.

SC VI.2 requires that the facility maintain a current listing of the chemical composition of each materials used; this information is maintained by the company.

SC VI.3 requires that monthly records be kept for the amount of material used and reclaimed, the VOC content, and VOC calculations on a monthly and 12 month rolling total basis. SC VI.4 requires that similar records be kept of IPA and gun cleaner usage and associated emission calculations. I was provided with these records, which are attached to this report for reference. Compliance.

VII. Reporting

SC VII.1 requires that AQD be notified upon completion of the installation, construction, reconstruction, or modification of the equipment addressed in the PTI. Ground Effects seems to have notified when coating lines were installed.

VIII. Stack/Vent Restrictions

The stack parameters in this section were not discussed during this compliance activity.

IX. Other Requirements

There are no conditions in this section of the PTI.

FGFACILITY

This Flexible Group puts forth source-wide HAP opt-out emission limits for the Ground Effects facility.

I. Emission Limits

Special Conditions (SC) I.1 and I.2 limit the individual HAP emissions for the facility to less than 8.9 tons per year, SC I.2 limits the aggregate HAP emissions from the facility to less than 22.4 tons per year, respectively. Ground Effects provided a copy of their recordkeeping spreadsheet that shows

individual and total HAP emissions for the facility, a copy of which is attached for reference. The 12-month rolling totals for July 2023 show 0.20 tons of total HAPs. Compliance.

II. Material Limits

There are no material limits put forth for this Flexible Group in this PTI.

III. Process/Operational Restrictions

There are no process/operational restrictions for this Flexible Group.

IV. Design/Equipment Parameters

There are no design/equipment parameter permit conditions for this Flexible Group.

V. Testing/Sampling

SC V.1 requires that the HAP content of the materials used at the facility be determined using manufacturer's formulation data. The company maintains the SDS for the coatings and materials used at the facility. Compliance.

VI. Monitoring/Recordkeeping

The facility is **in compliance** with the special conditions (VI.1 through VI.3) in this section. Per SC VI.1, Ground Effects maintains the required records in the required timeframes.

SC VI.2 requires that the facility maintain a current listing of the chemical composition of each coating-related material. As described in the write up for FG-CoatingLns, the facility maintains Safety Data Sheets for the materials used at the facility that contains this information.

SC VI.3 requires the monthly records be kept for the amount of HAP containing materials used at the facility, the HAP content of these materials, the individual and aggregate HAP mass emissions, and the 12-month rolling individual and aggregate HAP emissions. This information is tracked and recorded via the recordkeeping spreadsheet for the facility. The information is attached to this report for reference.

VII. Reporting

There are no reporting requirements put forth for this Flexible Group in the PTI.

VIII. Stack/Vent Restrictions

There are no stack parameters specified in the PTI for FGFACILITY.

IX. Other Requirements

There are no conditions in this section of the PTI.

Regulations

The terms and conditions of PTI No. 105-21 serve to limit potential emissions of VOC and HAPs to below major source thresholds. For the purposes of HAP emissions, the Ground Effects facility is an area source.

Compliance Determination

Based upon the results of the August 18, 2023 site visit and a review of the facility's compliance records, the Ground Effects facility on Rotunda Drive in Dearborn Township appears to be in

compliance with applicable rules and regulations, including with the terms and conditions of Permit to Install No. 105-21.

NAME Alex W. Lee

DATE 9/12/24

SUPERVISOR JK