

P0344

MANILA

**DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Scheduled Inspection**

P034433188

FACILITY: GROUND EFFECTS, INC		SRN / ID: P0344
LOCATION: 15200 COMMERCE DR NORTH, DEARBORN		DISTRICT: Detroit
CITY: DEARBORN		COUNTY: WAYNE
CONTACT: Steve Demeter , Plant Manager		ACTIVITY DATE: 01/28/2016
STAFF: Todd Zynda	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Scheduled Inspection		
RESOLVED COMPLAINTS:		

REASON FOR INSPECTION: Scheduled Inspection

INSPECTED BY: Todd Zynda, AQD

PERSONNEL PRESENT: Steve Demeter, Plant Manager; William Hicks, Health and Safety Coordinator

FACILITY PHONE NUMBER: 313-462-2290

FACILITY WEBSITE: www.gfxltd.com

FACILITY BACKGROUND

Ground Effects LLC (Ground Effects) completes spray-on bed liners for the Ford F-150. Ground Effects is located in the City of Dearborn, at 15200 Commerce Drive North in a primarily industrial and commercial area. The nearest residential property is located approximately 850 feet to the west southwest.

Currently the facility has approximately 99 employees. The facility operates three shifts, Monday through Friday, 2 shifts on Saturday, and one shift on Sunday. Hours are subject to change depending on the Ford F-150 production.

The facility operates the spray-on bed liner coating lines under permit to install (PTI) 59-12. The permit includes enforceable limits for hazardous air pollutants (HAPs) to restrict the facility's potential to emit (PTE) to less than the National Emission Standards for Hazardous Air Pollutants (NESHAP), Part 63, Subpart M and less than the major source threshold to opt out of the Renewable Operating Permit (ROP) program.

PROCESS OVERVIEW

The facility operates three spray-on bed liner coating lines. Each coating line contains its own designated spray booth, where the spray-on bed liner is applied robotically. The spray-on bed liner application process consists of two component coating application. Component A consists of urethane pre-polymer which reacts with amines in Component B to form a thick protective coating. Prior to coating application, the beds are prepared by washing with a isopropyl alcohol solution (Prep Wash). The exterior portion of the vehicle that does not receive spray coating, is tarped and taped off to protect the exterior finish. The bonding agent, which previously used to be hand painted on prior to the paint booth, is now applied robotically in the spray booth, prior to Component A and B application. Following application of the spray-on bed liner, the trucks are air dried before transporting to the customer (Ford).

The facility also operates a 26 gallon heated parts washer and a small enclosed cabinet for grinding residual pieces of spray-on bed liner for reuse during touch-up.

COMPLAINT/COMPLIANCE HISTORY

There are no complaints for this facility on file.

During recent inspections on August 15, 2013, the facility was determined to be in compliance with applicable permit conditions and regulations.

OUTSTANDING CONSENT ORDERS

None

OUTSTANDING VNs

None

INSPECTION NARRATIVE

On January 28, 2016 the Michigan Department of Environmental Quality (MDEQ) Air Quality Division (AQD) inspector, Mr. Todd Zynda, conducted an inspection of Ground Effects. During the inspection, Mr. Steve Demeter, Plant Manager, and Mr. William Hicks, Health and Safety Coordinator provided information and a tour of facility operations relating to air quality permits and regulations. The inspection was conducted to determine the facility's compliance with the Natural Resources and Environmental Protection Act (NREPA), Act 451, Part 55 and PTI 59-12.

At approximately 10:30 AM, AQD staff, Mr. Todd Zynda, arrived onsite and was greeted by Mr. Demeter. During the opening meeting the facility operations and permit requirements were discussed. An inspection check list was provided to the facility and record keeping requirements were discussed. The facility agreed to provide the required records in five business days.

During the opening meeting, Mr. Demeter stated that the facility currently operates three spray booth coating lines. The fourth line was never installed. Mr. Demeter also described some changes that have been made to the materials used. Previously, the facility used a bonding agent (Betaseal 43520A) that was hand painted prior to the truck entering the spray booth. This process was discontinued in October 2015, and replaced with robotic application of the bonding agent (UL Bonding agent) in the spray booth. Previously, the bonding agent (Betaseal 43520A) contained hexamethylen-1,6-diisocyanate. The new bonding agent (UL Bonding agent) as of October 2015 no longer contains this compound.

At this time, the facility provided the Safety Data Sheets for all materials used (both past and present) for the coating process and parts cleaning.

Following discussions of permit conditions and changes at the facility, a tour of the facility was provided. The tour began with observation of the washing area. When the trucks enter the facility they are hand wiped down with an isopropyl alcohol solution (Prep Wash). Following the wash, the trucks enter the "masking" area, where they are tarped and taped off. Within the "masking area" the beds are lightly sanded by hand to break the topcoat of the manufacturer's finish. According to Mr. Demeter, this allows for better bonding of the spray-on bed liner to the trucks finish.

The trucks are then staged to have the beds coated in one of three coating booths. Within each spray booth, the bonding agent and liner components are robotically applied. Each booth closes completely prior to application. Each booth is heated and maintained at approximately 95 degrees Fahrenheit (°F). Each booth is stacked individually and exhausts at roof level. During the inspection, filters appeared to be in place in each booth.

Following observation of the spray booths, storage of raw and waste material storage areas were observed. During the inspection, materials were stored in closed containers.

Next, a 26 gallon heated parts washer (cold cleaner) and small enclosed cabinet for grinding were observed. According to Mr. Demeter, the parts washer is used to clean the robotic application guns of hardened "bed liner". The parts washer is heated at 190 °F and using a material named ALL SOLVE (SDS provided). Additional information obtained indicates the material contains 8.76 pounds per gallon VOCs and has a boiling point of 410 °F. During the inspection the parts washer was covered with a lid. The washer tank has surface area dimensions of 15 inches by 44 inches or an air/vapor interface of 4.58 square feet. When the washer is in use, emissions are vented through a stack at roof level.

Near the parts washer, a small cabinet used for grinding was observed. According to Mr. Demeter, the sand blasting cabinet is used for grinding hardened bed liner material to a dust. The dust is used for bed liner touch up or repairs. During the inspection the grinding of material was not observed, but it appears that any potential emissions are maintained in the cabinet, or released to the general in-plant environment.

The inspection concluded with observation of the stacks at roof level.

The facility submitted records for VOC and HAP emissions via email on February 12, 2016 (see attached).

APPLICABLE RULES/PERMIT CONDITIONS

PTI 59-12 was issued on May 11, 2012. The Special Conditions (SC) are listed as appropriate. For brevity, permit conditions and the language of federal and state rules have been paraphrased.

FG-CoatingLns

S.C I. 1. **NOT IN COMPLIANCE.** VOC emissions shall be less than 11 tons per year on a 12-month rolling time period for all coating lines combined. According to records provided, the facility has not been in compliance with the 11 tons per year limit since at least December 2014. 12-month rolling emissions for FG-CoatingLns (all coating lines combine) range from 21.368 tons to 30.284 tons (see T2-12 Month Rolling – FGCoatingLNS) for 12-month periods ending December 2014 through December 2015.

SC I. 2 and 3. **NOT IN COMPLIANCE.** VOC emissions shall be less than 2,000 pounds per month for each coating line, and less than 10 tons per year for on a 12 month rolling basis for each coating line. According to records provided (see attached, T4-12Month Rolling – FGCoating(C)), the facility is not in compliance with either limit. The 2,000 pounds per month limit was exceeded 12 times from March 2014 to September 2015. Additionally the tons per year limit was exceeded two times, during September 2015 and November 2015. It is also noted that records are not kept for each individual booth, but are only the total emissions divided but the number booths at the time (either 2 or 3)

SC I. 4. **NOT IN COMPLIANCE.** Hexamethylene-1,6-diisocyanate (HDI) emissions shall be less than 0.0037 lb/day. During 2015, the facility exceed the daily limit 52 times as indicated in the "T7-Daily HDI Calculations" (see attached). According to the records provided it appears that use of material containing HDI was discontinued on November 1, 2015.

SC III. 1 through 4. **COMPLIANCE.** Storage, capture of waste materials, disposing of spent filters and handling of materials to reduce fugitive emissions. During the inspection the facility appeared to meet all of these conditions.

SC IV. 1 and 2. **COMPLIANCE.** Exhaust filters are installed and maintained. HVLP applicators or comparable technology used for coating application. During the inspection exhaust filters were in place. Robotic application appears to be the HVLP or comparable technology.

SC V. 1 and SC VI. 2. **COMPLIANCE.** May determine the VOC content from manufacturer's formulation data. Upon request, VOC content may be determined using Method 24. The facility provided the SDS for material used. At this time, AQD has not requested Method 24 analysis.

SC VI. 1. **COMPLIANCE.** Shall complete all required calculations in an acceptable format. The facility appears to be maintaining required calculations and records.

SC VI. 3. **COMPLIANCE.** Shall keep the following information on a calendar day basis for each coating line and FG-CoatingLns separately.

- a. Gallons (with water) of each material used and reclaimed.
- b. VOC content (with water) of each material as applied.
- c. VOC mass emission calculations determining the monthly emission rate in pounds per calendar month.
- d. VOC mass emission calculations determining the annual emission rate in tons per 12-month rolling time period.

The facility currently does not reclaim any material. The records provided satisfy record keeping requirements.

SC VI. 4. **COMPLIANCE.** Shall keep the following information on a calendar day basis for FG-CoatingLns.

- a. Gallons (with water) of each hexamethylene-1,6-diisocyanate containing material used.
- b. Gallons (with water) of each hexamethylene-1,6-diisocyanate containing material reclaimed.
- c. Hexamethylene-1,6-diisocyanate content (with water) in pounds per gallon of each material used.
- d. Hexamethylene-1,6-diisocyanate mass emission calculations determining the daily emission rate in pounds per calendar day.

The facility does not reclaim hexamethylene-1,6-diisocyanate. The records provided satisfy record keeping requirements.

SC VII. **UNKNOWN**. Shall notify the AQD within 30 days after completion or the installation of the new coating lines. Written notification could not be located in Detroit District files.

SC VIII. 1 through 4. **COMPLIANCE**. Maximum exhaust dimensions of 42 inches and minimum height above ground of 29 feet. During the inspection, the stacks visually appeared to meet these requirements. Measurements were not collected.

FG-Facility

SC I. 1 and 2. **COMPLIANCE**. HAP emissions shall be less than 9 tons per year on an individual HAP basis and less than 25 tons per year on an aggregate HAP basis. The maximum HAP emissions occurred during November 2015 at 8.488 tons.

SC I. 3. **NOT IN COMPLIANCE**. VOC emissions shall be less than 30.0 tons per year on a 12-month rolling basis. During September 2015, the facility reports 30.284 tons VOCs (see T2-12 Month Rolling – FGCoatingLNS).

SC. V. 1. **COMPLIANCE**. Shall determine HAP content of any coating, thinner, and/or purge and cleanup solvents using manufacturer formulation data. Upon request from AQD, shall verify HAP formulation data using EPA Test Method 311. At this time, AQD has not requested testing. The facility provided SDS for materials used that indicates HAP content.

SC VI. 2. **COMPLIANCE**. Shall keep the following on a calendar month basis.

Gallons or pounds of each HAP containing material used.

Gallons or pounds of each HAP containing material reclaimed.

HAP content, in pounds per gallon or pounds per pound.

Individual and aggregate HAP emission calculations determining the monthly emission rate of each in tons per calendar month.

Individual and aggregate HAP emission calculations determining annual emission rate on a 12-month rolling basis.

SC VI. 3. **COMPLIANCE**. Please see FG-CoatingLns, SC VI. 3 above. The facility does not coat any other metal beside the truck bed.

PERMIT TO INSTALL EXEMPT EQUIPMENT

Grinding Cabinet

The grinding cabinet appears to be exempt from PTI requirements under the following rule.

R336.1285(l)(vi)(B): "The requirement to obtain a PTI does not apply to...equipment for carving, cutting, routing, turning, drilling, machining...etc. metal, plastic, etc. and emissions are released only to the general in-plant environment."

Cold Cleaner

The parts washer at the facility is defined as cold cleaner as per R336.1103(aa). The cleaning material used (ALL SOLVE) has a boiling point of 410 °F and the tank is heated to 190 °F. The parts washer has an air/vapor interface of 4.58 square feet.

The parts washer appears to be exempt from PTI requirements under the following rule.

R336.1281(h): "The requirement to obtain a PTI does not apply to cold cleaners that have an air/vapor interface of not more than 10 square feet."

The parts washer is subject to R336.1707 for new cold cleaners. The vapor pressure of ALL SOLVE is 45 Pascal (0.0065 psi).

R336.1707(3)(a) – **NOT IN COMPLIANCE** - a cover shall be installed and closed whenever parts are not being handled in the cleaner. The cover shall be mechanically assisted in any of the following situations...the solvent is heated. Currently the cold cleaner at the does not have a mechanically assisted cover.

R336.1707(4) – **NOT IN COMPLIANCE** – Written operational procedures shall be posted in an accessible, conspicuous location near the cold cleaner. The facility did not have operational procedures posted.

40 CFR Part 63, Subpart Mmmm – National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products

Ground Effects is not subject to the Subpart Mmmm per §63.3881(b) as the facility is not major for HAPs. PTI 59-12 contains enforceable conditions limiting Ground Effect's PTE to less than 10 tpy for individual HAPs and less than 25 tpy for any combination of HAPs.

40 CFR Part 63, Subpart T – National Emission Standards for Halogenated Solvent Cleaning

The parts washer at the facility is not subject to Subpart T. The material used in the cleaner does not contain any of halogenated HAPs as defined in §63.460.

APPLICABLE FUGITIVE DUST CONTROL PLAN CONDITIONS

Not applicable.

MAERS REPORT REVIEW

MAERS submittal for 2014 was not reviewed.

FINAL COMPLIANCE DETERMINATION

At the time of the inspection, this facility appears to be in noncompliance with several emission limits of PTI 59-12 (VOC limits and hexamethylene-1,6-diisocyanate limit). The facility has stated in the response to records request that they are "working to update the current permit to request higher VOC emission limits". In addition, the cold cleaner at the facility does not appear to be in compliance with R336.1707(3)(a) and R336.1707(4). A violation notice will be issued for identified violations.

NAME



DATE

2/26/16

SUPERVISOR

JK