

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

N213762535

FACILITY: I.I. STANLEY CO., INC.		SRN / ID: N2137
LOCATION: 1500 HILL-BRADY ROAD, BATTLE CREEK		DISTRICT: Kalamazoo
CITY: BATTLE CREEK		COUNTY: CALHOUN
CONTACT: Mary Noggle , EHS Supervisor		ACTIVITY DATE: 03/04/2022
STAFF: Amanda Chapel	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT:		
RESOLVED COMPLAINTS:		

On March 4, 2022 Amanda Chapel (staff) arrived at II Stanley to conduct an unannounced air quality inspection of the permitted coating lines and all other activity conducted at the location. The facility was last inspected on August 30, 2018 and at the time, was determined to be in non-compliance due to records insufficiencies. The facility is located at 1500 Hill Brady Road, Battle Creek, Calhoun County Michigan. The facility has a Permit to Install (PTI) No. 113-03G for various coating lines, ovens, and control devices located on site as well as an opt out limit for HAPs and PTI 149-20 which is a general coating permit for FGALUMINIZATION5.

I entered the main entrance area and used the intercom to have an associate let me in. I asked for Ms. Mary Noggle, EHS Supervisor and stated I was there to complete an unannounced air quality inspection. The facility required a COVID questionnaire and temperature scan. Safety gear were steel toed boots and safety glasses. Boot covers and a hair net were provided. Changes to the facility since the last inspection include the removal of EU-DECOSILVER, EU-HARDCOAT3, EU-DECO3, and EU-ALUMINIZATION1. The facility added EU-HARDCOAT5 under the general coating PTI in 2020. Mr. Brent Burdo, facility manager gave me a tour of the facility.

The facility has approximately 50 plastic injection molding machines which are exempt under Rule 286(2) (b) for plastic injection, compression, and transfer molding equipment and associated plastic resin, handling, storage, and drying equipment. Resin pellets are stored and transferred to machines using vacuum tubes. Once the molds are made, some parts are sent through the permitted aluminization process. Following that, some of the parts are sent to be aluminized which is a powder coating process to give a shiny, aluminum look to plastic parts different from the permitted aluminization process. Powder coating and associated ovens where the booth is equipped with fabric filter control is exempt under Rule 287(2)(d). From here, parts are sent to the anti-fog or hardcoat lines for the final coating before being packed and shipped.

The facility submitted a PTI application in 2019 to include a fluidized bed type parts cleaner in the 113-03G permit. The facility is planning on removing one of the regenerative thermal oxidizers (RTO) and routing all of the equipment through one. There has been a good amount of equipment removed and the expected capacity has been reduced enough to run one RTO. They are aware that a new PTI should be submitted to reflect the changes.

113-03G

EU-DECOSILVER: (1) dry filter type paint spray booth and (1) oven that are used to coat plastic automotive parts.

This line was non-operational for the past two years and has been removed from the facility. Therefore, compliance with this emission unit was not evaluated for compliance with the permit. The line has been removed from the facility and will be removed during the next permit update.

EU-FLUIDCLEAN: Natural-gas fired Fluidized Bed Type parts cleaner that uses heated sand to mechanically and thermally remove coatings from coating line tooling and equipment. The exhaust from the fluidized sand travels through a direct-fire “afterburner” zone and a cyclone separator.

This was operational during the inspection and according to the screen, had about 19 minutes left in the cycle. The bed is used for cleaning off racks and hangers that are used throughout the facility of cured paint. They are not used for removal of rubber, plastics, uncured paint, or any material containing halogens. The setpoint for section 1 was 800F and section 2 was 825F and during the inspection the temperatures read 804F and 861F, respectively. The operation screen also indicated that the exhaust fan was on, blowers on, and burners on.

The facility provided a facility wide breakdown of all material used at the facility. This satisfies both the recordkeeping requirement for this emission unit as well as all other manufacturer information requirements throughout the permit. The spreadsheet contains the material, SDS name, density, HAP content including a breakdown of HAPs, VOC content, and percentages of chemicals.

The facility provided documentation of the visible emissions readings being taken, monthly, for the fluidized cleaning bed. All opacity readings were 0. The facility had installed and was monitoring the sand bed temperature and air flow temperature. The facility also provided maintenance records for the fluid bed. On 3/26/21 the fluid bed gravel, quartz sand, pilot burner, and pilot burner deflector cap were replaced, Distributor tubes were cleaned, and seals replaced. Unit was restarted on Monday 1/4/21.

FG-RTO-01and02: Coating Operations consisting of Regenerative Thermal Oxidizers (RTOs) No.1 and 2 to control VOC emissions from associated emission units.

According to the permit, RTO No. 1 controls EU-HARDCOAT3, EU-DECO3, EU-HARDCOAT4, and EU-ALUMINIZATION2(NEW). RTO No. 2 controls EU-ALUMINIZATION1, EU-ANTIFOG, EU-ALUMINIZATION17, and EU-AFOG-02. EU-HARDCOAT3, EU-DECO3, and EU-ALUMINIZATION1 have been removed. EU-HARDCOAT5 has been constructed under PTI No. 149-20 and is controlled by RTO No. 2. The facility is planning to reduce the RTO usage to just one for the site. This will require a new PTI.

Emission limits for FG-RTO-01and02 are as follows. The noted calculated emission, per piece of equipment, was based on a review of the provided records.

Pollutant	Limit	Time Period/Operating Scenario	Equipment	Calculated Emissions
VOC	6.1 pph	Test Protocol	FG-RTO-01and02	Tested 2015 - compliance
VOC	500 pounds per month	Calendar month	EU-ALUMINIZATION1	Removed
VOC	3.3 tpy		EU-HARDCOAT3	Removed

		12-month rolling time period		
VOC	4.7 tpy	12-month rolling time period	EU-DECO3	Removed
VOC	5.3 tpy	12-month rolling time period	EU-ANTIFOG	1.24 tpy (December 2021)
VOC	3.8 tpy	12-month rolling time period	EU-HARDCOAT4	1.91 tpy (November 2021)
VOC	3.2 tpy	12-month rolling time period	EU-ALUMINIZATION2 (NEW)	0.9 tpy (December 2021)
VOC	3.2 tpy	12-month rolling time period	EU-AFOG-2	0.3 tpy (January 2022)
VOC	2.9 tpy	12-month rolling time period	EU-ALUMINIZATION17	1.36 tpy (July 2021)

The facility submitted a malfunction abatement plan (MAP) on 9/5/14 and EGLE approved it on 10/14/14, according to the previous inspection report.

Safety Kleen removes any waste generated on site. The facility is a small quantity generator. All filters are removed and crushed in a drum crusher. This has a lid to put down after they are crushed, which was not down at the time of the inspection. The plunger on the drum was down, ensuring that the filters were still not being exposed to the air. It was noted the lid should be closed, as designed. Since the waste filters were not being exposed to the general, in-plant environment, a violation will not be written for this but the facility should keep the drum lid closed when not in use, moving forward.

Beginning every shift, the internal filters are changed and disposed of, as described above. All filters appeared to be in good condition. There is a weekly cleaning done by a third party as well to maintain the paint booths. All applicators used on site are HVLP. The facility is considering switching to LVHP applicators. This would need to be evaluated if it's considered similar technology to HVLP and can be used on site.

Both RTOs are monitored digitally and alarmed, including temperature which is monitored continuously. Any alarms are sent to facility phones as alerts. There is scheduled weekly and monthly maintenance on the RTOs. RTOs are also visually checked by security. During the inspection, RTO No. 1 was at 1736.81 F and RTO No. 2 was at 1692.94 F. This is above the

minimum temperature of 1400F specified in the permit. The annual natural draft openings (NDO) testing was completed in January 2022. The previous NDO was done in October 2020. This is slightly longer than the allowed annual testing. However, the testing has been completed for 2022 and no violation notice will be sent for this.

Records provided include the coating line identification and the associated flow rate into the RTO in scfm. Gallons of each material, per coating line, is being tracked daily, and monthly, by product number. Recordkeeping also maintains the VOCs emitted, per line, both monthly and on a 12-month rolling basis.

Temperature records for RTO 1 and RTO2 were submitted to the department, via email, to review. The facility is tracking temperature continuously and the records were tracking the temperature every minute. If the temperature was low and no production was occurring that time, that is denoted in the excel sheet. Maintenance records are kept on site by maintenance personnel.

Ms. Noggle indicated that the facility requested the use of formulation data instead of Method 24 information in 2019 and never received a response from the Department. Staff checked their records and confirmed that a draft letter had been written giving permission to use formulation data if Method 24 testing was performed on at least one coating. The facility is in possession of all formulation data and was working with the supplier of the materials to get the required Method 24 information. Since the intent was to allow the facility to use formulation data, no violation notice will be written for this and another formulation data approval letter will be sent.

FG-FACILITY: The following conditions apply source-wide to all process equipment including equipment covered by other permits, grand-fathered equipment and exempt equipment.

Pollutant	Limit	Time Period/Operating Scenario	Equipment	Calculated Emissions
Each Individual HAP	8.9 tpy	12-month rolling time period	FGFACILITY	0.76 tpy (January 2022)
Aggregate HAP	22.4 tpy	12-month rolling time period	FGFACILITY	0.40 tpy (October 2021)
VOCs	89.9 tpy	12-month rolling time period	FGFACILITY	8.08 tpy (January 2022)

According to records, the highest emitted single HAP is Toluene. As discussed above, the facility is maintaining records of the HAP content and VOC content of all materials used on site. Records of

material used and emissions are kept as described above in the spreadsheet containing daily, monthly, and 12-month rolling emissions for each individual line and facility wide.

PTI 149-20

FG-COATING: One or more coating lines and all associated purge and clean-up operations, where each coating line is a single series in a coating process and is comprised of one or more coating applicators, any associated flash-off areas, drying areas, and ovens where one or more surface coatings are applied and subsequently dried or cured. Coating lines may be used to coat any substrate except cans, coils, large appliances, metal furniture, magnet wire, fabrics, paper, vinyl, flat wood paneling, or graphic arts lines.

The facility applied for this permit for EU-HARDCOAT5, which replaced EU-HARDCOAT3 which is contained in the PTI above. EU-HARDCOAT5 is routed through RTO No. 2.

Pollutant	Limit	Time Period/Operating Scenario	Equipment	Calculated Emissions
VOC	2000 lb/month	Calendar Month	Each coating line	234.25 lbs (November 2021)
VOC	10 tpy	12-month rolling time period	Each coating line	0.70 tpy (December 2021)
VOC	30 tpy	12-month rolling time period	FG-SOURCE	8.08 tpy (January 2022)

All waste is disposed of and stored as discussed above. The line is equipped with HVLP spray applicators. Operational parameters of the RTO are discussed above as well. The permittee is tracking the emissions from this line both individually as well as in the FGFACILITY calculations, as required by PTI No. 113-03G.

This permit also contains FG-SOURCE which is defined as All coating lines and all associated purge and clean-up operations at the stationary source. This includes any coating line covered by this or any other general permit or any permit to install issued pursuant to Rule 201, and any coating line exempt from the requirement to obtain a permit to install pursuant to Rule 287 and/or Rule 290. This is a conflict as it establishes a facility wide emission limit for all coating lines at the facility that are both already permitted or are exempt. PTI No. 113-03G also has an FG-FACILITY limit which establishes a VOC facility wide emission limit for VOCs. Since there are two conflicting, established facility wide VOC limits, the lower one will be used for the compliance determination. It is strongly recommended that when the facility applies for an updated PTI No. 113-03 permit, they roll EU-HARDCOAT5 into the permit and void this existing permit. This will both clean up the facility permitting, and it will eliminate a double facility-wide VOC limit.

The facility appears to be in compliance with requirements contained within this permit.

Exempt Equipment:

The facility runs three small coating booths and lines under Exemption Rule 290. Lines are: EU-SOLDERLINE1 - Solder lines that use a spray flux and either leaded or lead-free solder, EU-SERVICEBOOTH - The only non-robotic spray booth in the facility, and EU-PESLINE - Plastic coating booth that exhausts to regenerative thermal oxidizer (RTO) # 2.

The facility is tracking emissions as is required by the exemption in a tab in the Excel spreadsheet. Records include the compound, composition by percent weight, the ITSL or IRSL, amount emitted of each compound monthly, and the associated rule emission amount.

In January 2022, EU-SERVICEBOOTH emitted 11.7 lbs of uncontrolled pollutant allowed under the 1000 lbs/month limit and 0.02 lbs of uncontrolled pollutant under the 20 lbs/month limit. Eu-SOLDERLINE1 emitted 1.2 lbs of uncontrolled pollutant allowed under the 1000 lb/month limit. Eu-PESLINE which is exhausted to RTO No. 2 emitted 13.57 lbs of controlled pollutant allowed under the 500 lbs/month limit and 2.36 lbs of controlled pollutant allowed under the 10 lbs/month limit. All coating lines operated under Rule 290 appear to be in compliance.

The facility has a high-pressure jet washer which is used to remove cured paint from racks. The use of this has decreased since the installation of EU-FLUIDCLEAN. This is exempt under Rule 285 (2)(r)(iv).

The facility also has a Natural Gas Fired Emergency Generator which is exempt under Rule 285(2) (g). It is a 38 kW engine installed in 1989 subject to 40 CFR Part 60 Subpart ZZZZ (RICE MACT) for existing emergency engines. The non-resettable hours meter reads 1775.2 hours. It is auto-tested every week for 10 minutes and serviced by a third party contractor.

The facility appears to be in compliance with all requirements contained in PTIs issued to the facility.

NAME 

DATE 4/7/22

SUPERVISOR  4/8/22