

DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION  
ACTIVITY REPORT: Self Initiated Inspection

N213726553

FACILITY: I.I. STANLEY CO., INC.		SRN / ID: N2137
LOCATION: 1500 HILL-BRADY ROAD, BATTLE CREEK		DISTRICT: Kalamazoo
CITY: BATTLE CREEK		COUNTY: CALHOUN
CONTACT: Debbie Oetting, Safety and Environmental Engineer		ACTIVITY DATE: 08/06/2014
STAFF: Rex Lane	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Self Initiated Inspection		
RESOLVED COMPLAINTS:		

On August 6, 2014, Air Quality Division (AQD) staff (Rex Lane) arrived at I.I. Stanley Company, Inc. (hereafter "IISC") located at 1500 Hill Brady Road, Battle Creek, Michigan at approximately 8:45 am to conduct an unannounced air quality inspection. IISC is an OEM supplier of automotive lighting and electronic components to several domestic and foreign based automakers. IISC commenced operations in 1987 and currently operates three production shifts, five days per week with some Saturday shifts based on product demand. IISC was last inspected by the AQD in June 2010 and was compliant at that time. IISC has one active permit to install (PTI) No. 113-03D and is considered to be a synthetic minor source for VOCs and HAPs based on permit restrictions.

Staff made initial contact with the receptionist and stated the purpose of their visit. The previous environmental contact, Mr. Mark Weiss, left a few months ago and has recently been replaced by Ms. Debbie Oetting, Safety and Environmental Engineer. Ms. Oetting arrived shortly thereafter and staff stated the purpose of their visit, presented credentials and provided a copy of MDEQ's inspection brochure. We had a brief discussion and then staff was introduced to Mr. Greg Bond, IISC Plant Manager and Mr. Sean Westlake, Coatings Supervisor prior to going through the manufacturing area. Information provided below is based on observations made during the inspection, post-inspection records review, emissions data reported in the facility's 2013 MAERS report and additional information that was requested and submitted by IISC to staff on August 14 through 20, 2014.

Permit to install exempt equipment:

EG-SOLDERLINE1 – There are two solder lines left that are operated under Rule 290 that use a spray flux and either a leaded or lead free solder. June 2014 emissions reported are 3% of the allowable limit.

EG-SERVICEBOOTH – Booth was installed and operated under Rule 290. The booth was not in use during the inspection and the mat fabric filters appeared to be in good working order. Reported total emissions for June 2014 were 6.7 pounds. Three chemicals listed on the report for this booth (i.e. CAS # 19549805, 822060 and 7429905) have an initial threshold screening level (ITSL) of less than 2.0 ug/m<sup>3</sup>, therefore, the combined uncontrolled emissions for this group cannot exceed 20 pounds per month (June 2014 reported value - 0.2 pounds). Note: Facility should be tracking this ITSL subcategory for compliance with the 20 pounds/month limit in addition to the overall monthly emission limit.

EG-ALUMINIZATION4 – Booth vents to RTO # 2, therefore, it is subject to the lower Rule 290 emission limits for controlled sources. June 2014 emissions reported were about 45% of the allowable limit.

EG-PADPRINTERS – Equipment was last used in July 2013 and was removed from the facility in January 2014. Therefore, staff did not review Rule 290 emission records for this group.

The facility has 46 plastic injection molding machines. Based on the facility's 2013 MAERS report, VOC emissions from mold release and plastic injection emission factors was 455 pounds. Process is exempt from permitting under Rule 286(b).

Parts racks and coating jigs are cleaned on-site using a high pressure water jet washer that vents in-plant. This process was not in use during the inspection and is exempt from permitting under Rule 285(r)(iv).

The facility has a SAMSCO evaporator that is installed and operated under Rule 285(m) and Rule 282(b)(i). Staff did not observe the evaporator during this inspection.

The facility has one 38 Kw natural gas fired emergency engine and generator set that was installed in 1989. The engine is equipped with a non-resettable hour meter (current reading: 1,213.8 hours). The engine is readiness

tested once per week. Process is exempt from permitting under Rule 285(g). The process is subject to 40 CFR Part 60, Subpart ZZZZ (aka RICE MACT) as an existing emergency engine. As an area source for HAPs, compliance was not determined since MDEQ has not taken delegation for the area sources under the RICE MACT. IISC staff indicated that they are considering replacing the engine and generator set with a comparable new unit. Staff advised that a new replacement engine would be subject to either 40 CFR Part 60, NSPS, Subpart JJJJ (spark ignition; natural gas or gasoline) or Subpart IIII (compression ignition; diesel). MDEQ does have delegation authority for these NSPS subparts.

Based on observations made during the inspection, records obtained during the inspection and additional facility records provided by Ms. Oetting on August 14 – 20, 2014, information on compliance with PTI No. 113-03D special conditions (SC) are noted below:

#### PTI No. 113-03D:

Permit was issued May 30, 2014 and covers installation and operation of four new coating lines (EU-DECO3\*, EU-ANTIFOG\*, EU-HARDCOAT4 and EU-ALUMINIZATION2(NEW)) and re-routing of specific emission units to either RTO #1 or #2. \* - EU-DECO3 and EU-ANTIFOG were initially permitted under PTI No. 113-03C and installation of these lines was completed on 4/14/14 and 11/11/13, respectively. EU-HARDCOAT4 was installed in May 2014. EU-ALUMINIZATION2 was removed in April 2014 and its replacement, EU-ALUMINIZATION2 (NEW) is under construction at this time.

#### EU-DECOSILVER

The permit describes the emission unit as consisting of six dry filter type paint spray booths (4 Deco booths and 2 Silver booths). This description is obsolete as only one booth remains and there are also obsolete emission limit conditions for silver coating under the emission unit.

Additionally, the facility uses acetone for purge/clean on EU-DECOSILVER and this use was either not addressed in the initial synthetic minor permit application or came into use following issuance of the air use permit. Based on acetone usage records submitted by the facility on August 20, 2014, emissions were less than 100 pounds/month and 0.5 tons on an annual basis for EU-DECOSILVER. **Note:** Acetone is considered to be a toxic air contaminant and because its use is associated with EU-DECOSILVER only rather than as a general purge/clean solvent on all coating lines that may be exempt from permitting under Rule 290, a permit application should be submitted to modify PTI No. 113-03D to add an acetone emission limit and associated recordkeeping under EU-DECOSILVER. It would also be appropriate to address obsolete permit conditions and revise the emission unit description in this permit application.

SC I.1 – Review of 12-month rolling VOC records indicate compliance with 8.3 tons/year limit. For June 2014, 12-month rolling VOC was 2.0 tons/year.

SC I.2 – Review of daily volume weighted average indicates compliance with 6.15 lb. VOC/gallon – water limit.

SC I.3 – Condition is obsolete as silver coating Type A process has been replaced by aluminization technology.

SC I.4 - Condition is obsolete as silver coating Type B process has been replaced by aluminization technology.

SC III.1 – Condition requires all waste coatings, solvents and catalysts be stored in closed containers and disposed of in compliance with all applicable rules and regulations. Ms. Oetting stated that Safety Kleen handles their disposal contract. Waste cleanup solvent rags are also stored in closed containers until they are shipped out.

SC III.2 – Condition requires disposal of spent filters be performed in a manner which minimizes introduction of air contaminants to the outer air. Ms. Oetting stated that spent coating booth filters are placed in a compactor and shipped out for disposal. Per Ms. Oetting, the filter compactor is located inside the plant near the high pressure water washer equipment described above.

SC IV.1 – Coating booth filters appear to be installed and maintained in a satisfactory manner.

SC IV.2 – Mr. Westlake stated that HVLP test caps are maintained on-site.

SC V.1 – Ms. Oetting stated that paper copies of all MSDS sheets are maintained in the security office.

SC VI.1 – Required records are made available by the 30<sup>th</sup> day of the calendar month for the previous calendar month.

SC VI.2 – Coating and solvent MSDS sheets are maintained at the security office.

SC VI.3 – Facility is maintaining records to demonstrate compliance with 12-month VOC rolling time period and VOC calendar day basis limits.

SC VIII.1 – Stack dimensions have been evaluated in prior AQD inspections.

FG-RTO-01and-2:

SC I.1 – Testing to verify compliance with 5.4 pounds/hour VOC emission limit will be required not later than 180 days of commencement of trial operation of EU-ALUMINIZATION2(NEW) which is still under construction.

SC I.2 – EU-ALUMINIZATION1, 2,5, 12 and EU-HARDCOAT2 are limited to 500 pounds/month VOC emissions. Review of recent records show compliance with limit with EU-HARDCOAT2 having the highest monthly emission rate of 96.5% of the allowable limit.

SC I.3 – Review of records for EU-HARDCOAT3 indicates compliance with the 3.3 tons/year VOC limit.

SC I.4 – Review of records for EU-DECO3 indicates compliance with the 4.7 tons/year VOC limit.

SC I.5 – Review of records for EU-ANTIFOG indicates compliance with the 5.3 tons/year VOC limit.

SC I.6 – EU-HARDCOAT4 commenced operations on 7/30/14 so emission records were not reviewed at this time.

SC I.7 – EU-ALUMINIZATION2(NEW) is still under construction at this time.

SC III.1 – The facility appears to be handling and disposing of waste materials in an acceptable manner.

SC III.2 – The facility is required to submit a malfunction abatement plan (MAP) within 90 days of permit issuance. The deadline to submit a MAP is 9/1/14. **Note:** Ms. Oetting stated that the plan will be submitted by the deadline.

SC IV.1 – The permittee shall not operate the coating booth unless respective dry filter or water wash particulate control systems are installed, maintained and operated in a satisfactory manner. Staff observed that the downdraft dry filters for EUDECO3 had not been equipped with a magnehelic gauge to measure pressure drop across the filters. Ms. Oetting submitted documentation on 8/14/14 that the required gauge was installed on 8/7/14. For the coating booths that were observed by staff during the inspection, the associated particulate control systems appeared to be functioning properly.

SC IV.2 – All coating booths except EUSERVICEBOOTH utilize robotic controlled HVLP applicators. Test caps are available for pressure testing, if needed.

SC IV.3 – The permittee is required to monitor and record the temperature for each regenerative thermal oxidizer (RTO) on a continuous basis during operation. Staff reviewed weekly circular temperature charts for RTO # 1 and # 2 for June through early August 2014. Staff noted that IISC maintenance staff put initialed notes on the charts that identify any weekend shutdowns, system faults, power outages, etc. for time periods where the combustion temperature drops below the required minimum operating temperature.

SC IV.4 – This condition was modified from PTI No. 113-03C to allow RTO's to either meet a minimum VOC destruction efficiency (DE) of 95% or a combined maximum VOC emission rate of 5.4 pounds/hour. Testing to verify compliance with either requirement will be required not later than 180 days after commencement of trial operation on EU-ALUMINIZATION2(NEW) which is still under construction. This condition also requires a minimum combustion temperature of 1400 degrees F when coating lines are in operation. During the inspection, the electronic readouts on both RTOs were above 1600 degrees F.

SC V.1 – The facility is using MSDS sheets to determine VOC content for coatings.

SC V.2 - Testing deadline for DE and combined VOC emission rate from the RTOs has not yet past (i.e. see comments under SC I.1 and IV.4).

SC V.3 – The permittee is required to verify direction of air flow at each NDO is into the non-fugitive enclosure on an annual basis. The last air flow test was completed on 4/9/14 and all air flow rates into each NDO were above the minimum air flow rate requirements.

SC VI.1 – Required records are made available by the 30<sup>th</sup> day of the calendar month for the previous calendar month.

SC VI.2 – Coating and solvent MSDS sheets are maintained at the security office.

SC VI.3 – Facility is maintaining records to demonstrate compliance with monthly and 12-month VOC rolling time period limits.

SC VI.4 – The permittee is maintaining continuous temperature readings on RTO # 1 and # 2.

SC VI.5 – The facility identifies time periods on the RTO circular temperature charts where combustion temperature falls below 1400 degrees F and writes (e.g. system fault, weekend shutdown, power outage, etc.) the cause of the deviation directly on the charts. This condition also requires that the permittee on a monthly basis review the temperature records and prepare a "list" showing the date, time and duration of all temperature deviations. **Note:** Although IISC writes the cause of each temperature deviation on the weekly charts, this does not constitute a monthly list and after further post-inspection discussion, Ms. Oetting agreed to develop and maintain a monthly temperature deviation listing hence forth.

SC VII.1 – On August 14, 2014, the facility submitted written notification of installation dates for EU-DECO3 (4/14/14), EU-ANTIFOG (11/11/13) and EU-HARDCOAT4 (May 2014).

SC VII.2 – EU-ALUMINIZATION2 was removed from the facility in April 2014.

SC VII.3 – Notification requirement has not passed since EU-ALUMINIZATION2(NEW) is still under construction.

SC VIII.1 – Stack dimensions have been evaluated in prior AQD inspections.

SC IX.1 – Emission units have been labeled by the facility.

#### FGFACILITY:

SC I.1 – Each individual HAPs is limited to less than 9.0 tons/year on a 12-month rolling time period. Based on reviewed records, highest individual HAP emissions were 1.8 tons/year for toluene.

SC I.2 – Aggregate HAPs are limited to less than 22.5 tons/year on a 12-month rolling time period. For June 2014, 12-month rolling emission rate was 2.4 tons/year.

SC I.3 – Source-wide VOC emissions are limited to less than 90.0 tons/year on a 12-month rolling time period. For June 2013, the 12-month rolling emission rate was 18.2 tons/year.

At the time of the inspection and based on a review of required records and additional information that was submitted by the facility following the inspection and provided that the facility addresses the notations for EU-SERVICEBOOTH, EU-DECOSILVER and FG-RTO-01and02 as described in this activity report, it appears that the facility is in compliance with the requirements of PTI No. 113-03D. -RIL

NAME RIL DATE 8/22/14 SUPERVISOR MA 8/25/2014