

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

B171538355

FACILITY: Industrial Container Services - MI, LLC		SRN / ID: B1715
LOCATION: 4336 HANSEN ST SW, GRAND RAPIDS		DISTRICT: Grand Rapids
CITY: GRAND RAPIDS		COUNTY: KENT
CONTACT: Dan Belfer, Asst. Facility Manager		ACTIVITY DATE: 12/14/2016
STAFF: April Lazzaro	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: MINOR
SUBJECT: Unannounced, scheduled inspection.		
RESOLVED COMPLAINTS:		

Staff, April Lazzaro arrived at the facility to conduct an unannounced, scheduled inspection and met with Dan Belfer, Assistant Facility Manager. Prior to going on-site, moderately objectionable paint and burnt type odors were noted directly to the east of the facility. Mr. Belfer and I sat down and I explained the purpose of the inspection, and Mr. Belfer was able to provide copies of emissions recordkeeping at that time.

FACILITY DESCRIPTION

Industrial Container Services- MI, LLC (ICS) is a drum reconditioning facility operating pursuant to Permit to Install No. 430-83A, which covers an interior and an exterior drum coating line as well as purge and cleanup operations. The facility also operates pursuant to PTI No. 874-91B which limits PM emissions from the drum reconditioning furnace. Steel drums are brought in via tractor trailer, and as the drums are emptied out of the trailer, the lid is removed and they are verified that they are empty pursuant to RCRA regulations. If the drum is not empty, it is sent back to the originator. Following inspection, the drums are placed on a conveyor that travels into the drum reclamation. The furnace was re-permitted in 2007 and replaced in 2008. No changes were made to the permit special conditions at that time. Following the furnace, the drums go through one of two wheelabrators and the lids go through a cover blaster, and the rings go through a ring blaster. There is a baghouse for each and a total of four. ICS will follow up on the specific sizes however they appear to be small. Following that, the interior and exterior of the drum are painted. Each booth is equipped with double bank filters and ovens for curing. The coatings come pre-mixed and ICS pulls straight from the agitated drum for coating. No formulation or mixing takes place on site.

This facility has been the source of many odor complaints over the years, however has never been cited in violation of Rule 901.

Potential to Emit (PTE) calculations for NO_x, CO, SO₂ and PM from all facility-wide natural gas combustion has been requested as well as a PTE for Volatile Organic Compound (VOC) and Hazardous Air Pollutant (HAP) emissions from the drum reconditioning furnace.

COMPLIANCE EVALUATION

PTI No. 874-91B

This PTI covers a 16.0 MMBtu drum reconditioning furnace, waste heat boiler (no supplemental fuel) and a 16.96 MMBtu thermal oxidizer. This permit limits the particulate matter (PM) emission rate to 0.30 lb/1,000lb of exhaust gas, corrected to 50% excess air. The application states that there is a maximum exhaust flowrate of 9,000 scfm when converted to a temperature of 1,600° F is 34,981 acfm. Due to the very high allowable PM emission rate, I asked Senior Permit Engineer Dave Riddle to help me with the calculation. Mr. Riddle confirmed that it is appropriate to utilize the value at scfm to run the calculations so data is standardized. Corrected to 50% excess air that is a potential to emit of 49 tons PM based on the data as supplied in the permit to install application. The unknown from this process is the VOC and HAP emissions that are generated when burning off the drums, hence the PTE request. ICS can only accept drums that are empty pursuant to 40 CFR 261.7(b). Empty is defined as 1" or less of liquid. Any drum received that is not empty is placed off to the side for eventual return to the originator. They are also not permitted to accept any drum that formerly contained acute hazardous waste as listed in 40 CFR 261.33(e). To be an acute hazardous waste, it must be 100 percent pure or the sole active ingredient in a chemical formulation. Information on the top ten drum suppliers was requested and received. The information was reviewed and are listed as mixtures of various ingredients, which don't

appear to meet the definition of acute hazardous waste. Additionally, during a discussion with Brian Grannan, Senior Engineer with ICS out of Gahanna, Ohio it was clarified that ICS does not deal with pharmaceutical or pesticide manufacturing facilities.

A potential to emit demonstration for VOC and HAP has been requested.

According to Mr. Belfer the oxidizer generally runs without issue. I was able to go through a pile of temperature charts (see attached for example). On the chart, the afterburner temperature generally ranges from 1,700-2,000°F and Mr. Belfer stated the set-point is 1,650°F. The furnace temperature peaks at over 1,800°F. An external visual inspection was conducted on the afterburner, and no obvious structural issues were observed. We were out by the furnace when it was shut down for lunch time break, and at shutdown excess emissions were noted as not being captured. I noted to Mr. Belfer that the emissions at shut down may be the cause of the odor complaints that are received as it did smell. Due to this fact, the AQD is requesting pursuant to Rule 336.1911 (Rule 911) a formal Malfunction Abatement Plan (MAP). While it is unclear whether or not this failure to capture emissions was a malfunction, it is not acceptable for standard operating conditions. Rule 911 requires source and air-cleaning device operating variables to be identified and monitored. The furnace and afterburner must operate to ensure all wastes are completely combusted and run through the furnace. When the furnace is shut down, (ie lunch and end of day) it should be empty of drums, which may eliminate the excess emissions. This has been a noted issue in prior reports by AQD inspectors and should be formally addressed in the MAP. Mr. Belfer identified that the pit in the furnace is cleaned out of solids daily and that material is disposed of. The permit requires a monthly visual inspection of the thermal oxidizer, which Mr. Belfer stated that they do more frequently. Recordkeeping provisions for this monthly visual inspection shall be incorporated into the MAP. This will be submitted by March 10, 2017.

Because the PTI only addresses PM emissions, the company has been requested to provide a potential to emit for Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAPs) via the attached e-mail request. ICS has drum furnaces across the country and most have emission limits for VOC, heavy metals and often HAP. This facility does not have a VOC limit and the PTE should be identified. Mr. Grannan stated that he will utilize the stack test data from the Columbus facility because the waste stream is representative of what is processed at Grand Rapids. I stated that this was acceptable.

Due to the excess temperature of the gasses leaving the afterburner, and the fact that the system is under negative pressure, there is a gap in the ductwork prior to the fan. This is to bring in dilution air to cool the gas so the fan is not damaged. In the stack after excess air is added, is the opacity monitor which is required by the PTI. This is new as of the 2008 unit replacement. It records on a paper chart, and while there are many instances of opacity it does not appear to be high enough or long enough duration to exceed a 6-minute average of 20%. If stack testing is ever required, the probe should be placed before the dilution air is added.

PTI No. 430-83A

This PTI covers an exterior barrel coating line, an interior barrel coating line and cleanup and purge operations associated with the two. Each line includes an automated spray application system and associated ovens. I requested installation information, and was informed that the ovens were installed in 1982 and the paint systems were installed in 1993. Each appears to be appropriately covered by the PTI which was issued post 1993.

This PTI has incorrectly been identified as an Opt-out. This PTI limits emissions of VOC and HAP for the coating lines and cleanup/purge operations only, not the entire facility. Additionally, in the permit engineer's evaluation, the Opt-out box is checked no. This will be updated in the AQD system. Due to the fact that potential to emit information was requested, the actual status of the facility is currently unknown.

The total VOC emission rate from the exterior barrel coating line is limited to 24.5 pounds per hour nor 22.7 tons per 12-month rolling time period. The facility is keeping monthly hours of operation, so I divided the total VOC by the hours for July 2016 and got 12.45 lb VOC/hr. Also based on the records provided, I had to calculate the 12-month rolling average which is 16 tons VOC. It is recommended that this be added to the updated spreadsheet that Mr. Belfer is working on.

The total VOC emission rate from the interior barrel coating line is limited to 22.4 pounds per hour nor 10.5 tons per 12-month rolling time period. The facility is keeping monthly hours of operation, so I

divided the total VOC by the hours for July 2016 and got 6.05 lb VOC/hr. Also based on records provided, I had to calculate the 12-month rolling average which is 9.11 tons. It is recommended that this be added to the updated spreadsheet that Mr. Belfer is working on.

The total VOC emission range from the cleanup and purge operations shall not exceed 35.2 pounds per hour nor 9.5 tons per 12-month rolling time period. The records indicate that only acetone is currently used which is no longer a VOC. Therefore, no emissions occur from these activities.

The interior coating line has an as applied instantaneous VOC limit of 3.5 pounds per gallon. Formulation data for the 4 most frequently used interior coatings (attached) were reviewed and were in compliance with this limit.

The exterior coating line has an as applied instantaneous VOC limit of 4.3 pounds per gallon. Formulation data for the 10 most frequently used exterior coatings (attached) were reviewed and were in compliance with this limit.

No visible emissions were noted from the coating lines at the time of the inspection.

The applicant is maintaining acceptable records of emissions with the above suggestions. During the inspection, Mr. Belfer confirmed verbally that the facility is utilizing HVLP spray equipment in both coating lines, and all exhaust filters were observed to be in place and operating properly. No apparent changes have been made to the exhaust stacks for the coating lines.

The total emissions of any single HAP emitted from the combination of coating lines and cleanup/purge operations shall be less than 10 tons per 12-month rolling time period and total aggregate HAP's shall be less than 25 tons per 12-month rolling time period. The highest single HAP reported was delisted in 2004. There are other issues with accuracy of HAP content for other coatings used. The actual HAP emissions are unknown at this point. Therefore, the HAP recordkeeping does not meet the permit requirements and a Violation Notice will be issued.

CONCLUSION

ICS will be sent a Violation Notice for failure to maintain adequate records of Hazardous Air Pollutant emissions.

NAME



DATE

1-23-17

SUPERVISOR

