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MAWLA

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

M462640728

FACILITY: DANA CONTAINER INC.		SRN / ID: M4626
LOCATION: 11430 RUSSELL, DETROIT		DISTRICT: Detroit
CITY: DETROIT		COUNTY: WAYNE
CONTACT: Tom Houle , Terminal Manager		ACTIVITY DATE: 07/07/2017
STAFF: Terseer Hemben	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: Minor
SUBJECT: VOC from wash and solvents		
RESOLVED COMPLAINTS:		

**SCHEDULED INSPECTION: DANA CONTAINER, INC****Address: 11430 RUSSELL, Detroit, MI 48211-1072****SRN: M4626****Present: Thomas P. Houle Terminal Manager****Inspector: Terseer Hemben MDEQ****Phone: 313-865-4122; Fax: 313-865-4462****Background:**

Dana Container, Inc. (DCI) acquired the company known as Action Tote Cleaners, Inc. in January 1994. DCI maintains the same cleaning business as Action Tote did. DCI receives empty paint totes from various paint manufacturers such as BASF and Sherwin Williams, and cleanses them interiorly and externally. DCI receives paint totes from the automotive industry, and other sources. The process is permitted under PTI number 125-07 for cleaning of totes with alcohol based solvents, and rinsing with dilute caustic solutions. Totes are towel-dried and returned to the customer. The use of caustic solutions met exempt status under Rule 281(2)(k) Totes vary widely in sizes, with capacities ranging from 175 gallons to 425 gallons. DCI currently operates three 8-hour shifts, 5 days per week and has approximately 45 employees.

**Inspection Narrative:**

I arrived at the facility address on July 7, 2017 at 1100 hours. Purpose of the visit was to conduct a scheduled regulatory compliance inspection of the tote cleaning process. Temperature at the hour was 77 F with wind speed 8 mph coming from the WSW, and humidity was 69%. I met with Mr. Thomas Houle, the Terminal Manager, who welcomed my visit. We settled down to a pre-inspection interview. Mr. Houle informed DCI had a regulatory compliance issue in the past. The Company wanted to make improvements, but run into challenges with understanding how to perform calculations and keeping to the reporting format required by the permit. He informed he was going on vacation, hence needed time to extract compliance records required by the permit for the AQD to review. We toured the facility and inspected the equipment and processes. Staff observed the loading of totes at the Drain rack including the rinsing and hand-drying for final stocking for the customers. The cleaning process was automated except for the hand - drying. We returned to the office for post-inspection conference. Mr. Houle requested time extension for providing requested records covering the time he would be gone on his pre-planned vacation. Communication regarding the time extension is attached. left the area at 1220 hours.

**Process Description:**

The basic tote cleaning process begins with empty paint being delivered to the site. Incoming totes are weighed for purposeful determination of the amount of residual paint remaining in the tote. Totes that are heavier than expected after weighing are returned to the customer for further emptying. Occasionally, full totes are mistakenly delivered and returned to the customer.

Totes are disassembled. All small parts such as plugs, valves, handles, hatches, etc. are disassembled. The small parts are cleaned separately in the four parts washers using alcohol based solvent. The current permit calls for using only butyl carbitol (alcohol) as the solvent in the small parts washers.

The disassembled paint totes go to the paint tote drain rack where totes are completely emptied. Disassembled totes are stacked on the rack until paint is no longer dripping. Depending on the tote size, emptied totes are then sent to one of the three paint tote cleaning machines. Current permit No. 125-07 calls for n-methylpyrrolidone or butyl carbitol as the only solvents that should be used in the cleaning of the valves and smaller parts. The MSDS of these solvents are in AQD file. Containers are cleaned using caustic solution. This process is regulated under R281(2)(k). The use of caustic is purported to reduce the use of organic solvents and VOC emissions. After cleaning, the paint totes are dried and small parts previously removed are reassembled. The clean reassembled tote is sent to the customer. All totes are labeled with various identification markings. The DCI cleanses an average of 40-90 totes per day.

#### **Equipment Controls:**

The process is controlled by inbuilt process that reduces potential VOCs from the solvent. First, the use of caustic solution for cleaning totes cuts down the amount of VOC content and emissions from the facility. Second, the minimal use of solvent in cleansing the valves and smaller parts increases the control on VOC emissions. Third, the draining rack is equipped with a hood and exhaust that draws air containing vapors to the ambient air through the stack. Fourth, the paint consuming industry increased the supply and encouraged use of water based paints, for reduction of VOC content in paints.

The facility uses 4 cold cleaners FG-SP-7760A. One of the cold cleaners is exempt from permit under Rule 281(h) because the equipment has an air/vapor interface of less than 10 square feet. The other three with air/vapor interface higher than 10 square feet, including the sink are covered in the permit regulatory conditions. Tote washers use a potassium hydroxide solution heated to 160 F for effective cleaning of totes. The washers are equipped with stacks to vent the steam from the building.

Emissions from the drain rack were estimated based on the assumption the total emission from the rack is less than the baseline emissions from the paint manufacturing estimates approximating 1.25% per year. The estimate was therefore assumed to be conservative. However, the toxicity potential of solvents used in washing small parts was assumed to be 100% of VOC emissions from the drain rack. Control of emissions was built in the limits.

#### **Compliance History:**

There have been complaints attributed to DCI in the last 2 years. The complaints were resolved.

#### **Permit (PTI) # 125-07 Conditions:**

- 1. Rule 201(1): There has been no modification to the equipment since permitted and installed.**

#### **EU-DRAINRACK**

- 1. Condition SC. 1.1a: Permittee did not demonstrate the maximum VOC from the EU-DRAINRACK did not exceed 7 tons per year based on a 12-month rolling time period as determined at the end of each calendar month [SC. 1.1a]. Records were not presented for determination of compliance.**
- 2. Condition SC. 1.2: The permittee did not demonstrate the process did not drain more than 15,000 totes in EU-DRAINRACK per 12-month rolling time period, as determined at the end of each calendar month. [SC. 1.2]. Records were not presented for determination of compliance.**
- 3. Condition SC 1.3: The permittee maintained written operating procedures for EU-DRAINRACK. These written procedures were posted in an accessible, conspicuous location near EU-DRAINRACK. Staff visually verified the procedures at the site.**
- 4. Condition SC. 1.4: The permittee covered the EU-DRAINRACK receiving tank whenever material was not being drained into it. The drain rack was equipped with an automatic control technology that automatically opened for draining process and closed when the connecting receptacle was disconnected. The operation of the drain mechanism was visually inspected while in operation.**
- 5. Condition SC. 1.5: The permittee did not demonstrate completion of all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition. Permittee stated the company did not have the skills to complete the required calculations. Records were not presented for determination of compliance.**
- 6. Condition SC. 1.6: The permittee did not demonstrate the keeping, in a satisfactory manner, monthly and 12-month rolling time period records of the number of clean totes shipped, the total weight of those totes when received, and the total weight of those totes when shipped. Records were not presented for determination of compliance.**
- 7. Condition SC. 1.7: The permittee did not demonstrate the keeping, in a satisfactory manner, monthly and 12-month rolling time period VOC emission rate calculations for EU-DRAINRACK. Records were not presented for determination of compliance.**
- 8. Condition SC. 1.8: The Stack & Vent ID SV-VENT had Maximum Diameter (48 inches), Minimum Height Above Ground Level (36.33 feet), and the exhaust gases discharged unobstructed vertically upwards to the ambient air. Visual inspection confirmed compliance.**

#### **FG-SP-7760A**

- 9. Condition SC. 2.1a: The permittee did not demonstrate the maximum VOC emission in FG-SP-7760A did not exceed 7.3 tons per year, based on a 12 - month rolling time period as determined at the end of each calendar month [SC. 2.1a]. Records were not presented for demonstration of compliance based on the 12 - month rolling time period format.**
- 10. Condition SC. 2.2: The permittee did not demonstrate the process did not use more than 15,000 pounds of SP-7760A, hereinafter "solvent", per year based on a 12-month rolling period as determined at the end of each calendar month. The permittee should have determined the amount of solvent used on a "net usage" basis. "Net usage" is defined as the amount of solvent added to FG-SP-7760A less any amount of solvent removed as waste. Records were not presented for demonstration of compliance based on the 12-month rolling time period format.**
- 11. Condition SC.2.3: The permittee drained cleaned parts for no less than 15 seconds or until dripping ceases. Visual inspection observed permittee installed auto operated drain rack that controlled timed events and actions. Preset timing controls for operational activities were read from the control screen displays.**
- 12. Condition SC. 2.4: The permittee maintained written operating procedures for each FG-SP-7760A cleaner. Staff observed these written procedures were posted in an accessible, conspicuous**

location near each cleaner.

13. Condition SC. 2.5: Staff observed a device was available for each FG-SP-7760A cleaner for draining cleaned parts.
14. Condition SC. 2.6: Staff observed each FG-SP-7760A cleaner was equipped with a cover and the cover was closed whenever parts were not being handled in the cold cleaner.
15. Condition SC. 2.7: Staff observed that each FG-SP-7760A cover was mechanically assisted if the Reid vapor pressure of the solvent was more than 0.3 psia or if the solvent was agitated or heated [SC. 2.7]. The system was automated.
16. Condition SC. 2.8: Staff observed If the Reid vapor pressure of any solvent used in any FG-SP-7760A cleaner was greater than 0.6 psia; or, if any solvent used in any FG-SP-7760A cleaner was heated above 120 degrees Fahrenheit, then the FG-SP-7760A cleaner complied with at least one of the following provisions:
  17. a. The cleaner was designed such that the ratio of the freeboard height to the width of the cleaner was equal to or greater than 0.7. [SC. 2.8a]. Schematics of the equipment are on AQD file.
  18. b. The solvent bath was covered with water if the solvent was insoluble and has a specific gravity of more than 1.0 [SC. 2.8b]. NA.
  19. c. The cleaner was controlled by a carbon adsorption system, condensation system, or other method of equivalent control approved by the AQD [SC. 2.8c]. NA.
20. Condition Sc. 2.9: Staff did not see records relating to if the solvent in any FG-SP-7760A cleaner was heated, the solvent temperature was monitored and recorded at least once each calendar week during routine operating conditions [SC. 2.9]. Records were not presented for determination of compliance.
21. Condition SC. 2.10: Staff observed the permittee did not complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition. Records were not presented for determination of compliance.
22. Condition SC. 2.11: The permittee did not demonstrate the keeping, in a satisfactory manner, monthly and 12-month rolling time period records of the amount of solvent used each month and 12-month rolling time period. The permittee should have determined the amount of solvent used on a "net usage" basis. "Net usage" is defined as the amount of solvent added to FG-SP-7760A less any amount of solvent removed as waste. The permittee should have kept all records on file at the facility for a period of at least five years and made them available to the Department upon Request.  
Records were not presented for determination of compliance.
23. Condition SC. 2.12: The permittee did not demonstrate the keeping, in a satisfactory manner, monthly and 12-month rolling time period VOC emission rate calculations for FG-SP-7760A. The permittee should have kept all records on file at the facility for a period of at least five years and made them available to the Department upon request. Records were not presented for determination of compliance.
24. Condition SC. 2.13: The permittee did not demonstrate the keeping, in a satisfactory manner, weekly records of the FG-SP-7760A solvent temperature, as required by SC 2.9. The permittee should have kept all records on file at the facility for a period of at least five years and made them available to the Department upon request [SC. 2.13]. Records were not presented for determination of compliance.
25. Condition SC. 2.14: The permittee should have maintained the following information on file for FG-SP-7760A:
  - a. The Reid vapor pressure of each solvent used [SC. 2.14a]. Records were not presented for determination of compliance.
26. b. If applicable, the option chosen to comply with Rule 707(2) [SC. 2.14b]. The permittee should have complied with the option limiting the DCI operation to 15,000 pounds per year of solvent used (new purchase minus reclaimed) and 7.3 tons per year VOC. Records were not presented

for determination of compliance.

27. **Condition SC. 2.15:** As noted in Rule 707(3)(c), an initial demonstration that the waste solvent was a safety hazard was made prior to storage in non-closed containers. If the waste solvent was a safety hazard and was stored in non-closed containers, verification that the waste solvent was disposed of so that not more than 20 percent, by weight, not allowed to evaporate into the atmosphere should have been made on a monthly basis. Records were not presented for determination of compliance.
28. **Condition SC. 2.16:** The Stack & Vent ID SV-VENT with a Maximum Diameter (48 inches), and Minimum Height Above Ground Level (36.33 feet) discharged exhaust gases unobstructed vertically upwards to the ambient air. Staff visually inspected the stack position for compliance. The stack/vent parameters were visually verified and determined to be in compliance.

#### **FG-FACILITY**

29. **Condition SC. 3.1a:** The permittee did not demonstrate the maximum emission of each HAP from FG-FACILITY did not exceed 8.9 tons per year based on a 12 - month rolling time period as determined at the end of each calendar month. Records were not presented for determination of compliance.
30. **Condition SC. 3.2:** The permittee did not demonstrate completion of all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition [SC. 3.2]. Records were not presented for determination of compliance.
31. **Condition SC. 3.3:** The permittee did not indicate to have kept, in a satisfactory manner, monthly and 12-month rolling time period calculations of the emission rate of each individual HAP for FG-FACILITY. The permittee should have kept all records on file at the facility for a period of at least five years and made them available to the Department upon request [SC. 3.3]. Records were not presented for determination of compliance.

### **Regulatory Summary**

The following regulatory rules were adequately addressed for compliance;

**Rule 301:** The rule limits opacity from the process. The rule was addressed through limitation of opacity from the process. There was no visible emission at the time of inspection.

**Rules 331, 901 and 910 –** The rules prohibited visible emissions from the stacks and recommended gaseous discharge to the ambient through stacks height not less than 36.33 feet high from the ground. A calculated height of at least 36 feet was stipulated for the stacks with exit vents in vertical unobstructed positions. The specifications assured compliance with air screening levels applicable per Rule 225. DCI was in compliance with the set requirements.

**NESHAP-HAP emissions:** The permit allows 14.3 tons of VOC per year, so that the total HAP emissions will be below 25 tons per year. Individual HAP emission are limited to 8.9 tons per year. Records were not presented to confirm compliance.

#### **Compliance Determination:**

The AQD staff inspected the DCI facility as part of the scheduled regulatory compliance inspection. The inspection observed the facility did not provide records for determination of compliance. The facility is determined to be in non-compliance with the permit# 125-07 conditions. Based on the limits set in SC, 3.1 through SC. 3.3 of FG-FACILITY, this facility qualifies as an Opt-Out source for HAPs. Compliance inspections planned for next visits shall be evaluated on the Opt-Out classification

**basis. A violation notice is sent to the DCI to provide records for regulatory compliance determination.**

NAME     flh    

DATE 10/16/2017 SUPERVISOR JK