

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

N742543039

FACILITY: TRI-CLOR, INC.		SRN / ID: N7425
LOCATION: 1012 ENTERPRISE DR., HASTINGS		DISTRICT: Grand Rapids
CITY: HASTINGS		COUNTY: BARRY
CONTACT: Chad Tolles ,		ACTIVITY DATE: 01/09/2018
STAFF: Eric Grinstern	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Unannounced compliance inspection		
RESOLVED COMPLAINTS:		

FACILITY DESCRIPTION

Tri-Chlor, Inc. is an open mold fiberglass reinforced product manufacturing facility. The facility manufactures tanks, piping and other corrosion resistant products.

The facility consists of three buildings, the main building which houses the offices and a newer large green building which has an adjacent Quonset hut on the north side for storage.

The facility has approximately 25 employees and normally operates Monday through Thursday for one 8-hour shift and a half day on Friday.

The facility is located at the end of Enterprise Drive, with residential neighborhoods adjacent to the south and west. AQD files do not show any recent odor complaints.

REGULATORY ANALYSIS

The facility currently has one opt-out permit, PTI No. 24-05C. The facility has an active consent order (No. 18-2008). The CO is eligible for termination if all the requirements have been met. EG forwarded a copy of the CO to the facility to pursue a termination request if they desire.

COMPLIANCE EVALUATION

At the facility, AQD staff, consisting of Eric Grinstern (EG), met with Chad Tolles, Manager, who accompanied EG during the facility tour. During the inspection, staff also met with Brad Tolles, Owner.

Prior to entering the facility, no visible emissions or odors were observed.

Facility operations are located in two separate buildings. The main building, with offices in the front, contains the laminate processes (including a small oven to heat the laminate to allow thermal forming), metal working, laminate welding, and water jet cutting. All of the processes in this building appear to be exempt from permitting under either Rule 285(2)(l)(vi)(B) or Rule 282(2)(a)(vi)(b)(i).

The newer green building to the east contains all of the emission units addressed in PTI No. 24-05C. Emission unit EUSMLDAMDREL is listed in PTI No. 24-05C as being exhausted through a 36-foot stack (Stack #1). The emission unit was originally located in the back of the main building with offices. The facility stated that the EUSMLDAMDREL was moved to the green building shortly after the permit was issued. Review of the permit evaluation shows that EUSMLDAMDREL had the highest styrene

impact out of the three emission units due to the 36-foot stack (9,000 cfm) versus the other two emission units having 40-foot stacks (each with 16,000 cfm). The permit evaluation also shows that the emissions were evaluated by combining the impacts of all three stacks, which is a conservative approach since it assume all three stack maximum impacts occur simultaneously at the same point spatially. Therefore, it appears that moving the emission unit to exhaust out of a 40-foot stack with an increased cfm would not have a negative impact on modeling and meets the minimum stack height requirement of 36-feet in the permit. It appears that the relocation of the emission unit is exempt under Rule 285(2)(a).

PTI No. 24-05C contains four emissions units, EUFILIMENTWIND, EUSMLMANDREL, EUHANDLAYUP and EUCLEANUP. The four emission units are combined into FGFIBERGLASS for styrene and VOC limits and restrictions.

EUHANDLAYUP

Manual lay-up operations.

Restricts the permittee to only use manual applicator equipment.

During the inspection, EG did not observe any lay-up operations taking place.

EUCLEANUP

Emission unit covers facility-wide cleanup activities using acetone.

EMISSION LIMIT

The permit limits acetone emissions to 10 tons per year, on a 12-month rolling time period basis. Compliance with the acetone limit is determined by tracking acetone used versus the amount of acetone reclaimed. The facility deducts a small amount of acetone used in the field from the facility usage totals. The facility uses a small amount of acetone in the field off-site for installations and repairs.

Review of acetone usage records for the past 12 months showed a 12-month rolling time period high in September 2017. The 12-month rolling time period total in September 2017 was 3.27 tons. (records attached)

PROCESS/OPERATIONAL LIMITS

Requires that a minimum of 25% of the acetone received be recovered for shipment offsite.

The facility tracks the monthly and 12 month rolling total percentage of acetone reclaimed. On a 12-month rolling time period, acetone recovery averages around 60%. For a single month the amount recovered can range from zero to greater than 100%. They can have greater than 100% recovery since they record the amount reclaimed on the month it is shipped off-site. Since the amount recovered may be accumulated from more than a single month, they may ship off-site more than they use in a given month.

RECORDKEEPING/REPORTING/NOTIFICATION

Requires the facility to maintain monthly records of type of cleanup solvent used, the amount used, the amount and percentage reclaimed and emission calculations.

The facility supplied records for the past 12 months. The facility reports only acetone used as a cleanup solvent. (records attached)

FGFIBERGLASS

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EMISSION LIMIT

Restricts the emissions of Styrene and VOC. Styrene emissions are limited to 8.9 tons per year and VOC is limited to 9.3 tons per year.

Compliance with the emission limits is calculated based on material usage and the unified emission factors for open molding of composites.

Review of the facility records (attached) for the past 12-month period showed that the highest 12-month rolling time period emission rate occurred ending in March 2017 with a calculated emission amount of 7.73 tons. The highest VOC emission amount also occurred ending in the same month with 7.78 tons of VOC.

MATERIAL LIMITS

Limits the styrene content of any resin used to 50.5 percent or less.

Review of the styrene content of the resins reported by the facility to be used, showed the highest content to be 46%.

PROCESS/OPERATIONAL

Requires the installation and operations of exhaust filters for EUFLILAMENTWIND and EUSMLMANDREL.

Exhaust to Stacks #2 and #3 is via floor vents on the east end of the building. There appears to have been some confusion regarding the requirement for exhaust filters for the emission units. Previous inspection reports question if the filter requirement pertained to the current emission units or to other emission units in the plant. The operation of EUFLILAMENTWIND and EUSMLMANDREL do not appear to generate a large amount, if any particulate. The facility stated that they originally had filter material over the floor vents, but discontinued using it since it appeared to primarily reduce air flow which would

reduce the collection and discharge of styrene emissions. The facility stated that if EG determined that filters are required they would install them. Subsequent review of the permit engineering notes determined that filters are required. During follow-up communications, the facility stated that they are evaluating design options to install filters on the floor inlets.

Requires waste catalyst and resin be stored in closed containers and disposed of properly.

During the inspection EG noted a single drum with a small amount of waste that did not have a lid. The facility was requested to assure that all waste drums have lids. Additionally, drums of resin that were currently being used were observed with no covers. While not directly required within the permit, the facility was requested to cover the drums, while allowing clearance for mixing shafts or pumps. Covers on the drums will aid in reducing emissions from the drums. The facility agreed to construct covers for the drums.

EQUIPMENT

Requires the use of non-atomized application methods, unless product specifications require the use of atomized.

The facility currently does not use any spray application equipment. The facility currently only performs filament wind and hand lay-up. The facility has a spray gun that has not been used for an extended period of time.

RECORDKEEPING/REPORTING/NOTIFICATION

Requires that the facility maintain documentation of non-atomized application devices.
Requires the maintenance of chemical composition data (SDS) for each material used.
Requires that the facility maintain styrene monomer content records for each shipment resin received.
The facility is required to maintain calendar month records of monthly and annual emission calculations.

The facility maintains the required records on-site. Copies of the Resin SDSs were requested and supplied.

STACKS

Visual observation of the stacks showed that they appeared to meet the height and diameter requirements. Stack #2 and Stack #3, each maximum 20" diameter x 40 feet.

MISCELLANEOUS

In addition to the permitted processes, the facility performs sanding and grinding operations. These operations are conducted in a semi-enclosed booth (photo attached) as well as on the plant floor. The semi-enclosed booth is equipped with a duct collector that vents internally. Processes conducted on

the plant floor are not controlled and vent internally. During the inspection a moderate amount of dust could be seen in the plant environment. The grinding and sanding operations are exempt from permitting under Rule 285(2)(l)(vi)(B).

CONCLUSION

Based on the information and observations made as part of this inspection, the facility appears to be in compliance with applicable air quality rules and regulations.



Image 1(EUFILAMENTWIND) : Large mandrel station

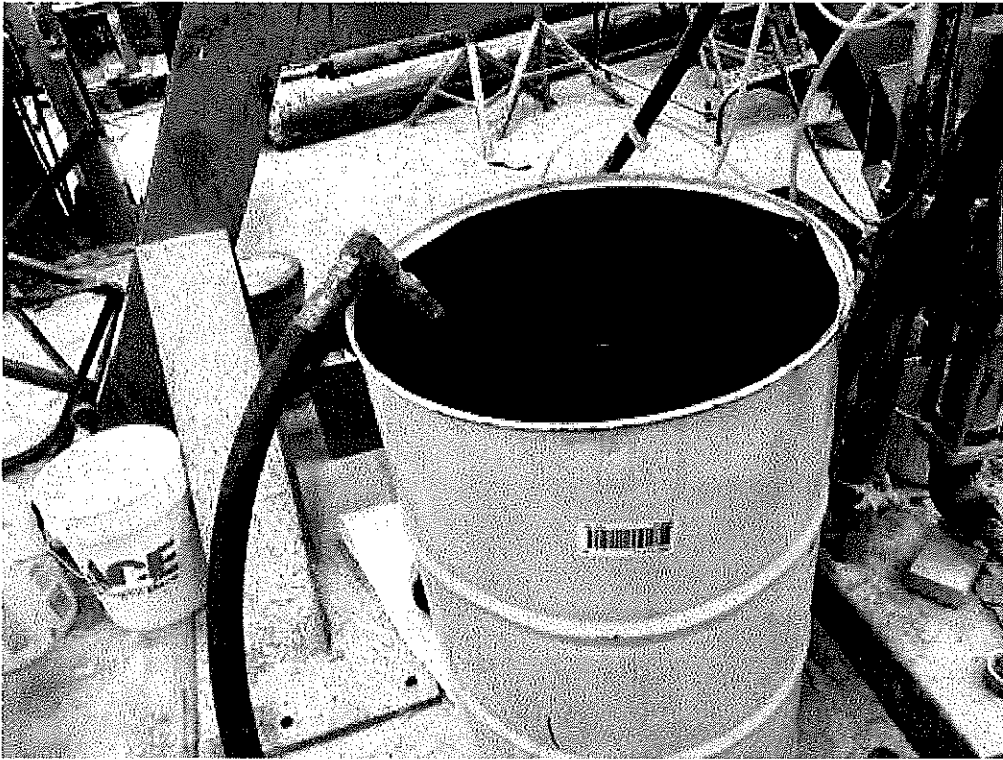


Image 2(Resin Drum) : Open resin drum



Image 3(Plant Floor) : Plant floor, looking southwest



Image 4(Sanding Booth) : Sanding Booth



Image 5(Floor vent) : One of the floor vents that exhaust to a 40 foot stack

NAME Chris Hunter

DATE 1/24/2018

SUPERVISOR [Signature]

