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

P049428865

FACILITY: CUSTOM COATING TECHNOLOGIES INC.		SRN / ID: P0494
LOCATION: 24341 BREST STREET, TAYLOR		DISTRICT: Detroit
CITY: TAYLOR		COUNTY: WAYNE
CONTACT: Jim Anderson , Manager		ACTIVITY DATE: 02/26/2015
STAFF: Terseer Hemben	COMPLIANCE STATUS: Compliance	SOURCE CLASS: Minor
SUBJECT: Scheduled inspection performed		
RESOLVED COMPLAINTS:		

Inspector: Terseer Hemben (AQD)
Personnel Present: Dr. Jim L. Anderson, Jr., General Manager
Company: Custom Coating Technologies, Inc.
24341, Brest Road, Taylor, MI 48180
SRN: P0494
Date of Inspection: February 26, 2015
Facility Phone Number: 734-244-3610
Précis: This inspection was conducted based on the following regulatory rules:-
General Permit (PTI) # 9-14
Federal Rule-
State Rule-R201, R216, R224, R225, R278-R290, R331, R702, 2003

INSPECTION REPORT

FACILITY BACKGROUND:

Custom Coating technology (CCT) operates a pilot paint line for processing flat metal sheets for automotive industry. The pilot paint line was designed to complete larger scale prove-out trials through application of the new coating technology. The new technology is used for coating parts for new vehicle designs scheduled for launching in the coming years. Process activities in the coating line include grinding, cleaning, and coating of various flat sheets of steel. Primary air contaminant concerns from this facility are Volatile Organic Compounds (VOC) emissions from the coating application and drying operations.

The CCT coating line is a single pass paint line covered by a General Permit that utilizes the following steps: (a) grinding, (b) four stage washer, (c) heated dry-off/dry in place pretreatment sealer, (d) coating application, cure oven, and cooling conveyor, and (e) paint room/solvent tank/panel oven/laboratory fume hood. The grinding is performed by manually feeding flat metal on a conveyor for wet grinding and sanding. The sheet is conveyed to the four stage washer after the grinding process. The sanded sheets are conveyed to the washer for alkaline cleaning, city water rinse, iron phosphate treat and rinse. The grinding process is exempt from PTI per R 336.1285(l)(vi) that addresses equipment used for grinding or cutting that generates emissions released in the general in-plant area. Similarly, the four stage washer is exempt from PTI application per R336.1281(e) that addresses equipment used for washing or drying in which the washed or dried material cannot become air contaminant under conditions that fuel used for the process is not solid, or oil type. The heated dry-off/dry in place pretreatment sealer heats the load conveyed from the four stage washer at heating rate 0.8 MMBTU/hr. Emissions from combustion the processes are vented uncontrolled to the atmosphere consistent with the general permit conditions for stack/vent restriction applicability. The finish product is coated with a dry in place sealer.

Inspection Narrate

I arrived at the CCT facility on February 26, 2015, at 1445 hours. Temperature at the hour was 18 F, with wind speed 10 mph coming from NNE and humidity 63%. I was admitted on the site by the manager. We (Manager and I) went through the pre-inspection conference interview. The manager informed there had been no modification of equipment or process since the process was permitted. We took a tour of the

equipment listed in the background narrative including the chemical storage areas, dry filter rack, and paint mixing room. We visited the Laboratory during the inspection. All chemicals found on site were labeled and covered. The indoor air capturing hood was on. The equipment functioned properly. The hood was ducted to the filter housing. I inspected the stacks. The stacks appeared properly constructed. There was no discharge activity out of the stacks. We returned to the office and held a post-inspection conference. I conducted odor inspection outside the facility for detection of odor impact from the CCT facility in the area. I examined the documents available at the site. I went through the SDS folders and noticed the compilation covered the chemicals on the site. I requested the emission records to be sent to AQD Detroit District office in 7 calendar working days from the date of inspection. The Manager called the AQD office requesting time extension for the delivery of emission records. The request was granted. The records were sent to AQD on March 24, 2015.

COMPLAINT/COMPLIANCE HISTORY:

None

OUTSTANDING LOV'S:
None

PROCESS DESCRIPTION:

The metal coating process carried out at the CCT facility is automated. The only manual handling processes are the flat metal sheet loading, washing/clean- up of purged wastes, spills, and finish products removal for storage. The flat metal sheets are pre-cut at a different facility and trucked to the Brest road facility. The CCT process generates minimum particulate matter.

EQUIPMENT AND PROCESS CONTROLS:
The process emission control equipment on paint spray booth process is dry filters. Ventilation system controls emissions generated within the facility building.

OPERATING SCHEDULE/PRODUCTION RATE:
The CCT facility currently operates one shift per day, and 5 days per week, except when shut down for maintenance.

APPLICABLE RULES/OPT OUT PERMIT # 9-14 CONDITIONS:

Based on the permit conditions and underlying applicable rules, the CCT facility was observed to have operated:

1. In compliance – CCT demonstrated there had not been any modification to any system, and/ or process at the above referenced facility since the permitted installation commenced operations The Manager stated there had been no change or modification of the coating process since permitted in 2014.

2. In compliance – CCT demonstrated the VOC emissions from each coating line plus all associated purge and clean- up operations did not exceed the permitted 2000 lbs. /month per calendar month [S.C. I.1]. Records covering the last 12 months indicated the highest emission 375.20 lbs. occurred in November 2014 [Attachment pg. #2].

3. In compliance – CCT demonstrated the VOC emissions from each coating line plus all associated purge and clean-up operations did not exceed the 10 tpy. based on 12-month rolling time period as determined at the end of each calendar month [SC. I.2.]. Records covering the last 12 months indicated the highest monthly emission tracking was 0.86 tons. [Attachment Pg. 2].

4. In compliance - CCT demonstrated permittee captured all purge/clean-up solvents and waste coatings from all coating applicators used in FG-COATING, and stored the materials in closed containers and disposed of them in an acceptable manner in compliance with all applicable rules and regulations [SC III.1]. Records submitted by CCT covering the last 12 months indicated the waste materials were stored in drums and disposed of through contractual vendor. [Attachment pg. 56-61].

5. In compliance - CCT demonstrated permittee equipped and maintained FG-COATING with high volume-low pressure (HVLP) spray applicators or comparable technology with equivalent transfer efficiency (electrostatic spray, dip, flowcoat, roller, dip-spin); and if the applicator is HVLP, and permittee kept test caps available for pressure testing [SC. IV.1]. Response from CCT indicated the facility used twin spray with high HVLP efficiency equivalence. Visual inspection confirmed compliance consistent with photos of equipment presented in Attachment pg. 24-25.

6. In compliance – CCT demonstrated permittee did not operate any spray application unless particulate control (dry filters or water curtain) was installed, maintained and operated in a satisfactory manner [S C. IV.2]. CCT used dry filters for trapping particulates discharged through the stacks. Records covering the last 12 months indicated dry filters were used for emissions control and regularly maintained through contractual vendor [Attachment pg. 26].

7. In compliance – CCT did not need to demonstrate, for a thermal oxidizer or catalytic oxidizer, that permittee maintained and operated in a satisfactory manner to meet the requirements of this general permit, and the equipment met efficiency requirement of an overall minimum of 76 percent reduction of VOC emissions to the atmosphere [SC. IV.3]. Response from CCT stated no Thermal or catalytic oxidizer was installed for the paint line [Attachment pg. 26, Response# 7]:-
   a. Satisfactory operation of a thermal oxidizer included maintaining a minimum combustion chamber temperature of 1400 F and a minimum retention time of 0.5 seconds. In lieu of a minimum temperature, an average temperature of 1400 F based upon a three hour rolling average was used [SC. IV.3a]. This condition was not applicable.

   b. Satisfactory operation of the catalytic oxidizer included maintaining a minimum catalyst bed inlet temperature of 600 F In lieu of a minimum temperature, an average temperature of 600 F based upon a three-hour rolling average was used [SC. IV. 3b]. This condition was not applicable.

8. In compliance – CCT did not need to demonstrate, for a coating line using a thermal oxidizer, permittee installed , calibrated, maintained and operated in a satisfactory manner a temperature monitoring device in the combustion chamber of the thermal oxidizer to monitor and record the temperature on a continuous basis, during operation of FG-COATING. Temperature data recording consisted of measurements made at equally spaced intervals, not exceeding 15 minutes per interval [SC. IV.4]. Response was same as in Question# 7].

9. In compliance – CCT did not need to demonstrate, for a coating line using a catalytic oxidizer, permittee installed, calibrated, maintained and operated in a satisfactory manner a temperature monitoring device to continuously monitor the inlet and outlet temperatures of the catalytic oxidizer catalyst bed during operation of FG-COATING., and temperature data recording consisted of measurements made at equally spaced intervals, not exceeding 15 minutes per interval [SC. IV.5]. Response was same as in Question# 7].

10. In compliance CCT demonstrated within 60 days of notification by the AQD verification of VOC emissions and VOC content (in pounds per gallon) of any coating, reducer, or purge/clean-up solvent, as applied or as received, using federal reference Test Method 25A, Method 24 or other EPA approved reference method, may be required for continued operation. Verification of the emission rates included submittal of a complete report of test results to the AQD following the last date for the test. Upon prior written approval by the AQD District Supervisor, VOC content might have been alternatively determined from manufacturer's formulation data. If Method 25A or Method 24 differed from formulation values, the permittee used Method 25A or Method 24 resulted to determine compliance [SC V.1]. Response from CCT stated all VOC content applied to emission calculations came from paint suppliers technical data sheet or SDS documents. Solvent VOC content and composition were determined from supplier technical data sheets or SDS documents. Technical data Sheets and SDS documents stored on site at CCT facility were made available for inspection. VOC emission records were listed as in the attachment [Attachment pg. 27; Response# 10].

11. In compliance – CCT did not need to demonstrate, for a coating line using a thermal oxidizer; permittee monitored temperature in the combustion chamber of thermal oxidizer and recorded the temperature on a continuous basis during operation of FG-COATING. Temperature data recording consisted of measurements made at equally spaced intervals not exceeding 15 minutes per interval [SC. VI.1]. Response was same as in Question# 7.

12. In compliance – CCT did not need to demonstrate, for a coating line using a catalytic oxidizer, permittee continuously monitored the inlet and outlet temperatures of catalytic oxidizer catalyst bed during operation of FG-COATING. Temperature data recording consisted of measurements made at equally spaced intervals not exceeding 15 minutes per interval [SC. VI.2]. Response was same as in Question# 7.

13. In compliance – CCT demonstrated permittee kept the following information on a monthly basis for FG-COATING:-
    a. Purchase orders and invoices for all coating, reducers, and purge/clean-up solvents [VI.3a]. Response from CCT stated all purchase orders were kept on file on the FRM computer server located in flat Rock, Michigan. Invoices for material purchased were submitted as attached [Attachment pg. 27, Response# 13a].

    b. VOC content, in pounds per gallon, of each coating, reducer and purge/clean-up solvent used [VI.3b]. CCT stated all VOC content for paints and solvents were from the coating line were submitted as listed. These documents were filed at CCT premises at Brest Road, Taylor [Attachment pg. 2, & 27, Response# 13b].

    c. Gallons of each coating, reducer and purge/clean-up solvent used and reclaimed [SC. VI.3c]. CCT presented the quantity of each coatings, reducer and purge/clean-up solvent used and reclaimed in an Excel database in gallons [Attachment pg. 30 – 55].

    d. VOC mass emission calculations determining the monthly emission rate for each coating line, in tons per calendar month, using the method specified in Appendix B [VI.3d]. Records from CCT indicated mass rate, calculations in tons per calendar month were presented [Attachment pg. 2].

    e. VOC mass emission calculations determining the annual emission rate for each coating line, in tons, based on 12-month rolling time period as determined at the end of each calendar month [SC. VI.3e]. CCT calculated the quantity of emissions in tons per 12-month but not rolling period because the plant was in operation for only 12 months at the time of inspection [Attachment pg. 2].

14. In compliance –CCT demonstrated permittee maintained a current listing from the manufacturers of chemical composition of each coating, including the weight percent of each component, and data consisted of Safety Data Sheets, Manufacturer's formulation data, or both as deemed acceptable by the AQD District Supervisor [SC. VI.4]. CCT stated all VOC and material compositions used to calculate VOC emissions were extracted from the supplier SDS documents and Technical Data Sheets. These documents were kept at Custom Coating Technologies, Inc. site, and made available for inspection. Visual inspection confirmed all chemicals on the site had adequate SDS compliance requirements [response# 14].

15. In compliance – CCT did not need to demonstrate for a coating line using a thermal oxidizer through keeping records of the date, duration and description of any malfunction of the control equipment, any maintenance performed, any replacement of catalyst and any testing results [SC. VI.5]. Response was same as in Question# 7. No thermal oxidizer was installed at the facility [Response# 15].

16. In compliance – CCT did not need to demonstrate, for a coating line using a thermal oxidizer, permittee kept, in a satisfactory manner, operating temperature records for thermal oxidizer as required by SC. VI.1, and if the measured temperature of thermal oxidizer fell below 1400F during operation of FG-COATING, and permittee should demonstrate compliance based upon a three-hour average temperature, by calculating the average operating temperature for each three hour period which included one or more temperature readings below 1400 F [SC. VI,6]. Response was same as in Question# 7 [Response# 16].

17. In compliance – CCT did not need to demonstrate, for a coating line using a catalytic oxidizer, permittee kept, in a satisfactory manner, operating temperature records for the catalytic oxidizer as required by SC. VI,2, and if measured operating temperature of the catalytic oxidizer fell below 600F during operation of FG-COATING, and permittee demonstrated compliance based upon a three hour average temperature, by calculating the average operating temperature for each three hour period which included one or more temperature readings below 600 F [SC. VI.7]. Response was same as in Question# 7 [Response# 17].

18. In compliance - CCT demonstrated the exhaust gases from FG-COATING were discharged unobstructed vertically upwards to the ambient air at exit points not less than one and one half times the building height (from ground level to point of discharge) [SC. VIII.1]. Visual inspection of stacks indicated compliance. CCT confirmed all stacks were in order and functioned as designed. No additional stacks had been added to process [Response# 18].

19. In compliance - CCT demonstrated permittee did not replace or modify any FG-COATING including control equipment or coatings, nor install additional coating lines (or any portion of, including control equipment or coatings) unless all of the following conditions were met [SC. IX.1]. CCT stated no changes were made to the paint line or equipment as outlined in the Permit to Install Application that was dated January 2014 [Response# 19]:-

    a. Permittee updated the general permit by submitting a new process information from (EQP5759) to the permit section and District Supervisor, identifying the existing and new equipment a minimum of 10 days before the replacement, modification or installation of new equipment [SC. IX.1a]. This condition did not apply.

    b. Permittee continued to meet all general permit to install applicability criteria after the replacement, modification or installation of new equipment was complete [SC. IX.1b]. This condition did not apply.

    c. Permittee kept records of the date and description of the replacement or modification, installation of new equipment, or any coating change [SC. IX.1c]. This condition did not apply.

FG-SOURCE

20. In compliance -CCT demonstrated VOC emissions from FG-SOURCE did not exceed 30 tpy based on a 12-month rolling time period as determined at the end of each calendar month [SC. I.1]. Records submitted by CCT indicated the highest VOC emission occurred at the end of month of November, 2014 in amount 0.19 tons per 12-month but not rolling period. The company has been operating for only 12 months [Attachment pg. 2]

21. In compliance –CCT demonstrated permittee kept VOC mass emission calculations, on a monthly basis for FG-SOURCE determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month, for all coating lines and associated purge and clean-up operation at the source; and permittee kept all records in the format specified in Appendix B (S C. VI.1). CCT submitted calculations indicating VOC mass emission on a monthly basis in tons per 12-month, but not rolling period, to be 0.86 tpy. It was noted the operation was commissioned and ran for 12 months at the time of inspection. An accurate calculation based on the 12-moth rolling time period procedure will start in the following month [Attachment pg. 2].

Inspection Areas of Focus:

1. Coating Line

   The coating line P&ID diagram is listed in Attachment pg. 20-21. The coating line was neatly laid out and well aerated. The equipment associated with the automated coating line worked was working satisfactorily. The manual operation identified with coating line was located in the feeding of sheets, washing of conveyors with cleaners, and removing finished (polished) metal sheets for storage. The coating is regulated under a general Permit (9-14) that certified the equipment installed met the necessary criteria for applicability of the Gen PTI. Generally, CCT's coating line has limited potential to emit VOCs and HAPs; the conditions in the Gen Permit (PTI# 9-14) ensure the coating line is operated in compliance with all applicable requirements for air pollution control stipulated in supplementary requirements. CCT did not apply to install

for federally enforceable limits for Hazardous Air Pollutants (HAPs). Therefore, the Gen PTI does not contain restrictions that apply to facilities with potential to emit HAPs to less than the major threshold in order to opt out of the National Emission Standards for Hazardous Air Pollutants subpart MMMM for Surface Coating of Miscellaneous Metal Parts and Products and/or the Renewable Operating Permit.

2. Associated Emission Units and Stacks
   The emission units associated with the coating line included ovens and paint spray booth. The areas around the oven and paint spray booth were satisfactorily maintained. The filters serving as emission control device were new and appeared satisfactorily maintained. There was no presence of waste or removed contaminants inside or outside the building.

CONCLUSION

The inspection of the Custom Coating Technologies facility indicated the facility was newly commissioned. The newly installed coating line was well kept. Compliance was determined based on the evaluation of operation data and recordkeeping. The AQD determined the facility operated in compliance with permit condition requirements.

NAME fh DATE 7/21/2015 SUPERVISOR JK