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

A797225271

FACILITY: CADON ACQUISITIONS LLC		**SRN / ID:** A7972
LOCATION: 3715 ELEVENTH ST, WYANDOTTE		**DISTRICT:** Detroit
CITY: WYANDOTTE		**COUNTY:** WAYNE
CONTACT: Robert Rager , Environmental Manager		**ACTIVITY DATE:** 05/14/2014
STAFF: Katherine Koster	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** SM OPT OUT
SUBJECT: Targeted Inspection		
RESOLVED COMPLAINTS:		

REASON FOR INSPECTION: Targeted Inspection
INSPECTED BY: Katie Koster, AQD
PERSO NNEL PRESENT: Robert Rager, Env. Manager
FACILITY PHONE NUMBER: 313-386-5400
FACILITY FAX NUMBER: 734-282-8100
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FACILITY BACKGROUND

Cadon Plating and Coatings, LLC ("Cadon" hereafter) performs plating and coating services on miscellaneous metal parts; mainly for Tier I automotive suppliers. Parts to be treated are mainly bolts, nuts, and fasteners. Facility has been at the current 97,000 sq ft location since the 1950's and presently employs about 63 people. Hours of operation are 24 hours per day, Monday through Friday, and at least one shift every Saturday. Facility is owned by MMP, not Alpha group.

COMPLAINT/COMPLIANCE HISTORY

No complaints have been received recently.

OUTSTANDING CONSENT ORDERS

None

OUTSTANDING LOVs

None

INSPECTION NARRATIVE

AQD staff, Katie Koster, arrived at Cadon Plating on 5/14 at approximately 10:30 a.m. I did not detect any odors in the parking lot. I entered the facility and met Mr. Bob Rager, Environmental Manager, to conduct an unannounced inspection.

We started the inspection in the conference room. I stated the purpose and authority for the inspection. Mr. Rager explained that the operations have not changed nor have the coatings in use. He explained that the process to gain approval from the automotive industry to use a certain coating is so cumbersome that once coatings are approved, they are not likely to change . Approximately 20 different coatings are used in the dip spin operation, although Magni B06 and B18 are the most heavily used solvent-based coatings. The facility uses both solvent and water- based coatings.

Next, Mr. Rager accompanied me about the facility on a plant tour. First, we went to the solvent storage area. He showed me a clipboard with a sign out sheet where operators record the type and amount of product they remove. I noticed Magni B06, P04A, B06J, B17, and Solvent SC150 stored in the area (note: this is not a complete inventory of every product in storage).

Jessup and Brian Zinc Electroplating Lines (2 lines total)

First, we viewed the Jessup and Brian zinc lines which are essentially the same process. Parts to be plated undergo the following treatment steps: caustic cleaning, rinse, acid pickling (HCl), rinse, electroplating, rinse, chromate conversion dip, rinse. Electroplating tanks contain a zinc chloride solution. Caustic and acid pickling tanks are vented uncontrolled through the push pull ventilation system to atmosphere. Electroplating and chromate dip tanks are vented internally.

Mechanical Plating Line

Next, we observed the mechanical plating line. Water, zinc powder, glass beads, and parts are added to an open rotating barrel. Mechanical impact of the materials with the parts results in zinc plating and is used when harder parts are required. I viewed an exhaust hood above the opening of the barrel with associated duct work which Mr. Rager stated vented to atmosphere. After plating, parts are sent to a dryer. Then, if necessary, dipped into a wax seal or super seal tank located near the line.

Zinc Phosphating Line

Parts in this line undergo the following treatment steps: presoak, soak clean, descaling, sulfuric acid dip, and a zinc phosphate bath with numerous rinses in between stages. There is no electrode used in this process. The sulfuric acid tank is equipped with a hood and ductwork leading to a scrubber which vents to atmosphere. Afterwards, parts are either painted or dipped into an oil tank for protection. If parts are to be painted, they are placed in an 180F oven to evaporate any residual water.

Automatic Dip Spin Lines (#2, #3) and Regenerative Thermal Oxidizer (controlling Line #2 and #3)

Parts are fed from a hopper to a chute and magnetic conveyor and then weighed and loaded into a basket. The basket is immersed into the reservoir containing the coating. After the basket is lifted from the coating bath, but is still below the walls of the reservoir, it is spun to remove excess coating. Coating is returned to the reservoir tank for reuse. The basket is emptied onto a conveyor and parts are raked into a single layer by an operator. This area contains a hood and ductwork leading to the RTO. Coated parts are then conveyed to a natural gas fired preheat and curing oven operated between 200 and 600 F.

For lines #2 and #3, Mr. Rager pointed out the exhaust ductwork leading to the RTO. Several years ago, the facility installed panels at both lines to improve capture efficiency based on smoke testing that was performed. The location of panels is documented in the facility file. These panels were in place during the inspection.

The control panel for the RTO is inside of the facility. I recorded the following parameters on the screen:
Afterburner temp – 1530F
Inlet temp – 148F
Outlet temp – 253F
We also checked the panel on the way out and the afterburner temperature was above 1400F.
According to Mr. Rager, the RTO has 8 chambers, and maximum air flow rate of 25,000 CFM, although the facility is only using about 14,000 CFM.

Mr. Rager pointed out a new basket washer that had been installed. Previously, baskets were sent offsite to a separate vendor for cleaning of paint build up via shot blasting. However, this method didn't clean as well as the new basket washer and grit could get stuck in areas and dislodged onto the part. Located near Line #2, the basket washer is natural gas heated; the burner vents to atmosphere. The actual washer vents to the existing scrubber. The cleaning solution is the same as what is used in the phosphating line.

Dip spin Line #1

Process is the same as described above except that this is a manual line where the operator has to initiate the spin cycle. According to facility, this line was installed in the 1950's and is grandfathered from permitting. This line is uncontrolled and uses mostly water based coatings.

Dip spin Line #6/WMV line

Line 6 uses Geomet and Geomet 320 coatings which are water based coatings. This line is uncontrolled. It was acquired from Alpha Coatings. Parts receive two coats of paint on this line.
There are three basket dip stations; baskets travel along the line and are dumped onto a tray. The tray is conveyed to the entrance of a pre heat oven and then into the curing oven.
Facility is considering evaluating use of line for a solvent based coating and according to Mr. Rager, they understand that a PTI modification would be required.

Shot Blasting Line/Wash Line

The process for treating parts is cleaning, rinsing, and shot blasting controlled by a fabric filter then vented to atmosphere. Cleaning and rinsing steps are vented internally.

Hydrogen embrittlement ovens

Each oven has two chambers and operates at 425F. Ovens are used to remove hydrogen build up in certain parts depending on the Rockwell hardness number. A new larger oven had been recently installed.

Next, we proceeded to Mr. Rager office. He stated that IT had taken his computer yesterday and therefore he did not have access to records. He stated that he could log into someone else computer and try to figure it out but he was the only person who looked at environmental records and would have a hard time locating the information. I agreed to request the records at a later date.

EQUIPMENT AND PROCESS CONTROLS

2 zinc electroplating lines -

- 1 Jessup Line – Push/Pull ventilation system on the HCL tanks - Uncontrolled
- 1 Brian Line – Push/Pull ventilation system on the HCL tanks - Uncontrolled

1 zinc phosphating line – Sulfuric acid tank controlled by an acid scrubber

1 mechanical plating line – Hood and associated stack vents uncontrolled to atmosphere

1 shot blasting/wash line – Controlled by a fabric filter and emissions vented to atmosphere

Manual Dip spin paint Line #1 - Uncontrolled

Automatic Dip spin paint Line #2 (90 gal. capacity) and #3 (150 gal. capacity) – Controlled by an RTO

Dip spin paint Line #6 - Uncontrolled
(Dip spin lines include curing ovens)

5 Hydrogen Embrittlement Relief Ovens – One oven new since last inspection

Basket washer – new since last inspection

2 Boilers for providing low pressure steam to treatment tanks

APPLICABLE RULES/PERMIT CONDITIONS
Facility is operating under Permit to Install 252-00B issued (Title V opt out permit for VOC's and HAP's). The B version was issued because facility wanted to remove daily VOC limit. Also Line 6 is operating under PTI No. 229-08.

PTE for VOC's:
LINE 2 and 3: 38.1 tons per year (permit limit)
LINE 1: 10 tons per year (max PTE in permit application information)
LINE 6: 10 tons per year (Permit 229-08)
Total: 58.1 tons VOC per year

PTI 225-00B
FG-RTO (EU-LINE2, EU-LINE3, and one regenerative thermal oxidizer)
S.C. I.1 **IN COMPLIANCE.** VOC emissions limited to 38.1 tpy on a 12 month rolling time period. VOC emissions were 11 tons for the 12 month rolling period ending in December 2013 according to facility MAERS report. (Appendix A).

S.C. IV.1 **IN COMPLIANCE.** Shall not operate FG-RTO unless thermal oxidizer is installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes minimum VOC capture efficiency of 90% and minimum VOC destruction efficiency of 95%, minimum temperature of 1400F, and minimum retention time of 0.5 seconds. Afterburner was above the required temperature during the inspection. RTO was tested in March 2009 and the destruction efficiency was above 95%. A smoke tube assessment was performed in October 2008 and satisfactorily demonstrated adequate capture efficiency after some paneling was installed on both lines to close off open areas. The panels to enhance capture efficiency were in place during this AQD unannounced inspection.

S.C. V.1 **DID NOT EVALUATE.**

S.C. V.2 **IN COMPLIANCE.** Upon written request from AQD, permittee shall verify the capture and control efficiency of the collection system and RTO. Testing of the RTO was conducted March 2009 and demonstrated compliance. AQD has not requested another test at this time.

S.C. VI. 2 **IN COMPLIANCE.** Temperature of the thermal oxidizer shall be monitored on a continuous basis with equipment acceptable to the department. AQD staff viewed the RTO control panel which fluctuated every second indicated temperature readings were being taken continuously. Continuous temperature monitoring records were provided on July 7 and are on the attached CD.

S.C. VI.3 **IN COMPLIANCE.** Facility maintains MSDS's for coatings and solvent used.

S.C. VI.4 Facility shall maintain the following on a monthly basis:
a. Identity and gallons of each coating used. Log of type and amount of each coating removed from storage area was presented during the inspection. **IN COMPLIANCE.**
b. VOC content of each coating, as applied. **NOT APPLICABLE.** As product usage is tracked separately for coatings and solvents, emissions are calculated on an "as received" basis. The "as applied" VOC content is not

necessary for emissions calculations. Therefore, VOC content of each coating as purchased is sufficient at this time. See attached spreadsheet submitted with the 2013 MAERS.
c. VOC mass emission calculations determining the monthly emission rate in tons per calendar month separately for EU-LINE2, EU-LINE3, and FG-RTO. **IN COMPLIANCE.**
d. VOC mass emissions calculations determining 12 month rolling emissions. **IN COMPLIANCE.**

S.C. VI.5 **IN COMPLIANCE.** Continuous records of the temperature in the thermal oxidizer shall be kept. Temperature is recorded electronically and maintained which was demonstrated by records submitted on July 2, 2014. Records are on the attached CD.

S.C. VI.6 **IN COMPLIANCE** – Panels were in place during the unannounced inspection.

S.C. VIII. 1 **IN COMPLIANCE.** Based on visual observation of the stack from ground level, it appears to be in compliance with parameters specified in the permit.

FGFACILITY – All equipment, including equipment covered by other permits, grandfathered equipment, and exempt equipment
S.C. I.1 **IN COMPLIANCE**. Emissions of each individual HAP are limited to less than 9 tons per year on a 12 month rolling time period. Highest individual HAP emissions were 3 tons for glycol ethers for the 12 month rolling period ending in December 2013 according to facility MAERS report. (Appendix A).

S.C. I.2 **IN COMPLIANCE.** Emission of aggregate HAP's are limited to less than 22.5 tons per year on a 12 month rolling time period. Total HAP emissions were 5 tons for the 12 month rolling period ending in December 2013 according to facility MAERS report. (Appendix A).

S.C. V.1 **IN COMPLIANCE.** HAP content of each material as applied and as received shall be determined using manufacturers formulation data. Manufacturers data is maintained for materials as received. Facility submitted Method 311 test results for Texacote 452 as received. This is the product with the highest HAP content. See discussion for S.C. 1.8 regarding "as applied" tracking.

S.C. VI. 2 Shall keep the following information of a monthly basis:
a. **IN COMPLIANCE.** Gallons of each material used.
b. **NOT APPLICABLE**. Gallons reclaimed.
c. **IN COMPLIANCE**. HAP content of each material used is maintained "as received."
d. **IN COMPLIANCE**. Individual and aggregate HAP emissions per calendar month.
e. **IN COMPLIANCE**. Individual and aggregate HAP emissions per 12 month rolling time period (Appendix A).

PTI 229-08 for the Paint Line #6
S.C. 1 and 2 – **NOT IN COMPLIANCE.** VOC emissions are limited to 10 tpy on a 12 month rolling time period and 2000 pounds per month. According to 2013 MAERs, 9.34 tons of VOC's were emitted from the coating usage plus 2.05 tons of xylene which results in 11.4 tons for the 12 month rolling period ending in December 2013. Additionally, the 2012 MAERS supporting information, shows 8.72 tons VOC emitting from the coating usage plus 2 tons of xylene which results in 10.74 tons for the 12 month rolling period ending in December 2012. Also, depending on the monthly xylene usage, facility could have exceeded the 2000 pounds per month limit. At this time, AQD only has the yearly usage (Appendix B).

S.C. V.1 - **DID NOT EVALUATE.**
S.C. VI.3 – **IN COMPLIANCE (a,b,c and d).** Shall keep the following information of a monthly basis:
a. Gallons (with water) of each coating, reducer, thinner, additive, catalyst, and solvent used.
b. VOC content (with water) of each coating as applied.

c. VOC mass emission calculations determining the monthly emission rate in tons per calendar month.
d. VOC mass emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.
e. Hours of operation – **DID NOT EVALUATE**

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EXEMPT EQUIPMENT - IN COMPLIANCE

- Wax dipping tanks – Rule 284(a)
- Electroplating tanks – Rule 285(r)(vii)
- Chromate conversion tanks – Rule 285(r)(i)
- Boilers - Rule 282(b)(i) (Appendix G).
- Hydrogen Embrittlement ovens – Rule 282(a)(i)
- Some tanks in mechanical plating, phosphating line, and electroplating lines vent to atmosphere and do not appear to qualify for the Rule 285(r) exemption. As such, the facility is using the Rule 290 exemption and calculating the emissions based on the methodology in the AQD electroplating calculation fact sheet.
    - Mechanical Plating – Rule 290. See attached records (Appendix H).
    - Phosphating Line – Rule 290. See attached records (Appendix H).
    - Electroplating acid and caustic tanks – Rule 290. See attached records (Appendix H).
- Basket cleaner - Rule 285(l)(ii)

(*For caustic tanks that vent to atmosphere, it appears that exemption Rule 285(l)(ii) is applicable as well)

- Wastewater Treatment Process – Facility is using Rule 285(m) exemption

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Rule 621 – **IN COMPLIANCE** Facility appears to be subject to Rule 621(1)(g), 3.0 lbs VOC/gal coating. In Rule 621(7), it states that compliance shall be determined through test methods specified in Rule 336.2040(12)(a). This testing was conducted in 2009.

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APPLICABLE FUGITIVE DUST CONTROL PLAN CONDITIONS

N/A. All lots are paved.

MAERS REPORT REVIEW

MAERS report was submitted on time and a spot check of the report was conducted by AQD staff.

FINAL COMPLIANCE DETERMINATION

At the time of the inspection, this facility appears to be in non-compliance based on the information reviewed.

Follow up items for next inspection:
Size of new oven
MSDS for cleaning solution
Method 24 results
Usage tracking

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8/8/14 UPDATE: AQD received additional information from Cadon Plating via email on July 15, July 22, and August 5 (attached). An email was presented from Metal Coating Inc stating that no xylene was in the Geomet products. Additionally, a letter from Cadon on August 5 states that no clean up solvents of any kind have been used at Line 6 ever, including xylene, because it has always been a water based line. Finally, the data error in the spreadsheet was an error when the consultant generated the spreadsheet due to the quanitity of products that are in use. This is sufficient information to resolve the non compliance determination. At this time, a letter of violation is not warranted. I have changed compliance status to "Compliance" - KRK

NAME Kale-Kuo DATE 8/8/14 SUPERVISOR