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

N236232468

FACILITY: Pyramid Peak Coatings, LCC		**SRN / ID:** N2362
LOCATION: 630 S Chestnut Street, OWOSSO		**DISTRICT:** Lansing
CITY: OWOSSO		**COUNTY:** SHIAWASSEE
CONTACT: Ted Hundich , Quality Assurance Manager		**ACTIVITY DATE:** 12/07/2015
STAFF: Daniel McGeen	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** SM OPT OUT
SUBJECT: Partial Compliance Evaluation (PCE) activities, conducted as part of a Full Compliance Evaluation (FCE): 1.) scheduled inspection, and 2.) review of facility recordkeeping.		
RESOLVED COMPLAINTS:		

On 12/7/2015, the Department of Environmental Quality (DEQ), Air Quality Division (AQD) conducted a scheduled inspection of Pyramid Peak Coatings, LLC, in Owosso. This was a Partial Compliance Evaluation (PCE) activity, conducted as part of a Full Compliance Evaluation (FCE). Additionally, a second PCE activity, review of records and operational logs, is also documented in this activity report.

Environmental contact:

Theodosi Hundich, Jr., Quality Assurance Manager; 248-226-6010; thundich@xcelpaint.com

Summary of plant operations:

This facility is a coating operation, which primes and paints fascias, which are exterior parts, for the auto industry.

Emission units:

Emission Unit ID	Emission Unit description	Permit to Install (PTI) No. or applicable rule	Status, during inspection
EUPAINTLINE	A plastic and metal parts coating line consisting of seven dry filter spray coating booths including two Primer Booths (No. 0 and No. 1), three Basecoat Booths (Nos. 2, 3, and 4), and two Clearcoat Booths (Nos. 5 and No. 6); numerous flash-off areas between booths and ovens; two natural gas-fired ovens to bake/cure coatings; and purge and cleanup solvent usage. The booths are identified in the PTI as Nos. 1-7, instead of 0-6. Electrostatic spray guns have recently replaced most HVLP spray guns.	PTI No. 30-07B; Rule 285(d), for replacement of most HVLP spray guns with electrostatic spray guns.	Compliance
Wash process	A new aqueous parts washer utilizing an alkaline solution, and water rinses, followed by a natural gas-fired drying oven. This replaced an earlier exempt unit.	Rule 281(e)	Compliance
Research and development paint booth	A small paint booth with dry filter control, for research and development only. Very rarely used.	Rules 283(a) and 287(c)	Not operating, may be removed
Sanding and polishing area	Small area where parts are sanded and/or polished, to remove any imperfections; exhausts to general, in-plant environment.	Rule 285(l)(vi)(B)	Compliance
Boiler	Natural gas-fired boiler, rated at 150,000 Btu/hr	Rule 282(b)(i)	Compliance

Regulatory applicability:

The original Permit to Install (PTI), No. 30-07, was a synthetic minor permit, which limited the Potential to Emit (PTE) of Volatile Organic Compounds (VOCs) and Hazardous Air Pollutants (HAPs), to keep the facility from becoming a major source. This permit was revised as PTI No. 30-07B, which is an opt-out permit that also has permit restrictions for EUPAINTLINE. This revision allowed for modifications to the process, and to their emission limits.

The opt-out permit No. 30-07B keeps the facility below major source thresholds, to opt out of any applicable National Emissions Standards for Hazardous Air Pollutants (NESHAPs), and the Renewable Operating Permit ROP) Program. Thus, the facility is not subject to 40 CFR Part 63, Subpart PPPP, the NESHAP for Surface Coating of Plastic Parts and Products, nor 40 CFR Part 63, Subpart MMMM, the NESHAP for Surface Coating of Miscellaneous Metal Parts and Products.

The facility is not subject to 40 CFR Part 63, Subpart HHHHHH, Paint Stripping and Miscellaneous Surface Coating at Area Sources, which is also known as the area source Maximum Achievable Control Technology (MACT) for coating operations. They have indicated to the AQD Permit Section that they do not spray coatings containing the HAPs (compounds of cadmium, chromium, lead, nickel, and manganese) which are targeted by the area source MACT.

The facility is not subject to 40 CFR Part 63, Subpart JJJJJJ, the NESHAP for Industrial, Commercial, and Institutional Boilers Area Sources. The AQD does not have delegation of authority from the U.S. EPA to enforce this regulation. Section 63.11237 provides a definition of *gas-fired boiler*, and Section 63.11195(e) exempts gas-fired boilers at an area source from the MACT.

Fee status:

This facility is not a major source for criteria pollutants, nor for HAPs, and is therefore not classified as Category I fee-subject. Additionally, it is not subject to New Source Performance Standards, and is not classified as Category II fee-subject. Finally, it is not subject to MACT regulations, and is not classified as Category III fee-subject. Accordingly, it does not pay an annual facility fee, nor a fee for each ton of air emissions. The facility reports annually to the Michigan Air Emission Reporting Systems (MAERS). Checking the plant emissions in the MAERS report against limits in the PTI is an annual compliance check.

Location:

The immediate surroundings of Pyramid Peak Coatings are mostly industrial and/or commercial. There is a large warehouse 350 feet to the north, with vacant land between them. To the south is a large commercial or industrial site. Also, there is an industrial park located 500 feet to the west. About 750 feet to the south and to the southeast are residential properties. To the immediate east and northeast are industrial and/or commercial facilities. The AQD has never received any air pollution complaints about Pyramid Peak Coatings, since it began operating.

Recent history:

This plant had previously been owned by Vaungarde. Pyramid Peak Coatings purchased the facility in November or December of 2007. In March, 2008, they began to operate, but in October 2008 the plant closed, upon loss of a major customer. The plant was mothballed, but the company kept their original Permit to Install (PTI) No. 30-07 active, in the hope of resuming operations. The plant began production again, on 11/29/2010.

On 3/22/2011, Pyramid Peak Coatings sent a letter to the AQD Lansing District Supervisor, asking for approval to use manufacturer's formulation data in lieu of Reference Test Method 24, pursuant to their PTI. On 7/21/2011, AQD sent an approval letter, stating that Rule 336.2040 allows a facility with written approval by AQD to use formulation data to determine VOC content of a coating.

Arrival:

This inspection was arranged in advance, to allow for scheduling. Mr. Ted Hundich is the environmental contact (Quality Assurance Manager) for X-Cel Industries, Inc., which is a parent or sister company to Pyramid Peak Coatings. He works most days out of Southfield, and so a meeting at the Owosso site was scheduled. Prior to today's date, Mr. Hundich and other company officials agreed to allow two DEQ student interns, Ms. Allie Shoffner and Ms. Olivia Ferreira, to participate in the inspection, for educational purposes.

Prior to arrival at the site, we drove around the perimeter of the site, on all four sides, as close as city streets would allow. There were no odors detected from the plant. We arrived at the site at approximately 12 noon. No visible emissions were observed from the facility, except for some steam from a point on the roofline, where a stack was not visible, because we were too close to the building. Weather conditions were 32 degrees F, and overcast, with dense fog, and no breeze.

We met with Mr. Hundich, as well as Mr. Jim Yates, Plant Manager, and Mr. Jarret Moore, Paint Supervisor. I provided my identification/credentials, and a copy of the DEQ brochure *Environmental Inspections: Rights and Responsibilities*, per procedure. They were also provided with a copy of the DEQ boiler MACT card.

We also discussed changes at the plant, which included a new parts washer, exempt under Rule 281(e), replacing a previously exempt unit. The Rule 281(e) exemption is for washing or drying equipment where the material washed (in this case auto parts) cannot become an air contaminant, if no VOCs with a vapor pressure of greater than 0.1 millimeter of mercury at standard conditions are used, and no oil or solid fuel is burned. The washer uses an alkaline solution, and only natural gas is burned as fuel.

Another change since the 2013 inspection is that a natural gas-fired boiler has replaced an earlier natural gas-fired unit. The new boiler is rated at 150,000 Btu/hr, and heats the paint kitchen, we were informed. Both the new boiler and the removed boiler appear to satisfy the exemption criteria for Rule 282(b)(i), which exempts:

(b) Fuel-burning equipment which is used for space heating, service water heating, electric power generation, oil and gas production or processing, or indirect heating and which burns only the following fuels:
(i) Sweet natural gas, synthetic gas, liquefied petroleum gas, or a combination thereof and the equipment has a rated heat input capacity of not more than 50,000,000 Btu per hour.

40 CFR Part 63, Subpart JJJJJJ, the NESHAP for Industrial, Commercial, and Institutional Boilers Area Sources is also known as the Boiler MACT. As mentioned earlier in this report, the AQD does not have delegation of authority from the U.S. EPA to enforce this regulation. Section 63.11237 provides a definition of *gas-fired boiler,* and Section 63.11195(e) exempts gas-fired boilers at an area source from the MACT. The new natural gas-fired boiler at Pyramid Peak Coatings, therefore, is not subject to Subpart JJJJJJ.

We were also informed that most of the High Volume Low Pressure (HVLP) spray guns at the plant have been replaced since the 2013 inspection, with electrostatic spray guns. We were informed that this was done to achieve greater transfer efficiency, and to reduce waste paint. This change, based on the information provided verbally, appears to qualify for the Rule 285(d) permit exemption, which exempts from the requirement to obtain a permit to install:

(d) Reconstruction or replacement of air pollution control equipment with equivalent or more efficient equipment.

Inspection:

Business has been good enough that they have recently added additional staff, we were told, to a total of 35. The plant is operating with one shift per day.

PTI No. 30-07B gives Pyramid Peak Coatings the option to coat metal parts, as well as plastic parts. However, they have not done any metal part coating here, we were informed. The plastic parts they have been coating here are made of Thermal Polyolefin (TPO), ABS, ABSPC, or Rapid Reaction Injection Molding (RRIM) plastics.

Wash process; Rule 281(e):

The wash process is new, and like the wash process it replaced, uses an alkaline solution of a surfactant, in water. The surfactant is a Henkel product called Bonderite, we were told, with a pH of 4. Based on this information, the current unit appears to qualify for use of the Rule 281(e) exemption. This exempts from the requirement to obtain a permit to install:

(e) Equipment used for washing or drying materials, where the material itself cannot become an air contaminant, if no volatile organic compounds that have a vapor pressure greater than 0.1 millimeter of mercury at standard conditions are used in the process and no oil or solid fuel is burned.

We observed the washing process in operation. The stages of the new unit are as follows:

Stage 0: pre-wash, with water from the City of Owosso, at ambient temperature.

Stage 1: Polyprep cleaner 2595, with city water, at 135-153 degrees F.

Stage 2: rinse water, with city water, at ambient temperature.

Stage 3: reverse osmosis rinse water, at ambient temperature, with Bonderite M-PT Dx Aid Post Treatment, to help remove water from parts.

Stage 4: reverse osmosis Halo rinse water, also at abient temperature, and with Bonderite M-PT Dx Aid Post treatment.

It was explained that after washing, a series of air knives blows the excess water off of the cleaned parts, before they enter the drying oven. The drying oven has a natural gas-fired burner, with an exhaust stack. Outside the plant, steam could be seen from this exhaust stack, but there were no visible emissions, otherwise. This process is exempt, and has no opacity limit in the PTI; therefore, it is subject to the 20% visible emission limit specified by Rule 301. At 0%, it is well below the limit.

We were informed that the washing solution uses a surfactant manufactured by Henkel called *Bonderite*, with a pH of 4.

EUPAINTLINE; PTI No. 30-07B:

a.) paint mixing room:

We observed their paint mixing room, or paint kitchen. It was explained that agitators are used, to mix paints with reducers and/or catalysts, as needed.

Coatings were once manually added in the paint room, but that process is now automated, we were informed, to ensure greater accuracy. Once paints are mixed, or catalyzed, they have a shelf life, and their characteristics change, over time. They can generally be in paint pots for 2-2.5 hours. We observed their Daily Paint Traceability and Daily Paint Usage logs, where they document which coatings are mixed, used, and are not used (designated as "scrap"). If there are any problems with a finished coating, they would be able to identify what date and time it was sprayed, the temperature of the spraybooth, and other variables which could help diagnosis a problem.

b.) coating booths:

There are seven paint booths at the site, Nos. 0 through 6. Originally there were booths Nos. 1 through 6, with No. 1 being a primer booth, Nos. 2 through 4 being basecoat booths, and Nos. 5 and 6 being clearcoat booths. They later installed another primer booth, and designated it as booth No. 0, rather than No. 7, because it is used prior to the basecoat and clearcoat booths. However, PTI No. 30-07B refers to the booths as Nos. 1 through 7, which could potentially cause confusion.

Note: this inspection report will refer to the booths as they are numbered at the site itself.

The spraybooths are crossdraft paint booths, with filters on the sides. There are visibly two stages of filter media, the first of which is described as a honey comb-like material. It is my understanding that this is changed daily, while the second media is a fiber layer, which lasts longer, before it needs to be changed. We were told that each booth has a pressure drop gauge, and the readings on the gauges are used to determine when the filtration media needs to be replaced. It is my understanding that the

pressure drop reading which is used as the triggering point for replacing filters is unique to each booth.

Some days, they will do basecoats, clear coats, and/or primers, on the same day. We observed adhesion promoter being applied in booth 0 (or booth 1, as it is identified in the PTI). Adhesion promoters are sometimes, used when coating plastics. The adhesion promoter can be sprayed in either a prime booth or basecoat booth, depending on the specific material.

Some parts which they prime are sent to auto dealerships without any subsequent basecoats. This allows the dealerships to paint them whatever color they may need, at the time.

We observed clear coat being applied, in booth 6 (booth 7, in the PTI). The spray equipment is purged with solvents, in between different coatings. The purge solvents are collected, and sent offsite for recycling.

Some booths coat the front side of parts, while other booths are used to coat the back sides of the parts. Booth No. 4 is a back side booth for applying basecoats, but it has not been used since they reopened in 2010, we were informed.

After being coated in a spraybooth, the parts enter a flash off area. This allows solvents to volatilize, before parts enter the curing ovens. If solvents are not given enough time to flash off, this can cause bubbles to appear in the paint finish, or can cause an orange peel effect, we were informed.

The booths can go through multiple color changes per day, we were advised.

c.) curing ovens:

EUPAINTLINE has two paint curing ovens; the first one being the lower oven, and the second one being the uppermost, although we were told they are sometimes described as one oven with two zones. PTI No. 30-07B requires them to keep the temperature of the bake/cure oven portions of EUPAINTLINE at or below 194 degrees F. Therefore, their coatings are classified as air-dried or "low bake" coatings. Curing at temperatures above 194 degrees F would mean that a company is using "high bake" coatings, which would subject them to a different set of VOC regulations. It was explained that Pyramid Peak Coatings has no interest in operating above their temperature limit, as that could melt their plastic parts.

The ovens are generally well below 194 degrees F, Mr. Hundich explained. On very rare occasions, however, they have had to correct an issue related to temperature. As an illustration, we were informed that fog crystals this morning caused the air intake filters on their air makeup units (AMUs) to freeze, and block incoming air, and temperatures briefly spiked up to 230 degrees F. Mr. Hundich explained that the temperatures were brought down to below 194 degrees F, before they started coating and curing parts. This does not appear to have caused a violation of permit conditions.

The PTI requires them to continuously monitor and record the temperature of the bake/cure oven portions of EUPAINTLINE. Mr. Hundich showed us their weekly circular chart for this week, and the brief temperature spike at the start of the day, today. Please see the attached copy of the circular chart for the week starting on Monday, 12/7. The special condition limiting oven temperature states: "The permittee shall not operate the bake/cure oven portions of EUPAINTLINE at a temperature in excess of 194 [degrees] F <u>when processing plastic parts</u>" (emphasis added). As stated in the paragraph above, it does not appear that a violation occurred, because they were not curing plastic parts, until temperatures had been brought down into the proper range.

As we observed the curing ovens in operation, the lower oven temperature controller, or set point, was 180 degrees F, and the upper oven temperature controller/set point was 179 degrees F, below the limit of 194 degrees F. Actual temperatures were approximately 180 degrees F while we were onsite, as shown on the attached copy of the circular chart. The copy was provided subsequent to the inspection, in response to a request by AQD.

Sanding and polishing area; Rule 285(l)(vi)(b):

The sanding and polishing of plastic parts is exhausted into the general, in-plant environment. This satisfies the criteria for the Rule 285(l)(vi)(B) exemption, which is for:

(vi) Equipment for carving, cutting, routing, turning, drilling, machining, sawing, surface grinding, sanding, planing, buffing, sand blast cleaning, shot blasting, shot peening, or polishing ceramic artwork, leather, metals, graphite, plastics, concrete, rubber, paper stock, wood, or wood products which meets any of the following:
(B) Equipment has emissions that are released only into the general in-plant environment.

We were shown their Finesse Department, where parts are checked for any flaws.

Research and development paint booth; Rules 283(a) and 287(c):

We were shown a small spray booth, referred to as their "batch booth." It is my understanding that it has been used in the past for research and development, which is considered exempt under Rule 283 (a), to see if they could match a manufacturer's coating colors exactly. It has also been considered exempt under Rule 287(c), being a coating booth which used less than 200 gallons per month of coatings. It was explained to us that they have not been using this booth lately, and may remove it, in the future.

Review of facility recordkeeping:

While we were in the facility's paint kitchen, Mr. Hundich showed us the raw recordkeeping forms, indicating how much paints are mixed, used, or end up as scrap. These records are subsequently entered into a spreadsheet.

This electronic spreadsheet was copied by Mr. Hundich onto an AQD flash drive for me, because it would be quite cumbersome to work with, in hard copy form, he indicated. It covered the time period from June, 2011 through October, 2015. November 2015 records were still being compiled, but would be available soon, if AQD would want them, we were informed.

Note: on 12/14/2015, Mr. Hundich sent me an e-mail, to advise me of a typographical error in the electronic spreadsheet, in the column "VOC + Acetone: Booths 3 & 5", which should read "VOC + Acetone: Booths 6 and 7". The data displayed in that column was correct for Booths 6 and 7, he indicated. (Booths 6 and 7 in the recordkeeping refer to Booths 6 and 7 in the PTI, which are identified as 5 and 6 on the plant floor. This activity report will refer to the booths as they are identified on the plant floor.)

Following the inspection, I reviewed 2015 records, in the Lansing District Office. The records indicated compliance with permitted limits in PTI No. 30-07B. I prepared summary tables documenting their actual emissions, permitted limits, and compliance status; please see below.

Table 1: Coating line VOC and acetone year to date (YTD) emissions in 2015

Process	Pollutants	2015 YTD emissions, TPY	Permit limits, TPY	Compliance?
Primer booths 0 and 1 (1 and 2 in PTI)	VOC and acetone combined	6.2	30 TPY	Yes
Basecoat booths 2-4 (3-5 in PTI)	VOC and acetone combined	8.8	30 TPY	Yes
Clearcoat booths 5-6 (6-7 in PTI)	VOC and acetone combined	8.8	30 TPY	Yes

Table 2: EUPAINTLINE monthly emissions of cumene, naphthalene, and xylene, for 2015 YTD

Month/Pollutant	Cumene, in lbs	Napthalene, in lbs	Xylene, in lbs
January	0	24	535
February	0	28	522
March	0	31	542
April	0	27	505
May	0	30	555
June	0	43	837
July	0	40	785
August	0	38	807
September	0	41	842
October	0	53	1,035
Total lbs:	0	355	6,965

Table 3: EUPAINTLINE yearly emissions of cumene, naphthalene, and xylene, for 2015 YTD

Process	Pollutant	Time period/operating scenario	Actual value, 2015 YTD	Limit	Compliance?
EUPAINTLINE	Cumene	12-month rolling time period at end of each calendar month	0 lbs/yr	1,840 lbs/yr	Yes
EUPAINTLINE	Napthalene	12-month rolling time period at end of each calendar month	355 lbs/yr	2,890 lbs/yr	Yes
EUPAINTLINE	Xylene	Calendar day	30.67 lbs/day*	220 lbs/day	Yes

*For xylene, the highest daily value for October 2015 is listed, because the limit is per calendar day.

Table 4: EUPAINTLINE emissions for coating metal parts, 2015 YTD

Process	Pollutant	Time period/operating scenario	Actual value, 2015 YTD	Limit	Compliance?
Metal parts coated on EUPAINTLINE	VOC	12-month rolling time period at end of each calendar month	0.0 TPY	10.0 TPY	Yes
Metal parts coated on EUPAINTLINE	VOCs	Calendar month	0 lbs/month	2,000 lbs/month	Yes

Table 5: VOC content in coating materials, during October, 2015

Process	Pollutant	Time period/operating scenario	Highest actual daily value, for October 2015	Limit	Compliance?
Plastic primer air-dried coating on EUPAINTLINE, other than red or black	VOCs	Daily volume-weighted average	0.0 lb/gal	4.8 lb/gal (minus water)	Yes
Red and black plastic primer air-dried coating on EUPAINTLINE	VOCs	Daily volume-weighted average	5.33 lb/gal	4.8 X 1.15 lb/gal (minus water) = 5.52	Yes
Plastic basecoat air-dried coating on EUPAINTLINE, other than red or black	VOCs	Daily volume-weighted average	4.58 lb/gal	5.0 lb/gal (minus water)	Yes
Red and black plastic basecoat air-dried coating on EUPAINTLINE	VOCs	Daily volume weighted average	4.91 lb/gal	5.0 X 1.15 lb/gal (minus water) = 5.75	Yes
Plastic clearcoat air-dried coating on EUPAINTLINE, other than red or black	VOCs	Daily volume-weighted average	4.36 lb/gal	4.5 lb/gal (minus water)	Yes

Table 6: Material limits for adhesion promoters

Material limits

Material	Actual value for October 2015	Limit	Time period/operating scenario	Equipment	Compliance?
VOCs in adhesion promoters	5.48 lb/gal (minus water)	5.8 lb/gal (minus water)*	Instantaneous	EUPAINTLINE	Yes

*The phrase "minus water" shall also include compounds which are used as organic solvents and which are excluded from the definition of volatile organic compound.

Table 7. FGFACILITY emission limits

Equipment	Pollutant	12 month rolling totals for Oct. 2015, in TPY	Limit	Time period/operating scenario	Compliance?
FGFACILITY	Each individual HAP	3.6, for xylene (individual highest HAP)	Less than 9 TPY	12-month rolling time period at the end of each month	Yes
FGFACILITY	Aggregate HAPs	6.0	Less than 22.5 TPY	12-month rolling time period at the end of each month	Yes
FGFACILITY	VOCs	31.7	Less than 90 TPY	12-month rolling time period at the end of each month	Yes
All metal parts coating lines in FGFACILITY	VOCs	0.00	30 TPY	12-month rolling time period at the end of each month	Yes

Table 8. VOC and acetone 12 month rolling totals for paint booths

Paint booths	VOC and acetone 12 month rolling totals for Oct. 2015, in TPY	PTI limits	Compliance?
0 & 1 (1& 2 in PTI)	6.6	30 TPY	Yes
2-4 (3-5 in PTI)	10.1	30 TPY	Yes
5-6 (6-7 in PTI)	9.9	30 TPY	Yes
Total	26.6*	Limit for FGFACILITY <90 TPY	Yes

***It should be noted that the total of 26.6 TPY VOC and acetone combined for the paint booths in EUPAINTLINE is less than the 31.7 TPY TPY VOCs reported for FGFACILITY in table 8. AQD inquired as to the difference in these two values. Mr. Hundich informed me that this discrepancy appears to be because they were over reporting their VOC emissions, by not giving themselves credit for purge solvents which are captured and sent offsite, for recycling. Pyramid Peak Coatings will follow up on this, I was advised. Even with the over reporting, Pyramid Peak Coatings is still within its permitted emission limits for VOCs and acetone, however.**

MAERS reporting for calendar year 2014:

The facility's most recent MAERS report, for the 2014 operating year, was audited by AQD Lansing District inspector (now Supervisor) Brad Myott, during Spring of 2015. The audit found them to be below permitted limits.

Conclusion:

No instances of noncompliance were observed. I did not identify any areas of concern. The facility appeared clean and neat, and the highly detailed facility recordkeeping indicated compliance with permitted limits in PTI No. 30-07B. We left the site at 2:15 PM. Our DEQ student interns found the inspection of Pyramid Peak Coatings, LLC to be very educational. The company advised me that they will look into accidental over reporting of VOCs caused by not giving themselves credit for purge solvents captured, and sent offsite, for recycling.

NAME _____ DATE 2-2-16 SUPERVISOR B. M.