

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

N215526189

FACILITY: CHRYSLER JEFFERSON NORTH ASSEMBLY PLANT		SRN / ID: N2155
LOCATION: 2101 CONNER AVE, DETROIT		DISTRICT: Detroit
CITY: DETROIT		COUNTY: WAYNE
CONTACT: Andy Whitsitt , Environmental Specialist		ACTIVITY DATE: 07/22/2014
STAFF: Robert Byrnes	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: MAJOR
SUBJECT: FY 2014 Scheduled Inspection.		
RESOLVED COMPLAINTS:		

On July 22, 2014 I conducted an announced inspection at the Chrysler Jefferson North Assembly Plant. I arrived at the facility at 9:45 am and contacted Andy Whitsitt for entry into the facility. Also present for the meeting/discussion portion was Mark Wherthman. Dawn Brezmai and Mike Wallace were present for both the meeting and site walk portions. We began the inspection with a review of the items to cover for the day, worked on obtaining the records for review, visited the final assembly and paint shop portions of the facility, and finally obtained paint samples for Method 311 analysis. The inspection was concluded with an exit meeting/discussion where most requested information was copied and obtained.

The facility currently produces the Grand Cherokee and Durango models 6 days per week, 20 hours per day.

Control Equipment Performance Test Results

Test Dates	Process/Device	Results	Operating Parameter
1/19/11?	Color 1, Bake Oven	99% DE	1310 deg. F.
1/19/11?	Color 2, Bake Oven	99% DE	1310 deg. F.
1/19/11?	Color 3, Bake Oven	95% DE	1310 deg. F.
2/13/14	E Coat A, Bake Oven (new December 2013)	99.8% DE	1310 deg. F.
2/13/14	E Coat B, Bake Oven (new December 2013)	98.4% DE	1310 deg. F.
9/15/10	Color 3, Booth	97.3% DE	1300 def. F.
12/17/09	Color 1, Concentrator	98.7% RE	NA
12/17/09	Color 2, Concentrator	97.9% RE	NA
12/15/09	Color 3 Concentrator	92.6% RE	NA
12/17/09	Color 1, Booth	98.8% DE	1310 deg. F.
12/17/09	Color 2, Booth	99.9% DE	1310 deg. F.

A review of the recent test dates, test results and thermocouple calibration dates (see table below) were reviewed as part of the inspection. E-coat RTO's on oven A and B were replaced and re-tested for DE in December 2013. The color oven calibrations were not conducted within the required 18 month period but Andy explained the facility received the wrong thermocouples and had to wait for the next maintenance opportunity which was late January 2014 and early February 2014. Permit condition III.1 in FG-Controls requires the replacement or calibration a minimum of every 12 months. This was reported as a deviation (SC VI.2) but not as an excursion (SC VI.4 and IX.1(c)) which would be required to be reported and was not with the last reporting period. As a result of missing the requirement to report these as excursions, a violation notice will be sent. A copy of the certification/replacement dates were obtained as part of the site inspection and are included with the hard copy of this report as Attachment A.

	Previous Calibration	Recent Calibration	Months Difference	Reported as deviation	Reported as CAM excursion
Color 1, Bake Oven	3/9/12	2/2/14	22 months	Yes	No, but should have been
Color 2, Bake Oven	3/22/12	1/21/14	22 months	Yes	No, but should have been
Color 3, Bake Oven	4/27/12	1/21/14	21 months	Yes	No, but should have been

E Coat A, Bake Oven		4/10/12	New equipment	No report req'd	No report req'd
E Coat B, Bake Oven		4/10/12	New equipment	No report req'd	No report req'd
Color 1, Concentrator	12/28/12	12/23/13	12 months	No report req'd	No report req'd
Color 2, Concentrator	12/28/12	12/23/13	12 months	No report req'd	No report req'd
Color 3, Concentrator	11/23/12	12/24/13	12 months	No report req'd	No report req'd
Color 1, Booth	4/10/12 (12/27/12)	12/26/13	12 months	No report req'd	No report req'd
Color 2, Booth	4/10/12	12/26/13	20 months	No, but should have been	No, but should have been
Color 3, Booth	4/10/12(12/28/12)	12/23/13	12 months	No report req'd	No report req'd

Paint Booth Line 2 & 3 PM 10 Test Results

The most recent PM10 test results are show below. Follow up testing was required by EPA. These results were reviewed and approved by Tom Maza, a copy is included with the hard copy of this report as Attachment B.

Test Date	Process Equipment	PM 10 Emission Rate
3/18/14	EU-Topcoat 2	2.91 lb/hr
3/18/14	Topcoat line 2, Stack 040	0.99 lb/hr
3/18/14	Topcoat line 2, Stack 042	0.34 lb/hr
3/18/14	Topcoat line 2, Stack 044	1.58 lb/hr
3/18/14	EU-Topcoat 3	2.58 lb/hr
3/18/14	Topcoat line 3, Stack 089	0.84 lb/hr
3/18/14	Topcoat line 3, Stack 090	0.39 lb/hr
3/18/14	Topcoat line 3, Stack 091	1.35 lb/hr

HAP Calculations

Records of HAP emissions required under MACT IIII were obtained for the months of January, February, March, April and May of 2014. Records were kept in an acceptable format as each month is considered a compliance period and does not rely on 12-month rolling time period information. However it was not clear how gallons used for sealers and deadeners were consistent between HAP and VOC reports. The reports also did not include a record showing compliance with the Sealers limit. Andy Whitsitt provided additional information via e-mail on August 6, 2014 which demonstrated the sealer emissions were below the respective limit. The reports also did not include emissions from EU-Topcoat 3 in the records. Andy also provided information on August 6, 2014 which included the usages and emissions from EU-Topcoat 3. Review of these records showed the emissions were well below their respective limits as shown in the table below. A copy of the HAP records is included with the hard copy of this report as Attachment C.

	Jan 2014	Feb 2014	Mar 2014	Apr 2014	May 2014
e-coat, glass install, lowbake, powder, topcoats Limit = 0.60 lbs HAP/GAC	0.37 lbs HAP/GAC (0.338 originally reported)	.305 lbs HAP/GAC (0.273 originally reported)	.308 lbs HAP/GAC (0.275 originally reported)	.26 lbs HAP/GAC (0.23 originally reported)	.324 lbs HAP/GAC (0.29 originally reported)
Sealers Limit = 0.01 lbs/lb of material	.001	.0000	.001	.001	.000
Deadener Limit = 0.01 lbs/lb of material	0.00	0.00	0.00	0.00	0.0 0

VOC Calculations

Recent reviews of each quarterly VOC report were conducted at the time they were received. Any questions regarding the VOC calculations would have been asked at that time. Comparisons were made as to the VOC gallons used for topcoat and compared with the gallons used in the HAP MACT IIII report. Because previous reviews of the VOC records were performed and all emissions were within permitted limits, no further review of the VOC records was conducted as part of this site inspection.

Auto Protocol

Review of the Auto Protocol (EPA-453/R-08-002) VOC emission calculations was not conducted this time but was recently reviewed in June 2012 during the last inspection. Records of the OSL and TE annual reviews required by the auto protocol were requested for the past 2 years. During the inspection I received copies of the 2010 and 2013 years review conducted in January of the following year. The 2010 year appeared to have no changes but the 2013 year review showed the changes were deemed to be insignificant. I briefly viewed information put together by Sandy Walker which showed new e-coat and topcoat oven burners, robots now have bell applicators and new e-coat RTO which recently had their DE tested in 2014. A review of the AQD database also showed TE testing was conducted on April 22, 2013. It is not clear whether this was before or after the applicator changes. The recertification for 2014 had not been signed by the EHS lead manager. The OSL recertification is questionable given changes to the ovens and this will be reviewed again at ROP renewal time. A copy of the certification records is included with the hard copy of this report as Attachment D.

O & M Plan Records

During the inspection we made a visit to Mike Justice of Abednego Environmental Services. Mike provided some of the thermocouple calibration dates. Andy provided real time information via his computer during our initial meeting. The concentrator wheels and thermal oxidizers were observed to have the following operational parameters:

	Color 1 Concentrators	Color 2 Concentrators	Color 3 Concentrators
Wheel #1	0.9" (Prev. 0.85")	0.75" (Prev. 0.80")	1.5" (Prev. 1.6")
Wheel #2	0.8" (Prev. 0.75")	0.65" (Prev. 0.70")	1.1" (Prev. 1.4")
Wheel #3	0.95" (Prev. 0.90")	0.85" (Prev. 0.90")	NA

Control Device	%CV	Operating Temperature Degrees Fahrenheit	Acceptable Operating Value
E-coat Oven A	41 (prev 29)	1332	Yes
E-coat Oven B	62 (Prev. 34)	1329	Yes
Color 1 Booth	66(Prev. 80)	1340	Yes
Color 2 Booth	63 (Prev. 69)	1345	Yes
Color 3 Booth	62 (Prev. 62)	1340	Yes
Color 1 Oven	70(Prev. 50)	1342	Yes
Color 2 Oven	69 (Prev. 64)	1314	Yes
Color 3 Oven	52 (Prev. 55)	1326	Yes

I also obtained a copy of the Annual Inspection of VOC Concentrators conducted on 12/27/2013. This record is attached to this report and comments on the erosion and contamination of the adsorbent materials for each color system. On a scale of 1-10 for erosion with 1= no erosion, color 1 and 2 rotors were rated at a 3 and color 3 was rated at a 1. For contamination, each system was rated 1-10 with 1= no contamination. Color 1 and 2 were rated at a 2 while color 3 was rated at a 1. Color 1 had some material used from tutone as it was damaged ruing removal/install. Color 1 and 2 rotors had material discolored and seal wear marks. Color 3 rotor looked virtually new. Previous inspection in 2012 noted each color system was rated at a 6 and each system was described as needing media replaced.

Review of the temperature calibration dates was conducted and the calibration dates were entered into the summary above showing the control device most recent tested values.

A copy of the control device inspection records is included with the hard copy of this report as Attachment E.

Paint Samples

Method 311 samples were taken from the paint kitchen for the colors Brilliant Black and Billet Silver. These samples will be sent to Advanced Technologies of Michigan (AToM) for analysis. These samples were packaged and mailed to the respective labs on July 23, 2014. When the results of this testing is received a copy will be e-mailed to Andy at the Chrysler JNAP facility.

On August 13, 2014 I received the Method 311 results from Advanced Technologies of Michigan. The results showed Brilliant Black with 1.05% by weight HAP (excluding Formaldehyde) and for Billet Silver with 1.11% HAP (excluding Formaldehyde). As of the finalization of this report the Formaldehyde results were not yet available. A separate report will be entered into MACES when the results become available. Comparing these results (without Formaldehyde) to the March 2014 HAP emission records in attachment C show the test results significantly lower that what was reported. Reported emissions are 2 or 3 times higher than the tested values without formaldehyde. On August 22, 2014 we received the results including Formaldehyde. The additional Formaldehyde was only .044 and .066% by weight which did not significantly change the results or the review. A copy of the Method 311 information is included with the hard copy of this report as Attachment F.

E-Coat Oven

A brief walk near the E-coat oven was part of the site walk to observe for any smoky haze in the vicinity. There was no visible haze in any portion of the paint shop during the site walk.

Powder Guidecoat Oven

A 5 minute walk was also conducted on the roof of the facility near the guidecoat cure oven to observe for visible emissions from the cure oven. During the approximate 5 minute period on the roof with the sun at our back there were no visible emissions from the guidecoat cure oven. Both Andy and Dawn said the facility had not noticed any visible emissions since reverting back to the original sealer materials that were used.

Emergency Engines

A request was made for a list of all the emergency generators at the facility. The facility currently has 2 emergency CI fire pump engines rated at 370 HP each. The engines were installed in 1991 and are identified as East Fire Pump and West Fire Pump. The East Fire Pump has operated 1052.4 hours and West Fire Pump has operated 954.1 hours as of July 2, 2014. A copy of the RICE MACT engine record is included with the hard copy of this report as Attachment G.

Rule 281(h) Cold Cleaners

A copy of all the cold cleaners at the facility was obtained. There are 20 cold cleaners located throughout the facility. The list shows how the each cold cleaner complies with the FG-Coldcleaners SC IV.1, 2, 3, 4 & 5 with air vapor interface (or vents in plant), Reid vapor pressures, freeboard heights, etc. A copy of the cold cleaner record is included with the hard copy of this report as Attachment H.

Rule 287 Spray Booth

The facility has 1 Rule 287 spray booth which coating usage records were obtained for the months of April, May and June of 2014. The record shows compliance with FG-Rule287 SC VI.1(a) by gallons (or ounces) of coating used. Usages were well below the 200 gallon per month requirement as the maximum they used in any month of the 3 was 2 gallons of paint. The lists also note the manufacturer and product ID number for each coating used. I did not request documentation of filter replacement under VI.1(b) but it may be part of a separate record somewhere else. A copy of the Rule 287 record is included with the hard copy of this report as Attachment I.

We concluded the site visit at approximately 4:15 pm and I left the facility at approximately 4:30 pm.

Conclusion

This inspection was the best from Chrysler yet in terms of the amount of requested information I received on the day of the inspection. Historically, obtaining information in a timely fashion was of concern. However, it did take 2 weeks to obtain the thermocouple calibration dates that were not available the day of the inspection and the RTO inspection report. This information should have been readily available the day of the inspection as the items both occurred several months before the inspection date.

The facility is in compliance with all requirements in the current ROP except for they did not report the latest deviations (failure to replace thermocouples within 12 months) as Excursions. These deviations should also have been reported as excursions under FG-Controls SC III.1, VII.4 and IX.1(c). The excursions should have been

reported for Color Bake Ovens 1, 2, 3 and Color Booth 2. As a result of not reporting this, a violation notice will be sent.

NAME Robert J. Byrnes

DATE 9/4/14

SUPERVISOR W.M.