

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

N215536560

FACILITY: FCA US LLC - 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: 07/20/2016
STAFF: Robert Byrnes	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: 2016 Scheduled Inspection.		
RESOLVED COMPLAINTS:		

On July 20, 2016 I conducted an unannounced inspection at the Chrysler Jefferson North Assembly Plant (JNAP). I arrived at the facility at 9:00 am and contacted Andy Whitsitt for entry into the facility. We began the inspection with a review of the emission units I wanted to observe during the walk through, for the day. We then proceeded to observed all the emission units in the body, paint and assembly plant portions listed in the current ROP (MI-ROP-N2155-2010). The inspection was concluded with an exit meeting/discussion where the requested records were obtained.

The facility currently produces the Jeep Grand Cherokee model utilizing 6 days per week, 3 crews, 2 shifts and up to 120 hours per week depending on production demand. No stamping is conducted at JNAP as the stamped materials come from either Sterling stamping or Warren stamping.

VOC Calculations/FG-Facility

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. Records for the month of May 2016 were obtained and reviewed.

Pollutant/material	Limit	May 2016	Compliance
VOC	1085.8 tpy	688.11	Yes
VOC	4.8 lbs/job	3.65	Yes
PM10	42.4 tpy	32.81	Yes
NOx	153.9 tpy	42.15	Yes
CO	133.65 tpy	45.44	Yes (emissions for 2016 are exactly the same as 2015 January through June?)
SO2	3.4 tpy	0.33	Yes
Natural gas	3,719 MM cubic feet	1,344.71	Yes

A couple questions will be asked in the future for clarification purposes. A copy of the VOC emission record for the month of May 2016 is included as attachment A of this report. The total 12-month rolling values were obtained from the 2nd Quarter VOC report.

FG-FACILITY PARTICULATE MATTER:

Copies of the filter records were obtained for the scuff booths, sand booth, tack-off booths, low bake and spot repair booth filters. All filter inspections were listed as "OK" for spray booths, scuff booths and sand booths. There were an occasional record for some filters listed as critical level but they did not pertain to exhaust sources of particulate matter and were mostly air supply houses, recirculation filters and/or combustion air supply. Copies of the filter inspection records for May 2016 are included with the hard copy of this report as Attachment B.

The most recent PM10 test results are shown below.

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

MACT IIII/HAP Calculations

Records of HAP emissions required under MACT III were obtained for the months of May of 2016. 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. It was not clear how gallons used for sealers and deadeners were consistent between HAP and VOC reports. E-coat materials used matched correctly with both the VOC and HAP reports. I did not obtain enough information to confirm the topcoat usages were the same. A review of the HAP records showed the emissions were well below their respective limits in MACT III as shown in the table below.

A copy of the HAP records is included with the hard copy of this report as Attachment C.

	May 2016
e-coat, glass install, lowbake, powder, topcoats Limit = 0.60 lbs HAP/GAC	0.228 lbs HAP/GAC (0.324 previously reported)
Sealers Limit = 0.01 lbs/lb of material	0.00
Deadener Limit = 0.01 lbs/lb of material	0.00

Auto Protocol

Review of the Auto Protocol (EPA-453/R-08-002) VOC emission calculations was not conducted this time but was reviewed in June 2012 during a previous 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 2015 and 2016 years review conducted in January of the following year. The 2015 year had changes to the bell applicators in which a new TE test was conducted on May 29, 2015. The 2016 year review mentions the 2015 bell applicator changes, but also mentioned that a TE test had been conducted. A review of the AQD database also showed TE testing was conducted on May 29, 2015. A copy of the certification records is included with the hard copy of this report as Attachment D.

Oxidizers and concentrators monitoring records

During the inspection records review portion, Andy provided real time information via his computer during our records 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)	1320	Yes
E-coat Oven B	62 (Prev. 34)	1340	Yes
Color 1 Booth	49(Prev. 66)	1344	Yes
Color 2 Booth	57 (Prev. 63)	1339	Yes
Color 3 Booth	50 (Prev. 62)	1341	Yes
Color 1 Oven	64(Prev. 70)	1343	Yes
Color 2 Oven	58 (Prev. 69)	1348	Yes
Color 3 Oven	57 (Prev. 52)	1340	Yes

Copies of all the oxidizer operating temperatures and the concentrator desorb temperatures were obtained for May 3, 2016. A review of the charts for these days showed the control devices were all operating within their required operating parameters as previously determined during testing. A larger review of data was also conducted onsite for the last couple years and all monitoring data appeared within acceptable ranges. A copy of the control device monitor records for May 3, 2016 is included with the hard copy of this report as Attachment E.

EU-Boilers/Natural Gas

Copies of the MAERS calculated values for NOx, SO2, CO, PM2.5, PM10 and VOC were obtained for each natural gas fired fuel combustion source. Also, a copy of the natural gas usage and emission calculations was obtained for each of the 4 boilers. All calculations appeared in order and correct. Natural gas usages were relatively low probably because the warmer month of May 2016 was used for the emission calculation review. A copy of the natural gas usage records are included with a hard copy of this report as Attachment F.

Paint Samples

No Paint Samples were taken during this site visit/inspection.

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

A walk through the powder guidecoat booth was conducted as part of the inspection. The booth spray robots were being cleaned off with compressed air. We asked the paint shop area manager about how the air recirculates and traced much of the duct work. Based upon my best observation, thoroughly following all the duct work and from questioning the manager, all the powder spray booth equipment recirculates and/or is vented internally within the plant.

Emergency Engines

The facility 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. A request was made for the hours of operation for the emergency generators at the facility (July 20, 2016). I was told the security personal responsible for the records desk was locked and had gone home. Andy stated I would receive them the next day. A written response was received on August 18, 2016 providing the total hours of operation. Records are required to be accessible and available for copy at reasonable times. The response also stated the requested information was not required under current ROP or applicable state and federal regulations to be immediately available. Although the specific requirement(s) are not in the current ROP, the regulation has been adopted into state rules under Rule 902(l). Public act 451 provides the mechanism to do such things necessary, proper or desirable to enforce a rule under this part. Also, 40 CFR General Provision 60.10(a)(7)(b)(1) (applicable to 40 CFR Subpart ZZZZ) states the following:

(b) *General recordkeeping requirements.* (1) The owner or operator of an affected source subject to the provisions of this part shall maintain files of all information (including all reports and notifications) required by this part recorded in a form suitable and readily available for expeditious inspection and review.

The engines are required to maintain a non-resettable hour meter and document how many hours were spent during emergency operations and how many hours were spend during non-emergency operation. The next ROP will have the following requirement for the engines:

For each engine in FG-CI-RICE-MACT the permittee shall keep in a satisfactory manner, records of hours of operation recorded through the non-resettable hour meter. The permittee shall document how many hours were spent during emergency operation and how many hours were spent during non-emergency operation. If the engines were used for demand response operation, the permittee shall keep records of the notification of the emergency situation and the time the engine was operated as part of demand response. The permittee shall keep all records on file and make them available to the department upon request. **(40 CFR 63.6655(f), 40 CFR 63.6660)**

The records provided only keep a total of the hours operated and do not appear to distinguish between emergency and non-emergency hours. This specific distinction was not specifically requested at the time of inspection but is a requirement of the regulation. Discretion will be used at this time with the expectation that future records will be adequate. A copy of the August 18, 2016 letter 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 does not adequately address all the items in Rule 707(3)(a). Also, cold cleaners 17 through 20 are over the 10 sft size requirement found in Rule 281(h). The record needs to address if items in Rule 707 and meet the exemption criteria under Rule 281(h), find another exemption, or apply for a permit to install. 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.

A review of the recent test dates test results were reviewed as part of the inspection. This information was based upon information contained within AQD files. All relevant control devices had been recently tested with acceptable results.

Control Equipment Performance Test Results

Test Dates	Process/Device	Results	Operating Parameter
12/1/15		99.6% DE	

	Color 1, Bake Oven	(prev 99%)	1310 deg. F.
12/1/15	Color 2, Bake Oven	99.7% DE (prev 99%)	1320 deg. F.
12/1/15	Color 3, Bake Oven	97.1% DE (prev 95%)	1300 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.
12/1/15	Color 1, Concentrator	94.7% RE (Prev 98.7%)	355 degrees F
12/2/15	Color 2, Concentrator	99.3% RE (prev 97.9%)	355 degrees F
12/3/15	Color 3 Concentrator	89.8% RE (prev 92.6%)	360 degrees F
11/11/14	Color 1, Booth	99.8% DE	1319 deg. F.
11/12/14	Color 2, Booth	99.7% DE	1320 deg. F.
11/13/14	Color 3, Booth	97.1% DE	1300 def. F.

Conclusion

It appears the facility is in compliance with all requirements in the current ROP at this time. There were a couple minor concerns which may or may not be compliance issues but at the time of writing this report they were considered minor. FCA possibly may have further information which would satisfy the requirement anyways. An e-mail was sent to Andy Whitsitt on September 12, 2016 requesting information to address these concerns. As of the date of this report, a response has not yet been received. These items will be addressed at a future follow up inspection. The items in question were as follows: why is there a 95% emission factor for EU-wipe emissions; Does the facility have the number of emergency and non-emergency hours of operation for each fire pump engine, and why there was more booth cleaner credit that usage?

NAME Robert Byrnes*lum

DATE 9/22/16

SUPERVISOR W.M.

* reprinted because original contained truncated text. - w.m.