

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

N215543357

FACILITY: FCA US LLC - JEFFERSON NORTH ASSEMBLY PLANT		SRN / ID: N2155
LOCATION: 2101 CONNER AVE, DETROIT		DISTRICT: Detroit
CITY: DETROIT		COUNTY: WAYNE
CONTACT: Steven Szura , Environmental Health and Safety Specialist		ACTIVITY DATE: 11/08/2017
STAFF: Robert Byrnes	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: MAJOR
SUBJECT: Scheduled Inspection for FY-18. Violation notice was sent for failure to report a deviation.		
RESOLVED COMPLAINTS:		

On November 8, 2017 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.

This purpose of this inspection was a result of recent internal AQD discussions and concerns over consistent reporting of deviations at auto assembly plants. FCA has historically always reported zero deviations which seems almost impossible as control equipment does tend to break down. In 2016 after discussions with FCA it was explained that when a control device breaks down, feed of new vehicle into the process should cease as this allows the AQD enforcement discretion under Rule 915 as emissions would have been minimized to the maximum extent practical. We don't however expect a facility to ruin potential saleable vehicle product so we would allow those vehicles already in process to be finished, but the finishing of those vehicles would need to be reported as a deviation. In March 2017 for the complete 2016 reporting period FCA JNAP listed 17 deviations in which they discussed new product was not introduced, production continued but the properly listed emissions were minimized and reported them as deviations. Now for the first 6 months of 2017 FCA JNAP has reverted back to reporting no deviations.

According to Andy Whitsitt at FCA JNAP and having discussed this with his corporate counter parts, FCA now claims it does in fact cease production in booths and ovens at the immediate time of control device malfunction through their interlock system. No other automobile assembly company in Michigan claims this happens. As such, the following information was obtained and reviewed during the day of this inspection.

During the first 6 months of 2017, eleven (11) control device downtime incidents occurred. 4 incidents were viewed in detail to determine if in fact the conveyor systems prevent both cars from entering and cars from exiting. Although even this method may not be accurate (not definitive/completely creditable) as one could just simply introduce 1 car for each car that exits and the counters on both ends would remain the same and appear to have no movement of vehicles.

- 1) 2/10/17, control panel powered off on E-coat Oven A incinerator, Conveyor U-1 interlock was activated, 21 minutes duration. AQD review found the P2 conveyor – pre-E-coat oven and P3 Conveyor – post E-coat Oven area before sealer deck shows flat line “0” production increase 10:12-10:33 period. However, FCA documentation explained there were no units in the oven when the temperature dropped. This seems unlikely as production counters were changing prior to 10:12am. FCA needs to explain why the conveyor counters showed vehicles in the process while the deviation discussion page states there were 0 (zero) units in the e-coat oven at that time?
- 2) 3/8/17, color 3 oven incinerator had trouble maintaining temperature. The incinerator went to setback temperature due to a P-65 conveyor run permissive fault, 5 minutes duration. AQD review found the P67 counter stayed the same at 23 vehicles on the P67 conveyor. FCA documentation stated no deviation, 3-hour average not triggered.
- 3) 5/22/17 Color 2 VOC was manually put into fresh air by-pass mode per the maintenance manager after Color 2 spray booth was stripped out. FCA documentation stated there were 4 units in the tack off zone but none in any paint zones of the spray booth. The Historical accumulator chart for timeframe (13:19 – 13:49) shows a constant 4 vehicles on the conveyor. FCA needs to explain how long it takes to process a vehicle through color 2?
- 4) 6/8/17, Color 3 went into bypass mode due to fire alarm from 8:44 to 9:02 am. FCA documented no deviation to 3-hr average, entire booth shuts down during fire alarm, bypass opens, and no operations occurring. AQD review on site (12-8-17) found the P60 Conveyor had an increase from 12 to 15 vehicles. Andy and Steve looked for additional information in their APIC Mercury database which is a VIN number switch operation for optimization of block color painting. This information was provided on

12/4/2017. The documentation provided showed the broadcast history to FL status. The barcode reader is prior to the P60 tackoff conveyor recorded by FIS. Documentation shows three units prior to the 8:44 shut down at 8:34, 8:38 and 8:42 and then 3 units at the 10:13, 10:17 and 10:31 time marks. The following table are the results of the information review of the P60 conveyor and the FL status information provided.

Time Frame	P60 Conveyor Reading	APIC Mercury/FL Status
8:30-8:40 am	-1 unit	+2 units (8:34, 8:38am)
8:40-8:50 am	+3 units	+1 unit (8:42am)
8:50-9:40 am	No change	Nothing listed
10:10-10:20 am	+2 units	+2 unit
10:20-10:30 am	-1 unit	+1 unit

- Bypass of color booth 3 from 8:44am – 9:02 am.
- P60 conveyor records show an increase from 12 jobs to 15 jobs (3 jobs) from 8:40 am to 8:50 am.
- FL status information only documents 1 vehicle processed from 8:40 am to 8:44 am.
- The other 2 vehicles documented by the FL status appears before the 8:40 am mark.

Based up the review and the table information above, FCA did not properly file a deviation of SC III.3 of EU-Topcoat 3 as required under SC VII.2. A notice of violation will be sent for not properly reporting deviations under Rule 336.1213(3)(c)(i)).

Thus, as mentioned above this reporting discrepancy is of concern to the AQD for the following reasons:

- Other painting facilities claim you would ruin a vehicle paint job by only half painting or half curing the paint and leaving said vehicle in a booth/oven for an extended period. FCA had 11 instances, 2 over 40 minutes, 5 over 30 minutes, and 8 over 20 minutes.
- Recorded information provided to document no deviations occurred seem to have inconsistent wording or conflicting wording between the downtime reasons and the reason is it a deviation. For example, the 3/8/17 run permissive fault occurred (so in bypass mode?) but noted no deviation of a 3-hour average temperature recording.
- Based upon the information provided there doesn't seem to be an exact way of correlating conveyor accumulator records, FL status records, without obtaining bypass damper records (Not obtained during this review) for date and time. Further information will be requested during a future review.
- If FCA continues to desire the non-reporting of deviations during bypass mode, information from suppliers and/or staff who run painting equipment maybe required as well as possibly observing a vehicle half painted which stays in the booth for 30 minutes without moving.

See Attachment 1 for more details.

VOC Control Device Maintenance and Inspection Reports

The following table is a summary of the documentation reviewed. See Attachment 2 for the details of this report.

Name of Report	Date Of Report	Notes:
Oxidizers Inspection Summary (DURR Service Report)	December 27-29, 2016	Only pages 1-3, & 32-33 were provided. Remaining pages in between were not provided. Hardcopy attached to this report.
VOC Rotor media inspection	12/30/216	For color 1, 2 & 3, inspection for erosion, contamination, notes for needed repairs, other comment regarding pressure drop. The remainder of the report mainly consists of checks (only noted with an inspector's initials) for: greasing bearings, combustion blower filter, gas usage per unit, clean port/windows, check oil, check door and plenum seals, sacrificial carbon check, motor amperage check, inlet/outlet/bypass damper checks, VFD checks, drive belts and sheaves. Hardcopy attached to this report.
Color 1 Incinerator TMS Maintenance example	12/1/2017	Activity details example of what maintenance is performed to Color 1 oven Incinerator as an example for all incinerators. Items include verifying ignition system, flame, damper maintenance, gas regulator, combustion blower filter, pressure switch, flame safety system, gas leak check, linkage

		check, electric motor inspection. Hardcopy attached to this report.
Color 1 Incinerator Maintenance	1/1/17 – 11/30/17	List of equipment, action description and dates of completion for various activities. Electronic copy was reviewed.
Color 2 Incinerator Maintenance	1/1/17 – 11/30/17	List of equipment, action description and dates of completion for various activities. Electronic copy was reviewed.
Color 3 Incinerator Maintenance	1/1/17 – 11/30/17	List of equipment, action description and dates of completion for various activities. Electronic copy was reviewed.
Color Booth VOC Incinerator Maintenance		For color 1, 2 & 3, inspection for erosion, contamination, notes for needed repairs, other comment regarding pressure drop. The remainder of the report mainly consists of checks (only noted with an inspector's initials) for: greasing bearings, combustion blower filter, gas usage per unit, clean port/windows, check oil, check door and plenum seals, sacrificial carbon check, motor amperage check, inlet/outlet/bypass damper checks, VFD checks, drive belts and sheaves. Electronic copy was reviewed.
E-Coat Oven Incinerator Maintenance	1/1/17 – 11/30/17	List of equipment, action description and dates of completion for various activities. Electronic copy was reviewed.

VOC Control Device Temperature Records Review

The following table is a summary of the documentation reviewed:

Control Device	Required Temperature	Average Temperature Reading	Dates	Acceptable Data?
Ecoat Oven Oxidizer A	1325 F	1330 F	3/6/17-3/11/17	Yes
Ecoat Oven Oxidizer B	1325 F	1330 F	3/6/17-3/11/17	Yes
Topcoat 1 Oven	1310 F	1339 F	3/6/17-3/11/17	Yes
Topcoat 1 Booth	1325 F	1340 F	3/6/17-3/11/17	Yes
Concentrator 1	355 F	355 F	3/6/17-3/11/17	Yes
Topcoat 2 Oven	1310 F	1340 F	3/6/17-3/11/17	Yes
Topcoat 2 Booth	1330 F	1325 F	3/6/17-3/11/17	Yes
Concentrator 2	355 F	355 F	3/6/17-3/11/17	Yes
Topcoat 3 Oven	1310 F	1340 F	3/6/17-3/11/17	Yes
Topcoat 3 Booth	1310 F	1345 F	3/6/17-3/11/17	Yes
Concentrator 3	355 F	360 F	3/6/17-3/11/17	Yes

Set point data is included as Attachment 3 of this report.

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, 2016 and 2017 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. The 2017 review documented no changes were made. A copy of the certification records is included with the hard copy of this report as Attachment 4.

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 2017 were obtained and reviewed.

Pollutant/material	Limit	September 2017	Compliance
VOC	1085.8 tpy	741.72	Yes
VOC	4.8 lbs/job	4.07	Yes
PM10	42.4 tpy	33.5	Yes
NOx	153.9 tpy	42.45	Yes
CO	133.65 tpy	3.52	Yes
SO2	3.4 tpy	0.02	Yes
Natural gas	3,719 MM cubic feet	1,322.0	Yes

See Attachment 5 for more details.

MACT III/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 6.

	September 2017
e-coat, glass install, lowbake, powder, topcoats Limit = 0.60 lbs HAP/GAC	0.247 lbs HAP/GAC, (11/21/17 data including powder solids) 0.263 lbs HAP/GAC (10/19/17 data did not include powder solids) (0.228 previously reported May 2016)
Sealers Limit = 0.01 lbs/lb of material	0.00
Deadener Limit = 0.01 lbs/lb of material	0.00

See attachment 6 for more details.

Paint Samples

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

Conclusion

The main purpose of this inspection was to address the no deviations reported. Because this inspection was to obtain information on deviation reporting a site walk through was not conducted. A future inspection will occur after the March 15, 2018 reporting date in follow up to the concerns over control equipment downtime/deviation reporting and to conduct a walkthrough of the facility. Records review for VOC/HAP emission, control equipment maintenance, and temperature records did not show any issues of concern. A Violation Notice will be sent for the reporting concerns listed above.

NAME Ann Byones

DATE 2/21/18

SUPERVISOR W.M