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

A864839694

FACILITY: FORD MOTOR CO ROUGE COMPLEX		**SRN / ID:** A8648
LOCATION: 3001 MILLER RD, DEARBORN		**DISTRICT:** Detroit
CITY: DEARBORN		**COUNTY:** WAYNE
CONTACT: Tamberlyn Shell , Environmental Representative - Corporate		**ACTIVITY DATE:** 04/12/2017
STAFF: Robert Byrnes	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MEGASITE
SUBJECT: FY 2017 Scheduled Inspection of Section 1, Paint Shop.		
RESOLVED COMPLAINTS:		

On April 12, 2017 I visited the Ford Dearborn Assembly Plant to observe the prime abatement stack test and to conduct an air quality inspection. I arrived at the facility at approximately 9:00 am and met with Tamberlyn Shell Reed from Ford. The purpose of this inspection was to determine compliance with MI-ROP-A8648-2010a. No visible emissions were observed nor were any Automobile Assembly Plant type odors detected from the security parking lot. The Ford Dearborn Assembly Plant manufacturers, paints and assembles Ford F-150 pick-up trucks. The facility is a major source of VOC/HAP and is cover by ROP MI-ROP-A8648-2015. Records were requested after the site visit via e-mail and are included as attachments to this report.

Particulate Controls: Ecoat, Guidecoat, Topcoat, Blackout Wax, Repair
Throughout the ROP the facility is required to keep records of the dry filter inspections for EU-Ecoat, EU-Guidecoat, EU-Topcoat and FG-Repair. The purpose of these inspections is to assure the particulate overspray control is working properly and it then can be assumed the tested emission factors for these units remain valid and accurate. A copy of the June 2016 filter inspection records were obtained, the filter records show the following:

Process/Date	1/2/17	1/9/17	1/17/17	1/23/17	1/30/17
Spot Repair Decks (1-3)	Y	Y	Y	Y	Y
E-coat Scuff	0.05 Previous (0.05, 0.1, 1.9)	0.05 Previous (0.05, 0.1, 1.9)	0.05 Previous (0.05, 0.1, 2.0)	0.05 Previous (0.05, 0.1, 1.3)	0.05
Topcoat (Repair) Scuff Booth	0.5 Previous (0.52, 0.5, 0.35)	0.5 Previous (0.52, 0.5, 0.35)	0.5 Previous (0.52, 0.4, 0.35)	0.5 Previous (0.52, 0.4, 0.35)	0.5
Prime Scuff Booth	1.32* Previous (1.5, 0.9, 1.2)	1.32* Previous (1.5, 0.9, 1.6)	1.32* Previous (1.5, 0.95, 1.6)	1.32* Previous (1.5, 0.95, 0.3)	1.32*
Black-out Wax Booth	0.45 Previous (0.3, 0.35, 0.3)	0.45 Previous (0.3, 035, 0.3)	0.45 Previous (0.3, 0.35, 0.3)	0.45 Previous (0.3, 0.35, 0.3)	0.3
SPOVEN final building	Y	Y	Y	Y	Y

*Broken gauge, report says filters were changed monthly. Note: previous readings are from past inspections.

Based upon a review of the records provided the e-coat, topcoat, and black out booths maintained their pressure drop readings. When filters have been changed or cleaned as the pressures rise and then drop after the cleaning and/or replacement. The spot repair and SPOVEN units simply just state "yes" the condition of the filters are acceptable. The prime scuff booth had a broken gauge so a follow up e-mail will be sent to determine the period in which no data was obtained. This raises concerns related to recent occurrences of perceived diminished maintenance. More information is needed before considering further action. See Attachment "1" for more detailed information.

Copies of the weekly water wash verification check list was obtained for the Prime Booth, Enamel #1 and Enamel #2. The weekly verifications simply have Yes or No check boxes which indicate abnormal results were reported to management, pressure drop readings have been reported, pump amperage and psi were checked and recorded, repairs were immediately reported and dates and reasons for any repairs were recorded. However, the reports do not really provide any details as to what would have been reported if anything. Records are included for the weeks of 1/3, 1/9, 1/17, 1/23, and 1/30/2017. Based upon a review of the records provided it

appears the water wash particulate control system has been operated in a satisfactory manner. See Attachment "4" for more detailed information.

VOC Controls
The facility uses carbon wheel concentrators to concentrate VOC emissions from the topcoat auto booths. The concentrators then send the VOC laden air to a 3 cell RTO which also controls the emissions from the E-coat tank, E-coat cure oven, the prime cure oven and the topcoat cure ovens. Operating parameters have been established from performance tests which demonstrate the control devices are installed, maintained and operated in a satisfactory manner. The facility also uses a fluidized bed concentrator and an RTO to control the emissions from the prime coat auto booths. The 3 zones of the 3 cell RTO, the RTO chart recorder, Carbon wheel #1 & #2 Desorb Temperatures. The following operational parameters were recorded during the day of the inspection:

Prime Abatement System
Adsorber differential pressure 1.8" wc (previous results 1.78" on 8/5/15, 1.91" on 5/15/13, 1.81" wc on 9/26/12)

Adsorber tray differential pressure 2.18" wc (previous results 2.2" on 8/5/15, 2.00" on 5/15/13, 2.02" wc on 9/26/12)

Desorber temps from top to bottom 76, 614, 661, 229 degree Fahrenheit (previous results 94, 294, 607, 256 on 8/5/15, 99, 343, 646, 257 degree Fahrenheit on 5/15/13, 152, 457, 509, 223 degree Fahrenheit on 9/26/12)

Oxidizer 1423 degree Fahrenheit (previous results 1423 on 8/5/15, 1417 on 5/15/13, 1426 degree Fahrenheit on 9/26/12)

0% natural gas valve

The following dates in the table below were when the fluidized bed concentrator carbon beads were replaced. These dates came from the previous inspection record, VN responses and a discussion which took place during the stack test/site inspection:

Date	Type	Time Span between changes
January 21, 2013	Reactivated	
May 5, 2013	Reactivated	3 months, 1 week
October 30, 2013	Reactivated	6 months, 3 weeks
March 15, 2014	Reactivated	4 months, 2 weeks
July 19, 2014	Reactivated	4 months
December 13, 2014	Reactivated	5 months, 3 weeks
April 25, 2015	Reactivated	4 months, 2 weeks
August 2, 2015	Reactivated	3 months, 1 week
October 17, 2016*	Reactivated	Not calculated
February 2, 2016*	Reactivated	Not calculated
May 30, 2016*	Reactivated	Not calculated
September 4, 2016*	Reactivated	Not calculated
December 2016	Reactivated	Not calculated
Pre-April 12, 2017	Reactivated	Not calculated

*Information from VN dated 8/31/16 and the response
** Information from retesting of Primer Abatement RE/DE on April 12, 2017

Topcoat Abatement System
The Topcoat abatement equipment consists of 2 rotary carbon wheels followed by a 3 tower RTO. The main abatement systems controls the E-coat, prime, color 1 & 2 ovens which are sent directly to the RTO and the CC 1 & 2 bells and e-coat dip tank which are sent to the concentrator wheels and then the RTO for VOC abatement. Review of this system was not conducted during this site visit. However, this will be further reviewed during a second site visit later in the fiscal year.

EU-Solvents
VOC records were obtained and reviewed for the months of December 2016 and January 2017. Review of the records were found to be acceptable and further matched reported solvent emissions from the 4th Quarter VOC report. The solvent records include cleaning, hydro purge/reclaim, line cleaners, purge/reclaim, beginning and ending tank levels, and wiping solvents. A copy of the solvent record is included as Attachment "2" of this report.

FG-Facility
A review of the most recent emission data for the month of December 2016 was reviewed for compliance with the emission and material limits in FG-Facility as follows:

Limit	Permit Limit	December 2016 Actual Emissions	Compliance?
VOC	897 tons per 12 month rolling time period	808 tpy	Yes
VOC	4.8 Lbs VOC/Job per 12 month rolling time period	4.7	Yes
NOx	79.5 tons per 12 month rolling time period	43.1 tons	Yes
PM 10	19.0 tons per 12 month rolling time period	10.2 tons	Yes
Natural Gas	1600 MMCF/12 month rolling time period	1010 MMCF	Yes

A copy of the March 2017 emission reports can be found as Attachment "3" included with this report.

Flex Permit Changes:
A request was made for a copy of all changes made under the flexibility provisions of the ROP for the last 2 years. The only changes performed was an additional sealer robot for the aluminum body trucks and change out of the paint applicators in the base, clear and prime spray booth automatic sections. See Attachment "5" for more details.

Auto-Protocol:
Copies of the auto protocol reviews were obtained for 2015 and 2016. The protocol reviews show new topcoat applicators were installed in September 2015. Recent testing of CE, TE, RE/DE for the Prime system on 2/27/15 and on 6/26/16 for topcoat do not warrant a re-test. See Attachment "6" for more details.

Example VOC Calculations:
As part of asking how to calculate the VOC contents, information on VOC emission calculations were provided. This information was reviewed and explains how control credit is taken using acronyms similar to those referenced in the Auto Protocol. Also provided in the example was a summary of the Overall Control Efficiency (OCE) of each VOC emitting Emission Unit. See Attachment "7" for more details.

E-coat Calculations:
Requests were made for who the e-coat supplier was. Included as Attachment "8" of this report is a copy of the product bulletin for the Axalta E-coat materials.

Product Data Sheets:
Requests were made for who the e-coat supplier was. Copies of a certificate of analysis for the Black primer and Blue Jeans basecoat materials were provided. Included as Attachment "9" of this report is a copy of the certificates for the Axalta prime and basecoat materials.

Conclusion:
In conclusion, we had a brief follow up discussion on the days inspection. Everything appeared to be in-compliance at this point and time other than the ongoing enforcement case. The facility is in the process of revising their Malfunction Abatement Plan.

NAME [signature] DATE 6/28/17 SUPERVISOR [signature]