

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

N741325988

FACILITY: VENTRA FOWLerville LLC		SRN / ID: N7413
LOCATION: 8887 WEST GRAND RIVER AVENUE, FOWLerville		DISTRICT: Lansing
CITY: FOWLerville		COUNTY: LIVINGSTON
CONTACT: Kaylyn Cox , Environmental Health & Safety		ACTIVITY DATE: 07/09/2014
STAFF: Robert Byrnes	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: FY 2014 Scheduled Inspection.		
RESOLVED COMPLAINTS:		

On Tuesday July 9, 2014 I performed an unannounced inspection at the Ventra Fowlerville LLC facility. I arrived at the facility at 10:15 and asked to meet with Kaylyn Cox the Environmental health & Safety Manager for the facility and Cathy Cupal. The facility is a major source of VOC and is covered by MI-ROP-N7413-2009 which is currently under renewal. I began by asking for a copy of the VOC and HAP records for December 2013. I sent an e-mail on July 9, 2014 requesting all the information I needed from the inspection that day. On July 11, 2014 I received the environmental data sheet for the ingot silver coating sample I collected and all the VOC and HAP emission record information I requested during the inspection. The inspection continued with a walk through of the facility. Norm from the maintenance department also walked with us and was very helpful in describing how the process equipment operates.

**EU-PIM**

There are now 8 (previously 6) plastic molding machines which make front and rear bumper components for various vehicle models such as the Ford F-150 truck, Ford Explorer, Ford Expedition, Chrysler minivan and Dodge Ram pickups. The molding operations run 3 shifts per day, 5 days per week. There are electrically heated air dryers for the plastic Resin portion of the molding process. The dryers are used to remove moisture from the molding process to eliminate quality concerns – exempt R286(a). There are 4 outdoor plastic resin storage silo's – exempt R286(a). Bulk plastic resins are offloaded from semi-tankers using a vacuum system to transfer the materials. Scraped or ruined plastic bumper components are recycled through a plastic grinder to be ground up for re-pelletizing or paint stripped at a facility off-site – exempt R285(l)(vi)(B).

There are also several bumper assembly lines which punch some holes and attach smaller plastic parts (lights, grills, sensors, brackets, license plate holders) - exempt R285(l)(vi)(B). The assembly lines are operating 3 shifts per day, 5 days per week for the F-150, Taurus, Lincoln MKS, expedition and navigator product line. Although EU-PIM is identified in the ROP, there are no permit conditions for this emission unit.

**EU-WASHLINE**

The paint system begins with a 5 stage aqueous based washer. The final stage uses reverse osmosis water. After the washer there is a convection dry-off oven with a 16 minute drying cycle at 225 degrees Fahrenheit. Next is a cool down process which lasts approximately 5 minutes with an end temperature target of 80 degrees Fahrenheit before paint application begins. In early 2011, a new water reclaim system was added. Water is recycled from the cleaner stages to the initial stage which has reduced water usage by over 75%. Although EU-WASHLINE is identified in the ROP, there are no permit conditions for this emission unit.

**EU-APPROCESS**

The start of the paint process begins with the application of an Adhesion Promoter (AP) which is water borne and vents to the atmosphere. There are 3 conventional robotic applicators within the adhesion promoter booth. After the AP booth there is a convection heated flash which drives off the water from the AP coating. The following is a list of special conditions for the EU, the requirement and how they comply with each condition:

Special Condition	Requirement	Compliance Evaluation
I.1	23.4 tpy VOC	Summary records for 2013 showed VOC emissions of 5.68 tons, well below the permit limit. See Attachment A.
I.2	2.6 lbs VOC/gallon minus water	December 2013 VOC records showed the actual materials as used had an average of 0.2689 pounds of VOC /gallon with water. The actual environmental data sheets show this coating to be 2.681 lbs VOC/gallon minus

		water. Although this is within rounding error. The facility has begun ducting this booth to the RTO. See attachment D for the details.
III.1	Captured waste coatings must be in closed containers	All coating materials were closed in the paint kitchen area.
IV.1	Install and maintain a water wash system.	The water wash system was installed, operating and appeared to be maintained in a proper fashion. Waste paint solids were collected and bagged to be sent off as waste.
IV.2	Non-electrostatic applicators or better	Booths used 3 robotic applicators. Ventra Fowlerville does not use any HVLP applicators, therefore test caps are not applicable. The facility uses spray equipment with comparable technology and transfer efficiency.
V.1	Method 24	Company uses vendor formulation data and MSDS to determine VOC contents
VI.1	Complete all calculations by 15 <sup>th</sup> day of the month	VOC records were up to date.
VI.2	Maintain MSDS and/or formulation data.	An e-mail received on July 9, 2014 contained the MSDS and/or environmental data sheets for the materials used during the month of December 2013. Information for the adhesion promoter is attached to this report as attachments A and D.
VI.3	Monthly VOC records	See Attachment A for VOC recordkeeping.
VII-1 through VII.3	Standard ROP reporting	Yes, annual and semi-annual submittals with deviation reports have been received.
VIII	Stack restrictions	Stack parameters for EU-APPROCESS and EU-COATINGLINE were confirmed in the 2013 MAERS submittal.

### EU-COATINGLINE

The basecoat booths spray a solvent borne color coating using 5 fully electrostatic robot bells and 3 dual head electrostatic robot applicators. The booth was designed for 80 ft/minute down draft and has a water wash particulate overspray control system. Following the basecoat booth is an 8-10 minute ambient flash area. Clear coat booths apply a solvent borne clear coat paint using 6 robotic applicators. All applicators are fully electrostatic bells which the original 5 had been tested by ABB when installed and provided approx. 47% TE. The clear coat booth was also designed for 80 ft/minute down draft and has a water wash particulate overspray control system. There is a 15 minute ambient flash followed by the bake oven. The bake oven has a 10 minute radiant heat section followed by a convection section. The total oven time is approximately 40 minutes with the design criteria being able to achieve a part curing temperature of 250-280 degrees Fahrenheit for 25 minutes.

Ad Pro and basecoat paints are received from DuPont or NBcoatings in 55 gallon drums filled with 45 gallons of paint, 10 gallons of room left for thinner. The clear coat comes in 150 gallons totes due to the higher usages.

The basecoat and clear coat spray booths are controlled by an RTO. The RTO is brought up to temperature 2 hrs prior to production and has a conveyor/sprayers interlock which automatically shuts down if the temperature of the RTO falls below 1400 degrees Fahrenheit. The RTO is a 2 chamber design with a cycle time of 2.5-3 minutes. A records review of the RTO temperature strip charts was performed during my inspection for April 15<sup>th</sup> through April 25<sup>th</sup> 2012. Other than a few momentary blips and during idle periods or a weekend, the temperature was always above 1400 degrees Fahrenheit. More commonly the RTO was operated around 1500 plus degrees during most operating periods. The thermocouples were recently replaced on 7/3/14. The heat exchanger inspection was also completed on 7/3/14.

The operating parameters for the RTO on the day of inspection were as follows:  
 Operating Temperature = 1546 degrees Fahrenheit (previous inspection was 1546)  
 Inlet Temperature = 92 degrees Fahrenheit (previous inspection was 122)  
 Outlet Temperature = 297 degrees Fahrenheit (previous inspection was 232)  
 0.47" delta pressure (previous inspection was 1.33" draft pressure).  
 %CV = 57%

### VOC recordkeeping

For VOC emissions from the painting line, Ventra Fowlerville uses their EMTRACK data system for recording and calculating VOC and HAP emission data. A monthly log from the paint kitchen is sent back to the office for data entry into EMTRACK. In the paint kitchen, actual usages, including solvent additions are kept by each shift

each day, and then are compared to supplier (Dupont and NB Coatings) invoices to make sure the paint inventory is balanced with usage. The facility can spray over 100 different colors.

Copies of the VOC and HAP summaries for 2013 were obtained and are attachments B & C included with this report. Detailed records of the usages for the month of December 2013 were also obtained but did not include the lb VOC/Gallon and lb HAP/gallon information. The records obtained were reviewed and they are below their respective VOC emission limits as found in the ROP.

### Plastic Parts MACT

Initial notification – March 31, 2009 due, received April 29, 2009.

Because the facility complies with the plastic parts MACT subpart PPPP using the emission rate without add on controls option, they are not required to have a work practice plan 63.4493(a).

Special Condition	Requirement	Compliance Evaluation
I.1	117.0 tpy VOC	Summary records for 2013 showed VOC emissions of 65.48 tons, well below the permit limit. See attachment A.
III.1	Reclaim 70 percent by weight of all purge solvents.	A copy of the 2013 purge manifest records were reviewed as well as the amounts purchased. The facility reclaimed approximately 52.6% of purge solvent based upon purchase/manifest records. Those purge solvents not collected would have occurred in the controlled paint booths with 90% capture and 95% destruction. Therefore the facility would be in compliance with the 70% reclaim/removal (in this case destruction) requirements. See attachment C.
III.2	Captured waste coatings must be in closed containers	All coating materials were closed in the paint kitchen area.
IV.1	Install and maintain a water wash system.	The water wash system was installed, operating and appeared to be maintained in a proper fashion. Waste paint solids were collected and bagged to be sent off as waste.
IV.2	Non-electrostatic applicators or better	Booths used 11 robotic applicators. Ventra Fowlerville does not use any HVLP applicators, therefore test caps are not applicable. The facility uses spray equipment with comparable technology and transfer efficiency..
IV.3	1400 Degree's Fahrenheit temperature and monitoring requirement.	A review of January 1st, 2014 through April 24 <sup>th</sup> , 2014 wheel charts showed the oxidizer to be above 1500 degree's except during shutdowns and weekends of non production.
V.1	Method 24	Company uses vendor formulation data and MSDS to determine VOC contents.
V.2	Performance testing every 5 years unless an acceptable demonstration shows the previous results are still valid.	The only changes the facility has made since initial operation has been to add robots to the spray booths. The original performance testing was conducted on March 18 <sup>th</sup> , 2007. Capture efficiency testing was conducted on July 2, 2013 and would likely be conducted prior to PTI 247-04B being rolled into the ROP.
VI.1	Monitor the temperature in the thermal oxidizer on a continuous basis.	Continuous temperature records were reviewed from January 1st, 2014 through April 24 <sup>th</sup> 2014. Operating temperature was above 1400 degrees Fahrenheit during all production hours.
VI.2	Complete require calculations by the 15 <sup>th</sup> day of each month.	Records were obtained in response to an e-mail sent on July 9, 2014. See attachments
VI.3	Maintain a current listing of the chemical composition of each coating, reducer, purge and/or clean up solvent.	Copies of the MSDS for purge and clean solvents were obtained in response to an e-mail sent on July 9, 2014. See attachment
VI.4	Monthly records of usage in gallons, VOC content, and mass VOC emission calculations.	Monthly records for December 2013 were obtained and reviewed in response to an e-mail sent on July 9 <sup>th</sup> 2014. See attachment A.
VI.5	Maintain records of the temperature in the thermal oxidizer.	Continuous temperature records were reviewed from April 15 <sup>th</sup> , 2012 through April 24 <sup>th</sup> 2012. Operating temperature was well above 1400 degrees Fahrenheit during all production hours.
VI.6	Conduct bypass monitoring for each bypass line.	Company uses an interlock for temperature and other monitoring faults.
VI.7	Develop an O&M plan and keep maintenance records.	The thermocouples were replaced on 7/3/14. The heat exchanger inspection was also completed on 7/3/14.
VII.1 through	Standard ROP reporting	Yes, annual and semi-annual submittals with deviation reports have

VII.3		been received.
VII.4	Standard CAM ROP reporting excursions and exceedances.	Annual and semi-annual submittals have been received. No exceedances or excursions have been reported.
VIII.1	Stack requirement for RTO	The stack parameters were confirmed in the 2013 MAERS submittal

**Boilers/Hot Water Heaters**

The facility also has 2 natural gas fired water heaters which are exempt under Rule 282(b)(i). 1 unit was new and was 2.0 MMBTU/hr. The second unit was 1.75 MMBTU/hr and is supposed to be replaced by a new 2.0 MMBTU/hr unit which was already on site, just not hooked up. All units are used to provide process water to the washer and building heat.

**Diesel Generator**

The facility has a Spectrum 300 Detroit Diesel emergency generator that was installed when the facility began operation in March 2006. The rated capacity of the generator is 300 HP. The renewal ROP which is currently in working draft phase will include the requirements for the engine as it is subject to MACT ZZZZ starting in 2016.

**Stacks**

No review of the stack heights and diameters were done at the facility during this inspection. The 2013 MAERS report confirmed the stacks are the same dimensions as in the facility's ROP.

**2011 MAERS Submittal**

A review of the 2013 MAERS submittal was done and no errors or discrepancies were found

**Conclusion:**

The facility is in compliance with all applicable rules and regulations at this time. The site inspection was unannounced, Cathy, Kaylyn and Norm were very helpful in getting the information needed in a timely fashion. No items remain to follow up with at this time.

NAME *[Signature]* DATE 7/17/14 SUPERVISOR *[Signature]*