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

N131626708

FACILITY: NJT Enterprises, LLC (Formally Mayco Plastics)		**SRN / ID:** N1316
LOCATION: 42400 Merrill, STERLING HTS		**DISTRICT:** Southeast Michigan
CITY: STERLING HTS		**COUNTY:** MACOMB
CONTACT: Al Cook , Facility Manager		**ACTIVITY DATE:** 08/08/2014
STAFF: Francis Lim	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MAJOR
SUBJECT: Inspection		
RESOLVED COMPLAINTS:		

On July 8, 2014, I conducted an inspection at NJT Enterprises LLC, located at 42400 Merrill Rd, Sterling Heights, Michigan. NJT's facility at this site is called Mayco International LLC. The purpose of the inspection was to determine compliance with the Federal Clean Air Act; Article II, Part 55, Air Pollution Control of Natural Resources and Environmental Protection Act, 1994 Public Act 451; Michigan Department of Environmental Quality, Air Quality Division (MDEQ-AQD) Administrative Rules; Renewable Operating Permit ROP No. MI-ROP-N1316-2010, Consent Order No. 3-2010, and Plastics Parts Coating MACT. During the inspection, AQD staff was assisted by Mr. Al Cook, Facility Manager.

The former occupant of the site, Mayco Plastics filed for bankruptcy in 2006. NJT bought the equipment from the bankrupt Mayco Plastics. NJT also bought some equipment from Collins & Aikman. This manufacturing plant is now called Mayco International LLC. NOTE: LLC means Limited Liability Corporation.

Mayco International manufactures and coats a variety of interior and exterior injection molded automotive and miscellaneous plastic parts. Besides injection molding, other operations at the site include thermoforming of plastic parts, reaction injection molding, light assembly of automotive parts and coating of automotive plastic parts. There are more than 60 injection and thermoforming molding machines at the site. Miscellaneous plastic products manufactured are used in the furniture and electronics industry. Plastic injection molding is conducted 24 hrs/day, 6 days a week; coating operations is conducted in 1 shift.

MI-ROP-1316-2010

The ROP renewal, MI-ROP-N1316-2010 was issued on September 1, 2010. Emission units/flexible groups for the current ROP include EUPLASTICS, EUSPRAYBOOTH1, EUSPRAYBOOTH2, EUSAMPLEBOOTH71, EUBURNOFF, EUDIESELGEN, EUFLEXFOAM, FGCOLDCLEANERS, FGEMGENS, FGRULE287(c), and FGRULE290.

EUPLASTICS is a plastic parts coating operations that includes an adhesion promoter booth and three topcoat booths, controlled by water curtains and dry filters. Facility stopped using the adhesion promoter booth for a short time. The adhesion promoter booth was restarted on January 2013. Water in the water curtains is reused and dumped in the water treatment system when the water can no longer be reused. Suspended paint solids captured in the water curtain are removed by adding a chemical to make the solids float. EUSPRAYBOOTH1 (rarely used), EUSPRAYBOOTH2 (rarely used) and SAMPLEBOOTH71 are Rule 287c exempt paint booths and are used for touchup and testing. EUBURNOFF is a burn off oven used to remove and clean paint overspray in the parts racks and hangers. The burn off oven has an afterburner control system. EUDIESELGEN is a diesel fuel-fired emergency generator. This generator has been erroneously identified as subject to 40 CFR 60 Subpart IIII, NSPS for

Stationary Compression Ignition – Internal Combustion Engines, in the ROP. The engine was manufactured before 1986, and therefore should not be subject to the NSPS. EUFLEXFOAM is for a reaction injection molding process that manufactures flexible polyurethane foam. This emission unit has 6 production stations called carriers. The foam production line use MDI and polyol. Although MDI is a carcinogen, MDI emissions are expected to be negligible since MDI is expected to completely react with polyol. (NOTE: Unreacted MDI could be emitted at the facility). Methylene chloride is not used during the process. A water based mold release paste is used sparingly. In the flexible polyurethane foam production, the MDI and polyol is metered at a specified stoichiometric ratio, mixed together until a homogeneous blend is obtained, and the reacting liquid is dispensed into the closed mold until the product cures.

FGCOLDCLEANERS are cold solvent cleaners located at the maintenance area. Halogenated solvents are not used in the cold cleaners. FGEMGENS are for the emergency generators. Currently, facility has three existing generators (subject to RICE MACT) and a new Cummins Power generator installed in March 2014 (subject to Rice MACT and NSPS Subpart IIII).

Miscellaneous Operations

Plastic injection and vacuum-formed thermoforming molding machines manufacture automotive plastic parts. The skins for the Jeep Instrument Panel are manufactured in the thermoforming machines. Mold release agents in spray cans are sparingly used for the molding machines. A reaction injection molding process (EUFLEXFOAM) manufactures flexible polyurethane foam for the Jeep Instrument Panel. Plastic injection and plastic thermoforming are exempt under Rule 286 (b), (d) and (e). The Jeep Instrument Panel assembly line has no air emissions.

Consent Order CO AQD No. 3-2010

Consent Order AQD No. 9-2004 with an effective date of April 29, 2004, was issued to the previous company, Mayco Plastics, and included in part, a compliance program and implementation schedule. The consent order resulted from allegations that Mayco Plastics failed to submit a timely application for ROP renewal and for violations of some ROP conditions. In the event Mayco Plastics sells the facility, the consent order stipulates that Mayco Plastics shall advise the purchaser of the company of the existence of the consent order. General provision 17 of the consent order calls for the consent order to remain in full force until the subsequent ROP renewal application has been received, due between March 14, 2008 and March 14, 2009. The ROP renewal permit application was submitted by NJT on March 12, 2009.

On June 17, 2008, an NOV was issued to NJT for noncompliance with the Plastic Parts Coating MACT (40 CFR 63, Subpart PPPP).

On Feb 4, 2009, an NOV was issued to NJT for non-submittal of ROP semiannual and deviation certification due Sep 30, 2008 and for non-submittal of the first semiannual MACT compliance report due July 30, 2008.

On March 24, 2009, an NOV was issued to NJT for noncompliance of MACT HAPs limits.

To resolve the above violations, NJT and AQD entered into a consent order agreement. This new consent order, CO AQD No. 3-2010 was approved on February 3, 2010. With the approval of the new consent order, the previous consent order, CO AQD No. 9-2004 has

been voided.

NJT has paid in full the penalty requirement of the consent order. NJT is in compliance with Consent Order AQD No. 3-2010.

Rule 632 Compliance Evaluation

Facility is subject to Rule 632 through Rule 702(a). VOC content limit for the topcoat is 5.0 pounds/gal, minus water, as applied. The ROP requires the facility to conduct random testing using Federal Reference Method 24 of all coatings, catalysts and solvents within the five-year ROP effective dates. Topcoats used were collected and analyzed by RTI Laboratories, Inc. on January 2011. Additional analysis was conducted for new coatings in February 2013 and March 2014. Staff took three samples; cocoa, jet black and C-17 catalyst. Results showed 5.03 pounds/gal, less water for jet black; 5.43 pounds/gal for cocoa; and 4.01 pounds/gal for the catalyst. At this time, since the coating samples were not mixed (coating plus catalyst) during the lab analysis, staff is still discussing this issue with the facility. NOTE: Jet black and cocoa contains a small amount of t-Butyl acetate, an exempt VOC. Per the manufacturer's environmental Data Sheet, VOC content of cocoa is 4.65 pounds/gal and jet black, 4.6.

Plastic Parts Coating MACT (40 CFR 63, Subpart PPPP) Compliance Evaluation:

Since the coating lines are an existing source, compliance date for the MACT is April 19, 2007.

MACT limit is 0.16 pound/pound of coating solids (general use coatings) for all coatings, solvents and cleaners and 0.22 for TPO coatings.

Initial statement of compliance submitted for the initial compliance period ending April 30, 2008 showed that the facility is not in compliance with the MACT. Facility is also required to submit semiannual compliance reports, with a due date coinciding with the ROP monitoring report. The first semiannual MACT report, which was submitted late, showed that the facility was not in compliance with the MACT.

NJT started using compliant coatings, non-HAP thinner (Note: Facility currently does not use any paint thinner), and compliant purge/cleanup solvents on January 2009. However, facility continued to use noncompliant coatings until the coatings were used up. By the second half of 2009, facility was using mostly compliance coatings.

Facility initially chose to comply with the MACT using Option 1: Use compliant coatings/solvents and compliant cleanup solvents. Facility later decided to use Option 2: Emission rate without add-on control. This option has more recordkeeping and calculation requirements than Option 1. Facilities are allowed to use different compliance options for the same coating operation at different times.

Facility is in compliance with the MACT using Option 2, emission rate without add-on control. Most of the coatings used have 0 HAPs. Solvent used (S-2012 manufactured by Superior) contains 0 HAPs and 11% VOC by weight. For the period ending July 2014, HAPs emissions for general use coatings are 0.01 pound/pound of coating solids, and 0.00 for TPO coatings.

Manufacturer's formulation data is allowed to be used to demonstrate compliance with the MACT.

ROP Compliance Evaluation:

1. Emission limits associated with EUPLASTICS:
VOCs and acetone limit: 137.2 tpy, 12-month rolling total. Total VOC and acetone emissions for the 12-month rolling period ending July 2014 are 8.27 tons. Note: Facility no longer uses acetone for purge and cleanup. See attached records.

Purge and cleanup limit: VOCs and acetone, 5 tpy, 12-month rolling total. Total purge and cleanup VOC and acetone emission for the 12-month rolling period ending July 2014 is 1.38 tons. At this time, facility no longer uses acetone for purge and cleanup. See attached records.

Limit for each spray booth in EUPLASTICS: VOCs, 72.8 tpy, 12-month rolling total. For the 12-month period ending July 2014, total VOC emissions for Booth No. 1 are 0.17 tons; for Booth No. 2, 1.80 tons; for Booth No. 3, 2.77 tons; and for Booth No. 4, 2.85 tons. Emissions per booth are determined by prorating total emissions from production records. See attached records.

Limit for all booths in EUPLASTICS: VOCs, 5,222 lbs/day, for all booths, each calendar day. From January 3, 2014 until August 6, 2014, highest daily VOC emission rate was 180.34 lbs/day on July 30, 2014. See attached records.

Paint usage is logged daily. For consistency in measuring paint usage, the same person is responsible for measuring and logging daily paint usage. Paint usage is estimated daily using the dipstick method. AQD staff conducted a random check of usage records by comparing daily usage logs to the usage entry in the monthly spreadsheet.

2. Material limits
VOC content of adhesion promoter is limited to 7.0 lbs/gallon (less water), as applied; VOC content of topcoat is limited to 5.0 lbs/gallon, as applied. Facility keeps a record of the VOC content of coatings used.

On February 8, 2013, an adhesion promoter (SL5CP-HF-ADH Promoter) was analyzed by RTI Labs and results were 6.71 pounds/gal less water, below the limit.

On January 2011, VOC content of all coatings was verified using Federal Reference Method 24. Testing was done by RTI Labs. Subsequent Method 24 analysis was conducted by the facility (performed by RTI Labs) on new coatings in 2013 and 2014.

Refer to **Rule 632 Compliance Evaluation** above for a discussion on compliance with VOC content limit.

3. Operational parameters
Cure oven temperature limit is 194 F. Staff reviewed oven temperature charts and verified that temperature did not exceed 194 F. Oven temperature set point is set at 194 F. The oven temperature is maintained as high as allowed so that the parts will cure properly.

The limit for the afterburner temperature for the burn off oven is at least 1400 F. To verify that the burn off oven is operating properly, an operator signs off a log sheet located near the burn off oven, every shift. During the inspection, I noticed that the temperature chart recorder was not recording properly. I reviewed previous month's temperature charts and the recorder showed temperature of more than 1400 F. NOTE: After the inspection, Al sent me information that their contractor found a defective high limit switch and bad thermocouple.

4. Monitoring and testing
ROP includes a requirement for the facility to perform random testing of the VOC content, water content and density of any coating, catalyst, and solvent. Random testing is required until all coatings, solvents and catalysts have been tested within the 5-year period ROP effective date. VOC content shall be determined using Federal Reference Method 24. Testing of all topcoat used by the facility was conducted in January 2011. New coatings from Dhake Industries and Red Spot Paint and Varnish were tested in 2013 and 2014. The new coatings are be solvent based but with 0 HAPs. Coating of the Jeep Instrument Panel will require an adhesion promoter to provide good adhesion between coating and substrate.

Coating usage, in gallons of coatings are logged daily, summarized and entered in the spreadsheet. Daily usage logs are kept and daily emissions are automatically calculated through spreadsheets. Daily usage is estimated by conducting daily inventory using a dipstick. Coating usage is recorded per booth (note: usage per booth is allocated by prorating from total usage through production records per booth). 12-month rolling total emissions for EUPLASTICS and for each of the 4 automatic booths are calculated using a spreadsheet developed by their consultant. Monthly purge and cleanup solvent usage is not kept if water is used. Acetone and solvent is no longer used for purging and cleanup.

EUDIESELGEN is a 200 KVA diesel fuel-fired emergency generator subject to 40 CFR 60 Subpart IIII, NSPS for Stationary Compression Ignition – Internal Combustion Engines. However, Mr. Cook informed AQD that this generator was actually installed before 2006 and therefore is not subject to Subpart IIII.

There are two other existing emergency generators at the site and one new generator installed in March 2014.

The small existing emergency diesel generators are subject to the RICE MACT with a compliance date of October 19, 2013. Requirements are: a. Change oil and filter every 500 hours of operation or annually, whichever comes first; b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary; d. Keep maintenance records; e. document hours.

A certification has not yet been submitted for the new emergency engine.

Emission units included in FGRULE287(c) are EUSPRAYBOOTH1, EUSPRAYBOOTH2 and SAMPLEBOOTH71. Usage is less than 200 gallons per month per booth.

FGRULE290. EUFLEXFOAM is listed in the ROP as part of FGRULE290. Although MDI is a carcinogen, MDI emissions are expected to be negligible since MDI is expected to completely react with polyol (resin). A water based mold release paste is used sparingly. Attached to this report are 2011 and 2012 monthly usages of isocyanate and resin. The flexible polyurethane foam production can also be exempt under Rule 286(e). Actual emissions of MDI are less than 20 pounds/month. See attached Rule 290 records.

NAME _____ DATE 10-03-14 SUPERVISOR CJE