A5496

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Scheduled Inspection FY 2015 Sched. Insp.

A549630427

FACILITY: Precision Coatings, Inc.		SRN / ID: A5496
LOCATION: 8120 Goldie St., WALLED LAKE		DISTRICT: Southeast Michigan
CITY: WALLED LAKE		COUNTY: OAKLAND
CONTACT: Mr. Jason Smith , Coatings / Materials Manager		ACTIVITY DATE: 07/27/2015
STAFF: Iranna Konanahalli	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: FY 2015 level-2 scheduled annual inspection of Precision Coatings, Inc. - MI-ROP-A5496-2014		
RESOLVED COMPLAINTS:		

A5496 – SAR – 2015 07 27

Precision Coatings, Inc. (A5496)
8120 Goldie Street
P.O. Box 155
Plant: Walled Lake, MI 48390-0155
P.O. Commerce Township, MI 48390-4107

Phone: 800-521-8380, 248-363-8321 ext. 346
Fax: 248-360-5661
E-mail: jsmith@pcicoatings.com

Renewable Operating Permit (ROP) No.: MI-ROP-A5496-2014 dated September 02, 2014, effective: September 02, 2014; Exp.: September 02, 2019. On January 17, 2013, AQD conducted ROP pre-application meeting at Precision's site. 2014 ROP renewal added two additional flexible groups based upon US EPA comments: FG-RICEMACT for natural gas fired 22 HP emergency generator & FG-WEBCOATING-MACT4J-RTO-CAM for CAM for web coating lines, presumptively acceptable MACT 4J monitoring as CAM.

Consent Order AQD No. 22-2008 signed and effective from August 14, 2008. Precision paid as $26,800.00 settlement. G. Vinson Hellwig, AQD Chief terminated CO on November 29, 2012. The consent order is principally for MACT 4J violations.

Subject to:Paper and other Web Coating NESHAP / MACT JJJJ / MACT 4J: 40 CFR, Part 63, Subpart JJJJ—National Emission Standards for Hazardous Air Pollutants for Paper and Other Webcoating, Page 72330, Federal Register / Vol. 67, No. 233 / Wednesday, December 4, 2002 / Rules and Regulations / Final Rule.

Not subject to: area source National Emission Standards for Hazardous Air Pollutants: Halogenated Solvent Cleaning (40 CFR, Part 63, Subpart T; NESHAP/ MACT T); Correction; 29484 Federal Register / Vol. 60, No. 107 / Monday, June 5, 1995 / Rules and Regulations; amended National Air Emission Standards for Hazardous Air Pollutants: Halogenated Solvent Cleaning (40 CFR, Part 63, Subpart T); Final Rule; Page 25138 Federal Register / Vol. 72, No. 85 / Thursday, May 3, 2007 / Rules and Regulations. Precision does not use halogenated solvents for cleaning.

Subject to RICE MACT (22 HP SI RICE natural gas fired generator for emergency lights): Subject to: Major Source NESHAP / RICE MACT 4Z, 40 CFR Parts 60 and 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines; New Source Performance Standards for Stationary Internal Combustion Engines (ICE); Page 6674 Federal Register / Vol. 78, No. 20 / Wednesday, January 30, 2013 / Rules and Regulations / Final Rule.

Subject to: CAM, 40 CFR, Part 64. NESHAP / MACT 4J is post-11/15/1990 presumptively acceptable CAM

On January 07, April 23 and July 27, 2015, I conducted a level-2 **scheduled** annual inspection of Precision Coatings, Inc. ("Precision" or "the company"), a web coating company, located at 8120 Goldie Street, Plant: Walled Lake, MI 48390-0155, P.O. Commerce Township, MI 48390-4107. The inspection was conducted to determine compliance with the Federal Clean Air Act; Article II, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994, PA 451; Michigan Department of and Environmental Quality, Air Quality Division (MDEQ-AQD) administrative rules; federal Paper and Other Web Coating NESHAP / MACT (Subpart JJJJ); and ROP No. MI-ROP-A5496-2014.

During my inspection, Mr. Jason Smith (Phone: 248-363-8321-ext. 346; Fax: 248-360-5661; e-mail: jsmith@pcicoatings.com), Coatings / Materials Manager, and Mr. Robin Van Tilburg (Phone: 248-363-8321-ext. 349; cell: 248-766-0727; e-mail: rvantilburg@pcicoatings.com), Vice President, Operations, assisted me.

Mr. Mark Gomez (phone: 248-363-8321-ext. 359; e-mail: mgomez@pcicoatings.com), Supervisor, Materials & Environmental, separated from the company in CY2007.

Precision manufactures coated polyester films, which are used in laminating applications. Precision develops advanced coatings for films and other flexible substrates. Commonly used coating type is clear coating. Occasionally, blue or green tint is added. The plastic films coated are used as wraps or bags (e.g. candy, cookies, chocolates, etc.). Pilot Coating Line (Web Coating Line No. 8) is used to develop a new product, evaluate alternative substrates, scale up production, or produce samples for testing and marketing. Line No. 8 is not used for production. Line 10 was never installed and therefore was removed from the ROP when PTI No. 154-07 was issued (May 18, 2007).

NESHAP / MACT 4J

Precision is subject to Paper and other Web Coating MACT / NESHAP (40 CFR, Part 63, Subpart JJJJ—National Emission Standards for Hazardous Air Pollutants for Paper and Other Webcoating, Page 72330, Federal Register / Vol. 67, No. 233 / Wednesday, December 4, 2002 / Rules and Regulations / Final Rule). Precision is an existing major NESHAP / MACT JJJJ source because the web coating processes were constructed before September 13, 2000 (Line1 in 1975, Line4 in 1979, Line6 in 1984 and Line8 in 1996). The MACT 4J standard applies only to a Webcoating facility located at a plant site that is a major source (40 CFR, Part 63, Subpart JJJJ, §63.3290); a non-major or area HAP source, i.e., actual and potential annual emissions are less than 10 tons of any single HAP and less than 25 tons of all HAP combined, is not subject to the MACT JJJJ standards. Major MACT sources are defined as those that emit or have the potential to emit at least 10 tons per year of any single HAP or 25 tons per year of any combination of HAP. The Initial Notification dated March 22, 2005, stated that Precision was a major HAP source and was subject to NESHAP / MACT JJJJ. Initial Notification for existing sources was due on December 5, 2004. The MDEQ-AQD received the notification dated March 22, 2005, on March 24, 2005. However, in response to the January 5, 2007, letter of violation, Precision submitted a copy of CAA Sec. 112(j) permit application dated May 10, 2002. The 112(j) permit application may be deemed to be an initial notification. The "once-in-always-in" policy of the US EPA precludes Precision from opting out of the requirements of the NESHAP / MACT JJJJ / MACT 4J.

"Once-in-always-in" policy

However, on January 3, 2007, US EPA has proposed (Page 69, Federal Register / Vol. 72, No. 1 / Wednesday, January 3, 2007 / Proposed Rules) to replace this "once-in-always-in" policy (May 16, 1995, EPA memorandum entitled "Potential to Emit for MACT Standards – Guidance on Timing Issues" from John Seitz) so that a major MACT source may become an area source any time. As of today (July 2015), US EPA has not repealed the policy.

In ROP No. MI-ROP-A5496-2014, the RO Permit incorporates the four web coating lines into one flexible group (FG-WEBCOATING).

The emission groups / units are:

1. EU-LINE1RECO2 (Web coating line #1 with RECO2 (new RECO) Regenerative Thermal Oxidizer for VOC/HAP emissions control): This is a Web Coating Line No. 1 consisting of two coating heads, a laminator and one four-zone curing oven. The coating takes place in an enclosed room with doors which are kept closed at all times except when plant personnel need to be in the room for maintenance, coating replenishment, etc. All exhaust air laden with VOC from the web coating and the curing oven goes to RECO2 (new RECO) RTO.

2. EU-LINE4RECO1 (Web coating line #4 with RECO1 (old RECO) Regenerative Thermal Oxidizer for VOC/HAP emissions control): This is a Web Coating Line No. 4 consisting of two coating heads, a laminator and one five-zone curing oven. Regarding each coating head, the coating takes place in an enclosed room with doors which are kept closed at all times except when plant personnel need to be in the room for maintenance, coating replenishment, etc. All exhaust air laden with VOC from the web coating and the curing oven goes to RECO1 (old RECO) RTO.

3. EU-LINE6ANDJZINK (Web coating line #6 with JZINK Regenerative Thermal Oxidizer for VOC/HAP emissions control): This is a Web Coating Line No. 6 consisting of two coating heads, a laminator and one four-zone curing oven. Each coating head is enclosed in a room. All exhaust air laden with VOC from the web coating heads and the curing oven goes to J. Zink RTO.

4. EU-LINE8ANDRECO1 (Web coating line #8 with RECO1 Regenerative Thermal Oxidizer for VOC/HAP emissions control): This is a Web Coating Line No. 8 (non-production, R & D and testing) consisting a single coating head, a laminator and a curing oven. All exhaust air laden with VOC from the web coating heads and the curing oven goes to RECO1 (old RECO) RTO.

The coating line # 10 was never installed and therefore it was removed from the ROP when PTI No. 154-07 was issued (May 18, 2007). While Line1 and Line4 are classified as cleanrooms, Line6 and Line8 are not cleanroom coating lines. Cleanrooms are positive pressure with respect to surroundings and office and plant space. Coating head enclosures are under negative pressure with respect to cleanroom such that air from cleanroom can leak into enclosures but not other way around. Line6 entire room is under negative pressure w.r.t. office space and hence no coating head enclosure unlike cleanroom lines.

Six flexible groups are:

1. FG-WEBCOATING: This flexible group consists of Web Coating Line No. 1 (EU-LINE1RECO2), Web Coating Line No. 4 (EU-LINE4RECO1), Web Coating Line No. 6 (EU-LINE6ANDJZINK), and Web Coating Line No. 8 (EU-LINE8ANDRECO1); four web coating lines in all with three Regenerative Thermal Oxidizers (3 RTOs) to control volatile organic compounds (VOC) and hazardous air pollutants (HAP). All coating operations take place in the enclosed rooms providing Permanent Total Enclosure (PTE) such that 100 percent of VOC & HAP are captured and delivered to 3 RTOs for destruction. Permit-to-Install (PTI) No. 491-99 dated January 5, 2001, consolidated previously existing permits (PTI Nos. 851-84, 463-78 & 37-77C) into one permit with facility-wide VOC emission limits for the web coating lines. PTI No. 491-99 was voided on November 26, 2002, upon incorporation into MI-ROP-A5496-2002. PTI No. 154-07 dated May 18, 2007, revised the special conditions of PTI No. 491-99 and the ROP to clarify operation of three regenerative thermal oxidizers (3 RTOs) and to remove Coating Line No. 10, which was never installed. The May 18, 2007, PTI revision resolved the January 10, 2007, violation regarding minimum destruction efficiency. As revised in PTI No. 154-07 and as subsequently modified in the ROP (ROP-A5496-2002b dated August 15, 2007), a minimum destruction efficiency (DE) of 95 percent is not required; overall control efficiencies for the RTOs as specified in the revised permit are deemed to be sufficient pursuant to Rule 336.1702 BACT (Best Available Control Technology). FG-WEBCOATING is subject to Paper and other Web Coating NESHAP / MACT JJJJ (40 CFR, Part 63, Subpart JJJJ—National Emission Standards for Hazardous Air Pollutants for Paper and Other Webcoating, Page 72330, Federal Register / Vol. 67, No. 233 / Wednesday, December 4, 2002 / Rules and Regulations / Final Rule). Pursuant to the NESHAP / MACT JJJJ, §63.3310, FG-WEBCOATING is an existing affected source as its construction or reconstruction commenced before September 13, 2000 (Line1 in 1975, Line4 in 1979, Line6 in 1984 and Line8 in 1996), and has not undergone reconstruction as defined in §63.2.

2. FG-RULE284-TANKS - Any existing (placed into operation before 7/1/79), new (placed into operation on or after 7/1/79) or modified storage tank that is exempt from the requirements of R336.1201 pursuant to R336.1284.

3. FG-RULE290 Any existing or future emission unit that emits air contaminants which are exempt from the requirements of R 336.1201 pursuant to R 336.1290

4. FG-COLD-CLEANERS: Any cold cleaner that is grandfathered or exempt from Rule 201 pursuant to Rule 278 and Rule 281(h) or Rule 285(r)(iv). Existing cold cleaners were placed into operation prior to July 1, 1979. New cold cleaners were placed into operation on or after July 1, 1979.

5. FG-RICEMACT: One existing natural gas fired spark ignition (SI) reciprocating internal combustion engine (RICE) (0.125 MM BTU per hour heat input) subject to NESHAP / RICE MACT 4Z.

6. FG-WEBCOATING-MACT4J-RTO-CAM: Post-11/15/1990 presumptive CAM: NESHAP / MACT 4J Webcoating monitoring as CAM.

RTO set-up

The following is the existing configuration (RTO set-up) of the four coating lines and the three Regenerative Thermal Oxidizers (RTOs) based upon FY2015 inspection. Any change in configuration is subject to the notification and testing requirements. All emissions capture devices provide 100 percent capture of VOC / HAP.

1. EU-LINE1RECO2 (Web coating line #1 with RECO2 Regenerative Thermal Oxidizer for VOC/HAP emissions control)

2. EU-LINE4RECO1 (Web coating line #4 with RECO1 Regenerative Thermal Oxidizer for VOC/HAP emissions control)

3. EU-LINE6ANDJZINK (Web coating line #6 with JZINK Regenerative Thermal Oxidizer for VOC/HAP emissions control)

4. EU-LINE8ANDRECO1 (Web coating line #8 with RECO1 Regenerative Thermal Oxidizer for VOC/HAP emissions control)

The most recent change in RTO setup occurred in 2004.

3 RTOs

Three Regenerative Thermal Oxidizers (3 RTOs) are:

1. Line4 and Line8: Reco1 (old RECO): 1 second, 1500 °F (815.6 °C), 90.00 percent overall control. Based upon May 2007 test, overall control efficiency is 93.5 percent Vs minimum required overall control efficiency of 90.0 percent (FG-WEBCOATING.III.1). Based upon February 2015 test, overall control efficiency is 92.3 percent at 1613 °F Vs minimum required overall control efficiency of 90.0 percent (FG-WEBCOATING.III.1). Hence, 1613 °F is new MACT 4J operating temperature limit for RECO1

2. Line1: Reco2 (new RECO): 0.45 second, 1500 °F (815.6 °C), 92.50 percent overall control. Based upon May 2007 test, overall control efficiency is 96.75 percent Vs minimum required overall control efficiency of 92.5 percent (FG-WEBCOATING.III.1). Based upon May 2015 test, overall control efficiency is 96.1 percent at 1608 °F Vs minimum required overall control efficiency of 92.50 percent (FG-WEBCOATING.III.1). Hence, 1608 °F is new MACT 4J operating temperature limit for RECO2

3. Line6: J. Zink RTO: 2 seconds, 1600 °F (871.1 °C), 90.25 percent overall control. Based

upon May 2007 test, overall control efficiency is 97.33 percent Vs minimum required overall control efficiency of 90.25 percent (FG-WEBCOATING.III.1). Based upon May 2015 test, overall control efficiency is 96.2 percent at 1622 °F Vs minimum required overall control efficiency of 90.25 percent (FG-WEBCOATING.III.1).Hence, 1622 °F is new MACT 4J operating temperature limit for J. Zink RTO.

The RTOs do not provide process heat to the bake ovens. However, the RTOs recover heat and reuse it so as to minimize natural gas consumption; resulting in energy and cost savings.

JZink: J Zink RTO consists of three (3) chambers. In one of three parts, VOC laden waste exhaust gases (250 °F) upon picking up heat in two other chambers from hot ceramic packing enter three burner zone. The gases are heated to the set point using 2 second dwell time. Hot exhaust gases (1500-1700°F) enter two other chambers to give up heat to the ceramic packing. Packing chamber switch occurs based upon time (about 1 minute).

Reco1 (Old Reco): Reco1 RTO consists of five (5) circular chambers with ceramic packing (saddles). VOC laden waste exhaust gases (250 °F) enter two (2) packing units containing ceramic saddles. The units are switched based upon time.

Reco2 (New Reco): Reco2 RTO consists of honey-comb structured packing that is divided into heat transfer zones. There is a system of rotary valves to switch heat transfer zones based upon time.

While Reco1 and JZink provide 80% thermal efficiency, Reco2 delivers 90% thermal efficiency as a result of heat recovery using ceramic packing or such materials of high heat capacity.

RTO setup and testing

Precision Coatings can tie in any process group or coating line to any combination of three regenerative thermal oxidizers (3 RTOs). The three RTOs are: Reco1 or Old Reco RTO, Reco2 or New Reco RTO and John Zink (or J. Zink) RTO. In order to ensure proper control of volatile organic compounds (VOC), Precision Coatings is required to have an alarm system and an auto shut-off system with respect to each RTO. Any reconfiguration of the RTO set-up must be followed by a performance testing, concerning capture and destruction of volatile organic compounds, to demonstrate an acceptable performance of this new set-up. Each RTO has its own dedicated stack that discharges products of combustion, or exhaust air, to atmosphere vertically upwards. After issuance of the January 5, 2007, letter of violation, Precision promptly removed hinged rain cap from J. Zink stack. Hence, all stacks (after 2007) discharge exhaust gases vertically upwards to enhance pollutants dispersion.

FG-WEBCOATING, I. Emission Limits

Based upon CY 2014 monthly VOC & HAP records, Precision emitted 5.63 (Vs. 33.69 in CY2006) tons of VOC per 12-month rolling period (FG-WEBCOATING.I.2. limit: 198.1). Based upon CY 2012 monthly VOC & HAP records, Precision emitted 5.2 (CY 2012 (5.2 tons / yr = 0.73 for Line 1 + 2.76 for Lines 4 & 8 + 1.71 for Line 6) Vs. 33.69 in CY2006) tons of VOC per 12-month rolling period (FG-WEBCOATING.I.2. limit:198.1). Based upon CY 2011 monthly VOC & HAP records, Precision emitted 5.93 (CY 2011 Vs. 33.69 in CY2006) tons of VOC per

12-month rolling period (FG-WEBCOATING.I.2. limit: 198.1).

CY 2014 HAP emissions ranged from 0.8-2.1% HAP content; 2.1% is highest for Oct 2014 (FG-WEBCOATING.I.3. limit: 0.04 kg HAP per kg coatings or 4 percent by mass). Hazardous Air Pollutants (HAP) emissions were 1.2-2.3 % for Jan-Dec 2011, 2.3% for July 2011, 2.4% for Nov 2012 and 0.3-2.4 % for Jan-Dec 2012 HAP percent in coatings (FG-WEBCOATING.I.3. limit: 0.04 kg HAP per kg coatings or 4 percent by mass).

FG-WEBCOATING, I. Emission Limits, Operational Flexibility

HAP compliance operational flexibility: 0.04 kilogram (kg) organic HAP per kg of coating material (0.04 pound [lb] organic HAP per lb of coating material), overall organic HAP emission rate, on a monthly average as-applied basis using capture systems and regenerative thermal oxidizers. This overall organic HAP emission rate is equivalent to limiting organic HAP to no more than 4 percent of the mass of coating materials applied for each month, on as calculated basis considering organic HAP emissions capture and control. Follow the procedures set out in 40 CFR, Part 63, Subpart JJJJ, §63.3370(g) & §63.3370(n). The permittee shall demonstrate compliance on a monthly basis according to 40 CFR, Part 63, Subpart JJJJ § 63.3370(n)(3). The permittee may switch to an alternative compliance method as specified in the NESHAP / MACT JJJJ. Each Semi-annual NESHAP / MACT JJJJ Compliance Report (due on March 15 for July 1 thru December 31 semi-annual periods and September 15 for Jan 1 thru June 30 semi-annual periods) shall include a statement regarding a MACT compliance option chosen for a given month. Although change of compliance method is not specified in the regulations, the "Preamble (VI.E. Periodic Reports)" to the NESHAP / MACT JJJJ regulations suggests that the permittee may change a method of compliance and switch to another emission limitation option.

If necessary, AQD may modify the ROP to accommodate operational flexibility. Precision has not used such operational flexibility in last one decade or so.

FG-WEBCOATING, III. Process / Operational Restrictions

The precision operates the RTOs properly when corresponding coating lines are operating (FG-WEBCOATING.III.1.) such that tested VOC / HAP destruction values are maintained (Feb 2015 test values DE: Reco1 = 92.3 at 1613 °F Vs Min 90.0; Reco2 = 96.1 at 1608 °F Vs Min 92.5; and J Zink = 96.2 at 1622 °F Vs Min 90.25). These Feb 2015 test temperatures are minimum MACT 4J operating temperatures until new operating temperature limits are established during next test. Each web coating line is equipped with a capture system with magnehelic pressure differential instrumentation (FG-WEBCOATING.III.2.). Automatic coating process shutoff system is installed and is tested once per month (FG-WEBCOATING.III.3.). When an alarm sounds, coating heads drop and coating stops; web needs to be stopped manually (FG-WEBCOATING.III.3.).

FG-WEBCOATING, IV. Design and Equipment Parameters

Because design of RTOs (dimensions and gas flow rate) did not change, it may be assumed retention times (Reco1 = 1.0 Reco2 = 0.45 and J Zink = 2 seconds) are maintained (FG-WEBCOATING.IV.).

FG-WEBCOATING, V-A. Testing and Sampling (US EPA RM 24)

9 coating samples were sent to Trace Analytical of Grand Rapids in November 2009 and the

VOC analytical results arrived at Precision on December 3, 2009. Precision paid for the analyses. AQD hired RTI Laboratories (734-422-8000) of Livonia for coatings VOC analyses and is responsible for its payment. The two analytical results are agreeable with each other with an acceptable margin of error. 12 coating samples were sent to Trace Analytical of Grand Rapids in December 2012. 8 coating samples were sent to Trace Analytical of Grand Rapids in December 2014 and Precision received the results about December 16, 2014. (FG-WEBCOATING.V-A: RM24 required for 3 frequently used and 2 random coatings).

FG-WEBCOATING, V-B. Testing and Sampling (May 2007 stack test)

On April 02, 2015, AQD received the VOC destruction efficiency (DE) test report (Environmental Quality Management, Inc. Project No. 050692.0002). Per MI-ROP-A5496-2014, based upon 100 percent capture efficiency (CE) minimum required DEs are 90 percent (Reco1 old Reco), 92.5 percent (Reco2 or new Reco) and 90.25 percent (J Zink or John Zink). Obviously, the reported destruction efficiency (DE) and overall control efficiency (OCE) results (DE=OCE due to 100 percent capture efficiency) show compliance with the ROP limits (MI-ROP-A5496-2014, FG-WEBCOATING, III, Operational Parameters) as stated below:

1. Reco1 (old RECO) RTO: 1 second retention / residence time, 1500 °F (815.6 °C), 90.00 percent overall control, SV-RECO1 stack: Feb 2015 test DE = 92.3 percent at 1613 °F Vs limit 90.00 percent. Hence, 1613 °F is new operating temperature limit for RECO1

2. Reco2 (new RECO) RTO: 0.45 second retention / residence time, 1500 °F (815.6 °C), 92.50 percent overall control, SV-RECO2 stack: Feb 2015 test DE = 96.1 percent at 1608 °F Vs limit 92.50 percent. Hence, 1608 °F is new operating temperature limit for RECO2

3. J. Zink (John Zink) RTO: 2 seconds retention / residence time, 1600 °F (871.1 °C), 90.25 percent overall control, SV-JZINK stack: Feb 2015 test DE = 96.2 percent at 1621.52 °F Vs limit 90.25 percent. Hence, 1622 °F is new operating temperature limit for J. Zink RTO.

For additional details see under February 2015 stack test.

FG-WEBCOATING, VI. Monitoring and Record-keeping

A record of hours of operation is kept (FG-WEBCOATING.VI.1.). Water-based coatings are not used. Coating usage is records are kept (FG-WEBCOATING.VI.2.). When the clean-up is occurring, the corresponding RTOs are running. Clean-up occurs at an end of a shift. Clean-up VOC records are maintained (FG-WEBCOATING.VI.3.). VOC and HAP emission calculations are performed using MS Excel Spreadsheets (FG-WEBCOATING.VI.4.).

VOC and HAP emission calculations are performed (FG-WEBCOATING.VI.4: VOC and HAP calculations)

Based upon CY 2014 monthly VOC & HAP records, Precision emitted 5.63 (Vs. 33.69 in CY2006) tons of VOC per 12-month rolling period (FG-WEBCOATING.I.2. limit: 198.1). Based upon CY 2012 monthly VOC & HAP records, Precision emitted 5.2 (CY 2012 (5.2 tons / yr = 0.73 for Line 1 + 2.76 for Lines 4 & 8 + 1.71 for Line 6) Vs. 33.69 in CY2006) tons of VOC per

12-month rolling period (FG-WEBCOATING.I.2. limit:198.1). Based upon CY 2011 monthly VOC & HAP records, Precision emitted 5.93 (CY 2011 Vs. 33.69 in CY2006) tons of VOC per 12-month rolling period (FG-WEBCOATING.I.2. limit: 198.1).
CY 2014 HAP emissions ranged from 0.8-2.1% HAP content; 2.1% is highest for Oct 2014 (FG-WEBCOATING.I.3. limit: 0.04 kg HAP per kg coatings or 4 percent by mass). Hazardous Air Pollutants (HAP) emissions were 1.2-2.3 % for Jan-Dec 2011, 2.3% for July 2011, 2.4% for Nov 2012 and 0.3-2.4 % for Jan-Dec 2012 HAP percent in coatings (FG-WEBCOATING.I.3. limit: 0.04 kg HAP per kg coatings or 4 percent by mass).

Precision monitors incinerators' temperatures and calibrates thermocouples; if out of calibration it sends out thermocouples for calibration or replaces them with new calibrated thermocouples (once every three months, FG-WEBCOATING.VI.5.).

Temperature Chart Recorder calibration is done (once every three months; FG-WEBCOATING.VI.5.).

Periodic inspection of RTOs is performed (FG-WEBCOATING.VI.6.).

The automatic shut-off system interlock testing is done (once every month; FG-WEBCOATING.VI.7.).

RTO chamber inspection is performed (FG-WEBCOATING.VI.7.).

Temperature records are maintained using a MS Excel Spreadsheets (FG-WEBCOATING.VI.8 & 9.).

Temperature statistical analyses using MS Excel is performed using a MS Excel Spreadsheets FG-WEBCOATING.VI.10.).

VOC capture system pressure differential with respect to surroundings is done once month (FG-WEBCOATING.VI.11.).

RTO reconfiguration has not been done since 2004 (FG-WEBCOATING.VI.12.).

February 2015 stack test records are kept (FG-WEBCOATING.VI.13.).

DAQ Pro System was installed in November 2005 to monitor temperature of the oxidizers (FG-WEBCOATING.VI.14.). Per NESHAP / MACT JJJJ, 3-hour average temperatures are calculated based upon every-10-minute readings. DAQ Pro System can auto-calibrate temperature monitoring devices. It downloads the temperature information to an Excel Spreadsheet. Temperature readings are taken every 10 minutes. The coating machines have interlock systems so that the coating can not be performed when temperature is below the required minimum. Pressure readings are taken at each coating room to ensure proper operation of capture systems.

Temperature is measured every 10 minutes; 6 readings in 1 hour (FG-WEBCOATING.VI.14.A). Temperature measurement devices are calibrated (1/3 mo; FG-WEBCOATING.VI.14.B) according to FG-WEBCOATING.VI.14.C...Hourly temperature averages are calculated according to FG-WEBCOATING.VI.14.D. Each RTO is equipped with visible and audible alarm (FG-WEBCOATING.VI.14.E). If temperature falls below the RO permit limits (FG-WEBCOATING.III), the Interlock System starts alarm (audible and visible), coating heads drop and coating process stops; the roller has to be stopped manually. The Interlock System is inspected on a monthly basis. Continuous Parameter (temperature)

Monitoring System (CPMS) is implemented (FG-WEBCOATING.VI.14.F).

FG-WEBCOATING,VII. Reporting.

Semi-annual and Annual Certification (ROP, MAERS, MACT, CAM) reports are submitted punctually on biannual or annual basis as required (FG-WEBCOATING.VII.)

FG-WEBCOATING.IX.

Capture System Monitoring Plan (CSMP) (ΔP readings for lines 1, 4, 6 & 8 are kept), Continuous Parameter (temperature) Monitoring Plan (CPMP) and Start-up, Shutdown and Malfunction Plan (SSMP) are implemented (FG-WEBCOATING.IX.2).

During the inspection, I confirmed that the coating enclosures are under negative pressure with respect to surroundings based upon Magnehelic pressure gauges (ΔP monitoring devices).

Stack tests

Initial RO Permit Performance Tests (Nov 2003 MI-ROP-5496-2002)

Mr. Thomas Maza's November 19, 2003, letter approved the test plan for Capture Efficiency (CE) and Destruction Efficiency (DE) tests for Line Nos. 1, 4, 6, and 8 (MI-ROP-5496-2002, F-1.1.III.B2.).

Mr. Mark Gomez submitted the CE & DE test report with a letter dated January 22, 2004 (MI-ROP-5496-2002, F-1.1. III.B2.). The performance test was conducted on November 24 and 25, 2003. Clayton Group Services (Clayton) conducted sampling and analysis for destruction efficiencies of Regenerative Thermal Oxidizers (Reco1, Reco2 and JZink). The destruction efficiencies reported were 98.7 percent (JZink), 92.2 percent (Reco1) and 99.2 percent (Reco2). The ROP requires minimum overall control efficiencies of 90 percent (Reco1), 92.5 percent (Reco2) and 90.25 percent (JZink); in this case capture efficiency is 100 percent. The ROP required (December 4, 2003 version) minimum destruction efficiency of 95 percent, with which Rco1 tested DE (92.2 percent) was not in compliance. A letter of violation was issued for failing to meet a minimum destruction efficiency of 95 percent. PTI No. 491-99 was later revised as PTI No. 154-07 dated May 18, 2007, to remove minimum DE requirement. Please refer to the January 10, 2007, LOV for the details. As result of January 10, 2007, LOV, the ROP was revised on August 15, 2007. The revised ROP, known as MI-ROP-A5496-2002b dated August 15, 2007, does not require minimum destruction efficiency and the LOV is resolved with the Consent Order (AQD No. 22-2008).

NESHAP / MACT JJJJ Performance Tests (May 2007)

On May 3, 2007, Mr. Jon Wilford (517-335-4866) of AQD-TPU conducted a capture devices survey and determined capture efficiency (CE) to be100 percent for each capture device. On May 30 & 31, 2007, Precision conducted inlet and outlet sampling of 3 RTOs to determine destruction efficiency (DE). Line 1 (Reco2 or new Reco RTO) was operating at 21 ft/min = 410 yards / hour = 770 square yards / hour = 6934 square feet / hour. Line 6 (J Zink RTO) was operating at 1,000 yards / hour = 1,000 square yards / hour with 36 inches wide film. I did not observe Reco1 sampling, which was done on May 30. Clean Air Engineering supplied calibration gases on May 31.

Mr. Jon Wilford reported, via the Test Observation Activity Report dated June 6, 2007, that

100 percent capture efficiency was achieved by meeting US EPA Reference Method 204 criterion for Permanent Total Enclosure (PTE). The criterion required a face velocity (FV) of at least 200 fpm. This FV equates to pressure drop of at least -0.007 inch of water. During PTE test, the magnehelic reading was -0.01 inch of water. According to Mr. Wilford's letter dated May 16, 2007, to Mr. Jason Smith concerning the test plan approval, Mr. Wilford conducted capture device review on site on May 3, 2007. Mr. Wilford is satisfied that capture devices meet US EPA Reference Method 204 criterion. Mr. Wilford confirmed that four capture devices were completely surrounded (enclosed) and that all VOC emissions were contained for discharge to three RTOs. All flows were determined using smoke tubes and other flow measuring devices.

On April 23, 2007, AQD received NESHAP/MACT JJJJ Initial Performance Test Plan dated April 19, 2007. On May 11, 2007, AQD approved the test plan. On May 30-31, 2007, Precision conducted sampling for VOC to determine destruction efficiency (DE) of the RTOs. Mr. Wilford and I observed the coating process and sampling on May 30 and 31, 2007. Mr. Wilford wrote stack test observation report for both days of sampling. The report states that four coating lines provide Permanent Total Enclosure (PTE) with 100 percent capture. On July 31, 2007, AQD received DE test results and NESHAP/MACT JJJJ compliance status via certification letter dated July 30, 2007. Mr. Wilford of AQD-TPU stated via e-mail dated June 7, 2007, that preliminary review showed that Precision passed destruction efficiency (DE) and overall control efficiency (OCE). GSA, Inc. (219-661-9900), Environmental Consulting and Testing Contractors, of Crown Point, Indiana 46308, conducted sampling and completed the stack test report. Per the test report, which AQD received on July 31, 2007, destruction efficiencies of 93.5% (Reco1 or old Reco), 96.7% (Reco2 or new Reco) and 97.33% (J Zink or John Zink) for three Regenerative Thermal Oxidizers (3 RTOs) were reported. Per MI-ROP-A5496-2002b, based upon 100 percent capture efficiency (CE) minimum required DEs are 90 percent (Reco1 old Reco), 92.5 percent (Reco2 or new Reco) and 90.25 percent (J Zink or John Zink). Obviously, the reported destruction efficiency (DE) and overall control efficiency (OCE) results (DE=OCE due to 100 percent capture efficiency) show compliance with the ROP limits (MI-ROP-A5496-2002b, F-1.1 V Operational Parameters). The same DE limits are carried over to 2009 revised ROP (MI-ROP-A5496-2009; (FG-WEBCOATING.III; 90, 92.5, 90.25).

Based upon May 2007 DE and CE (=100%) tests:

Reco 1 tested DE = 93.5 Vs FG-WEBCOATING.III limit 90

Reco 2 tested DE = 96.75 Vs FG-WEBCOATING.III limit 92.5

JZink tested DE = 97.33 Vs FG-WEBCOATING.III limit 90.25

ROP Performance Tests (Feb 2015)

February 24 & 25, 2015, Stack Test

Renewable Operating Permit (ROP) No.: MI-ROP-A5496-2014 dated September 2, 2014, effective: September 2, 2014; Exp.: September 2, 2019

Performance test required by: MI-ROP-A5496-2014, FG-WEBCOATING, V.2 Performance Test.

Certification: ROP Report Certification dated April 01, 2015, for the stack test submitted

upon request.

As part of an initial NESHAP / MACT 4J performance test, on May 3, 2007, Mr. Jon Wilford (Phone: 517-335-4866) of AQD-TPU conducted a capture devices survey and determined capture efficiency (CE) to be100 percent for each capture device. Mr. Jon Wilford reported, via the Test Observation Activity Report dated June 6, 2007, that 100 percent capture efficiency was achieved by meeting US EPA Reference Method 204 criterion for Permanent Total Enclosure (PTE). The criterion required a face velocity (FV) of at least 200 fpm. This FV is equivalent to pressure drop (ΔP) of at least -0.007 inch of water; coating head space at lower pressure than surrounding space such that all VOC emissions are captured. During the May 2007 PTE test, the magnehelic reading was -0.01 inch of water. According to Mr. Wilford's letter dated May 16, 2007, to Mr. Jason Smith concerning the test plan approval, Mr. Wilford conducted capture device review on site on May 3, 2007. Mr. Wilford is satisfied that capture devices meet US EPA Reference Method 204 criterion. Mr. Wilford confirmed that four capture devices were completely surrounded (enclosed) and that all VOC emissions were contained for discharge to three RTOs (Reco1, Reco2, JZink). All air flows concerning capture devices, or web coating head enclosures, were determined using smoke tubes and other flow measuring devices. Based upon the pressure differential (ΔP) readings, for the February 24 & 25, 2015, performance tests, Mr. Tom Gasloli of AQD-TPU is satisfied that Precision Coatings continues to meet, or exceed, US EPA Reference Method 204 criterion for Permanent Total Enclosure (PTE); the required pressure differential is -0.007 inch of water and actual ΔP is much greater than this amount (about 0.02-0.05). In addition, no changes were made to the enclosures.

Moreover, Precision maintains clean room standard for the coating line Nos. 1 (Reco2) & 4 (Reco1). For clean room standard, the coating rooms themselves are at higher pressure than the surroundings such as office space, plant space, etc. and coating head enclosures are at lower pressure than the clean room. Hence, air flow is always from coating rooms to coating head enclosures. While Line No. 1 is associated with Reco2 (new Reco) RTO, Line No. 4 is associated with Reco1 (old Reco) RTO. Line No. 6 associated with JZink RTO is not clean room and hence entire room is under negative pressure with respect to surroundings (air from the surroundings such as plant, office, etc.) can leak into this room) and does have additional coating head enclosures although not needed. Entire Line 6 room is under negative pressure using JZink RTO exhaust fan. Line No. 8, which is associated with Reco1 (old Reco) was not part of the Feb 2015 performance test as it is small, non-production line used only for testing, R & D, etc. Exhaust gases laden with VOC from all coating lines (Nos. 1, 4, 6 & 8) are ducted to one of three RTOs: Reco1, Reco2, JZink. During the Feb 2015 performance tests, RTO set-up is: Line1→RECO2, Line4→RECO1, Line6→JZINK, Line8→RECO1. Any reconfiguration of RTO set-up requires repeat performance tests.

On January 7, 2015, AQD received MI-ROP-A5496-2014, FG-WEBCOATING, V.2 Performance Test Plan dated January 6, 2015. On January 22, 2015, AQD (Mr. Tom Gasloli of AQD-TPU) approved the test plan (US EPA Reference Methods 1, 2, 3 & 25A). On February 24 & 25, 2015, Precision conducted sampling for VOC to determine destruction efficiency (DE) of the RTOs. Mr. Gasloli and / or I observed the coating processes and sampling on February 24 & 25, 2015; Gasloli was absent on February 25, 2015.

On February 24 & 25, 2015, Environmental Quality Management, Inc. (EQ; Mr. Karl Mast, Manager, Air Emissions Measurement) of Crown Point, Indiana (Phone: 219-661-9900; Cell: 219-776-6056; Fax: 219-661-9902) conducted VOC sampling for inlet and outlet of three RTOs to determine destruction efficiencies (DE). The RTO exhaust gas (inlet and outlet to the

RTOs) sampling and analysis was conducted using US EPA (40 CFR, Part 60, Appendix A) Reference Methods 1, 2, 3, 4 and 25A. In summary, US EPA Reference Method 25A (US EPA RM 24) requires extraction of VOC laden exhaust gases from an emission source via heated line, a glass fiber filter to a flame ionization analyzer. Calibration gases are propane based and, hence, concentrations of gases are VOC as propane (C3). Three one-hour runs were obtained for each RTO. Maximum production (i.e., VOC loading 70 lbs. / hr. for Redco1, 250 lbs. / hr. for Redco2 70 lbs. / hr. for ZJink was not occurring. Lower than maximum VOC loading is acceptable because destruction efficiency (DE) is inlet Vs outlet mass VOC comparison.

On April 02, 2015, AQD received the VOC destruction efficiency (DE) test report (Environmental Quality Management, Inc. Project No. 050692.0002). Per MI-ROP-A5496-2014, based upon 100 percent capture efficiency (CE) minimum required DEs are 90 percent (Reco1 old Reco), 92.5 percent (Reco2 or new Reco) and 90.25 percent (J Zink or John Zink). Obviously, the reported destruction efficiency (DE) and overall control efficiency (OCE) results (DE=OCE due to 100 percent capture efficiency) show compliance with the ROP limits (MI-ROP-A5496-2014, FG-WEBCOATING, III, Operational Parameters) as stated below:

1. Reco1 (old RECO) RTO: 1 second retention / residence time, 1500 °F (815.6 °C), 90.00 percent overall control, SV-RECO1 stack: Feb 2015 test DE = 92.3 percent at 1612.6 °F Vs limit 90.00 percent. Hence, 1613 °F is new operating temperature limit for RECO1

2. Reco2 (new RECO) RTO: 0.45 second retention / residence time, 1500 °F (815.6 °C), 92.50 percent overall control, SV-RECO2 stack: Feb 2015 test DE = 96.1 percent at 1607.91 °F Vs limit 92.50 percent. Hence, 1608 °F is new operating temperature limit for RECO2

3. J. Zink (John Zink) RTO: 2 seconds retention / residence time, 1600 °F (871.1 °C), 90.25 percent overall control, SV-JZINK stack: Feb 2015 test DE = 96.2 percent at 1621.52 °F Vs limit 90.25 percent. Hence, 1622 °F is new operating temperature limit for J. Zink RTO.

AQD-TPU (Tom Gasloli) performed only cursory review of the report. A detailed review deemed to be unnecessary based upon a comparison of the current (February 24 & 25, 2015) with the previous (most recent: May 30 & 31, 2007) test report.

RTO set-up (MI-ROP-5496)

Precision reconfigured RTO set-up in CY 2004. Precision failed to submit a notification of reconfiguration of the thermal oxidizer system. Line No. 8 was, in CY 2004, reconfigured to Reco1 from JZink. The RO permit (F-1.1. VI. Other Requirements) requires the responsible official to submit the notification within 15 days of a reconfiguration. In addition, the RO permit (F-1.1.III. B2. Testing / Recordkeeping) requires Precision to conduct a performance test for capture efficiency (CE) and destruction efficiency (DE) of each incinerator within 90 calendar days of RTO reconfiguration. Precision failed to conduct the required CE & DE tests. A letter of violation dated January 5, 2007, was issued for failure to notify reconfiguration of RTO set-up and conduct performance test of the reconfigured RTO. Please refer to the January 5, 2007, LOV for the details. Although Precision disputed date of reconfiguration, January 5, 2007, LOV stack test issue is resolved upon completing May 2007 stack test with the Consent

Order. May 2007 stack test was performed in order to comply with the Webcoating NESHAP/MACT JJJJ. In addition, Precision performed February 2015 stack test for all three RTOs as required by the 2014 ROP.

Stack / Vent (MI-ROP-5496)

The RO permit (F-1.1.I. B. Stack / Vent Parameters) requires vertical discharge of exhaust gases without any obstruction. The rain protection device on JZink stack was in violation of this condition. Please refer to the January 5, 2007, LOV for the details. The rain protection device was promptly (within couple of days of being aware of the violation) removed and January 5, 2007, LOV was resolved with the Consent Order.

NESHAP/MACT Subpart JJJJ Violations (Jan 2007)

Furthermore, webcoating process (FG-WEBCOATING) was not in compliance with entire applicable NESHAP/MACT Subpart JJJJ (40 CFR, Part 63, Subpart JJJJ—National Emission Standards for Hazardous Air Pollutants for Paper and Other Webcoating, Page 72330, Federal Register / Vol. 67, No. 233 / Wednesday, December 4, 2002 / Rules and Regulations / Final Rule). Please refer to the January 5, 2007, LOV for the details. The following are summary items of NESHAP / MACT JJJJ violation and subsequent Precision's compliance:

1. NESHAP/ MACT JJJJ, §63.3400(b) (Initial Notification): Initial Notification for existing sources was due on December 5, 2004. MDEQ-AQD received the notification dated March 22, 2005, on March 24, 2005. The notification was late by about three months. The notification submitted stated that Precision was a major HAP source and was subject to NESHAP / MACT JJJJ. On May 14, 2002, AQD received a CAA Sec. 112(j) permit application dated May 10, 2002. LOV status: The 112(j) application may be deemed to be NESHAP/ MACT JJJJ, §63.3400(b) Initial Notification. Therefore, Initial Notification violation never occurred.

2. NESHAP/ MACT JJJJ, §63.3400(c) (Semi-annual Compliance Report): Immediately after following the compliance date, December 5, 2005, a Semi-annual Compliance Report (SCR) should be delivered no later than July 31 (Jan 1 thru June 30 semi-annual period) or January 31 (July 1 thru December 31 semi-annual period). The first report was due on January 31, 2006. Precision failed to submit these reports. LOV status: On March 15, 2007, AQD received a NESAHP / MACT audit report dated March 15, 2007. The comprehensive audit report identifies all deviations and violations of the NESHAP. On September 17, 2007, AQD received Semi-annual Compliance Report (SCR) along with Semi-annual ROP Deviation Report dated September 14, 2007. Again, On March 17, 2008, AQD received SCR dated March 14, 2008. This SCR states that all required NESHAP / MACT JJJJ elements were satisfied except Notification of Compliance Status was not submitted in a timely manner. Henceforth, SCR will be submitted along with semi-annual ROP certifications. Based upon experience until FY 2015, SCR are submitted along with ROP Certifications by September 15 and March 15.

3. NESHAP/ MACT JJJJ, §63.3400(d) (Notification of Performance Test): Precision failed submit the Notification of Performance Test. Neither MDEQ-AQD nor US EPA approved a Performance Test Waiver. LOV status: On April 23, 2007, AQD received

NESHAP/MACT JJJJ Initial Performance Test Plan dated April 19, 2007. On May 11, 2007, AQD approved the test plan. On May 30-31, 2007, Precision conducted sampling for VOC to determine destruction efficiency (DE) of the RTOs. Mr. Wilford and I observed the coating process and sampling on May 30 and 31, 2007. Subsequently, on July 31, 2007, AQD received the May 2007 stack test reports. In addition, Precision conducted February 2015 stack test (please see under 2015 stack test)

4. NESHAP/ MACT JJJJ, §63.3400(e) (Notification of Compliance Status): Within 180 days of the compliance date, December 5, 2005, Precision was required to submit the Notification of Compliance Status. Precision failed to submit the Notification of Compliance Status. This report must include a compliance certification, the results of performance tests, and monitoring and a description of how Precision will demonstrate continuing compliance. LOV status: On July 31, 2007, AQD received a Notification of Compliance Status dated July 30, 2007. The submittal included the stack test report showing destruction and overall control efficiencies. The notification stated that precision would limit to 4 percent HAP standard utilizing three regenerative thermal oxidizers (3 RTOs). Precision stated that 0.4-1.2 mass percent HAPs were emitted during CY2006. Based upon FY 2010 inspection, 1.3-2.5 mass percent HAPs were emitted during CY2009. Based upon FY 2013 inspection, 0.3-2.4 mass percent HAPs were emitted during CY2012. Based upon FY 2015 inspection, HAP emissions are less than 2.1% (CY 2014).

5. NESHAP/ MACT JJJJ, §63.3400(f) (Performance Test Reports): Precision is required to submit Performance Test Reports as a part of Notification of Compliance Status. Precision failed to submit the Performance Test Reports. Neither MDEQ-AQD nor US EPA approved a Performance Test Waiver. LOV status: On April 23, 2007, AQD received NESHAP/MACT JJJJ Initial Performance Test Plan dated April 19, 2007. On May 11, 2007, AQD approved the test plan. On May 30-31, 2007, Precision conducted sampling for VOC to determine destruction efficiency (DE) of the RTOs. Mr. Wilford and I observed the coating process and sampling on May 30 and 31, 2007. On July 31, 2007, AQD received DE test results and NESHAP/MACT JJJJ compliance status via certification letter dated July 30, 2007. Mr. Wilford of AQD-TPU stated via e-mail dated June 7, 2007, that preliminary review showed that Precision passed destruction efficiency (DE) and overall control efficiency (OCE). GSA, Inc. (219-661-9900), Environmental Consulting and Testing Contractors, of Crown Point, Indiana 46308, conducted sampling and completed the stack test report (GSA, Inc. Project No. 07-T-458 May 30-31, 2007). The reported DE results are (percent): Reco1 = 93.5 Vs limit 90; Reco2 = 96.75 Vs limit 92.5; JZink = 97.33 Vs limit 90.25 assuming 100% CE. In addition, Precision conducted February 2015 stack test establishing new MACT 4J operating temperature limits.

6. NESHAP/ MACT JJJJ, §63.3400(g) (Start-up, Shutdown, and Malfunction Reports or SSMR): If capture and control technology is used, Precision is required to develop Start-up, Shutdown, and Malfunction Plan. Separate SSMR is not required if the information included in Semi-annual Compliance Report. LOV status: All deviations will be reported along with semi-annual ROP deviation reports. NESHAP/ MACT JJJJ standards are included in the 2009 renewal ROP (FG-WEBCOATING.IX.C)

7. NESHAP/ MACT JJJJ, §63.3320 (Emission Standards): Precision failed to pick a compliance option and demonstrate compliance with its selected option. For an existing source, a simplest option appears to be 95 percent reduction of HAP using an oxidizer or 20 maximum ppmv HAP in exhaust with 100 percent capture. The November 2003 tests showed destruction efficiencies of 98.7% for JZink, 92.2% for Reco1 and 99.2% for Reco2. Reco1 did not comply with the minimum required destruction efficiency of 95% with 100% CE. LOV status: On July 31, 2007, AQD received a Notification of Compliance Status dated July 30, 2007. The submittal included the stack test report showing destruction and overall control efficiencies. The notification stated that precision would limit to 4 percent HAP standard utilizing three regenerative thermal oxidizers (3 RTOs). Precision stated that 0.4-1.2 mass percent HAPs were emitted during CY2006. Per the stack test report, which AQD received on July 31, 2007, destruction efficiencies of 93.5% (Reco1 old Reco), 96.7% (Reco2 or new Reco) and 97.33% (J Zink or John Zink) for three Regenerative Thermal Oxidizers (RTOs) were reported. Per MI-ROP-A5496-2002b, minimum required DEs are 90 percent (Reco1 old Reco), 92.5 percent (Reco2 or new Reco) and 90.25 percent (J Zink or John Zink). Obviously, the reported destruction efficiency (DE) and overall control efficiency (OCE) results (DE=OCE due to 100 percent capture efficiency) show compliance with the ROP limits (MI-ROP-A5496-2002b, F-1.1 V Operational Parameters); the condition requiring minimum DE of 95 percent is removed from the revised ROP (MI-ROP-A5496-2002b dated August 15, 2007). The same DE limits are carried into 2009 and 2014 ROP renewals (FG-WEBCOATING III; 90, 92.5, 90.25)

8. NESHAP/ MACT JJJJ, §63.3321 (Operating Limits): Precision failed to establish operating limits for its oxidizers (JZink, Reco1, and Reco2) and meet them at all times. LOV status: Temperature monitoring for 3 RTOs and magnehelic pressure differential monitoring together with shut-off system are implemented.

9. NESHAP/ MACT JJJJ, §63.3350 (Monitoring): Precision failed to conduct monitoring for MACT although it already has some monitoring plan for VOC. An integrated plan may be developed. LOV status: Temperature monitoring for 3 RTOs and magnehelic pressure differential monitoring together with shut-off system are implemented.

Consent Order AQD No. 22-2008 and January 5 and January 10, 2007, Letters of Violation

On February 12, 2007, AQD-SEMI-DO-Warren referred violations of MI-ROP-A5496 and Paper and other Webcoating NESHAP / MACT JJJJ (40 CFR, Part 63, Subpart JJJJ) for escalated enforcement action. AQD sent an initial enforcement letter dated March 1, 2007. A public comment period for Consent Order AQD No. 22-2008 ended on July 23, 2008. The Consent Order settlement resolved the violations cited in the letters of violation (January 5 and January 10, 2007). Consent Order (CO) AQD No. 22-2008 is signed and effective from August 14, 2008, for at least three years. CO requires compliance with ROP No. MI-ROP-A5496-2002b dated August 15, 2007, and subsequently issued renewal ROP (MI-ROP-A5496-2009). In addition, CO requires compliance with entire NESHAP / MACT JJJJ for Paper and Other Webcoating. Precision has chosen to limit HAP emissions to 4 percent HAP

standard utilizing three regenerative thermal oxidizers (3 RTOs). Precision stated that 0.4-1.2 mass percent HAPs were emitted during CY2006. FY2010 inspection showed 1.3-2.4% HAP. FY2013 inspection showed 0.3-2.4% HAP.

On November 29, 2012, G. Vinson Hellwig, AQD Division Chief, terminated Consent Order AQD No. 22-2008. Principally, the Consent Order required compliance with NESHAP / MACT 4J and the ROP. The Consent Order required payment of the settlement amount of $26,880.00 in four installments ($8880.00 + 3* $6000.00):

1. $8,880.00, 09/02/2008, Check No. 63776
2. $6,000.00, 11/26/2008, Check No. 64353
3. $6,000.00, 02/25/2009, Check No. 64798
4. $6,000.00, 07/28/2009, Check No. 65506

According to my advice, Precision requested voiding of the consent order via a letter dated November 13, 2012. The letter explained Precision's compliance with the terms of the consent order. Attached with it are copies of cancelled checks (both sides) for the above amounts.

FG-WEBCOATING-MACT4J-RTO-CAM

CAM plan is identical to post-11-15-1990 MACT 4J standards. Therefore, compliance with MACT 4J monitoring requirement is deemed to be compliance with CAM. Precision is submitting CAM certifications along with ROP certifications.

FG-COLD-CLEANERS (EU-WASHTANK)

Any cold cleaner that is grandfathered or exempt from Rule 201 pursuant to Rule 278 and Rule 281(h) or Rule 285(r)(iv). Existing cold cleaners were placed into operation prior to July 1, 1979. New cold cleaners were placed into operation on or after July 1, 1979.

At the time of issuance of this RO Permit, only cold-cleaner in use is EU-WASHTANK.

A cold-cleaner (3 ft. * 8 ft) is present. It is included in the ROP as a wash-tank; 2009 renewal ROP incorporated this unit as a cold-cleaner. Tools are cleaned in the cold-cleaner, which uses organic solvents. It is equipped with a mechanically assisted cover. Since it is located in the coating mix room, the VOC emissions are captured via floor sweeps, which are ducted to ambient air without control. During FY2008 inspection, I discovered vent holes in the tank. As noted in the Jason Smith's e-mail dated June 6, 2008, Precision promptly corrected ventilation system assisted solvent vapor loss by sealing off vents. During the FY2013 inspection, I confirmed proper functioning of the cold-cleaner. Based upon FY 2015 inspection, this solvent tank appears to be removed.

FG-RUL284-TANKS

There are six storage tanks (capacity: 4-6 thousand gallons each). The washtank is included

in the ROP as a 3 feet * 8 feet coldcleaner.

FG-RICEMACT

22.12 HP SI RICE engine has not been used.

FG-RULE290

At present, no process is covered by this flexible group.

Conclusion

Precision is subject to Paper and other Web Coating MACT / NESHAP. Consent Order (CO) AQD No. 22-2008 was signed and effective from August 14, 2008. Precision is now (FY 2015) in compliance with the MACT. AQD terminated the Consent Order effective November 29, 2012.

FYI: LOV

January 5, 2007

CERTIFIED MAIL

Mr. Andrew W. Rich, President and Owner
Precision Coatings, Inc.
8120 Goldie Street
Commerce Twp., Michigan 48390-4107

SRN: A5496, Oakland County (63)

Dear Mr. Rich:

LETTER OF VIOLATION

On December 7, 11 and 13, 2006, the Department of Environmental Quality (DEQ), Air Quality Division (AQD), conducted an inspection of Precision Coatings, Inc. (Precision), a web coating products facility, located at 8120 Goldie Street, Walled Lake, Michigan. The purpose of this inspection was to determine Precision's compliance with the requirements of the federal Clean Air Act; Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451).

During the inspection, the following air pollution violations were identified:

Process Description	Rule/Permit Condition Violated	Comments
No. 1. FG-WEBCOATING[θ]	MI-ROP-A5496, F-1.1 (VI) (2)	Precision failed to submit a notification of reconfiguration of the thermal oxidizer system. Line8 was, in CY 2004, reconfigured to Reco1 from JZink. The RO permit (F-1.1. VI. Other Requirements) requires the responsible official to submit the notification within 15 days of a reconfiguration.

No. 2. FG-WEBCOATING[θ]	MI-ROP-A5496, F-1.1 (III) (B2)	The RO permit (F-1.1.III. B2. Testing / Recordkeeping) requires Precision to conduct a performance test for capture efficiency (CE) and destruction efficiency (DE) of each incinerator within 90 calendar days of RTO reconfiguration. Precision failed to conduct the required CE & DE tests.
No. 3. FG-WEBCOATING[θ]	MI-ROP-A5496, F-1.1 (I) (B)	The RO permit (F-1.1.I. B. Stack / Vent Parameters) requires vertical discharge of exhaust gases without any obstruction. The rain protection device on JZink stack is in violation of this condition.
No. 5. FG-WEBCOATING[θ]	National Emission Standards for Hazardous Air Pollutants/ Maximum Achievable Control Technology (NESHAP/MACT) Subpart JJJJ[λ]	Precision failed to comply with the federal MACT JJJJ standards.
[θ] This flexible group consists of Web Coating Line No. 1 (EG-LINE1RECO2), Web Coating Line No. 4 (EG-LINE4RECO1), Web Coating Line No. 6 (EG-LINE6ANDJZINK), Web Coating Line No. 8 (EG-LINE8ANDJZINK) and Web Coating Line No. 10 (EG-LINE10RECO2). The Line No. 10 has never been installed. [λ] 40 CFR, Part 63, Subpart JJJJ—National Emission Standards for Hazardous Air Pollutants for Paper and Other Webcoating, Page 72330, Federal Register / Vol. 67, No. 233 / Wednesday, December 4, 2002 / Rules and Regulations / Final Rule		

On December 4, 2002, the US Environmental Protection Agency (EPA) promulgated federal NESHAP/MACT standards for Paper and Other Webcoating facilities (40 CFR, Part 63, Subpart JJJJ —National Emission Standards for Hazardous Air Pollutants for Paper and Other Webcoating, Page 72330, Federal Register / Vol. 67, No. 233 / Wednesday, December 4, 2002 / Rules and Regulations / Final Rule). The MACT standard applies only to a Webcoating facility located at a plant site that is a major source (40 CFR, Part 63, Subpart JJJJ, §63.3290); a non-major or area HAP source, i.e., actual and potential annual emissions are less than 10 tons of any single HAP and less than 25 tons of all HAP combined, is not subject to the MACT JJJJ standards. Major MACT sources are defined as those that emit or have the potential to emit at least 10 tons per year of any single HAP or 25 tons per year of any combination of HAP. The Initial Notification dated March 22, 2005, stated that Precision was a major HAP source and was subject to NESHAP / MACT JJJJ. Initial Notification for existing sources was due on December 5, 2004. The MDEQ-AQD received the notification dated March 22, 2005, on March 24, 2005. The "*once-in-always-in*" policy of the US EPA precludes Precision from opting out of the requirements of the MACT JJJJ.

MI-ROP-A5496 General Condition Nos. 28 & 29 require that a responsible official shall certify, on an annual basis, to the AQD and the US EPA that the stationary source is and has been in compliance with all terms and requirements except for the deviations that have been identified. The March 6, 2006, annual certification (received by the AQD on March 13, 2006) did not identify the above violations (Nos. 1 thru 3). Although the responsible official certification was stated to be made after reasonable inquiry, it is evident that reasonable inquiry was not made. Your failure to review each term and condition of the ROP for the purpose of annual compliance certification, resulted in an improper

and false annual compliance certification. Please explain the processes and steps you followed and inquiries you made before the certification was signed. Please also explain why the ROP violations were not discovered during the annual certification review.

You should immediately initiate necessary actions to correct the cited violations. Additionally, *please submit a report of your program for compliance with* the RO Permit and NESHAP/MACT Subpart JJJJ *by **January 26, 2007***. At a minimum, this report should explain the causes and duration of the violations, whether the violations are ongoing, remedial action taken, and what steps are being taken to prevent a reoccurrence. If the violations are not resolved by the date of your response, describe what equipment you will install, procedures you will implement, processes or process equipment you will shut down, or other actions you will take and by what dates these actions will take place. The records and reports must be certified by the responsible official using ROP Report Certification Form (EQP 5736 [Rev 11-04]).

Notwithstanding your response to the preceding citations, the AQD may initiate further enforcement action to address violation of state and federal Clean Air Acts, rules and regulations.

Thank you for your attention to resolving the violations cited above and for the cooperation extended to me during my inspection of your facility. If you have any questions regarding the violations or the actions necessary to bring your facility into compliance, please call me at the number listed below.

Sincerely,

Iranna S. Konanahalli

Air Quality Division
586-753-3741

ISK:JMS
Enclosure
cc: Mr. Robin Van Tilburg, Precision Coatings, Inc.
Mr. Mark Gomez, Precision Coatings, Inc.
Mr. Gerald Avery, DEQ
Mr. Thomas Hess, DEQ
Ms. Teresa Seidel, DEQ
Mr. Christopher Ethridge, DEQ
Mr. Richard Taszreak, DEQ

January 10, 2007

CERTIFIED MAIL

Mr. Andrew W. Rich, President and Owner
Precision Coatings, Inc.
8120 Goldie Street
Commerce Twp., Michigan 48390-4107

SRN: **A5496**, Oakland County (63)

Dear Mr. Rich:

LETTER OF VIOLATION

On December 7, 11 and 13, 2006, the Department of Environmental Quality (DEQ), Air Quality Division (AQD), conducted an inspection of Precision Coatings, Inc. (Precision), a web coating products facility, located at 8120 Goldie Street, Walled Lake, Michigan. The purpose of this inspection was to determine Precision's compliance with the requirements of the federal Clean Air Act; Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451).

During the inspection, the following air pollution violations were identified:

Process Description	Rule/Permit Condition Violated	Comments
FG-WEBCOATING Reco1 Regenerative Thermal Oxidizer (RTO)	**MI-ROP-A5496, F-1.1 (V)**	**In addition to minimum overall volatile organic compound (VOC) control efficiency of 90 percent, Precision is required to maintain minimum VOC destruction efficiency of 95 percent.θ**
θ Pursuant to F-1.1. III.B2, the performance test was conducted on November 24 and 25, 2005. Clayton Group Services (Clayton) conducted sampling and analysis for destruction efficiencies of Regenerative Thermal Oxidizers (Reco1, Reco2 and JZink). The destruction efficiencies reported were 98.7 percent (JZink), 92.2 percent (Reco1) and 99.2 percent (Reco2). The ROP requires minimum overall control efficiencies of 90 percent (Reco1), 92.5 percent (Reco2) and 90.25 percent (JZink). In addition, the ROP requires a minimum VOC destruction efficiency of 95 percent for each oxidizer.		

You should immediately initiate necessary actions to correct the cited violations. Additionally, *please submit a report of your program for compliance with* the RO Permit by ***January 31, 2007***. At a minimum, this report should explain the causes and duration of the violation, whether the violation is ongoing, remedial action taken, and what steps are being taken to prevent a reoccurrence. If the violation is not resolved by the date of your response, describe what equipment you will install, procedures you will implement, processes or process equipment you will shut down, or other actions you will take and by what dates these actions will take place. The records and reports must be certified by the responsible official using ROP Report Certification Form (EQP 5736 [Rev 11-04]).

Notwithstanding your response to the preceding citations, the AQD may initiate further enforcement action to address violation of state and federal Clean Air Acts, rules and regulations.

Thank you for your attention to resolving the violation cited above and for the cooperation extended to me during my inspection of your facility. If you have any questions regarding the violation or the actions necessary to bring your facility into compliance, please call me at the number listed below.

Sincerely,

Iranna S. Konanahalli

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Mr. Mark Gomez, Precision Coatings, Inc.
Mr. Gerald Avery, DEQ
Mr. Thomas Hess, DEQ
Ms. Teresa Seidel, DEQ
Mr. Christopher Ethridge, DEQ
Mr. Richard Taszreak, DEQ

NAME JS Mcnamara DATE 8/3/2015 SUPERVISOR CTE