

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

FY2014 Insp

N657724863

FACILITY: ND Industries, Inc.		SRN / ID: N6577
LOCATION: 1000 N. Crooks Road, CLAWSON		DISTRICT: Southeast Michigan
CITY: CLAWSON		COUNTY: OAKLAND
CONTACT:		ACTIVITY DATE: 04/02/2014
STAFF: Iranna Konanahalli	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: FY 2014 scheduled annual inspection of ND Industries located at 1000 North Crooks Road, Clawson, Michigan.		
RESOLVED COMPLAINTS:		

E file: N6577 - SAR - 2014 04 02

ND Industries, Inc. (N6577)
1000 North Crooks Road
Clawson, Michigan 48017-1003
Ph: (248) 288-0000

www.ndindustries.com

NESHAP / MACT MMMM, ROP Opt-Out PTI No. 72-99C dated September 5, 2008.

Voids: PTI Nos. 345-98 (11/03/00), 72-99 (02/03/04), 72-99A (03/28/08), 72-99B (09/05/08).

PTI No. 72-99B dated March 28, 2008, was revised to PTI No. 72-99C dated September 5, 2008.

Consent Order AQD Nos.: 11-2004 is executed April 7, 2004, 19-2008 is executed on July 17, 2008, by G. Vinson Hellwig, AQD Chief. Consent Orders 11-2004 and 19-2008 terminated by G. Vinson Hellwig, AQD Chief, effective November 29, 2012, based upon July 15, 2012, written request by D. K. Bungee, EHS Manager, ND Industries.

Not subject to (due to Consent Order AQD No. 19-2008 settlement in spite of once-in-always-in policy is not repealed yet): NESHAP/MACT MMMM (4M) standards for Surface Coating of Miscellaneous Metal Parts and Products (40 CFR, Part 63, Subpart MMMM — National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products, Page 130, Federal Register / Vol. 69, No. 1 / Friday, January 2, 2004 / Rules and Regulations / Final Rule).

Not subject to: Rule 336.1621 pounds of VOC per gallon of coatings emission limits pursuant to Rule 336.1621(10); 2,000 pounds per month per line, 10 (single line) / 30 (entire facility) tpy VOC emission limits in PTI No. 72-99C (FG-COATING 1.1a [10 tpy] and 1.1b [2000 ppm] and FG-FACILITY 2.1a [30 tpy]).

On October 24, 2013, and February 11 and April 2, 2014, I conducted a level-2 scheduled annual inspection of ND Industries located at 1000 North Crooks Road, Clawson, Michigan. 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 Environmental Quality, Air Quality Division (MDEQ-AQD) administrative rules; ROP Opt-Out PTI No. 72-99C; CO AQD No. 19-2008.

Mr. Richard Wallace, President and owner, ND Industries.

Mr. Rob Chraska (Phone: 248-288-0000-ext. 1228 / 248-655-2557, Cell: 248-535-9840, Fax: 248-649-7730, rchraska@ndindustries.com), CSP, Environmental, Health and Safety Manager, and Mr. Michael H. Tohlman (Phone: 248-288-0000 / 248-655-2526, Cell: 248-321-8655, Fax: 248-655-2562, mtohlman@ndindustries.com), General Manager, assisted me during the inspection. Mr. Rob Chraska joined the company in 2013.

Mr. Jim Bar (246-655-2567), R & D Division Manager, joined the corporate office. Scot Wickham (Cell: 248-321-1822) replaced Mr. Bar and is responsible for R & D and chemical composition of the coatings.

Mr. Rob Chraska replaced D. K. Bungee, EHS Manager, who in turn replaced Ms. Kim Frazier for a brief period (September thru October 2012).

Ms. Kim Frazier (Phone: 248-288-0000-ext. 1228 / 248-655-2557, Cell: 248-321-9690, Fax: 248-655-2581, kfrazier@ndindustries.com), CSP, Environmental, Health and Safety Manager, separated from the company in June 2012.

Mr. James W. Counts (Phone: 248-288-0000 or 248-655-2503; Cell: 248-561-8903; E-mail: jcounts@ndindustries.com), Cost Analyst / Inside Sales Manager, performs data entry for the spreadsheet calculations.

Ms. Brannon S. Wickham separated from the company. Ms. Susanna Tong, as of March 5, 2008, transferred EHS duties to Ms. Frazier. Mr. Greg Touchette, former general manager, separated from the company about 2007 and Mr. Tohlman replaced him.

Ms. Susanna Tong (Phone: 248-655-2587; E-mail: stong@ndindustries.com), former Compliance and Safety Manager, separated from the company in November 2008 and Ms. Kristina Berger (Phone: 248-288-0000, Fax: 248-288-0022, kberger@ndindustries.com), Jr. VP of Corporate Operations and Sales, is not responsible for environmental duties anymore; she transferred those duties in CY2008 to Jim Bar, who supervised Ms. Frazier. Ms. Kristina Berger separated from the company in December 2012.

ND Industries makes chemicals for locking and sealing applications for threaded fasteners. ND Patch System, which involved applying a proprietary powder coating to threaded fasteners of all sizes and configurations, male or female threads, self-locking and self-sealing, while leaving them fully adjustable, has been removed.

ND Patch powder coating, which was completely dry (powder) and fused to the hot fastener, was not done since May 2007; but I observed powder coating reintroduced during FY 2010 inspection. Anyway, the powder coating system was not included in the original PTI and was operating under Rule 336.1287(d) exemption.

There are many processes, consisting of twenty-one flow-coating lines, at this plant:

1. Nylon (ND Patch) powder coating on hot metal surfaces (threaded fasteners) was not done since May 2007; but I observed powder coating reintroduced during FY 2010 inspection. . The powder process that was removed and reintroduced was never a part of original or revised PTI.
2. Epoxy lock coating. This is a two-component coating with no VOC. The coatings are cured using Ultraviolet (UV) light.

3. Wax coating. No VOC in these coatings. The coatings are applied to preheated metallic threaded parts and the parts are not cured.
4. Water-based Teflon coating. There are five lines. The threaded parts are baked in gas fired oven.
5. Solvent-based Microsperes coating. The threaded parts cured at 70 degrees Celsius.
6. Solvent-based Vibratite coating. The parts are cured. Usage is about 5 gallons of coatings per month.
7. Water-based sealant coating. The parts are cured.
8. Miscellaneous solvents for purge and clean-up. Toluene, a predominant HAP solvent, has been eliminated as a part of settlement to resolve NESHAP / MACT Mmmm violation cited in the letter of violation (LOV) dated January 23, 2007. The violation is resolved via CO AQD No. 19-2008. Toluene and Xylene were approved on May 11, 2010, to be included in a coating formulation; but neither should be used for clean up.
9. Plastisol coatings, which are based on PVC. These coatings contain little or no VOC. The coatings are applied on preheated parts.

While Teflon coatings are always water based, Microsperes are either solvent based or water based.

Flow and drip coating VOC emissions are negligible and are emitted in general in-plant. Flow coating has almost 100 percent transfer efficiency because excess coating is captured, recycled and reused. Oven VOC emissions are ducted to outside ambient air via stacks.

Male parts are processed through flow coaters. This process involves picking the parts up on a rotating magnetic dial that carries them under the coating applicator where liquid coating simply flows out from a tube on to the male part. The part then passes under a wire brush that wipes any excess coating from the part. The application takes place over a sink, which serves to collect excess coating that is recycled via flow tube.

Female parts are processed on the conveyor belt metered drip coating lines. During this process, the female parts are carried by a conveyor belt past an infrared sensor and measured amount of coating is applied. In the drip coating lines, coating is dripped when an infrared eye notices the part; only requisite amount is dripped precisely on passing part.

While all male parts use flow coating, all female parts involve drip coating with an infrared eye.

Plastisol lines use similar technology as the conveyor belt metered flow coating process to put small amount of coating on the underside of a head on a male fastener. There are three Plastisol lines, none of which exceed Rule 287(c) coating limits (<< 200 gallons per month). Therefore, Plastisol lines are not included in PTI No. 72-99C (voided PTI No. 72-99B as well). I asked Ms. Frazier to maintain Rule 287(c) records (gallons of coatings per month) separately for each coating line. Ms. Frazier stated that all coating lines put together use less than 200 gallons per month. In March 2009, I asked Ms. Frazier report all Rule 287 VOC under a reporting group of MAERS. Mr. Chraska is following the same procedure per FY 2014 inspection.

ND Industries' Clawson plant used to operate two shifts per day, 8 hours per shift and 6 days per week; only one shift on Saturday. As a result of 2009 economic turbulence in automobile industry, the production levels have fallen off drastically. Towards the end of CY2008, 80 percent of 300 employees were laid off. By June 2010, few workers were recalled and some temps were also added. However, in CY 2013, business picked up and ND operated 12 hours per day and 5 days per week.

Rule 336.1621 and NESHAP / MACT MMMM opt-out

ND Industries opted out of Rule 336.1621 pounds of VOC per gallon of coatings emission limits pursuant to Rule 336.1621(10) via PTI No. 72-99C, Special Condition Nos. 1.1a, 1.1b and 2.1a, by limiting VOC emissions to 2,000 pounds per month per line and 10 tons per year per line (not to exceed 30 tpy at this geographic site). This permit lets ND Industries opt-out of ROP and NESHAP / MACT MMMM programs as well via PTI No. 72.99C, Special Condition Nos. 2.1b (9 tpy single HAP) and 2.1c (22.5 tpy aggregate HAP). Therefore, the emission limit violations of PTI No. 72.99A as cited in January 23, 2007, were serious; Consent Order No. 19-2008 was finalized and executed on July 17, 2008, to resolve the violations. Consent Order is terminated effective November 29, 2012.

February 2006 Violation Notice – PTI No. 72-99A and Consent Order No. 11-2004

Based upon the FY 2006 inspection of the Clawson facility's records, the company was NOT in compliance with recordkeeping requirements of PTI No. 72-99A dated February 3, 2004. The letter of violation (LOV) dated February 28, 2006 was sent for recordkeeping violations of the ROP opt-out Permit to Install No. 72-99A and Consent Order No. 11-2004. The violations are described in the February 2006 letter of violation. Consequently, stipulated penalty of \$15,000.00 (Check No. 00208733 dated 05/11/2006) was paid to resolve record-keeping violations.

March 2002 Violation Notice – PTI No. 72-99

It may be noted that Consent Order No. 11-2004 was a result of recordkeeping violations (Permit to Install No. 72-99; LOV dated March 28, 2002). On or about July 20, 2002, these violations were referred for an escalated enforcement action. On or about August 19, 2002, US Environmental Protection Agency added the violations to High Priority Violation (HPV) list. These actions and negotiated settlements culminated in Consent Order No. 11-2004. Settlement amount is \$25,900.00

January 2007 Violation Notice – PTI No. 72-99A

FY 2007 inspection resulted in January 23, 2007 letter of violation. The letter of violation is for exceeding VOC emission limit (Opt-out Permit to Install No. 72-99A, Special Condition No. 2.1b {limit: 9.0 tons per year based upon 12-month rolling time [tpy]}). The LOV is also for violation of NESHAP / MACT MMMM because the actual, and potential-to-emit, toluene (a Sec. 112 hazardous air pollutant or HAP) emissions exceeded 10 tons per year. The cited Special Condition No. 2.1b of Permit to Install No. 72-99A is enforceable as paragraphs 10 & 17 of Consent Order, AQD No. 11-2004. The violation of the Consent Order subjects the company to stipulated penalty provisions. See the January 23, 2007 letter of violation for additional details. Consent Order No. 19-2008 is finalized and executed on July 17, 2008, to resolve the violations cited in January 23, 2007, LOV. Consent Order is terminated effective November 2012.

EB-Butyl Cellosolve (CAS No. 111-76-2)

Purge and clean-up toluene emissions are included in 12-month rolling time emissions. Toluene emissions are down to about 6 tpy from about 11 tpy, based upon 12-rolling time period (April 2007 data). Toluene emissions were substantially reduced by eliminating Toluene as a clean-up solvent. EB-Butyl Cellosolve (CAS No. 111-76-2) replaced toluene as miscellaneous cleaning solvent. ND's R&D is making continuous efforts to replace toluene in coating formulations as well. Due to higher Cellosolve costs (\$/gal), Butyl Cellosolve usage was discontinued in September 2009. Toluene replaced, as approved by AQD via May11, 2010, letter (Seidel) according to SC 2.4, PTI No. 72-99C, Butyl Cellosolve as thinning solvent. Acetone replaced Butyl Cellosolve as clean-up solvent; prior to the Consent Order 19-2008, Toluene was used as a clean-up solvent. Per Apr. 2010 VOC Report, toluene emissions have increased to 8.85 tons per 12-month before subtraction of credits due to off-site disposal (1,069 pounds of toluene) and material returns to Chemical Blending on Barrett Road (214 pounds of toluene). Via letter dated May11, 2010, AQD approved use of toluene as coating diluent solvent (PTI No. 72-99C, SC 2.4); however, toluene may not be used as clean-up solvent.

NESHAP / MACT MMMM

On January 2, 2004, the US Environmental Protection Agency (EPA) promulgated federal NESHAP/MACT standards for Surface Coating of Miscellaneous Metal Parts and Products (40 CFR, Part 63, Subpart MMMM —National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products, Page 130, Federal Register / Vol. 69, No. 1 / Friday, January 2, 2004 / Rules and Regulations / Final Rule). The MACT standard applies only to a Miscellaneous Metal Parts Surface Coating facility located at a plant site that is a major source (40 CFR, Part 63, Subpart MMMM, §63.3881); 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 MMMM 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. Current *once-in-always-in policy* of US EPA precludes ND Industries from opting out of the requirements of the NESHAP/MACT MMMM. However, as I discussed on January 9, 2007, with Ms. Susana Tong, 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 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. See Consent Order 19-2008 settlement.

For an existing MACT MMMM source, the compliance must be achieved by January 2, 2007. An affected MACT MMMM source is new source for which construction commenced after August 13, 2002; an affected source is an existing source if it is not new or reconstructed.

On February 16, 2007, AQD received January 23, 2007, LOV response letter dated February 12, 2007. The letter states that accurate and timely calculations will be performed, toluene (HAP) has been replaced by a non-HAP solvent (butyl cellosolve) and the coatings and diluent solvent are being reformulated to exclude toluene. The letter also states that use of toluene as thinning and cleaning solvent was eliminated as of January 1, 2007. Per the letter, these actions should bring toluene emissions below 5 tons per year from current 11 tons per year. Via letter dated May11, 2010, AQD approved use of toluene as coating diluent solvent

(PTI No. 72-99C, SC 2.4); however, toluene may not be used as clean-up solvent.

NESHAP / MACT 4M : Trailing Vs Projected HAPs

Based upon **trailing** 12-month toluene emissions, ND was a NESHAP / MACT major source; actual about 11 tpy HAP. However, per the January 23, 2007, letter toluene was eliminated before January 1, 2007 (MACT compliance date January 2, 2007). Since the actions were taken before compliance date, **projected** 12-month toluene emissions must be considered according to Mr. S. Lee Johnson, an attorney representing ND. AQD agreed with the argument and Consent Order No. 19-2008 is finalized and executed on July 17, 2008, to represent this agreement. As a matter of fact, the emissions were about 4.98 tons of HAP per year as of January 2009. Since then Toluene emissions have increased to 8.85 tons per 12-month (April 2010 VOC Report). Per the VOC report, Sep 2013 emissions are 8.57 tons of HAPs per year and 9.10 tons of VOC per year based upon 12-month period.

Semi-annual (Jan-Jun and Jul-Dec) Audit Reports

On Aug 28, 2008, AQD received Jan-June 2008 audit report. The report stated that employee retraining would be done to correctly record VOC / HAP. Toluene, total HAP, total VOC emissions have reduced from 6.53, 6.59, 10.39 (Dec07) to 4.58, 4.66, 8.54 (Jul08), respectively.

On February 18, 2009, AQD received July-December 2008 audit report. One clip-board was installed for each emission unit (72-99C) and one for Butyl Cellosolve (non-HAP substitute solvent for toluene). Since waste materials are insignificant, no credit is taken for reclaimed HAP / VOC.

Total of 6,376 gal /yr coating materials were purchased in CY2008 by the Clawson Plant. 3,190 gallons were purchased during July-Dec 08. Only 1,290 gallons were accounted for; rest was not logged. The audit report contains corrective actions. Similarly, 48 gallons of butyl cellusolve were not accounted for. 48 gallons were added to the VOC / HAP calculations spreadsheet.

On March 3, 2010, AQD received July-December 2009 audit report. Toluene is used only as diluent solvent adjust coating viscosity. Water-based coatings continue to have quality issues. Butyl Cellosolve has not been used since September 2009.

Based upon June 2010 production, water-based coatings quality results are encouraging.

On August 23, 2010, AQD received Jan-June 2010 audit report. The report stated US EPA RM 24 tests were done.

On August 26, 2011, AQD received Jan-June 2011 audit report. The report stated US EPA RM 24 tests were done.

On February 28, 2012, AQD received July-Dec 2011 audit report. The report stated US EPA RM 24 tests were done.

On August 30, 2012, AQD received Jan-June 2012 audit report.

Past inaccurate VOC / HAP records

I advised Ms. Frazier that AQD was aware past VOC records, as kept by Ms. Stacy Kacarka ,

former Supervisor of Compliance and Safety, who was let go, were not accurate and that it was not necessary to go back and correct those records and that future records should be accurate.

Permit-to-Install Revisions

AQD issued a letter of violation dated March 28, 2002, for failure to keep records (PTI No. 72-99), failure to obtain ROP (Rule 336.1210) and failure to meet VOC limits (Rule 336.1621, PTI No. 72-99 SC2). ND revised PTI No. 72-99 to PTI No. 72-99A to resolve the violations. PTI No. 72-99A allowed the company to opt out of Rule 621 VOC limits (lbs VOC / gallon of coating), NESHAP/ MACT standards and ROP. ND entered into Consent Order No. 11-2004 to resolve violations. During Consent Order No. 19-2008 negotiations, the company applied for General Permit-to-Install (GPTI) for the coating operations. AQD denied the GPTI application because of ongoing enforcement action. AQD agreed to simplify recordkeeping requirements. Hence, AQD revised PTI No. 72-99A to PTI No. 72-99B and eliminated all Rule 336.1287(c) paint spray booths from the PTI. AQD also removed individual toxic air contaminants (TAC) of PTI No. 72-99A, SC 1.1a through 1.1f. In addition, the revision (PTI No. 72-99A to PTI No. 72-99B) removed SC 1.2 through 1.5 (PTI No. 72-99A), which required recordkeeping of these TACs, e.g., N, N-Dimethyl-O-Toluidine, N, N-Diethyl-P-Toluidine, Hydroxymethyl Amino Ethanol.

Again, PTI No. 72-99B was revised to PTI No. 72-99C to revise SC 2.4 because ND uses non-HAP solvents to adjust viscosities of the coatings. PTI No. 72-99B (SC 2.4) prohibited coatings content alteration by dilution with solvents; this was not so per the plant manager. This revision made SC 2.4 (72-99C) consistent with paragraphs 13 and 15 of CO AQD No. 19-2008.

In addition, according to SC 2.4, PTI No. 72-99C, via May 11, 2010 letter, AQD approved use of Toluene and Xylene as diluent / thinning solvent to adjust coating viscosity. SC 2.4 allows use of HAP solvents for clean-up / thinning with AQD's approval.

Rule 336.1287(c) Coating Lines

During permit modification from PTI No. 72-99A to PTI No. 72-99B, all Rule 287(c) coating lines with potentially less than 200 gallons per month were removed from the permit. I informed Ms. Kim Frazier that the emissions from these lines must be counted for 30 tpy VOC limit (PTI No. 72-99C, SC 2.1a). I advised Ms. Frazier in March 2009 to include Rule 287(c) VOC as a reporting group in MAERS. Mr. Chraska is following the same procedure.

PTI No. 72-99A to 72-99B Revision

Per AQD SEMI District request, all emission unit descriptions have been corrected with assistance from Mr. Tohlman, General Manager. All Rule 287(c) coating lines are removed. Individual toxic air contaminants (TAC) limits of PTI No. 72-99A, SC 1.1a through 1.1f are removed. Per March 2008 data, facility-wide VOC emissions are 9.08 tpy (SC 1.1a limit: 10 tpy per line, SC2.1a limit: 30 tpy for entire facility). Per Sep 2013 data, facility-wide VOC emissions are 9.10 tpy (SC 1.1a limit: 10 tpy per line, SC2.1a limit: 30 tpy for entire facility).

PTI No. 72-99C

I observed that all coating and solvent materials containers were covered with lids (SC1.2-

1.4); this is done for safety and OSHA reasons as well. Only drip and flow coating technologies are used (SC1.5). Pursuant to Consent Order 19-2008 and PTI No. 72-99C, the VOC / HAP calculations are done using formulation coating information (SC1.7-1.9). Facility-wide HAP and VOC emissions are 8.57 tpy (SC2.1b limit: 9 tpy each individual HAP, SC2.1c limit: 22.5 tpy for entire facility aggregate HAP) and 9.10 (SC2.1a limit: 30 tpy VOC), respectively, for September 2013. VOC and HAP records are kept and calculations are done using MS Excel Spreadsheets (SC2.3-2.6).

All emission information is according to September 2013 data. SC2.4 (72-99B to 72-99C) is revised to allow non-HAP dilution of coatings to adjust viscosity.

According to SC 2.4, PTI No. 72-99C, via May 11, 2010 letter, AQD approved use of Toluene and Xylene as diluent / thinning solvent to adjust coating viscosity.

Clean-up solvent usage is reduced by using mechanical scrapping and reducing frequency of color changes. Acetone replaced Toluene as clean-up solvent. Butyl Cellosolve usage as thinning as well as clean up solvent discontinued since Sept 2009 due to cost considerations.

Reference Method 24

On March 31, 2009, AQD approved use of formulation data provided 5 frequently used and 5 random coatings are analyzed on an annual basis according to SC 1.6 PTI #72C and the March 31, 2009, letter. In CY 2009, VOC coatings analysis was done in-house. Water-based coatings analysis was done by NSL of Cleveland using Karl-Fisher Method. NSL's analysis showed negative 7.7% water. Therefore, NDI bought its own Karl-Fisher machine:

V20 Volumetric Karl Fisher Titrator
Mettler Toledo
Mat Eby, Instrument Sales Specialist
1-800-METLER-ext 7004
614-519-0882
E-mail: Mathew.eby@mt.com
www.mt.com

According to Ms. Gaile Hanning (248-655-2597) of NDI, coulometry should not be used for higher water content in coatings. Volumetric method must be used for water based coatings. Ms. Hanning claimed she was getting good results with less than 1% error. Ms. Hanning separated from the company about Dec 2012.

December 2, 2013, Violation Notice – US EPA RM24

AQD issued the December 2, 2013, Violation Notice for failure to perform US EPA Reference Method 24 coating analysis by December 2012. CY 2013 RM 24 tests are done; AQD received the test results dated December 12, 2012, on December 17, 2013. Although the company is not able to produce a proper documentation for the CY 2012 RM 24 test results, the company is able to produce e-mail activities pertaining to the tests in question. Hence, the VN is under consideration to be resolved.

Consent Order Termination (November 2012)

Consent Order AQD Nos. 11-2004 and 19-2008 are executed on April 7, 2004 and July 17, 2008 by G. Vinson Hellwig, AQD Chief. Consent Orders 11-2004 and 19-2008 are terminated

by G. Vinson Hellwig, AQD Chief, effective November 29, 2012, based upon July 15, 2012, written request by D. K. Bungee, EHS Manager, ND Industries.

Based upon my request, Mr. Chraska provided copies of cancelled checks:

1. \$24,640.00; Comerica Check No. 234780 dated 08/05/08
2. \$24,640.00; Comerica Check No. 238401 dated 12/19/08

Total \$49,280.00 (Paragraph 17, AQD No. 19-2008).

In addition, ND Industries paid \$25,900.00 (Paragraph 16, AQD No. 11-2004) \$15,000.00 (stipulated penalty for failure to keep records, Check No. 00208733 dated 05/11/2006).

Parts Washer

One aqueous parts washer with boric acid, rust inhibitor, etc. are added.

Conclusion

The January 23, 2007 letter of violation was issued for VOC limit of PTI No. 72-99A (Special Condition No. 2.1b), Consent Order No. 11-2004 and NESHAP/MACT MMMM. Consent Order No. 19-2008 is executed to resolve these violations. December 2012 RM24 violation is under consideration to be resolved.

FYI: VNs (December 2, 2013, January 23, 2007 and February 28, 2006)

December 2, 2013

Mr. Richard Wallace, President and Owner
ND Industries, Inc.
1000 North Crooks Road
Clawson, Michigan 48017-1003

SRN: N6577, Oakland (63) County

Dear Wallace:

VIOLATION NOTICE

On October 24, 2013, the Department of Environmental Quality (DEQ), Air Quality Division (AQD), conducted an inspection of ND Industries, Inc. located at 1000 North Crooks Road, Clawson, Michigan. The purpose of this inspection was to determine ND Industries' 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); the administrative rules and the conditions of Permit to Install (PTI) number PTI No. 72-99C dated September 5, 2008.

During the October 24, 2013 inspection, staff observed the following:

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Process Description	Rule/Permit Condition Violated	Comments
FG-Coating: Clawson coating facility	PTI No. 72-99C, FG-Coating, Special Condition (SC), Testing, 1.6	ND Industries failed to perform US EPA Reference Method 24 coating analysis by December 2012 for CY2012 ^θ
^θ PTI No. 72-99C (SC 1.6) together with the Ms. Teresa Seidel's letter dated March 31, 2009, to Mr. Michael Tohlman, that approved US EPA RM 24 coating analyses, require annual coating analyses (minimum 5 frequently used coatings and 5 random coatings) by December 31 of each year.		

Please initiate actions necessary to correct the cited and submit a written response to this Violation Notice by December 23, 2013 (which coincides with 21 calendar days from the date of this letter). The written response should include: the dates the occurred; an explanation of the causes and duration of the ; whether the ongoing; a summary of the actions that have been taken and are proposed to be taken to correct the and the dates by which these actions will take place; and what steps are being taken to prevent a recurrence.

If ND Industries believes the above observations or statements are inaccurate or do not constitute violations of the applicable legal requirements cited, please provide appropriate factual information to explain your position.

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

Sincerely,

Iranna Konanahalli

Air Quality Division
konanahalli@michigan.gov or 586-753-3741

ISK /DAC

cc: Mr. Michael Tohlman, General Manager, ND Industries, Inc.
Mr. Rob Chraska, EHS Manager, ND Industries, Inc.

cc/via email: Ms. Lynn Fiedler, DEQ
Ms. Teresa Seidel, DEQ
Mr. Thomas Hess, DEQ
Mr. Chris Ethridge, DEQ

January 23, 2007

CERTIFIED MAIL

Mr. Greg Touchette, General Manager
 ND Industries
 1000 North Crooks Road
 Clawson, Michigan 48017-1003

SRN: N6577, Oakland (63) County

Dear Mr. Touchette:

LETTER OF VIOLATION

On January 9, 2007, the Department of Environmental Quality (DEQ), Air Quality Division (AQD), conducted an inspection of your facility located at 1000 North Crooks Road, Clawson, Michigan. The purpose of this inspection was to determine your facility'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); the conditions of your Opt-out Permit to Install No. 72-99A dated February 3, 2004 (a Synthetic Minor Permit for Renewable Operating Permit [ROP] Program and National Emission Standards for Hazardous Air Pollutants [NESHAP]); and AQD Consent Order No. 11-2004.

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

Process Description	Rule/Permit Condition Violated	Comments
FG-FACILITY. Entire Crooks Road facility	ROP & NESHAP / MACT^θ Opt-out Permit to Install No. 72-99A, Special Condition No. 2.1b (limit: 9.0 tons per year based upon 12-month rolling time [tpy]). Consent Order No. 11-2004, Paragraph 10.	ND Industries failed to comply with the limit. During August thru December 2006, toluene, a hazardous air pollutant, emissions exceeded the 9.0 tpy limit. For example, toluene emissions for January-December 2006 were 10.8 tpy.
FG-FACILITY. Crooks Road Misc. Metal Parts Coating facility	NESHAP / MACT MMMM^θ	ND Industries failed to comply with the federal standards.
^θ On January 2, 2004, the US Environmental Protection Agency (EPA) promulgated federal NESHAP/MACT standards for Surface Coating of Miscellaneous Metal Parts and Products (40 CFR, Part 63, Subpart MMMM — National Emission Standards for Hazardous Air Pollutants (NESHAP) for Surface Coating of Miscellaneous Metal Parts and Products, Page 130, Federal Register / Vol. 69, No. 1 / Friday, January 2, 2004 / Rules and Regulations / Final Rule). Section 112(d) of the Clean Air Act requires NESHAP to represent an application of Maximum Achievable Control Technology (MACT).		

The cited Special Condition No. 2.1b of Permit to Install No. 72-99A is enforceable as paragraphs 10 & 17 of Consent Order, AQD No. 11-2004. The violation of the Consent Order subjects the company to stipulated penalty provisions. The DEQ staff will make a determination of the appropriateness of stipulated penalties after review of the requested response and corrective action above. You will be notified following our review. At that time, staff in the Enforcement Unit would be willing to meet with representatives of your company to discuss this matter and any mitigating circumstances the company feels should be considered

prior to staff making a final determination on the amount of stipulated penalties to be assessed.

On January 2, 2004, the US Environmental Protection Agency (EPA) promulgated federal NESHAP/MACT standards for Surface Coating of Miscellaneous Metal Parts and Products (40 CFR, Part 63, Subpart M MMM —National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products, Page 130, Federal Register / Vol. 69, No. 1 / Friday, January 2, 2004 / Rules and Regulations / Final Rule). The MACT standard applies only to a Miscellaneous Metal Parts Surface Coating facility located at a plant site that is a major source (40 CFR, Part 63, Subpart M MMM, §63.3881); 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 M MMM 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. Current *once-in-always-in policy* of US EPA precludes ND Industries from opting out of the requirements of the NESHAP/MACT M MMM. However, as I discussed on January 9, 2007, with Ms. Susana Tong, 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 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.

For an existing MACT M MMM source, the compliance must be achieved by January 2, 2007. An affected MACT M MMM source is new source for which construction commenced after August 13, 2002; an affected source is an existing source if it is not new or reconstructed.

Please note that failure to comply with the ROP opt-out permit may violate Rule 336.1210, which may result in ND Industries operating without a Renewable Operating Permit (federal Title V permit). A major ROP source is required to submit an administratively complete Renewable Operating Permit application according to a schedule specified in Rule 336.1210 (5).

You should immediately initiate necessary actions to correct the cited violations. **Additionally, please submit a report of your program for compliance with the Permit to Install No. 72-99A, MACT M MMM and Consent Order No. 11-2004 by February 13, 2006.** 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.

Notwithstanding your response to the preceding citations, the AQD may initiate further enforcement action to address violations 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 that was 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:VLL

Enclosures

cc: Ms. Susana Tong, Environmental and Safety Manager, ND Industries.
Mr. Gerald Avery, DEQ
Mr. Thomas Hess, DEQ
Ms. Teresa Seidel, DEQ
Mr. Christopher Ethridge, DEQ
Mr. Richard Taszreak, DEQ

February 28, 2006

CERTIFIED MAIL

Mr. Greg Touchette, Plant Manager
ND Industries
1000 North Crooks Road
Clawson, Michigan 48017-1003

SRN: N6577, Oakland County

Dear Mr. Touchette:

LETTER OF VIOLATION

On February 15, 2006, the Department of Environmental Quality (DEQ), Air Quality Division (AQD), conducted an inspection of your facility located at 1000 North Crooks Road, Clawson, Michigan. The purpose of this inspection was to determine your facility'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); the conditions of your Air Use Permit to Install No. 72-99A dated February 3, 2004, (ROP opt-out); and AQD Consent Order No. 11-2004.

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

Process Description	Rule/Permit Condition Violated	Comments
FG-FACILITY. Entire Crooks Road Facility	Permit to Install No. 72-99A, Special Condition Nos. 1.2, 1.10 & 2.3. Consent Order No. 11-2004, Paragraphs 10 & 17, \$500.00 per day	ND Industries has failed to perform the required calculations by the 15 th day of each calendar month for the entire calendar year 2005 and January & February 2006. Approximately 425 days of violation @ \$500.00 / day.

The cited Special Condition No. 1.2, 1.10 & 2.3 of Permit to Install No. 72-99A is enforceable as paragraphs 10 & 17 of Consent Order, AQD No. 11-2004. The violation of the Consent Order subjects the company to stipulated penalty provisions per violation per day of the order as contained in paragraph 17 (\$500.00 per day). Staff has made a preliminary determination that the facility was in violation of its permit and consent order for 425 days. The DEQ staff will make a determination of the appropriateness of stipulated penalties after review of the requested response and corrective action above. You will be notified following our review. At that time, staff in the Enforcement Unit would be willing to meet with representatives of your company to discuss this matter and any mitigating circumstances the company feels should be considered prior to staff making a final

determination on the amount of stipulated penalties to be assessed.

Please refer to a letter of violation (LOV) dated January 26, 2006 issued to the Troy facility. The LOV was regarding failure to perform the required calculations. This was a similar violation to the Clawson facility's recordkeeping violations. Hence, ND Industries showed a lack of diligence to comply with the consent order. The inspection of the Clawson facility's records show that data entry has been completed until June 2005. However, the calculations are performed only until December 2004. The January-June 2005 calculations have not been performed due to incorrect formulas (error: #Value) in the Excel spreadsheets. July 2005 thru January 2006 data entry has not been performed and therefore the required calculations could not be performed.

Please note that failure to comply with the ROP opt-out permit may violate Rule 336.1210, which may result in ND Industries operating without a Renewable Operating Permit (federal Title V permit).

You should immediately initiate necessary actions to correct the cited violations. **Additionally, please submit a report of your program for compliance with the Permit to Install No. 72-99A and Consent Order No. 11-2004 by March 21, 2006.** 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.

Notwithstanding your response to the preceding citations, the AQD may initiate further enforcement action to address violations 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 that was 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:VLL

Enclosures

cc: Mr. Gerald Avery, DEQ
Mr. Thomas Hess, DEQ
Ms. Teresa Seidel, DEQ
Mr. Chris Ethridge, DEQ
Mr. Richard Tazreak, DEQ

NAME

Iranna S Konanahalli

DATE

04/14/2014

SUPERVISOR

CJE