DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Self Initiated Inspection

FY2016 Insp

N657734319

FACILITY: ND Industries, Inc.	**SRN / ID:** N6577
LOCATION: 1000 N. Crooks Road, CLAWSON	**DISTRICT:** Southeast Michigan
CITY: CLAWSON	**COUNTY:** OAKLAND
CONTACT:	**ACTIVITY DATE:** 04/18/2016
STAFF: Iranna Konanahalli **COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** SM OPT OUT
SUBJECT: FY 2016 level-2 self-initiated annual SM CMS inspection of ND Industries	
RESOLVED COMPLAINTS:	

N6577 – SAR– 2016 04 18

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

www.ndindustries.com

NESHAP / MACT MMMM (4M), 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Not subject to (due to Consent Order AQD No. 19-2008 settlement in spite of once-in-always-in policy is not repealed yet): NESHAP/MACT MMMM (4M) standards for Surface Coating of Miscellaneous Metal Parts and Products (40 CFR, Part 63, Subpart MMMM — National Emission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) tons per year 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 March 11 and April 18 2016, I conducted a level-2 self-initiated annual **SM CMS** 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; and ROP Opt-Out PTI No. 72-99C.

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. James W. Counts (Phone: 248-288-0000 or 248-655-2503; Cell: 248-561-8903; E-mail: jCounts@ndindustries.com), General Manager, assisted me during the inspection. Mr. Rob Chraska joined the company in 2013. As a General Manager of Clawson plant, Mr. Counts replaced Mr. Tohlman.

Mr. Jim Bar (Phone: 246-655-2567), R & D Division Manager, joined the corporate office. Scot Wickham (Phone; 248-655-2588; Cell: 248-321-1822; E-mail: sWickham@ndindustries.com), VP, Applications and Chemical Engineering, 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. Michael H. Tohlman (Phone: 248-288-0000 / 248-655-2526, Cell: 248-321-8655, Fax: 248-655-2562, mTohlman@ndindustries.com), General Manager, separated about January 2016. Mr. Counts replaced Mr. Tohlman, who separated about January 2016.

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

Ms. Brannon S. Wickham, who performed chemical analysis (US EPA Reference Method 24) 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 (Nylon), 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 (Nylon) 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. Again, about 2015, powder coating lines are completely removed. 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 (male parts), at this plant:

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. Again, powder coating was removed about 2015. The powder process that was removed and reintroduced and removed again was never a part of original or revised PTI.

Epoxy lock coating. This is a two-component coating with no VOC. The coatings are cured using Ultraviolet (UV) light.

Wax coating. No VOC in these coatings. The coatings are applied to preheated metallic threaded parts and the parts are not cured.

Water-based Teflon coating. There are five lines. The threaded parts are baked in gas fired oven. Teflon coating is hardly done.

Solvent-based Microsperes coating. The threaded parts cured at 70 degrees Celsius.

Solvent-based Vibratite coating. The parts are cured. Usage is about 5 gallons of coatings per month.

Water-based sealant coating. The parts are cured.

Miscellaneous solvents for purge and clean-up. Toluene, a predominant HAP solvent, has been eliminated as a part of a Consent Order 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 (Seidel), to be included in a coating formulation; but neither should be used for clean-up. Acetone and not toluene is used as clean-up solvent.

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 (male parts) and drip (female parts) 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. Drip (female parts) coating does not result in excess (overspray) coatings because precise amount of coating is sprayed on female threads using infra-red eyes. A coating is precisely sprayed on two sides of female threads using infra-red eye to detect precise location of female part. 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's threads. The part then passes under a wire brush (s) 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 (drip coating) 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; no overspray or excess. 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 2016 inspection.

There are total 11 Rule 287(c) coating lines (not part of the permit): 3 female and 8 male parts lines. However, there are 8 male parts lines that are part of the permit. In April 2015 (max) 570 pounds (81 gallons assuming density = 7 pounds per gallon) coatings were uses in 11 Rule 287(c) coating lines.

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 had 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. This 12 hour / shift and 5 days per week continued in 2015.

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 was finalized and executed on July 17, 2008, to resolve the violations cited in January 23, 2007, LOV. Settlement amount is $49,280. 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 Cellosove 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 (Seidel), 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. Acetone replaced EB-Butyl Cellosolve as clean-up solvent due to costs.

NESHAP / MACT MMMM (4M)

On January 2, 2004, the US Environmental Protection Agency (EPA) promulgated federal NESHAP/MACT 4M standards for Surface Coating of Miscellaneous Metal Parts and Products (40 CFR, Part 63, Subpart MMMM (4M)—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 (4M) 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 cellulosive) 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 (Honigman-Miller-Schwartz-Cohn LLP), 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 calculactions 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 negations, 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 (Seidel), 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 limt: 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 limt: 10 tpy per line, SC2.1a limit: 30 tpy for entire facility).

PTI No. 72-99C Emissions and compliacce

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 (female) and flow (male) 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 8.39 tpy (SC2.1b limit: 9 tpy each individual HAP, SC2.1c limit: 22.5 tpy for entire facility aggregate HAP) and 8.87 (SC2.1a limit: 30 tpy VOC), respectively, for CY 2015. VOC and HAP records are kept and calculations are done using MS Excel Spreadsheets (SC2.3-2.6).

Rule 287(c) coating usage records (3 female and 8 male, 11 total parts lines) are kept separately because these usages are not part of the permit. In December 2015, 1,440 pounds of toluene per month, 1,461.6 pounds of HAPs per month and 1,513.0 pounds of VOC per month were emitted from permitted coating lines. In addition, in December 2015, 36 pounds of toluene per month, 36.3 pounds of HAPs per month and 68.3 pounds of VOC per month were emitted from Rule 287(c) coating lines. Hence, total emissions are (December 2015): 1,476 pounds of toluene per month, 1,497.9 pounds of HAPs per month and 1,581.3 pounds of VOC per month.

All coating and solvent usage logs are kept properly using one log sheet near chemical room.

All emission information is according to CY 2015 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 (Seidel), 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:

V2O Volumetric Karl Fisher Titrator
Metler 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, coulorometry should not be used for higher water content in coatings. Volumtric 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.

On April 18, 2016, I asked the company request Method 24 alternative approval again.

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 2013 RM24 violation is resolved.

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

NAME [signature] DATE 04/25/2016 SUPERVISOR CJE