INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
Toll Free (800) 451-6027
www.idem.IN.gov

TO: Interested Parties / Applicant

DATE: May 19, 2010

RE: SMC Corporation / 057-28662-00073

FROM: Matthew Stuckey, Branch Chief
Permits Branch
Office of Air Quality

Notice of Decision – Approval

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to 326 IAC 2, this approval was effective immediately upon submittal of the application.

If you wish to challenge this decision, IC 4-21.5-3-7 requires that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) calendar days from the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

(1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
(2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
(3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

(1) the name and address of the person making the request;
(2) the interest of the person making the request;
(3) identification of any persons represented by the person making the request;
(4) the reasons, with particularity, for the request;
(5) the issues, with particularity, proposed for considerations at any hearing; and
(6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosures
FNPER-AM.dot12/3/07

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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Brian Armstrong
SMC Corporation of America
10100 SMC Blvd.
Noblesville, IN 46060

May 19, 2010

Re: Exempt Operation Status,
057-28662-00073

Dear Brian Armstrong:

The application from SMC Corporation of America, received on November 10, 2009, has been reviewed. Additional information was received March 8, 2010, April 1, 2010, and April 29, 2010. Based on the data submitted and the provisions in 326 IAC 2-1.1-3, it has been determined that the following stationary manufacturing operation which manufactures and stores pneumatic cylinders located at 10100 SMC Blvd., Noblesville, Indiana 46060 is classified as exempt from air pollution permit requirements:

(a) One (1) Bead Blast operation, identified as EU1, installed September 1, 2009, utilizing glass beads, with a maximum annual throughput of 750 pounds of glass beads and product combined, using no controls, exhausting to atmosphere;

(b) One (1) Anodizing operation, identified as EU2, installed September 1, 2009, with a maximum machine capacity of 4.35 tons per year, utilizing a wet scrubber with water for control, exhausting to atmosphere, consisting of the following units:

(1) One (1) Alkaline Cleaner bath and rinse, AN 100 (borax) solid mixed with water;

(2) One (1) Caustic Etch bath and rinse, AN200 sodium hydroxide solid mixed with water, and vented to the scrubber;

(3) One (1) DeOX bath and rinse, AN650L (Iron Sulfate, sulfuric acid, nitric acid, hydrogen flouride) mixed with water 7% solution;

(4) One (1) acid bath and rinse, 93% sulfuric acid mixed with water; expected makeup of approximately one gallon of sulfuric acid. This bath is vented to the scrubber;

(5) Two (2) dye baths (chromium based) and rinse; and

(6) Two (2) Seal Tank bath and rinse, AN535L (nickel-based) liquid mixed with water 3% solution, expected makeup of approximately 50 milliliters (ml) per week.

(c) One (1) Painting operation, identified as EU3, installed September 1, 2009, using one (1) electrostatic air atomized spray applicator to coat steel products, with a maximum throughput of forty (40) gallons of paint products per year, utilizing dry filters for particulate control;

(d) One (1) Machining operation, identified as EU4, installed June 1, 2009, consisting of sixty (60) cutting machines using an aqueous-based fluid, with a combined maximum throughput of 810 tons per year, utilizing no controls, and exhausting to atmosphere;

(e) Two (2) cleaning machines to wash product after machining, using wash water to clean and recycle aqueous cutting fluid, with a maximum throughput capacity to recycle 10,350 gallons of cutting fluid per year. This process has no controls and is vented to atmosphere; and

(f) Several welding and grinding machines, with minimal non-production use, exhausting to atmosphere.

The following conditions shall be applicable:

(a) 326 IAC 5-1 (Opacity Limitations)
Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(1) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(2) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

(b) 326 IAC 6-4 (Fugitive Dust Emissions Limitations)
Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4.

This exemption is the first air approval issued to this source. A copy of the Exemption is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/. For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source. If you have any questions on this matter, please contact Jack Harmon, OAQ, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana, 46204-2251, at 317-3-4228 or at 1-800-451-6027 (ext 3-4228).

Sincerely,

Iryn Calilung, Section Chief
Permits Branch
Office of Air Quality

IC/jh

cc: File - Hamilton County
Hamilton County Health Department
Compliance and Enforcement Branch
Billing, Licensing and Training Section

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for an Exemption

Source Description and Location

Source Name: **SMC Corporation**
Source Location: **10100 SMC Blvd., Noblesville, Indiana 46060**
County: **Hamilton County**
SIC Code: **3471**
Exemption No.: **057-28662-00073**
Permit Reviewer: **Jack Harmon**

On November 10, 2009, the Office of Air Quality (OAQ) received an application from SMC Corporation related to the operation of an existing pneumatic cylinder manufacturing plant. Additional information was received on March 8, 2010, April 1, 2010, and April 29, 2010.

Existing Approvals

There have been no previous approvals issued to this source.

County Attainment Status

The source is located in Hamilton County.

Pollutant	Designation
SO_2	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O_3	Attainment effective October 19, 2007, for the 8-hour ozone standard.[1]
PM_{10}	Unclassifiable effective November 15, 1990.
NO_2	Cannot be classified or better than national standards.
Pb	Not designated.

[1]Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005.
Basic nonattainment designation effective federally April 5, 2005, for PM2.5.

(a) Ozone Standards
Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to ozone. Hamilton County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) PM2.5
U.S. EPA, in the Federal Register Notice 70 FR 943 dated January 5, 2005, has designated Hamilton County as nonattainment for PM2.5. On March 7, 2005 the Indiana Attorney General's Office, on behalf of IDEM, filed a law suit with the Court of Appeals for the District of Columbia Circuit challenging U.S. EPA's designation of nonattainment areas without sufficient data. However, in order to ensure that sources are not potentially liable for a violation of the Clean Air Act, the OAQ is following the U.S. EPA's New Source Review Rule for PM2.5 promulgated on

May 8, 2008, and effective on July 15, 2008. Therefore, direct PM2.5 and SO2 emissions were reviewed pursuant to the requirements of Nonattainment New Source Review, 326 IAC 2-1.1-5. See the State Rule Applicability – Entire Source section.

(c) Other Criteria Pollutants
Hamilton County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

The fugitive emissions of criteria pollutants and hazardous air pollutants are counted toward the determination of 326 IAC 2-1.1-3 (Exemptions) applicability.

Background and Description of Emission Units and Pollution Control Equipment

The Office of Air Quality (OAQ) has reviewed an application, submitted by SMC Corporation on November 10, 2009, requesting an Air Permit Exemption Letter be issued in accordance with 326 IAC 2. The company was incorporated in 1979, and moved to another Marion County location in 1986, and recently relocated to its current facility in Hamilton County, in Noblesville, Indiana. The company operates a manufacturing facility which manufactures and stores pneumatic cylinders and includes operations of machining, blasting, anodizing, and painting to manufacture its product. The company has never had a permit to construct or operate and is requesting an Exemption Letter at this time.

The source consists of the following existing emission units:

(a) One (1) Bead Blast operation, identified as EU1, installed September 1, 2009, utilizing glass beads, with a maximum annual throughput of 750 pounds of glass beads and product combined, using no controls, exhausting to atmosphere;

(b) One (1) Anodizing operation, identified as EU2, installed September 1, 2009, with a maximum machine capacity of 4.35 tons per year, utilizing a wet scrubber with water for control, exhausting to atmosphere, consisting of the following units:

(1) One (1) Alkaline Cleaner bath and rinse, AN 100 (borax) solid mixed with water;

(2) One (1) Caustic Etch bath and rinse, AN200 sodium hydroxide solid mixed with water, and vented to the scrubber;

(3) One (1) DeOX bath and rinse, AN650L (Iron Sulfate, sulfuric acid, nitric acid, hydrogen flouride) mixed with water 7% solution;

(4) One (1) acid bath and rinse, 93% sulfuric acid mixed with water; expected makeup of approximately one gallon of sulfuric acid. This bath is vented to the scrubber;

(5) Two (2) dye baths (chromium based) and rinse; and

(6) Two (2) Seal Tank bath and rinse, AN535L (nickel-based) liquid mixed with water 3% solution, expected makeup of approximately 50 milliliters (ml) per week.

(c) One (1) Painting operation, identified as EU3, installed September 1, 2009, using one (1) electrostatic air atomized spray applicator to coat steel products, with a maximum throughput of fifty (50) gallons of paint products per year, utilizing dry filters for particulate control;

(d) One (1) Machining operation, identified as EU4, installed September 1, 2009, consisting of sixty (60) cutting machines using an aqueous-based fluid, with a combined maximum throughput of 810 tons per year, utilizing no controls, and exhausting to atmosphere;

(e) Two (2) cleaning machines to wash product after machining, using wash water to clean and recycle aqueous cutting fluid, with a maximum throughput capacity to recycle 10,350 gallons of cutting fluid per year. This process has no controls and is vented to atmosphere.

(f) Several welding and grinding machines, with minimal non-production use, exhausting to atmosphere.

Enforcement Issues

There are no pending enforcement actions related to this source.

Emission Calculations

See Appendix A of this TSD for detailed emission calculations.

Permit Level Determination – Exemption

The following table reflects the unlimited potential to emit (PTE) of the entire source before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Process/ Emission Unit	Potential To Emit of the Entire Source (tons/year)**								
	PM	PM10*	PM2.5	SO_2	NOx	VOC	CO	Total HAPs	Worst Single HAP
EU1 - Bead Blast	1.012E-02	4.875E-03	4.875E-03	0.00	0.00	0.00	0.00	0.00	0.00
EU2 - Anodizing	0.15	0.15	0.15	0.00	0.00	0.15	0.00	0.02 (nickel)	0.034
EU3 - Painting	0.11	0.11	0.11	0.00	0.00	0.57	0.00	0.19 (xylene)	0.19
EU4 - Machining	4.05E-03	4.05E-03	4.05E-03	0.00	0.00	0.00	0.00	0.00	0.00
Fugitive Emissions	2.75	0.51	0.51	0.00	0.00	0.00	0.00	0.00	0.00
Total PTE of Entire Source	**3.02**	**1.06**	**1.06**	**0.00**	**0.00**	**0.72**	**0.00**	**0.19 (xylene)**	**0.224**
Exemptions Levels	5	5	5	10	10	5 or 10	25	25	10

* Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".
** Calculation details are shown in the attached Appendix A of this Technical Support Document.

(a) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1(16)) of all regulated criteria pollutants are less than the levels listed in 326 IAC 2-1.1-3(e)(1). Therefore, the source is subject to the provisions of 326 IAC 2-1.1-3 (Exemptions).

(b) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1(16)) of any single HAP is less than ten (10) tons per year and the PTE of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA) and

not subject to the provisions of 326 IAC 2-7.

Federal Rule Applicability Determination

New Source Performance Standards (NSPS)

(a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the permit.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

(b) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Hard and Decorative Chrome Electroplating and Chrome Anodizing Tanks, 40 CFR 63, Subpart N, are not included in the permit, since the facility's manufacturing process does not meet the definition described in the applicability section of Subpart N; therefore, the requirements of 40 CFR Part 63, Subpart N do not apply.

(c) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Surface Coating for Miscellaneous Metal Products, 40 CFR 63, Subpart MMMM, are not included in the permit, because the source uses fifty (50) gallons of paint per year, and the applicability threshold is two hundred fifty (250) gallons per year; therefore, the requirements of 40 CFR Part 63, Subpart MMMM do not apply.

(d) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Area Source Standards for Plating and Polishing Facilities, 40 CFR 63, Subpart WWWWWW, are not included in the permit, since the facility's manufacturing process does not meet the definition of a plating and polishing facility as described in the applicability section of Subpart WWWWWW; therefore, the requirements of 40 CFR Part 63, Subpart WWWWWW do not apply.

(e) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Paint Stripping and Miscellaneous Metal Coating Operations at Area Sources, 40 CFR 63, Subpart HHHHHH, are not included in the permit, since the facility's manufacturing process does not meet the criteria as described in the applicability section of Subpart HHHHHH. The source does not perform any metal stripping operations; the source does not perform autobody refinishing operations; and the source does not perform a spray application of coatings containing compounds of chromium, lead, manganese, nickel, or cadmium. Therefore, the requirements of 40 CFR Part 63, Subpart HHHHHH do not apply.

(f) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in the permit.

Compliance Assurance Monitoring (CAM)

(g) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is not included in the permit, because the unlimited potential to emit of the source is less than the Title V major source thresholds and the source is not required to obtain a Part 70 or Part 71 permit.

State Rule Applicability Determination

The following state rules are applicable to the source:

(a) 326 IAC 2-1.1-3 (Exemptions)
Exemption applicability is discussed under the Permit Level Determination – Exemption section above.

(b) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The potential to emit of any single HAP is less than ten (10) tons per year and the potential to emit of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA) and not subject to the provisions of 326 IAC 2-4.1.

(c) 326 IAC 2-6 (Emission Reporting)
Pursuant to 326 IAC 2-6-1, this source is not subject to this rule, because it is not required to have an operating permit under 326 IAC 2-7 (Part 70), it is not located in Lake, Porter, or LaPorte County, and it does not emit lead into the ambient air at levels equal to or greater than 5 tons per year. Therefore, 326 IAC 2-6 does not apply.

(d) 326 IAC 5-1 (Opacity Limitations)
Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(1) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(2) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

(e) 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)
The anodizing process is not subject to the requirements of 326 IAC 6-3 because it is a facility that performs surface coating using dip coating. Pursuant to 326 IAC 6-3-1(b)(5), surface coating using dip coating is exempt from this Rule. Therefore, the requirements of 326 IAC 6-3 do not apply.

(f) 326 IAC 6-4 (Fugitive Dust Emissions Limitations)
Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4.

(g) 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)
The source is not subject to the requirements of 326 IAC 6-5, because the source does not have potential fugitive particulate emissions greater than 25 tons per year. Therefore, 326 IAC 6-5 does not apply.

(h) 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
Each of the emission units at this source is not subject to the requirements of 326 IAC 8-1-6, since the unlimited VOC potential emissions from each emission unit is less than twenty-five (25) tons per year.

(i) 326 IAC 8-2-9 (Surface Coating Emission Limitations)
The source is not subject to the requirements of 326 IAC 8-2 because, although it meets the description of 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), it does not have actual VOC emissions of greater than fifteen (15) pounds per day. Therefore, the requirements of 326 IAC 8-2 do not apply.

Conclusion and Recommendation

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant. An application for the purposes of this review was received on

November 10, 2009, with additional information received on March 8, 2010, April 1, 2010, and April 29, 2010.

The operation of this source shall be subject to the conditions of the attached proposed Exemption No. 057-28662-00073. The staff recommends to the Commissioner that this Exemption be approved.

IDEM Contact

(a) Questions regarding this proposed permit can be directed to Jack Harmon at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) *(*233-4228 or toll free at 1-800-451-6027 extension 3-4228.

(b) A copy of the findings is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/

(c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov

Appendix A: Emissions Calculations

Uncontrolled Emissions Summary

Company Name: SMC Corporation
Address City IN Zip: 10100 SMC Blvd., Noblesville, Indiana 46060
Permit Number: 057-28662-00073
Plt ID: 057-00073
Reviewer: Jack Harmon
Date: 4/20/10

Operation	PM	PM10/PM2.5	SO2	NOx	VOC	CO	Worst HAP	Total HAPs
EU1 - Bead Blast	1.0125E-02	4.8750E-03	0.00	0.00	0.00	0.00	0.00	0.00
EU2- Anodizing	0.15	0.15	0.00	0.00	0.15	0.00	0.02 (nickel)	0.034
EU3- Paint	0.11	0.11	0.00	0.00	0.57	0.00	0.19 (xylene)	0.19
EU4- Machining	4.05E-03	4.05E-03	0.00	0.00	0.00	0.00	0.00	0.00
Fugitive Emissions	2.75	0.51	0.00	0.00	0.00	0.00	0.00	0.00
Total Emissions (tons per yr)	**3.02**	**1.06**	**0.00**	**0.00**	**0.72**	**0.00**	**0.19**	**0.224**
Exemption Threshhold	<5 tpy	<5 tpy	<10 tpy	<10 tpy	<10 tpy	<25 tpy	<10 tpy	<25 tpy

Appendix A: Emissions Calculations
VOC and Particulate
Bead Blasting Operations

Company Name: SMC Corporation
Address City IN Zip: 10100 SMC Blvd., Noblesville, Indiana 46060
Permit Number: 057-28662-00073
Plt ID: 057-00073
Reviewer: Jack Harmon
Date: 4/20/10

Bead Blast operations EU1

	Throughput (lb/yr)	PM	PM10/PM2.5	SO2	Nox	VOC	CO	Single HAP	Total HAPs
Emission Factor		0.027	0.013	0.00	0.00	0.00	0.00	0.00	0.00
Glass Bead Blast	750	20.25	9.75	0.00	0.00	0.00	0.00	0.00	0.00
	Emissions (lb/yr)	20.25	9.75	0.00	0.00	0.00	0.00	0.00	0.00
	Emissions (tons/yr)	1.0125E-02	4.8750E-03	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Methodology:
Emission Factors for PM, PM10/PM2.5 from AP-42, Table 13.2.6-1 and provided by source (PM = 27 pounds per 1000 pounds=0.027; PM10/2.5 = 13 pounds per 1000 pounds = 0.013)
Throughput provided by source
Emissions in tons per year = emission factor * throughput/2000 lbs/ton

Appendix A: Emissions Calculations
VOC and Particulate
From Anodizing Operations

Company Name: SMC Corporation
Address City IN Zip: 10100 SMC Blvd., Noblesville, Indiana 46060
Permit Number: 057-28662-00073
Plt ID: 057-00073
Reviewer: Jack Harmon
Date: 4/20/10

Anodizing Emissions EU2

	Density(lb/gal)	Throughput(gal/year)	Throughput(lb/year)	Area (ft^2) [1]
One Alkaline Cleaner bath and rinse, AN 100 (borax) solid mixed with water, expected bath replacement every 3 months.			88	6.67
One Caustic Etch bath and rinse, AN 200 sodium hydroxide solid mixed with water, expected bath replacement every 3 months. This bath is vented to the scrubber.			88	6.67
One DeOX bath and rinse, AN650L (Iron Sulfate, sulfuric acid, nitric acid, hydrogen fluoride) mixed with water 7 % solution, expected bath replacement every 3 months.	11.676	40	467	6.67
One acid bath and rinse, 93% Sulfuric Acid mixed with water expected makup of approximately 1 gallon of sulfuric acid. This bath is vented to the scrubber.	15.3456	96	1473	9.33
Two dye baths(chromuim based) and rinse, expected bath replacement every year.	9.70776	10	97	11.33
Two Seal Tank bath and rinse, AN 535L(nickel based) liquid mixed with water 3% solution, expected makup of approximately 50 ml per week.	8.9238	25	223	15.67

	NO_x	SO_2	PM/PM_{10}	Chromium	Nickel
Emission Factors	0.10	0.10	4.20	2.00	2.00
Units	lb/ton	lb/ton	gr/sq.ft.hr.	gr/sq.ft.hr.	gr/sq.ft.hr.
Emission Factors (conversion)	0.10	0.10	0.0006	0.0003	0.0003
Units	lb/ton	lb/ton	lb/sq.ft.hr.	lb/sq.ft.hr.	lb/sq.ft.hr.

Composition	HNO3	H2SO4
AN100	0%	0%
An200	0%	0%
AN650L	10%	20%
Sulfuric Acid	0%	93%
Dye	0%	0%
AN535L	0%	0%

Estimated Emission (lbs/yr)

Emission Unit	NO_x	SO_2	PM/PM_{10}	Chromium	Nickel
AN100	0.0000	0.0000	35	0	0
An200	0.0000	0.0000	35	0	0
AN650L	0.0023	0.0047	35	0	0
Sulfuric Acid	0.0000	0.0685	49	0	0
Dye	0.0000	0.0000	60	28	0
AN535L	0.0000	0.0000	82	0	39

Estimated Emission (tons/yr)

Emission Unit	NO_x	SO_2	PM/PM_{10}		
AN100	0.0000	0.0000	0.018	0.000	0.000
An200	0.0000	0.0000	0.018	0.000	0.000
AN650L	0.0000	0.0000	0.018	0.000	0.000
Sulfuric Acid	0.0000	0.0000	0.025	0.000	0.000
Dye	0.0000	0.0000	0.030	0.014	0.000
AN535L	0.0000	0.0000	0.041	0.000	0.020
Totals	0.0000	0.0000	0.15	0.014	0.020

Throughput (lb/year) = Throughput (gal/year) * Density (lb/gal)
NO_2 (lbs/yr) = Throughput (lb/yr) * Nitric Acid (%) * 0.1 (lb NO_2/ Ton HNO_3) [2]
NO_2 (tons/yr) = NO_2 (lbs/yr) /2000 (lb/ton)
SO_2 (lbs/yr) = Throughput (lb/yr) * Sulfuric Acid (%) * 0.1 (lb SO_2/ Ton $H2SO_4$) [3]
SO_2 (tons/yr) = SO_2 (lbs/yr) /2000 (lb/ton)
PM/PM_{10} (lbs/yr) = Hours of Operation (8760 hrs/yr) * Area * 0.0006 (lbPM/hr-ft^2)
PM/PM_{10} (tons/yr) = PM/PM_{10} (lbs/yr) /2000 (lb/ton)
(1) Area is comprised of process tank and associated rinse tank.

Component	density(lb/gal)	VOC Density(lb/gal)	Annual Usage(gal/yr)	Annual Usage (lb/yea	VOC Emissions (lbs/	VOC Emissions (ton/
Clear S/G Urethane Tint Base	8.5	5.17	10	85	52	0.03
White Urethane Tint Base	9.34	5.02	10	93.4	50	0.03
Tolonate HDB 75B	8.76	8.76	20	175.2	175	0.09
general purpose spray paint (20 cans/year)				15	15	0.01
				368.6	292	0.15

Appendix A: Emissions Calculations
VOC and Particulate
From Painting Operations

Company Name: SMC Corporation
Address City IN Zip: 10100 SMC Blvd., Noblesville, Indiana 46060
Permit Number: 057-28662-00073
Plt ID: 057-00073
Reviewer: Jack Harmon
Date: 4/20/10

EU3 - Painting operations

Material	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/lb)	Maximum (lb/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency
Clear Tint Base	8.5	60.80%	0.0%	60.8%	0.0%	0.00%	0.00143	4.000	5.17	5.17	0.03	0.71	0.13	0.08	0.00	0%
White Tint base	9.3	53.70%	0.0%	53.7%	0.0%	0.00%	0.00143	4.000	5.02	5.02	0.03	0.69	0.13	0.11	0.00	0%
Tolonate	8.8	100.00%	0.0%	100.0%	0.0%	0.00%	0.00286	4.000	8.76	8.76	0.10	2.41	0.44	0.00	0.00	0%
	0.0	0.00%	0.0%	0.0%	0.0%	0.00%	0.00000	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%
State Potential Emissions		**Add worst case coating to all solvents**									**0.13**	**3.21**	**0.57**	**0.11**		

METHODOLOGY

Worst Case is used with coatings because only one coating can be used at a time.
Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating + Sum of all solvents used

Appendix A: Wet Machining Emissions
PM/PM10

Company Name: **SMC Corporation**
Address City IN Zip: **10100 SMB Blvd, Noblesville, Indiana 46060**
Permit Number: **057-28662-00073**
Plt ID: **057-00073**
Permit Reviewer: **Jack Harmon**
Date: **April 20, 2010**

EU4- Machining

Process	Emission Unit Capacity			Emisson Factor (lb / ton)		Uncontrolled PTE (tons/yr)	
	No. of Stations		Total Maximum Throughput	PM	PM10/ PM2.5	PM	PM10/ PM2.5
Wet Machining	60		810	0.01	0.01	4.05E-03	4.05E-03
(tons per year)							

	PM	PM10/PM2.5
Totals:	4.05E-03	4.05E-03

Note:
Emission Factors based on FIRE 6.24 for grinding of aluminum. There were no emission factors for wet machining, or dry machining. However, the aluminum product is similar, and a grinding operation will produce more particulate dust than a wet machining operation. Therefore, this emission factor is considered the worst case.

Methodology:
Uncontrolled PTE = Maximum throughput of the process * Emission Factor (lbs/ton) / 2,000 lbs per year.

Appendix A: Emission Calculations
Fugitive Dust Emissions - Paved Roads

Company Name: SMC Corporation
Address City IN Zip: 10100 SMC Blvd, Noblesville, IN, 46060
Permit Number: 057-28662-00073
Plt ID: 057-00073
Reviewer: Jack Harmon
Date: April 20, 2010

Paved Roads at Industrial Site

The following calculations determine the amount of emissions created by paved roads, based on 8,760 hours of use and AP-42, Ch 13.2.1 (12/2003).

Vehicle Information (provided by source)

Type	Maximum number of vehicles	Number of one-way trips per day per vehicle	Maximum trips per day (trip/day)	Maximum Weight Loaded (tons/trip)	Total Weight driven per day (ton/day)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/day)	Maximum one-way miles (miles/yr)
Vehicle (entering plant) (one-way trip	520.0	1.3	650.0	2.0	1300.0	1500	0.284	184.7	67400.6
Vehicle (leaving plant) (one-way trip)	520.0	1.3	650.0	2.0	1300.0	1500	0.284	184.7	67400.6
Truck (entering plant) (one-way trip)	19.0	1.0	19.0	40.0	760.0	3000	0.568	10.8	3940.3
Truck (leaving plant) (one-way trip)	19.0	1.0	19.0	40.0	760.0	3000	0.568	10.8	3940.3
		Total	**1338.0**		**4120.0**			**390.9**	**142681.8**

Average Vehicle Weight Per Trip = 3.1 tons/trip
Average Miles Per Trip = 0.29 miles/trip

Unmitigated Emission Factor, Ef = [k * (sL/2)^0.65 * (W/3)^1.5 - C] (Equation 1 from AP-42 13.2.1)

	PM	PM10	
where k =	0.082	0.016	lb/mi = particle size multiplier (AP-42 Table 13.2.1-1)
W =	3.1	3.1	tons = average vehicle weight (provided by source)
C =	0.00047	0.00047	lb/mi = emission factor for vehicle exhaust, brake wear, and tire wear (AP-42 Table 13.2.1-2)
sL =	0.6	0.6	g/m^2 = Ubitiguous Baseline Silt Loading Values of paved roads (Table 13.2.1-3 for summer months)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext = E * [1 - (p/4N)]
Mitigated Emission Factor, Eext = Ef * [1 - (p/4N)]
where p = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.1-2)
N = 365 days per year

	PM	PM10	
Unmitigated Emission Factor, Ef =	0.04	0.01	lb/mile
Mitigated Emission Factor, Eext =	0.04	0.01	lb/mile
Dust Control Efficiency =	50%	50%	(pursuant to control measures outlined in fugitive dust control plan)

Process	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)
Vehicle (entering plant) (one-way trip	1.30	0.24	1.19	0.22	0.59	0.11
Vehicle (leaving plant) (one-way trip)	1.30	0.24	1.19	0.22	0.59	0.11
Truck (entering plant) (one-way trip)	0.08	0.01	0.07	0.01	0.03	0.01
Truck (leaving plant) (one-way trip)	0.08	0.01	0.07	0.01	0.03	0.01
	2.75	**0.51**	**2.51**	**0.47**	**1.26**	**0.23**

Methodology

Total Weight driven per day (ton/day) = [Maximum Weight Loaded (tons/trip)] * [Maximum trips per day (trip/day)]
Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip) / [5280 ft/mile]
Maximum one-way miles (miles/day) = [Maximum trips per year (trip/day)] * [Maximum one-way distance (mi/trip)]
Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per day (ton/day)] / SUM[Maximum trips per day (trip/day)]
Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/day)] / SUM[Maximum trips per year (trip/day)]
Unmitigated PTE (tons/yr) = [Maximum one-way miles (miles/yr)] * [Unmitigated Emission Factor (lb/mile)] * (ton/2000 lbs)
Mitigated PTE (tons/yr) = [Maximum one-way miles (miles/yr)] * [Mitigated Emission Factor (lb/mile)] * (ton/2000 lbs)
Controlled PTE (tons/yr) = [Mitigated PTE (tons/yr)] * [1 - Dust Control Efficiency]

Abbreviations

PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PTE = Potential to Emit

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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Indianapolis, Indiana 46204
(317) 232-8603
Toll Free (800) 451-6027
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SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

TO: Brian Armstrong
SWC Corporation
101000 SMC Blvd
Noblesville, IN 46060

DATE: May 19, 2010

FROM: Matt Stuckey, Branch Chief
Permits Branch
Office of Air Quality

SUBJECT: Final Decision
Exemption
057-28662-00073

Enclosed is the final decision and supporting materials for the air permit application referenced above. Please note that this packet contains the original, signed, permit documents.

The final decision is being sent to you because our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person.

A copy of the final decision and supporting materials has also been sent via standard mail to:
Kelley Stacy (Director of Ops)
Nicholas Welte (American Environmental Corporation)
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at jbrush@idem.IN.gov.

Mail Code 61-53

IDEM Staff	MIDENNEY 5/19/2010 SMC Corporation 057-28662-00073 (final)		AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender	▶	Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: **CERTIFICATE OF MAILING ONLY**

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee Remarks
1		Brian Armstrong SMC Corporation 10100 SMC Blvd Noblesville IN 46060 (Source CAATS) via confirmed delivery									
2		Kelley Stacy Dir - Ops SMC Corporation 10100 SMC Blvd Noblesville IN 46060 *(RO CAATS)*									
3		Hamilton County Health Department 1 Hamilton County Square, Suite30 Noblesville IN 46061-2229 *(Health Department)*									
4		Hamilton County Board of Commissioners One Hamilton County Square Noblesville IN 46064 *(Local Official)*									
5		Nicholas C. Welte American Environmental Corporation 8500 Georgetown Road Indianapolis IN 46268 *(Consultant)*									
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