



Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant
DATE: September 1, 2005
RE: Tenneco Automotive / 151-21089-00015
FROM: Paul Dubenetzky
Chief, Permits Branch
Office of Air Quality

Notice of Decision: Approval - Effective Immediately

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 IC 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require 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, Room 1049, Indianapolis, IN 46204, **within eighteen (18) calendar days of 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.dot 1/10/05



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We make Indiana a cleaner, healthier place to live.

Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
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Mr. Jeff Perkins
Tenneco Automotive
503 Weatherhead Street
Angola, IN 46703

September 1, 2005

Re: **151-21089-00015**
First Significant Revision to
FESOP 151-15838-00015

Dear Mr. Perkins:

Tenneco Automotive was issued a permit on June 20, 2003 for automotive parts manufacturing operation. A letter requesting changes to this permit was received on April 5, 2005. Pursuant to the provisions of 326 IAC 2-8-11.1 a significant permit revision to this permit is hereby approved as described in the attached Technical Support Document.

The modification consists of the replacement of their existing adhesives coating system with one (1) automatic turbo spray adhesives coating system, identified as EU004, to be constructed in 2005, with all particulate overspray emissions controlled by two (2) dry filter systems, and all VOC and HAP emissions controlled by one (1) catalytic oxidizer, with all emissions exhausted through one (1) stack, identified as SV-1.

The following construction conditions are applicable to the proposed project:

1. General Construction Conditions
The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).
2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.
3. Effective Date of the Permit
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.
4. Pursuant to 326 IAC 2-1.1-9 (Revocation), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

Pursuant to 326 IAC 2-8-11.1, this permit shall be revised by incorporating the significant permit revision into the permit. All other conditions of the permit shall remain unchanged and in effect. Please attach a copy of this modification and the following revised permit pages to the front of the original permit.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Scott Fulton, OAQ, 100 North Senate Avenue, Indianapolis, Indiana, 46204, or call at (800) 451-6027, and ask for Scott Fulton or extension (3-5691), or dial (317) 233-5691.

Sincerely,

Original signed by
Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

Attachments

SDF

cc: File - Steuben County
U.S. EPA, Region V
Steuben County Health Department
Northern Regional Office
Air Compliance Section Inspector – Doyle Houser
Compliance Data Section - Karen Nowak
Administrative and Development - Janet Mobley
Technical Support and Modeling - Michele Boner



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FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) RENEWAL OFFICE OF AIR QUALITY

**Tenneco Automotive
 503 Weatherhead Street
 Angola, Indiana 46703**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-8 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: F151-15838-00015	Date Issued: June 20, 2003 Expiration Date: June 20, 2008
Issued by: Paul Dubenetzky, Chief, Permits Branch, Office of Air Quality	
First Administrative Amendment No.: 151-17913-00015	Date Issued: August 5, 2003
Second Administrative Amendment No.: 151-19144-00015	Date Issued: June 23, 2004
First Significant Permit Revision No.: 151-21089-00015	Affected Pages: 2-7, 22 - 24, 33, and 34, with 7a, 24a, 24b, and 34a added
Issued by: Original signed by Paul Dubenetzky, Chief Permits Branch, Office of Air Quality	September 1, 2005

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SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-8-3(b)]

The Permittee owns and operates a stationary rubber and miscellaneous plastics products manufacturing plant.

Authorized Individual:	Engineering Manager
Source Address:	503 Weatherhead Street, Angola, Indiana 46703
Mailing Address:	503 Weatherhead Street, Angola, Indiana 46703
SIC Code:	3714, 3069
Source Location Status:	Steuben
County Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit (FESOP) Minor Source, under PSD Rules; Minor Source, Section 112 of the Clean Air Act

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

This stationary source consists of the following emission units and pollution control devices:

- (a) One (1) automatic turbo spray adhesives coating system, identified as EU004, to be constructed in 2005, with all particulate overspray emissions controlled by two (2) dry filter systems, and all VOC and HAP emissions controlled by one (1) catalytic oxidizer, with all emissions exhausted through one (1) stack, identified as SV-1.
- (b) Two (2) Wheelabrator Grit blast units, identified as IDs 003A and 003B and constructed in 1974 and 1992, respectively, each with a maximum rate of 33,000 pounds of blast material per hour, both utilizing a separate Jet Pulse Cartridge dust collector for particulate control and exhausting through one (1) stack identified as DC-3.
- (c) Three (3) cold cleaners performing organic solvent degreasing operations:
 - (1) Rotary assembly unit cleaner, installed in 1993, with a maximum capacity of 77 gallons.
 - (2) Maintenance cleaner, installed in 1993, with a maximum capacity of 26 gallons.
 - (3) Service cleaner, installed in 1993, with a maximum capacity of 26 gallons.

A.3 Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-8-3(c)(3)(I)]

This stationary source also includes the following insignificant activities, as defined in 326 IAC 2-7-

1(21):

- (a) Natural gas fired combustion sources with heat input equal to or less than 10 million British thermal units per hour consisting of:
 - (1) One (1) natural gas fired boiler, with a maximum rated heat input of 4.164 million MMBtu per hour, and exhausting through stack B-001 (constructed after 1983).
 - (2) Four (4) natural gas fired air makeup units, each rated 1.75 MMBtu/hr.

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- (3) One (1) natural gas fired heat treat furnace, rated at 0.1 MMBtu/hr.
 - (4) Eight (8) natural gas fired space heaters with combined rated capacity of 0.483 MMBtu/hr.
- (b) Propane or liquefied petroleum gas, or butane-fired combustion sources with heat input equal to or less than six million (6,000,000) Btu per hour.
 - (c) Combustion source flame safety purging on startup.
 - (d) Storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons.
 - (e) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids.
 - (f) Filling drums, pails or other packaging containers with lubricating oils, waxes, and greases.
 - (g) Application of oils, greases, lubricants, or other nonvolatile materials applied as temporary protective coatings.
 - (h) Machining where an aqueous cutting coolant continuously floods the machining interface.
 - (i) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6 including:
 - (1) Saw cold cleaner with maximum capacity of 1 gallon.
 - (2) Tool room cleaner with maximum capacity of 7 gallons.
 - (j) Cleaners and solvents characterized as follows:
 - (1) Having a vapor pressure equal to or less than 2 kPa; 15 mm Hg; or 0.3 psi measured at 38 degrees C (100F) or;
 - (2) Having a vapor pressure equal to or less than 0.7 kPa; 5mm Hg; or 0.1 psi measured at 20C (68F); the use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months.
 - (k) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment.
 - (l) Closed loop heating and cooling systems.
 - (m) Solvent recycling systems with batch capacity less than or equal to 100 gallons.
 - (n) Activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to 1% by volume.
 - (o) Any operation using aqueous solutions containing less than 1% by weight of VOCs excluding

HAPs.

- (p) Water based adhesives that are less than or equal to 5% by volume of VOCs excluding HAPs.
- (q) Forced and induced draft cooling tower system not regulated under NESHAP.
- (r) Quenching operations used with heat treating processes.

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Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.

- (t) Heat exchanger cleaning and repair.
- (u) Paved and unpaved roads and parking lots with public access.
- (v) Asbestos abatement projects regulated by 326 IAC 14-10.
- (w) Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup, including catch tanks, temporary liquid separators, tanks, and fluid handling equipment.
- (x) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.
- (y) On-site fire and emergency response training approved by the department.
- (z) Stationary fire pumps.
- (aa) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and flow rate less than or equal to 4000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations.
- (bb) Filter or coalescer media changeout.
- (cc) Mold release agents using low volatile products (vapor pressure less than or equal to 2 kilopascals measured at 38 degrees C).
- (dd) Activities or categories of activities with individual HAP emissions not previously identified. Following units emit greater than 1 pound per day but less than 5 pounds per day or 1 ton per year of a single HAP.
 - (1) Rust inhibitor tank (1% solution containing 10% Diethanolamine).
 - (2) Ethylene Glycol tanks for filling vibration control parts. (4 units)
- (ee) Other categories with emissions below insignificant thresholds (i.e. less than 5 pounds per hour particulates).

One (1) welding operation consisting of the following:

 - (1) Three (3) flash butt welding stations, identified as ID 002A, constructed in 1995, with a maximum consumption rate of 38.25 pounds per hour, utilizing Torit dust collector for

- particulate control and exhausting through one (1) stack, identified as DC-1.
- (2) Eleven (11) metal inert gas (MIG), two (2) resistance and one (1) Upset resistance welding stations, and one (1) TIG welder, identified as 002B, constructed in 1995 (two of the MIG welders and one resistance welder were added in 1998), with a maximum wire consumption rate of 19.0 pounds per hour, utilizing Torit dust collector for particulate control and exhausting through one (1) stack, identified as DC-2.

A.4 FESOP Applicability [326 IAC 2-8-2]

This stationary source, otherwise required to have a Part 70 permit as described in 326 IAC 2-7-2(a), has applied to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) to renew a Federally Enforceable State Operating Permit (FESOP).

A.5 Prior Permits Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions of previous permits issued pursuant to permitting programs approved into the state implementation plan have been either
- (1) incorporated as originally stated,
 - (2) revised, or
 - (3) deleted
- by this permit.
- (b) All previous registrations and permits are superseded by this permit.

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]:

One (1) automatic turbo spray adhesives coating system, identified as EU004, to be constructed in 2005, with all particulate overspray emissions controlled by two (2) dry filter systems, and all VOC and HAP emissions controlled by one (1) catalytic oxidizer, with all emissions exhausted through one (1) stack, identified as SV-1.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.1.1 Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAPs) [326 IAC 2-8-4(1)]

- (a) The total input volatile organic compounds (VOC) delivered to the turbo spray adhesives coating system (EU004) shall be limited to less than or equal to 652.73 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with the requirements of condition D.1.1(a) shall limit the sourcewide (including insignificant activities) potential to emit of VOC to less than 100 tons per twelve (12) consecutive month period with compliance determined at the end of each month. Therefore, the requirements of 326 IAC 2-7 (Part 70) shall not apply.

- (b) The total input hazardous air pollutants (HAP) delivered to the turbo spray adhesives coating system (EU004) shall be limited such that the source wide input single HAP and total input HAPs including insignificant activities shall not exceed 66.66 and 166.66 tons per twelve (12) consecutive month period with compliance determined at the end of each month, respectively.

Compliance with these limitations shall make the requirements of 326 IAC 2-7 (Part 70) not applicable to the source.

D.1.2 Volatile Organic Compound (VOC) Limitations [326 IAC 8-2-9] [326 IAC 8-1-2]

- (a) Pursuant to 326 IAC 8-2-9, the Permittee shall not allow the discharge into the atmosphere of VOC in excess of three (3.0) pounds of VOC per gallon of coating, excluding water, as delivered to the applicator.
- (b) Pursuant to 326 IAC 8-1-2 (b), the turbo spray adhesives coating system (EU004) VOC emissions shall be limited to no greater than the equivalent emissions, expressed as pounds of VOC per gallon of coating solids, allowed in (a).

This equivalency was determined by the following equation:

$$E = L / (1 - (L/D))$$

Where:

- L = Applicable emission limit from 326 IAC 8 in pounds of VOC per gallon of coating;
D = Density of VOC in coating in pounds per gallon of VOC;

E = Equivalent emission limit in pounds of VOC per gallon of coating solids as applied.

(A solvent density of 7.36 pounds of VOC per gallon of coating shall be used to determine equivalent pounds of VOC per gallon of solids for the applicable emission limit contained in this article)

Actual solvent density shall be used to determine compliance of the surface coating operation using the compliance methods in 326 IAC 8-1-2 (a).

- (c) The pounds of VOC per gallon of coating solids shall be limited to less than or equal to 5.06 pounds of VOC per gallon coating solids as applied.
- (d) Pursuant to 326 IAC 8-1-2(c) the overall control efficiency of the catalytic oxidizer shall be no less than the equivalent overall efficiency calculated by the following equation:

$$O = \frac{V - E}{V} \times 100$$

Where:

- V = The actual VOC content of the coating or, if multiple coatings are used, the daily weighted average VOC content of all coatings, as applied to the subject coating line as determined by the applicable test methods and procedures specified in 326 IAC 8-1-4 in units of pounds of VOC per gallon of coating solids as applied.
- E = Equivalent emission limit in pounds of VOC per gallon of coating solids as applied.
- O = Equivalent overall efficiency of the capture system and control device as a percentage.

The overall efficiency of the catalytic oxidizer shall be greater than or equal to 85% in order to satisfy the requirements of Parts (a) and (c) of Condition D.1.2 based on the daily volume weighted average VOC contents listed in Part (d) of this condition.

D.1.3 Volatile Organic Compound (VOC) Limitations, Clean-up Requirements [326 IAC 8-2-9]

Pursuant to 326 IAC 8-2-9(f), all solvents sprayed from the turbo spray adhesives coating system during cleanup or color changes shall be directed into containers. Said containers shall be closed as soon as the solvent spraying is complete. In addition, all waste solvent shall be disposed of in such a manner that minimizes evaporation.

D.1.4 Particulate-Matter (PM) [40 CFR 52 Subpart P]

Pursuant to 40 CFR 52 Subpart P, the PM from the turbo spray adhesives coating system shall not exceed the pound per hour emission rate established as E in the following formula:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

D.1.5 Particulate [326 IAC 6-3-2(d)]

Pursuant to 326 IAC 6-3-2(d), particulate from the turbo spray adhesives coating system, shall be

controlled by a dry particulate filter and the Permittee shall operate the dry filter in accordance with manufacturer's specifications.

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D.1.6 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the turbo spray adhesives coating system and any control devices.

Compliance Determination Requirements

D.1.7 Volatile Organic Compounds (VOC)

Compliance with the VOC and HAP usage limitations contained in Condition D.1.1 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the "as supplied" and "as applied" VOC data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

D.1.8 Testing Requirements [326 IAC 2-8-5(a)(1),(4)] [326 IAC 2-1.1-11]

Within one hundred and eighty (180) days after initial startup, the Permittee shall conduct a performance test to verify the VOC overall control efficiency and to establish the operating parameters as per condition D.1.2 for the catalytic oxidizer using methods as approved by the Commissioner. This test shall be repeated at least once every five years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.

Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

D.1.9 Catalytic Oxidizer Temperature

- (a) A continuous monitoring system shall be calibrated, maintained, and operated on the catalytic oxidizer for measuring the operating temperature at the inlet of the catalyst bed. The output of this system shall be recorded as a 3-hour average. For the purposes of this condition, continuous shall mean no less than once per minute.

From the date of issuance of this permit until the approved stack test results are available, the Permittee shall take appropriate response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records and Reports whenever the 3-hour average temperature of the catalytic oxidizer is below 700°F. A 3-hour average temperature that is below 700°F is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records and Reports shall be considered a deviation from this permit.

- (b) The Permittee shall determine the 3-hour average temperature from the most recent valid stack test that demonstrates compliance with the limits in condition D.1.2, as approved by IDEM.
- (c) On and after the date the approved stack test results are available, the Permittee shall take appropriate response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records and Reports whenever the 3-hour average temperature of the catalytic oxidizer is below the 3-hour average temperature as observed during the compliant stack test.

A 3-hour average temperature that is below the 3-hour average temperature as observed during the compliant stack test is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records and Reports shall be considered a deviation from this permit.

D.1.10 Parametric Monitoring

- (a) The Permittee shall determine fan amperage or duct pressure from the most recent valid stack test that demonstrates compliance with the limits in condition D.1.2, as approved by IDEM.
- (b) The duct pressure or fan amperage shall be observed at least once per day when the catalytic oxidizer is in operation. When for any one reading, the duct pressure or fan amperage is outside the normal range as established in most recent compliant stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records and Reports. A reading that is outside the range as established in the most recent compliant stack test is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records and Reports shall be considered a deviation from this permit.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.1.11 Record Keeping Requirements

- (a) To document compliance with Condition D.1.1, the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC and HAP usage limits and/or the VOC and HAP emission limits established in Condition D.1.1.
 - (1) The VOC and HAP content of each coating material and solvent used.
 - (2) The amount of coating material and solvent less water used on monthly basis.
 - (A) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.
 - (B) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents.
 - (3) The VOC and HAP content of the coatings used for month;
 - (4) The cleanup solvent usage for each month;
 - (5) The total VOC and HAPs usage for each month; and
 - (6) The input VOCs and HAPs emitted for each compliance period.
- (b) To document compliance with Condition D.1.2, the Permittee shall maintain records of:

- (1) the operating parameters specified in Conditions D.1.9 and D.1.10, and
- (2) the actual VOC content of the coating if one coating is used, in pounds of VOC per gallon of coating solids as applied, or, if multiple coatings are used, the daily volume weighted average VOC content of all coatings, as applied, in pounds of VOC per gallon of coating solids.

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- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.12 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.1.1 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION**

FESOP Quarterly Report

Source Name: Tenneco Automotive
Source Address: 503 Weatherhead Street, Angola, Indiana 46703
Mailing Address: 503 Weatherhead Street, Angola, Indiana 46703
FESOP No.: F151-15838-00015
Facility: turbo spray adhesives coating system (EU004)
Parameter: Input VOC
Limit: Total input VOC from the robotic turbo spray adhesives coating system shall be limited to 652.73 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	Input VOC This Month	Input VOC Previous 11 Months	Input VOC, 12 Month Total
Month 1			
Month 2			
Month 3			

☛ No deviation occurred in this quarter.

☛ Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____
 Signature: _____
 Date: _____
 Phone: _____

Attach a signed certification to complete this report.

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**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF AIR QUALITY
 COMPLIANCE DATA SECTION**

Part 70 Quarterly Report

Source Name: Tenneco Automotive
 Source Address: 503 Weatherhead Street, Angola, Indiana 46703
 Mailing Address: 503 Weatherhead Street, Angola, Indiana 46703
 FESOP No.: F151-15838-00015
 Facility: turbo spray adhesives coating system (EU004)
 Parameter: Input Single and Combined HAP
 Limit: Source wide input single HAP and total input HAPs including insignificant activities shall not exceed 66.66 and 166.66 tons per twelve (12) consecutive month period with compliance determined at the end of each month, respectively.

Single HAP:

Month		(Column 1) Single HAP This Month	(Column 2) Single HAP From Previous 11 Months	(Column 1 + Column 2) Single HAP For 12 Month Period
1	MEK			
	Toluene			
	Xylene			
	MIBK			
	Formaldehyde			
	Tetrachloroethylene			
	Ethylbenzene			

Month		(Column 1) Single HAP This Month	(Column 2) Single HAP From Previous 11 Months	(Column 1 + Column 2) Single HAP For 12 Month Period
	MEK			

2	Toluene			
	Xylene			
	MIBK			
	Formaldehyde			
	Tetrachloroethylene			
	Ethylbenzene			

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Month		(Column 1) Single HAP This Month	(Column 2) Single HAP From Previous 11 Months	(Column 1 + Column 2) Single HAP For 12 Month Period
3	MEK			
	Toluene			
	Xylene			
	MIBK			
	Formaldehyde			
	Tetrachloroethylene			
	Ethylbenzene			

Combined HAP:

Month	(Column 1) Combined HAP This Month	(Column 2) Combined HAP From Previous 11 Months	(Column 1 + Column 2) Combined HAP For 12 Month Period
1			
2			
3			



No deviation occurred in this quarter.

Deviation/s occurred in this quarter.

Deviation has been reported on: _____

Submitted by: _____
 Title / Position: _____
 Signature: _____
 Date: _____
 Phone: _____

Attach a signed certification to complete this report.

Indiana Department of Environmental Management Office of Air Quality

Technical Support Document (TSD) for a Significant Permit Revision to an Existing Source FESOP

Source Background and Description:

Source Name:	Tenneco Automotive
Source Location:	503 Weatherhead Street, Angola, Indiana 46703
County:	Steuben
SIC Code:	3714, 3069
Operating Permit No.:	151-15838-00015
Date Issued:	June 20, 2003
Significant Permit Revision No.:	151-21089-00015
Permit Reviewer:	SDF

The Office of Air Quality (OAQ) has reviewed an application from Tenneco Automotive relating to the replacement of their existing adhesives coating system with a new adhesives coating system.

Emission Units and Pollution Control Equipment

One (1) robotic turbo spray adhesives coating system, identified as EU004, to be constructed in 2005, with all particulate overspray emissions controlled by one (1) dry filter system, and all VOC and HAP emissions controlled by one (1) catalytic oxidizer, with all emissions exhausted through one (1) stack, identified as SV-1.

The proposed adhesives coating system will not result in an increase in production or emissions from any of the other existing emission units. Therefore, the emissions due to the modification are the adhesive VOC, HAP, and PM and PM10 overspray emissions. Upon completion of the emission calculations, the unrestricted PM, PM10, VOC, single HAP, and combined HAP emissions are estimated to be 2.29, 2.29, 30.41, 14.89, and 30.97 tons per year.

The proposed replacement adhesives coating system consists of new booths equipped with dry filter systems which will control the particulate overspray emissions much better than the existing booths, and a robotic application system which will reduce the amount of VOC and HAP generated as well as further reduce the PM and PM10 overspray generated.

The unrestricted VOC emissions from the proposed coating system (30.41 tons/yr) exceed 25 tons per year and the proposed replacement adhesives coating system is subject to a new applicable requirement (326 IAC 8-2-9).

Therefore, the proposed adhesives surface coating system shall be permitted via a Significant Permit Revision pursuant to 326 IAC 2-8-11.1(f)(1)(E)(iv) which states a modification with potential to emit greater than or equal to twenty-five (25) tons per year of VOC that is not an administrative amendment pursuant to 326 IAC 2-8-10 or a minor permit revision under 326 IAC 2-8-11.1(d), is a modification which shall be permitted via a significant permit revision.

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the construction and operation be approved. This recommendation is based on the following facts and conditions.

A complete application for the purposes of this review was received on June 6, 2005.

Unless otherwise stated, information used in this review was derived from the application and additional information submitted on April 26, 2005, and June 6, 2005.

Emission Calculations

The emissions generated by the proposed adhesives coating system are the process PM and PM10 overspray, VOC, and HAP emissions. The following calculations determine the unrestricted potential emissions and the estimated emissions after controls.

Unrestricted Potential Emissions:

The following calculations determine the unrestricted emissions from the proposed adhesives coating system based on the worst case coating combination, material properties obtained from the Material Safety Data Sheets (MSDS), a transfer efficiency of 50%, emissions before controls, and 8760 hours of operation.

PM/PM10: $\text{lb/gal} * \text{gal/unit} * \text{unit/hr} * (1 - \text{wt frac. volatiles}) * (1 - \text{frac. transfer}) * 8760 \text{ hr/yr} * 1/2000 \text{ ton/lb} = \text{tons PM/yr}$

Coating	lb/gal	gal/unit	unit/hr	wt fraction volatiles	fraction transfer	tons PM/yr	tons PM10/yr*
Solvent (MEK)	6.71	0.165	1	1.00	0.5	-	-
Solvent (Toluene)	7.22	0.044	1	1.00	0.5	-	-
Solvent (Xylene)	7.35	0.011	1	1.00	0.5	-	-
Primer	7.81	0.297	1	0.81	0.5	0.97	0.97
Chemloc 6100	8.2	0.275	1	0.79	0.70	0.62	0.62
Chemloc 6125	8.4	0.275	1	0.77	0.70	0.70	0.70
Total						2.29	2.29

* PM10 is determined to be equal to PM

VOC: $\text{lb/gal} * \text{gal/unit} * \text{unit/hr} * \text{fraction VOC} * 8760 \text{ hr/yr} * 1/2000 \text{ ton/lb} = \text{tons VOC/yr}$

Coating	lb/gal	gal/unit	unit/hr	fraction VOC	tons VOC/yr
Solvent (MEK)	6.71	0.165	1	1.00	4.85
Solvent (Toluene)	7.22	0.044	1	1.00	1.39
Solvent (Xylene)	7.35	0.011	1	1.00	0.35
Primer	7.81	0.297	1	0.81	8.23
Chemloc 6100	8.2	0.275	1	0.79	7.80
Chemloc 6125	8.4	0.275	1	0.77	7.79
Total					30.41

HAP: lb/gal * gal/unit * unit/hr * fraction HAP * 8760 hr/yr * 1/2000 ton/lb = tons HAP/yr

HAP	lb/hr	ton/yr
Formaldehyde	0.02	0.09
MEK	1.16	5.08
MIBK	1.39	6.09
Xylene	3.40	14.89
Toluene	0.32	1.40
Tetrachloroethylene	0.02	0.09
Ethylbenzene	0.76	3.33
Total		30.97

Total Unrestricted Potential Emissions:

The following table lists the total unrestricted potential emissions generated by the proposed adhesives surface coating process.

	PM	PM10	SO2	NOx	VOC	CO	Single HAP	Comb. HAP
Emissions (ton/yr)	2.29	2.29	-	-	30.41	-	14.89	30.97

Emissions After Controls:

Tenneco has proposed controlling the VOC and HAP emissions with a catalytic oxidizer which will achieve an overall control efficiency of 85%.

The proposed adhesives coating system is subject to 326 IAC 8-2-9. In order to achieve compliance with the limits of this rule, Tenneco will be using the compliance methods specified in 326 IAC 8-1-2. Pursuant to 326 IAC 8-1-2, compliance with all of the applicable limits is achieved if the catalytic oxidizer is operated such that the overall control efficiency is at least 85% . Therefore, the overall control efficiency for VOC and HAP will be 85%.

The PM and PM10 overspray emissions will be controlled by the new booth filter system which will achieve an overall control efficiency of 99%.

The following calculations determine the emissions after controls based on the respective overall control efficiencies and the estimated emissions before controls.

(VOC/HAP) Emissions Before Controls * (1 - 0.85) = (VOC/HAP) Emissions After Controls
 (PM/PM10) Emissions Before Controls * (1 - 0.99) = (PM/PM10) Emissions After Controls

	PM	PM10	SO2	NOx	VOC	CO	Single HAP	Comb. HAP
Emissions (ton/yr)	0.02	0.02	-	-	4.56	-	2.23	4.65

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency.”

This table reflects the source PTE before controls due to the proposed changes. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	2.29
PM-10	2.29
SO ₂	-
VOC	30.41
CO	-
NO _x	-

Note: For the purpose of determining Title V applicability for particulates, PM-10, not PM, is the regulated pollutant in consideration.

HAP's	Potential To Emit (tons/year)
Worst case Single HAP	14.89
TOTAL	30.97

- (a) The source combined HAP potential to emit (as defined in 326 IAC 2-7-1(29)) after the proposed replacement is greater than twenty-five (25) tons per year.
- (b) The unrestricted VOC emissions from the proposed coating system (30.41 tons/yr) exceed 25 tons per year and the proposed replacement adhesives coating system is subject to a new applicable requirement (326 IAC 8-2-9).

- (a) The VOC emissions are limited to less than 100 tons per year and the single and combined HAP emissions are limited to less than 10 and 25 tons per year, respectively.
- (b) This existing source is not a PSD major stationary source because no attainment pollutant is emitted at a rate that exceeds its respective major source level and it is not in one of the 28 listed source categories.
- (c) This existing source is not a Title V major stationary source because none of the criteria pollutant emissions exceed the applicable level of 100 tons per year and the single and combined HAP emissions are less than their respective applicable levels of 10 and 25 tons per year.

Source Status After the Proposed Modification

Source PSD Definition After Application of the Proposed Modification (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited:

Unit	PM (tons/yr)	PM10 (tons/yr)	SO2 (tons/yr)	NOx (tons/yr)	VOC (tons/yr)	CO (tons/yr)	Single HAP (tons/yr)	Comb. HAPs (tons/yr)
Existing Source Less Existing Adhesives Coating Equipment	0.59	0.89	neg.	5.20	<100	4.30	<10	<25
Proposed Adhesives Coating System	0.02	0.02	-	-	4.56	-	2.23	4.65
Source After Mod.	0.61	0.91	neg.	5.20	<100	4.30	<10	<25

Major Source Levels	250	250	250	250	250	250	-	-
Part 70 Major Levels	-	100	100	100	100	100	10	25

- (a) The source VOC, single HAP, and combined HAP emissions will still be limited to less than 100, 10, and 25 tons per year, respectively.
- (b) The source after the proposed replacement is still not a PSD major stationary source because no attainment pollutant is emitted at a rate that exceeds its respective major source level and it is not in one of the 28 listed source categories.
- (c) The source after the proposed replacement is still not a Title V major stationary source because none of the criteria pollutant emissions exceed the applicable level of 100 tons per year and the single and combined HAP emissions are less than their respective applicable levels of 10 and 25 tons per year.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This source is not subject to the Part 70 Permit requirements because the PTE of:

- (a) each criteria pollutant is less than 100 tons per year,
- (b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
- (c) any combination of HAPs is less than 25 tons/year.

Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) included in this modification.
- (b) The proposed replacement adhesives coating system is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants for Surface Coating of Plastic Parts and Products, 40 CFR 63, Subpart PPPP, because the adhesives are applied to metal parts, not plastic parts, and the source is not a major source for HAPs.
- (c) The proposed replacement adhesives coating system is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products, 40 CFR 63, Subpart MMMM, because the source is not a major source for HAPs.

State Rule Applicability - Entire Source

(a) 326 IAC 2-4.1:

The requirements of 326 IAC 2-4.1 do not apply to the modification because the source single and combined HAP emissions are limited to less than their respective major source levels of 10 and 25 tons per year.

(b) 326 IAC 2-6 (Emission Reporting):

Pursuant to 326 IAC 2-6-1, since the source is not required to have an operating permit under 326 IAC 2-7, is not a source located in Lake or Porter County with VOC or NOx emissions greater than or equal to twenty-five (25) tons per year, and is not a source that emits lead into the ambient air at a level that is greater than or equal to five (5) tons per year, the proposed source is only subject to the requirements of 326 IAC 2-6-5.

Pursuant to 326 AC 2-6-5, the department may request emissions and emissions related information about any regulated air pollutant as defined at 326 IAC 2-7-1(31) from any source permitted by the department when needed for air quality planning, air quality modeling, or state implementation plan development. A source that receives an information request pursuant to this section shall provide the information, based on reasonable estimates and using data available to the preparers, in writing to the department within sixty (60) days of receipt of the department's request. A source may request additional time to submit the information. Types of circumstances when the department may request information include the following:

- (1) To identify sources or processes that emit a monitored pollutant.
- (2) To address public complaints.
- (3) To develop and quality assure emissions inventories, as necessary, for permit modeling, state implementation plan development, rulemaking, or perform air risk analysis.
- (4) To survey industry wide sources or geographic specific areas to address potential health risks.
- (5) To assess pollutants for a single industry source.
- (6) To comply with an information request from a local, state, or federal agency.
- (7) To verify or supplement Emergency Planning and Community Right-to Know Act Section 313 toxic release inventory information.

(d) 326 IAC 2-8 (FESOP):

This source VOC, single HAP, and combined HAP emissions will still be limited to less than 100, 10, and 25 tons per year, respectively.

Compliance with these limits will limit the source-wide VOC, single HAP, and combined HAP emissions to less than their respective Part 70 applicable levels of 100, 10 and 25 tons per year.

(e) 326 IAC 5-1:

The proposed replacement will not affect the applicability or result in any changes to the requirements of 326 IAC 5.

(f) 326 IAC 6-4:

The proposed replacement will not affect the applicability or result in any changes to the requirements of 326 IAC 6-4.

State Rule Applicability - Individual Facilities

(a) 326 IAC 6-3-2:

The proposed replacement adhesives coating system is subject to the requirements of 326 IAC 6-3-2 because the coating system generates particulate matter overspray emissions, the coating system is not any of the exemptions listed in 326 IAC 6-3-1(b), and no limitations are established in any of the determinations listed in 326 IAC 6-3-1(c).

Pursuant to 326 IAC 6-3-2(d), surface coating, reinforced plastics composites manufacturing processes, and graphic arts manufacturing processes, shall be controlled by a dry particulate filter, waterwash, or an equivalent control device. The source shall operate the control device in accordance with the manufacturer's specifications.

The requirements of 326 IAC 6-3-2(d)(2) do not apply to the proposed replacement adhesives coating system because pursuant to 326 IAC 6-3-2(d)(3)(B), sources that operate according to a valid permit pursuant to 326 IAC 2-8 are not subject to the requirements of 326 IAC 6-3-2(d)(2).

(b) 326 IAC 8-2-9 (Miscellaneous Metal Parts Coating Requirements):

Pursuant to 326 IAC 8-2-9(a)(5), 326 IAC 8-2-9 applies to any industrial category which coats metal parts or products under the Standard Industrial Classification Code of major groups #33, #34, #35, #36, #37, #38, and #39.

The proposed replacement adhesives coating system is part of major group #37. Therefore, further review is required to determine if 326 IAC 8-2-9 applies.

Pursuant to 326 IAC 8-2-9(b)(7), the requirements of 326 IAC 8-2-9 do not apply to processes which apply adhesives. However, pursuant to 326 IAC 8-2-9(c), commencing July 1, 1991, the operations described in Subsection (b)(6) through (b)(9) shall comply with the requirements of 326 IAC 8-2-9.

Therefore, the proposed adhesives coating system is subject to the requirements of 326 IAC 8-2-9.

Pursuant to 326 IAC 8-2-9(d)(4), the VOC content of the coatings applied at the adhesives coating system shall be limited to no more than three (3) pounds per gallon of coating, excluding water, as delivered to the applicator.

Pursuant to 326 IAC 8-2-9(f), all solvent sprayed from the application equipment during cleanup or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

The VOC content of the adhesives applied are as follows:

[lb/gal * weight fraction volatiles] / [1 - vol. fraction water]

Coating	lb/gal	wt fraction volatiles	vol. fraction water	lb VOC/gal coating less water
Primer	7.81	0.81	0.00	6.33
Chemloc 6100	8.2	0.79	0.00	6.21
Chemloc 6125	8.4	0.77	0.00	6.23

All of the estimated VOC contents of the adhesives except the dip paint exceed the allowable level of 3.00 pounds per gallon, excluding water, as delivered to the applicator. To achieve compliance, Tenneco Automotive has proposed the installation and operation of a catalytic oxidizer and its associated capture and exhaust system.

This is determined to be acceptable because pursuant to 326 IAC 8-1-2(a)(2) compliance with the emission limitations specified in 326 IAC 8-2-9 can be achieved through the application of catalytic oxidation.

Pursuant to 326 IAC 8-1-2(b), the VOC emission limit shall be limited to no greater than the equivalent emissions, expressed as pounds of VOC per gallon of coating solids, allowed under the applicable limitation contained in this article for any surface coating operation using the compliance methods contained in 326 IAC 8-1-2.

Pursuant to 326 IAC 8-1-2(b)(1), the equivalent lb VOC/gal solids limit shall be determined as follows:

$$\begin{aligned}
 E &= [L] / [1 - (L/D)] \\
 &= [3.00 \text{ lb VOC/gal coat}] / [1 - (3.00 \text{ lb VOC/gal coat} / 7.36 \text{ lb VOC/gal sol})] \\
 &= 5.06 \text{ lb VOC/gal coating solids, as applied}
 \end{aligned}$$

where: E = Equivalent emission limit in pounds of VOC per gallon of coating solids, as applied.
 L = Applicable emission limit (3.00 lb VOC/gal coating)
 D = Baseline solvent density (7.36 lb VOC/gal solvent)

Based on the 326 IAC 8-2-9 limit of 3.00 lb VOC/gal coating, less water and the baseline solvent density of 7.36 lb VOC/gal solvent, the equivalent limit is determined to be 5.06 pounds VOC per gallon coating solids, as delivered to the applicator.

Pursuant to 326 IAC 8-1-2(b)(2), compliance with the equivalent emission limit shall be determined

using the following equation:

$$Ea = [La] / [1 - (La/Da)]$$

where: Ea = actual emissions in pounds of VOC per gallon of coating solids
 La = actual VOC content in lb VOC/gal coating
 Da = actual VOC density in lb VOC/gal VOC

The actual emissions for the listed adhesives are listed below.

Coating	lb VOC/gal coating solids
Primer	33.30
Chemloc 6100	30.85
Chemloc 6125	28.12

None of the estimated actual emissions are in compliance with the equivalent emission limit of 5.06 pounds of VOC per gallon coating solids.

Pursuant to 326 IAC 8-1-2(c), the overall efficiency of the catalytic oxidizer and its associated capture and exhaust system shall be determined using the following equation:

$$O = [(V - E) / (V)] * 100$$

where: V = The worst case VOC content of the adhesives in pounds of VOC per gallon coating solids, as applied (33.30 lb VOC/gal solids)
 E = Equivalent emission limit in pounds VOC per gallon coating solids, as applied (5.06 lb VOC/gal solids).
 O = Equivalent overall efficiency of the catalytic oxidizer and its associated capture and exhaust system.

Based on the estimated worst case adhesive VOC content of 33.30 pounds of VOC per gallon solids and the equivalent emission limit of 5.06 pounds of VOC per gallon, the equivalent overall control efficiency required is determined to be 85%. This is the overall control efficiency that will be established for the proposed adhesives coating system.

Therefore, to achieve compliance with the VOC content limit of 326 IAC 8-2-9 and the equivalent VOC content limit of 326 IAC 8-1-2(b), the Permittee will be required to achieve an overall control efficiency of 85%.

326 IAC 8-1-6:

Although the potential VOC emissions from the proposed adhesives coating system (30.41 tons/yr) are greater than the applicable level of 25 tons per year, the requirements of 326 ICA 8-1-6 do not apply to the coating system because the coating system is subject to 326 IAC 8-2-9.

Changes

1. The unit description of Section A shall be changed as follows to reflect the unit description associated with the replacement coating system.

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

This stationary source ~~source~~ consists of the following emission units and pollution control devices:

- (a) ~~Two (2) adhesive coating booths, identified as ID 001A (Model No. TEX 67-LO-34-M), constructed in 1974 (and modified in 1987), utilizing a LPHV spray application system, with an estimated potential coating usage of 8,951.5 gallons per year, using water wash for particulate overspray control, and exhausting to one (1) stack, identified as SV-1.~~

One (1) robotic turbo spray adhesives coating system, identified as EU004, to be constructed in 2005, with all particulate overspray emissions controlled by one (1) dry filter system, and all VOC and HAP emissions controlled by one (1) catalytic oxidizer, with all emissions exhausted through one (1) stack, identified as SV-1.

2. The unit description of Section D.1 shall be changed as follows to reflect the unit description associated with the replacement coating system.

Facility Description [326 IAC 2-8-4(10)]:

- (a) ~~Two (2) adhesive coating booths, identified as ID 001A (Model No. TEX 67-LO-34-M), constructed in 1974 (and modified in 1987), utilizing a LPHV spray application system, with an estimated potential coating usage of 8,951.5 gallons per year, using water wash for particulate overspray control, and exhausting to one (1) stack, identified as SV-1.~~

One (1) robotic turbo spray adhesives coating system, identified as EU004, to be constructed in 2005, with all particulate overspray emissions controlled by one (1) dry filter system, and all VOC and HAP emissions controlled by one (1) catalytic oxidizer, with all emissions exhausted through one (1) stack, identified as SV-1.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

3. Condition D.1.1 shall be changed as follows to reference the replacement adhesives coating system. The Office of Air Quality has determined that the input VOC should be based on the 326 IAC 8-2-9 overall control efficiency of 85%.

X input tons/yr = [limited tons/yr] / [1 – 0.85]

	Limited Tons Per Year	Input Tons Per Year
Coating System VOC	97.91	652.73
Source Single HAP	10	66.66
Source Combined HAP	25	166.66

D.1.1 Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAPs) [326 IAC 2-8-4(1)]

- (a) The total **input** volatile organic compounds (VOC) delivered to the ~~two (2) adhesive coating booths (ID 001A) turbo spray adhesives coating system (EU004)~~ shall be limited such that the ~~VOC emissions shall not exceed 97.94~~ **to less than or equal to 652.73** tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with the requirements of condition D.1.1(a) shall limit the sourcewide (including insignificant activities) potential to emit of VOC to less than 100 tons per twelve (12) consecutive month period with compliance determined at the end of each month. Therefore, the requirements of 326 IAC 2-7 (Part 70) shall not apply.

- (b) The total **input** hazardous air pollutants (HAP) delivered to the ~~two (2) adhesive coating booths (ID-004A)~~ **turbo spray adhesives coating system (EU004)** shall be limited such that the source wide **input** single HAP and total HAPs ~~emissions~~ including insignificant activities shall not exceed ~~40 and 25~~ **66.66 and 166.66** tons per twelve (12) consecutive month period with compliance determined at the end of each month, respectively.

Compliance with these limitations shall make the requirements of 326 IAC 2-7 (Part 70) not applicable to the source.

4. New Condition D.1.2 shall be added as follows to include the overall control efficiency requirement of the proposed catalytic oxidizer which will be used to achieve compliance with the emission limits of 32 IAC 8-1-2(b)(1) and 326 IAC 8-2-9(d)(4), and the affected limits.

D.1.2 Volatile Organic Compound (VOC) Limitations [326 IAC 8-2-9] [326 IAC 8-1-2]

- (a) Pursuant to 326 IAC 8-2-9, the owner or operator shall not allow the discharge into the atmosphere of VOC in excess of three (3.0) pounds of VOC per gallon of coating, excluding water, as delivered to the applicator.
- (b) Pursuant to 326 IAC 8-1-2 (b), the turbo spray adhesives coating system (EU004) VOC emissions shall be limited to no greater than the equivalent emissions, expressed as pounds of VOC per gallon of coating solids, allowed in (a).

This equivalency was determined by the following equation:

$$E = L / (1 - (L/D))$$

Where:

L= Applicable emission limit from 326 IAC 8 in pounds of VOC per gallon of coating;

D= Density of VOC in coating in pounds per gallon of VOC;

E= Equivalent emission limit in pounds of VOC per gallon of coating solids as applied.

(A solvent density of 7.36 pounds of VOC per gallon of coating shall be used to determine equivalent pounds of VOC per gallon of solids for the applicable emission limit contained in this article)

Actual solvent density shall be used to determine compliance of the surface coating operation using the compliance methods in 326 IAC 8-1-2 (a).

- (c) The pounds of VOC per gallon of coating solids shall be limited to less than or equal to 5.06 pounds of VOC per gallon coating solids as applied.
- (d) Pursuant to 326 IAC 8-1-2(c) the overall control efficiency of the catalytic oxidizer shall be no less than the equivalent overall efficiency calculated by the following equation:

$$O = \frac{V - E}{V} \times 100$$

Where:

V = The actual VOC content of the coating or, if multiple coatings are used, the daily weighted average VOC content of all coatings, as applied to the subject coating line as determined by the applicable test methods and procedures specified in 326 IAC 8-1-4 in units of pounds of VOC per gallon of coating solids as applied.

E = Equivalent emission limit in pounds of VOC per gallon of coating solids as applied.
O = Equivalent overall efficiency of the capture system and control device as a percentage.

The overall efficiency of the catalytic oxidizer shall be greater than or equal to 85%.

5. New Condition D.1.3 shall be added to include the standards associated with 326 IAC 8-2-9.

D.1.3 Volatile Organic Compound (VOC) Limitations, Clean-up Requirements [326 IAC 8-2-9]

Pursuant to 326 IAC 8-2-9(f), all solvents sprayed from the turbo spray adhesives coating system during cleanup or color changes shall be directed into containers. Said containers shall be closed as soon as the solvent spraying is complete. In addition, all waste solvent shall be disposed of in such a manner that minimizes evaporation.

6. Condition D.1.2 (now Condition D.1.4) shall be changed as follows to reflect the unit description associated with the replacement coating system.

D.1.24 Particulate-Matter (PM) [40 CFR 52 Subpart P]

Pursuant to 40 CFR 52 Subpart P, the PM from the ~~two (2) adhesive coating booths (ID-001A)~~ **turbo spray adhesives coating system** shall not exceed the pound per hour emission rate established as E in the following formula:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

7. Condition D.1.3 (now Condition D.1.5) shall be changed as follows to reflect the unit description associated with the replacement coating system and reflect the other options since the source will no longer be using a waterwash system.

D.1.35 Particulate [326 IAC 6-3-2(d)]

Pursuant to 326 IAC 6-3-2(d), particulate from the ~~two (2) adhesive coating booths (ID-001A)~~ **turbo spray adhesives coating system**, shall each be controlled by a **dry particulate filter**, water wash, or **an equivalent control device** and the Permittee shall operate the ~~water wash dry filter~~ in accordance with manufacturer's specifications.

8. Condition D.1.4 (now Condition D.1.6) shall be changed as follow to reflect the unit description associated with the replacement coating system.

D.1.46 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the ~~two (2) adhesive coating booths (ID-001A)~~ **turbo spray adhesives coating system** and any control devices.

9. Existing Condition D.1.5 shall be renumbered as Condition D.1.7.

D.1.57 Volatile Organic Compounds (VOC)

10. New Condition D.1.8 shall be added as follows to include the testing requirements associated with the

proposed catalytic oxidizer.

D.1.8 Testing Requirements [326 IAC 2-8-5(a)(1),(4)] [326 IAC 2-1.1-11]

Within one hundred and eighty (180) days after initial startup, the Permittee shall conduct a performance test to verify the VOC overall control efficiency as per condition D.1.2 for the catalytic oxidizer using methods as approved by the Commissioner. This test shall be repeated at least once every five years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.

11. Existing Condition D.1.6 shall be removed as follows because the requirements are monitoring requirements associated with a water wash system which was used to control the particulate emissions from the old adhesives coating booths. The replacement coating system will be equipped with a filter system. Since the PM and PM10 emissions from the proposed replacement adhesives coating system (0.52 lb/hr, each) are less than emission level which triggers monitoring (10 lb/hr), no new monitoring will be required for the filter system of the replacement adhesives coating system.

PM/PM10: lb/gal * gal/unit * unit/hr * (1 – wt frac. Volatiles) * (1 – frac. Transfer) * 8760 hr/yr * 1/2000 ton/lb = tons PM/yr

Coating	lb/gal	gal/unit	unit/hr	wt fraction volatiles	fraction transfer	lb PM/hr	lb PM10/hr*
Solvent (MEK)	6.71	0.165	1	1.00	0.5	-	-
Solvent (Toluene)	7.22	0.044	1	1.00	0.5	-	-
Solvent (Xylene)	7.35	0.011	1	1.00	0.5	-	-
Primer	7.81	0.297	1	0.81	0.5	0.22	0.22
Chemloc 6100	8.2	0.275	1	0.79	0.7	0.14	0.14
Chemloc 6125	8.4	0.275	1	0.77	0.7	0.16	0.16
Total						0.52	0.52

* PM10 is determined to be equal to PM

D.1.6 Monitoring

- ~~(a) Daily inspections shall be performed to verify that the water level of the water pans meet the manufacturer's recommended level. To monitor the performance of the water pans, the water level of the pans shall be maintained weekly at a level where surface agitation indicates impact of the air flow. Water shall be kept free of solids and floating material that reduces the capture efficiency of the water pan. To monitor the performance of the baffles, weekly inspections of the baffle panels shall be conducted to verify placement and configuration meet recommendations of the manufacturer. In addition, weekly observations shall be made of the overspray from the surface coating booth stack (SV-1) while one or more of the booths are in operation. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C – Compliance Response Plan – Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.~~
- ~~(b) Monthly inspections shall be performed of the coating emissions from the stack and the presence of overspray on the rooftops and the nearby ground. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when a noticeable change in overspray emission, or evidence of overspray emission is observed. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C – Compliance Response Plan – Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.~~
- ~~(c) Additional inspections and preventive measures shall be performed as prescribed in the~~

~~Preventive Maintenance Plan.~~

12. New Condition D.1.9 shall be added as follows to include the new monitoring requirements associated with the proposed catalytic oxidizer.

D.1.9 Catalytic Oxidizer Temperature

- (a) A continuous monitoring system shall be calibrated, maintained, and operated on the catalytic oxidizer for measuring the operating temperature at the inlet of the catalyst bed. The output of this system shall be recorded as a 3-hour average. For the purposes of this condition, continuous shall mean no less than once per minute.

From the date of issuance of this permit until the approved stack test results are available, the Permittee shall take appropriate response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records and Reports whenever the 3-hour average temperature of the catalytic oxidizer is below 800oF. A 3-hour average temperature that is below 800oF is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records and Reports shall be considered a deviation from this permit.

- (b) The Permittee shall determine the 3-hour average temperature from the most recent valid stack test that demonstrates compliance with the limits in condition D.1.2, as approved by IDEM.
- (c) On and after the date the approved stack test results are available, the Permittee shall take appropriate response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records and Reports whenever the 3-hour average temperature of the catalytic oxidizer is below the 3-hour average temperature as observed during the compliant stack test.

A 3-hour average temperature that is below the 3-hour average temperature as observed during the compliant stack test is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records and Reports shall be considered a deviation from this permit.

13. New Condition D.1.10 shall be added as follows to include the parametric monitoring requirements associated with the capture and exhaust system for the catalytic oxidizer.

D.1.10 Parametric Monitoring

- (a) The Permittee shall determine fan amperage or duct pressure from the most recent valid stack test that demonstrates compliance with the limits in condition D.1.2, as approved by IDEM.
- (b) The duct pressure or fan amperage shall be observed at least once per day when the catalytic oxidizer is in operation. When for any one reading, the duct pressure or fan amperage is outside the normal range as established in most recent compliant stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records and Reports. A reading that is outside the range as established in the most recent compliant stack test is not a deviation from this permit.

Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records and Reports shall be considered a deviation from

this permit.

14. Condition D.1.7 (now Condition D.1.11) shall be modified as follows to include the record keeping requirements associated with the proposed catalytic oxidizer and remove the record keeping requirements associated with the particulate overspray waterwash system because the water wash system monitoring requirements have been removed.

D.1.711 Record Keeping Requirements

(a) To document compliance with Condition D.1.1, the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC and HAP usage limits and/or the VOC and HAP emission limits established in Condition D.1.1.

(1) The VOC and HAP content of each coating material and solvent used.

(2) The amount of coating material and solvent less water used on monthly basis.

(A) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.

(B) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents.

(3) The volume weighted VOC and HAP content of the coatings used for month;

(4) The cleanup solvent usage for each month;

(5) The total VOC and HAPs usage for each month; and

(6) The ~~weight of~~ **input** VOCs and HAPs emitted for each compliance period.

(b) To document compliance with Condition D.1.2, the Permittee shall maintain records of the required operating parameters specified in Conditions D.1.9 and D.1.10.

~~(b) To document compliance with Condition D.1.6, the Permittee shall maintain a log of weekly overspray observations, weekly observations of the water level in the pans, daily and monthly inspections, and those additional inspections prescribed by the Preventive Maintenance Plan.~~

~~(ec)~~ All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

15. Existing Condition D.1.8 shall be renumbered as Condition D.1.12.

16. The reporting forms shall be revised to reflect the input VOC reporting.

17. The Table of Contents shall be adjusted to reflect the permit condition changes.

Conclusion

The construction and operation of this replacement adhesives coating system shall be subject to the conditions of the attached proposed Significant Permit Revision No. 151-21089-00015 and all other applicable approvals.

Indiana Department of Environmental Management Office of Air Quality

Addendum to the Technical Support Document for a Significant Permit Revision to an Existing Source FESOP

Source Name: Tenneco Automotive
Source Location: 503 Weatherhead Street, Angola, Indiana 46703
County: Steuben
SIC Code: 3714, 3069
Operating Permit No.: 151-15838-00015
Date Issued: June 20, 2003
Significant Permit Revision No.: 151-21089-00015
Permit Reviewer: SDF

On June 15, 2005, the Office of Air Quality (OAQ) had a notice published in the Herald Republican, located in Angola, Indiana, stating that Tenneco Automotive had applied for a permit to construct and operate one (1) automatic turbo spray adhesives coating system, identified as EU004. The notice also stated that the OAQ proposed to issue a permit for this installation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On July 1, 2005, Peter Keck, consultant for Tenneco Automotive submitted comments on the proposed construction permit via e-mail. A summary of the comments and corresponding responses is as follows:

(1) Comment:

The proposed adhesive coating system description should be as follows:

One (1) automatic turbo spray adhesive coating system, identified as EU-004, to be constructed in 2005, with all particulate overspray emissions controlled by two (2) dry filter systems, and all VOC and HAP emissions controlled by one (1) catalytic oxidizer, with all emissions exhausted through one (1) stack, identified as SV-1.

Response:

Condition A.2, the unit description of Section D.1, and the unit description in the approval letter will be changed as requested.

Condition A.2:

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

This stationary source consists of the following emission units and pollution control devices:

- (a) One (1) ~~robotic~~ **automatic** turbo spray adhesives coating system, identified as EU004, to be constructed in 2005, with all particulate overspray emissions controlled by ~~one two (42)~~ **two (2)** dry filter systems, and all VOC and HAP emissions controlled by one (1) catalytic oxidizer, with all emissions exhausted through one (1) stack, identified as SV-1.

Unit Description of Section D.1:

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]:

One (1) ~~robotic~~ **automatic** turbo spray adhesives coating system, identified as EU004, to be constructed in 2005, with all particulate overspray emissions controlled by ~~one~~ **two (42)** dry filter systems, and all VOC and HAP emissions controlled by one (1) catalytic oxidizer, with all emissions exhausted through one (1) stack, identified as SV-1.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Unit Description in Approval Letter:

The modification consists of the replacement of their existing adhesives coating system with one (1) ~~robotic~~ **automatic** turbo spray adhesives coating system, identified as EU004, to be constructed in 2005, with all particulate overspray emissions controlled by ~~one~~ **two (42)** dry filter systems, and all VOC and HAP emissions controlled by one (1) catalytic oxidizer, with all emissions exhausted through one (1) stack, identified as SV-1.

(2) Comment:

Please add one (1) catalytic oxidizer for controlling VOC and HAP emissions with a rated capacity of 1.0 MMBtu/hr to the insignificant activities list of Condition A.3.

Response:

The Office of Air Quality has determined that since the catalytic oxidizer is already included with the description for the adhesives coating system in Condition A.2, the catalytic oxidizer does not need to be added as an insignificant activity.

Therefore, no changes will be made.

(3) Comment:

Part (ee) of Condition A.3. No wire is used with the flash butt welders and there are eleven MIG welders, not eight, and one TIG welder.

Response:

The reference to wire will be removed from the flash butt welder description as follows.

Regarding the MIG welders, since the maximum consumption rate of 19 pounds per hour will remain the same, the description will be changed as follows to reflect eleven MIG welders and one TIG welder.

A.3 Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-8-3(c)(3)(I)]

This stationary source also includes the following insignificant activities, as defined in 326 IAC 2-7-1(21):

- (a) Natural gas fired combustion sources with heat input equal to or less than 10 million British thermal units per hour consisting of:

- (ee) Other categories with emissions below insignificant thresholds (i.e. less than 5 pounds per hour particulates).

One (1) welding operation consisting of the following:

- (1) Three (3) flash butt welding stations, identified as ID 002A, constructed in 1995, with a maximum wire consumption rate of 38.25 pounds per hour, utilizing Torit dust collector for particulate control and exhausting through one (1) stack, identified as DC-1.
- (2) ~~Eight (8)~~ **Eleven (11)** metal inert gas (MIG), two (2) resistance and one (1) Upset resistance welding stations, **and one (1) TIG welder**, identified as 002B, constructed in 1995 (two of the MIG welders and one resistance welder were added in 1998), with a maximum wire consumption rate of 19.0 pounds per hour, utilizing Torit dust collector for particulate control and exhausting through one (1) stack, identified as DC-2.

(4) Comment:

For Part (d) of Condition D.1.2, please restate that the overall control efficiency of the catalytic oxidizer shall be greater than 85% in order to satisfy the requirements of Condition D.1.2 based on the daily weighted average VOC contents listed on Page 9 of the TSD or say the 85% efficiency of the catalytic oxidizer will assure compliance with the requirements of this section.

Response:

Condition D.1.2 shall be changed to state that the 85% control is required to achieve compliance with the limits of parts (a) and (c) of Condition D.1.2.

D.1.2 Volatile Organic Compound (VOC) Limitations [326 IAC 8-2-9] [326 IAC 8-1-2]

- (a) Pursuant to 326 IAC 8-2-9, the Permittee shall not allow the discharge into the atmosphere of VOC in excess of three (3.0) pounds of VOC per gallon of coating, excluding water, as delivered to the applicator.

- (d) Pursuant to 326 IAC 8-1-2(c) the overall control efficiency of the catalytic oxidizer shall be no less than the equivalent overall efficiency calculated by the following equation:

.....
.....
The overall efficiency of the catalytic oxidizer shall be greater than or equal to 85% **in order to satisfy the requirements of Parts (a) and (c) of this condition based on the daily weighted average VOC contents listed in Part (d) of this condition.**

(5) Comment:

Condition D.1.9(a). The manufacturer has stated that the normal operating temperature for the catalyst is 700 to 750°F and has guaranteed that 95% efficiency can be achieved at a temperature of 650°F. The burner capacity and the structural materials will not support a temperature of 800°F.

Response:

Condition D.1.9(a) shall be changed to reflect the normal minimum operating temperature of 700°F.

D.1.9 Catalytic Oxidizer Temperature

- (a) A continuous monitoring system shall be calibrated, maintained, and operated on the catalytic oxidizer for measuring the operating temperature at the inlet of the catalyst bed. The output of this system shall be recorded as a 3-hour average. For the purposes of this condition, continuous shall mean no less than once per minute.

From the date of issuance of this permit until the approved stack test results are available, the Permittee shall take appropriate response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records and Reports whenever the 3-hour average temperature of the catalytic oxidizer is below ~~800~~700°F. A 3-hour average temperature that is below ~~800~~700°F is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records and Reports shall be considered a deviation from this permit.

(6) Comment:

Will photohelic measurements be acceptable for measuring duct pressure to meet the compliance monitoring requirements of Condition D.1.10(a)?

Response:

The Office of Air Quality has determined that photohelic measurements are acceptable for measuring the duct pressure.

(7) Comment:

Regarding the VOC and HAP content record keeping requirements of Part (a)(3) of Condition D.1.11, is it necessary to keep records based on a volume weighted average?

Response:

The VOC and HAP content record keeping requirements of Part (a)(3) of Condition D.1.11 were established prior to this review. Part (a) of Condition D.1.11 requires that records be kept to establish compliance with the VOC and HAP usage limits established in Condition D.1.1. While the VOC and HAP contents do need to be kept, the contents do not need to be kept based on a volume weighted average. Therefore, the volume weighted average requirements will be removed from Part (a) of Condition D.1.11 as requested.

However, Condition D.1.2 establishes the limits associated with the requirements of 326 IAC 8-2-9 and the means of achieving compliance with the limits. Tenneco Automotive has selected catalytic oxidation pursuant to 326 IAC 8-1-2 as the means of achieving compliance with the requirements of 326 IAC 8-2-9 which establishes an overall control efficiency based on the actual VOC content of the coating or, if multiple coatings are used, the daily weighted average VOC content of all coatings, as applied. In order to establish that compliance using catalytic oxidation is being achieved, records of the operating parameters that achieve the overall control efficiency and the actual VOC content for single coatings or daily volume weighted average VOC content for multiple coatings, must be kept. Therefore, Condition D.1.11 shall be changed as follows to include the coating content record keeping requirements.

D.1.11 Record Keeping Requirements

- (a) To document compliance with Condition D.1.1, the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC and HAP usage limits and/or the VOC and HAP emission limits established in Condition D.1.1.
- (1) The VOC and HAP content of each coating material and solvent used.
.....
 - (3) The ~~volume weighted~~ VOC and HAP content of the coatings used for month;
- (b) To document compliance with Condition D.1.2, the Permittee shall maintain records of:
- (1) the ~~required~~ operating parameters specified in Conditions D.1.9 and D.1.10, **and**
 - (2) **the actual VOC content of the coating if one coating is used, in pounds of VOC per gallon of coating solids as applied, or, if multiple coatings are used, the daily volume weighted average VOC content of all coatings, as applied, in pounds of VOC per gallon of coating solids.**