

TENNESSEE AIR POLLUTION CONTROL BOARD
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
NASHVILLE, TENNESSEE 37243-1531



OPERATING PERMIT (TITLE V) Issued Pursuant to Tennessee Air Quality Act

This permit fulfills the requirements of Title V of the Federal Clean Air Act (42 U.S.C. 7661a-7661e) and the federal regulations promulgated thereunder at 40 CFR Part 70, (FR Vol. 57, No. 140, Tuesday, July 21, 1992 p.32295-32312). This permit is issued in accordance with the provisions of paragraph 1200-3-9-.02(11) of the Tennessee Air Pollution Control Regulations. The permittee has been granted permission to operate an air contaminant source in accordance with emissions limitations and monitoring requirements set forth herein.

Date Issued: **APR 28 2004**

Permit Number:
556316

Date Expires: **April 1, 2009**

Issued To:
Johnson Controls, Inc

Installation Address:
**1890 Mines Road
Pulaski**

Installation Description:

01 - Polyurethane Foam Manufacturing (3 Lines)

Emission Source Reference No.: **28-0076**
Renewal Application Due Date: **Between June 1, 2008 and October 1, 2008**

Primary SIC: **25**

Responsible Official:
Name: **Orlando Castano**
Title: **Plant Manager**

Facility Contact Person:
Name: **Randy Austin**
Title: **Environmental Coordinator**
Phone: **(931) 424-7872**

Information Relied Upon:
Application dated: **April 8, 2003**

(Continued on the next page)

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EDW

**COLUMBIA FIELD OFFICE
DIV. OF AIR POLLUTION CONTROL**

Randy R. Stephens

TECHNICAL SECRETARY

No Authority is Granted by this Permit to Operate, Construct, or Maintain any Installation in Violation of any Law, Statute, Code, Ordinance, Rule, or Regulation of the State of Tennessee or any of its Political Subdivisions.

CN-0827 (Rev.9-92)

POST OR FILE AT INSTALLATION ADDRESS

RDA-1298

SECTION E

SOURCE SPECIFIC EMISSION STANDARDS, OPERATING LIMITATIONS, and MONITORING,
RECORDKEEPING and REPORTING REQUIREMENTS

28-0076 Facility Description: Polyurethane Foam Manufacturing

E1. Fee payment: Allowable emissions basis.

FEE EMISSIONS SUMMARY TABLE FOR MAJOR SOURCE 28-0076

REGULATED POLLUTANTS	ALLOWABLE EMISSIONS (tons per AAP)	ACTUAL EMISSIONS (tons per AAP)	COMMENTS
PARTICULATE MATTER (PM)	31.8	N/A	Includes all fee emissions.
PM ₁₀	N/A	N/A	
SO ₂	N/A	N/A	
VOC	248.0	N/A	Includes all fee emissions.
NO _x	N/A	N/A	
CATEGORY OF MISCELLANEOUS HAZARDOUS AIR POLLUTANTS (HAP WITHOUT A STANDARD)**			
VOC FAMILY GROUP	N/A	AEAR	These values <u>are</u> included in VOC above.
PM FAMILY GROUP			
CATEGORY OF SPECIFIC HAZARDOUS AIR POLLUTANTS (HAP WITH A STANDARD)**			
VOC FAMILY GROUP	N/A	N/A	
NON-VOC GASEOUS GROUP	N/A	N/A	
PM FAMILY GROUP	N/A	N/A	
CATEGORY OF NSPS POLLUTANTS NOT LISTED ABOVE***			
EACH NSPS POLLUTANT NOT LISTED ABOVE	N/A	N/A	

NOTES

AAP The Annual Accounting Period (AAP) is a twelve (12) consecutive month period that begins each July 1st and ends June 30th of the following year. The present Annual Accounting Period began July 1, 2003 and ends June 30, 2004. The next Annual Accounting Period begins July 1, 2004 and ends June 30, 2005.

N/A N/A indicates that no emissions are specified for fee computation.

AEAR AEAR indicates that an Actual Emissions Analysis is Required to determine the actual emissions of:

- (1) each regulated pollutant (Particulate matter, SO₂, VOC, NO_x and so forth. See TAPCR 1200-3-26-.02(2)(i) for the definition of a regulated pollutant.),
- (2) each pollutant group (VOC Family, Non-VOC Gaseous, and Particulate Family), and
- (3) the Miscellaneous HAP Category

under consideration during the Annual Accounting Period.

* **Category Of Miscellaneous HAP (HAP Without A Standard):** This category is made-up of hazardous air pollutants that do not have a federal or state standard. Each HAP is classified into one of three groups, the VOC Family group, the Non-VOC Gaseous group, or the Particulate (PM) Family group. For fee computation, the Miscellaneous HAP Category is subject to the 4,000 ton cap provisions of subparagraph 1200-3-26-.02(2)(i).

** **Category Of Specific HAP (HAP With A Standard):** This category is made-up of hazardous air pollutants (HAP) that are subject to Federally promulgated Hazardous Air Pollutant Standards that can be imposed under Chapter 1200-3-11 or Chapter 1200-3-31. Each individual hazardous air pollutant is classified into one of three groups, the VOC Family group, the Non-VOC Gaseous group, or the Particulate (PM) Family group. For fee computation, each individual hazardous air pollutant of the Specific HAP Category is subject to the 4,000 ton cap provisions of subparagraph 1200-3-26-.02(2)(i).

*** **Category Of NSPS Pollutants Not Listed Above:** This category is made-up of each New Source Performance Standard (NSPS) pollutant whose emissions are not included in the PM, SO₂, VOC or NO_x emissions from each source in this permit. **For fee computation**, each NSPS pollutant not listed above is subject to the 4,000 ton cap provisions of subparagraph 1200-3-26-.02(2)(i).

END NOTES

The permittee shall:

- (1) Pay annual allowable based emission fees for the present Annual Accounting Period.
- (2) Pay major source annual allowable based emission fees, as requested by the responsible official, in accordance with the above Fee Emissions Summary Table beginning July 1, **2004** of the next annual accounting period.

The Tennessee Air Pollution Control Division will bill the permittee no later than April 1 prior to the end of each annual accounting period. The annual emission fee is due July 1 following the end of each annual accounting period. If any part of any fee imposed under TAPCR 1200-3-26-.02 is not paid within fifteen (15) days of the due date, penalties shall at once accrue as specified in TAPCR 1200-3-26-.02(8). Emissions for regulated pollutants shall not be double counted as specified in Condition A8(d) of this permit.

Payment of the fee due and the actual emissions analysis shall be submitted to The Technical Secretary at the address in Condition E2(b) of this permit.

TAPCR 1200-3-26-.02 (3) and (9), and 1200-3-9-.02(11)(e)1 (iii) and (vii)

E2. Reporting requirements.

(a) **Semiannual reports.** The first report shall cover the 6-month period from **October 1, 2004 to March 31, 2005** and shall be submitted within 60 days after the 6-month period ending **March 31, 2005**. Subsequent reports shall be submitted within 60 days after the end of each 6-month period following the first report.

Semiannual reports of this facility (28-0076) shall include:

- (1) Any monitoring and recordkeeping required by Conditions **B4.2** of this permit.
- (2) The visible emission evaluation readings from Condition **E3.1** of this permit if required. However, a summary report of this data is acceptable provided there is sufficient information to enable the Technical Secretary to evaluate compliance.
- (3) Identification of all instances of deviations from **ALL PERMIT REQUIREMENTS**.

These reports must be certified by a responsible official consistent with condition B4 of this permit and shall be submitted to The Technical Secretary at the address in Condition E2(b) of this permit.

TAPCR 1200-3-9-.02(11)(e)1.(iii)

(b) **Annual compliance certification.** The permittee shall submit annually compliance certifications with terms and conditions contained in Sections A, B, D and E of this permit, including emission limitations, standards, or work practices. This compliance certification shall include all of the following (provided that the identification of applicable information may cross-reference the permit or previous reports, as applicable):

- (1) The identification of each term or condition of the permit that is the basis of the certification;
- (2) The identification of the method(s) or other means used by the owner or operator for determining the compliance status with each term and condition during the certification period;
- (3) Whether such method(s) or other means provide continuous or intermittent data. Such methods and other means shall include, at a minimum, the methods and means required by this permit. If necessary, the owner or operator also shall identify any other material information that must be included in the certification to comply with section 113(c)(2) of the Federal Act, which prohibits knowingly making a false certification or omitting material information;

- (4) The status of compliance with the terms and conditions of the permit for the period covered by the certification, based on the method or means designated in E2(b)2 above. The certification shall identify each deviation and take it into account in the compliance certification. The certification shall also identify as possible exceptions to compliance any periods during which compliance is required and in which an excursion* or exceedance** as defined below occurred; and
- (5) Such other facts as the Technical Secretary may require to determine the compliance status of the source.

* "Excursion" shall mean a departure from an indicator range established for monitoring under this paragraph, consistent with any averaging period specified for averaging the results of the monitoring.

** "Exceedance" shall mean a condition that is detected by monitoring that provides data in terms of an emission limitation or standard and that indicates that emissions (or opacity) are greater than the applicable emission limitation or standard (or less than the applicable standard in the case of a percent reduction requirement) consistent with any averaging period specified for averaging the results of the monitoring.

The first certification shall cover the 12-month period from October 1, 2004 to September 31, 2005 and shall be submitted within 60 days after the 12-month period ending September 31, 2005. Subsequent certifications shall be submitted within 60 days after the end of each 12-month period following the first certification.

These certifications shall be submitted to:

The Technical Secretary
Division of Air Pollution Control
ATTN: West Tennessee Permit Program
9th Floor, L & C Annex
401 Church Street
Nashville, Tennessee 37243-1531

and

Air and EPCRA Enforcement Branch
US EPA Region IV
61 Forsyth Street, SW
Atlanta, Georgia 30303

40 CFR Part 70.6(c)(5)(iii) as amended in the Federal Register Vol.62, No.204, October 22, 1997, pages 54946 and 54947

E3. General Permit Conditions.

- E3-1. Visible emissions from the sources at this facility shall not exceed 20 percent opacity specified in Rule 1200-3-5-.03(6) of the TAPCR. Visible emissions shall be determined by EPA Method 9, as published in the Federal Register, Volume 39, Number 219 on November 12, 1974.

Compliance Method: The permittee shall assure compliance with the opacity standard by utilizing the opacity matrix dated June 18, 1996 that is enclosed as Attachment 1.

If the magnitude and frequency of excursions reported by the permittee in the periodic monitoring for emissions is unsatisfactory to the Technical Secretary, this permit may be reopened to impose additional opacity monitoring requirements.

- E3-2. Documentation for all VOC and HAP containing materials used along with material safety data sheets must be maintained and kept available for inspection by the Technical Secretary or his representative. These records must be retained for a period of not less than five years.
- E3-3. Material Safety Data Sheets (MSDS) or any other documentation which would show percent (%) Volatile Organic Compounds (VOC) by weight for all VOC and HAP containing material must be maintained for a period of not less than five years.
- E3-4. For purposes of compliance with Volatile Organic Compound (VOC) and Hazardous Air Pollutants (HAPs) emissions limits in this permit, the following logs (LOG 1 and LOG 2) shall be used. These logs shall contain all volatile emissions excluding water and/or exempt compounds and also shall contain all HAPs. Records shall also be retained to verify the HAP content of each material. This may include MSDS, formulation data, or other documentation to establish the HAP content. These logs and records must be retained for a period of not less than five years and shall be reported in accordance with condition E2 of this permit.

EXPIRATION DATE: April 1, 2009

(1) Emissions in tons of each Hazardous Air Pollutant, (2) Emissions in tons of all Hazardous Air Pollutants and (3) Emissions in tons of VOCs excluding water and/or exempt compounds for all input materials used during all intervals of 12 consecutive months. Logs containing information in the following format or an alternative format that provides the same information must be maintained at the source location and kept available for inspection by the Technical Secretary or his representative. These logs must be retained for a period of not less than five (5) years.

MONTH:

TOTALS

LOG 2 YEARLY LOG FOR {28-0076-01}

MONTH/YEAR	VOC EMISSIONS (TONS per MONTH)	(*) VOC EMISSIONS (TONS per 12 MONTHS)	HAP-1 EMISSIONS (TONS per MONTH)	(*) HAP-1 EMISSIONS (TONS per 12 MONTHS)	HAP-2 EMISSIONS (TONS per MONTH)	(*) HAP-2 EMISSIONS (TONS per 12 MONTHS)	HAP-3 EMISSIONS (TONS per MONTH)	(*) HAP-3 EMISSIONS (TONS per 12 MONTHS)	TOTAL HAP EMISSIONS (TONS per MONTH)	(*) TOTAL HAP EMISSIONS (TONS per 12 MONTHS)
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										

(*) The Tons per 12 Month value is the sum of the VOC (or HAP) emissions in the 11 months preceding the month just completed + the VOC (or HAP) emissions in the month just completed. If data is not available for the 11 months preceding the initial use of this Table, this value will be equal to the value for tons per month. For the second month it will be the sum of the first month and the second month. Indicate in parentheses the number of months summed [i.e., 6 (2) represents 6 tons emitted in 2 months].

E4. Source Specific Emission Standards.**28-0076-01****Polyurethane Foam Production**

Source consists of foam production lines where various mixtures of Polyol, Toluene Diisocyanate (TDI), and Diethanolamine (DEOA), are injected into molds to produce polyurethane foam for automotive seat cushions. Minor repairs are performed using Methylene Diphenyl Diisocyanate (MDI) as the foaming agent.

- E4-1.** Particulate matter (PM) emitted from this source shall not exceed **7.25** pounds per hour pursuant to Tennessee Air Pollution Regulations Rule 1200-3-7-.03(1), not to exceed **31.8** tons per Calendar year.

Compliance Method: The facility shall be deemed in compliance with the particulate limits if it is in compliance with the opacity standard in **Condition E3-1.**

- E4-2.** Volatile organic compounds (VOC) emitted from this source shall not exceed **248.0** tons during all intervals of twelve (12) consecutive months.

Compliance Method: The permittee shall calculate the actual quantities of VOC and HAPs emitted from this facility during each calendar month and during each twelve consecutive (12) month period. The permittee shall maintain records of these emissions in a form that readily shows compliance with this condition. (See **Logs 1 and 2** for an example) These logs must be maintained at the source location and kept available for inspection by the Technical Secretary or his representative. These logs must also be reported in accordance with condition **E2** of this permit and be retained for a period of not less than five (5) years.

- Toluene Diisocyanate (TDI) emissions shall be calculated using the emission factor of 3.29×10^{-5} lb TDI emitted per lb of TDI used. This emission factor is based on a source test performed on October 1, 1997.
- Diethanolamine (DEOA) emissions shall be calculated using the emission factor of 8.7×10^{-3} lb DEOA emitted per lb of DEOA used. This emission factor is based on a source test performed on October 1, 1997.
- Methylene Diphenyl Diisocyanate (MDI) emissions shall be calculated using the emission factor of 9.39×10^{-6} lb MDI emitted per lb of MDI used. This emission factor is based on a source test performed on October 1, 1997.

- E4-3.** The permittee is placed on notice that there is a National Standard for Hazardous Air Pollutants (NESHAP) for Flexible Polyurethane Foam Production (40 CFR Part 63 Subpart III). Should this facility exceed the major source thresholds of 10 tons of a single HAP or 25 tons of a combination of HAPs, the facility shall notify the Division within three (3) working days of discovery.

END OF PERMIT CONDITIONS

ATTACHMENT 1

OPACITY MATRIX DECISION TREE for VISIBLE EMISSION EVALUATION METHOD 9 dated JUNE 18, 1996

Decision Tree PM for Opacity for Sources Utilizing EPA Method 9

Notes:

PM = Periodic Monitoring
required by 1200-3-9-.02(11)(e)(1)(iii)

This Decision Tree outlines the criteria by which major sources can meet the periodic monitoring and testing requirements of Title V for demonstrating compliance with the visible emissions standards in paragraph 1200-3-5-.01. It is not intended to determine compliance requirements for EPA's Compliance Assurance Monitoring (CAM) Rule (formerly referred to as Enhanced Monitoring - Proposed 40 CFR 64).

Examine each emission source using this Decision Tree to determine PM required.

Use of continuous emission monitoring systems eliminates the need to do any additional periodic monitoring.

Visible Emission Evaluations (VEEs) are to be conducted utilizing EPA Method 9. The observer must be properly certified to conduct valid evaluations.

Typical Pollutants

Particulates, VOC, CO, SO₂, NO_x,
HCl, HF, HBr, Ammonia, and Methane

Initial observation to be repeated within 90 days of startup of a modified source if a new construction permit is issued for modification of the source.

A VEE conducted by TDAPC personnel after the Title V permit is issued will also constitute an initial reading.

Reader Error

EPA Method 9, Non-NSPS or Neshaps stipulated opacity standards: The TDAPC guidance is to declare non-compliance when the highest six-minute average** exceeds the standard plus 6.8% opacity (e.g. 26.8% for a 20% standard).

EPA Method 9, NSPS or NESHAPS Stipulated Opacity Standards: EPA guidance is to allow only engineering round. No allowance for reader error is given.

*Not Applicable to Asbestos Manufacturing Subject to 40 CFR 61.142

**Or second highest six minute average, if the source has an exemption period stipulated in either the Regulations or in the permit.

