



State of Ohio Environmental Protection Agency

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P.O. Box 1049
Columbus, OH 43216-1049

03/30/01

CERTIFIED MAIL

RE: Draft Title V Chapter 3745-77 permit

13-18-04-0267
Sherwin-Williams Diversified Brands, Inc.
Ted Cligrow
26300 Fargo Avenue
Bedford Heights, OH 44146

Dear Ted Cligrow:

You are hereby notified that the Ohio Environmental Protection Agency has prepared the enclosed draft of the Title V permit for the facility referenced above. The purpose of this draft is to solicit public comments. A public notice concerning the draft will appear in the Ohio EPA Weekly Review and the major newspaper in the county where the facility is located. Comments and/or a request for a public hearing from the public and any affected parties will be accepted by Cleveland Division of Air Pollution Control within 30 days of the date of publication in the newspaper. You will be notified in writing if a public hearing is scheduled.

A decision on processing the Title V permit will be made after consideration of written public comments and oral testimony (if a public hearing is conducted). After the comment period, you will be provided with a Preliminary Proposed Title V permit and an opportunity to comment prior to the Proposed Title V permit submittal to USEPA.

If you have any questions or comments concerning this draft Title V permit, please contact Cleveland Division of Air Pollution Control.

Very truly yours,

Thomas G. Rigo, Manager
Field Operations and Permit Section
Division of Air Pollution Control

cc: USEPA (electronically submitted)
Michael Ahern, DAPC PMU
Cleveland Division of Air Pollution Control
Pennsylvania



Ohio EPA

State of Ohio Environmental Protection Agency

DRAFT TITLE V PERMIT

Issue Date: 03/30/01

Effective Date: To be entered upon final issuance

Expiration Date: To be entered upon final issuance

This document constitutes issuance to:

Sherwin-Williams Diversified Brands, Inc.
26300 Fargo Avenue
Bedford Heights, OH 44146

of a Title V permit for Facility ID: 13-18-04-0267

Emissions Unit ID (Company ID)/

Emissions Unit Activity Description:

P002 (Line # 3)

Mixing, Filling, & Charging of Aerosol Containers

P003 (Line # 5)

Mixing, Filling, & Charging of Aerosol Containers

P004 (Line # 6)

Mixing, Filling, & Charging of Aerosol Containers

P005 (Line # 7)

Mixing, Filling, & Charging of Aerosol Containers

P006 (Can Piercing)

Equipment Used to Pierce Aerosol Containers

You will be contacted approximately eighteen (18) months prior to the expiration date regarding the renewal of this permit. If you are not contacted, please contact the appropriate Ohio EPA District Office or local air agency listed below. This permit and the authorization to operate the air contaminant sources (emissions units) at this facility shall expire at midnight on the expiration date shown above. If a renewal permit is not issued prior to the expiration date, the permittee may continue to operate pursuant to OAC rule 3745-77-04(A) and in accordance with the terms of this permit beyond the expiration date, provided that a complete renewal application is submitted no earlier than eighteen (18) months and no later than one-hundred eighty (180) days prior to the expiration date.

Described below is the current Ohio EPA District Office or local air agency that is responsible for processing and administering your Title V permit:

Cleveland Division of Air Pollution Control
1925 St. Clair
Cleveland, OH 44114
(216) 664-2324

OHIO ENVIRONMENTAL PROTECTION AGENCY

Christopher Jones
Director

PART I - GENERAL TERMS AND CONDITIONS

A. State and Federally Enforceable Section

1. Monitoring and Related Recordkeeping and Reporting Requirements

- a. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
 - i. The date, place (as defined in the permit), and time of sampling or measurements.
 - ii. The date(s) analyses were performed.
 - iii. The company or entity that performed the analyses.
 - iv. The analytical techniques or methods used.
 - v. The results of such analyses.
 - vi. The operating conditions existing at the time of sampling or measurement.
- b. Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.
- c. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
 - i. Reports of any required monitoring and/or recordkeeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
 - ii. Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be promptly made to the appropriate Ohio EPA District Office or local air agency. These quarterly written reports shall satisfy the requirements of OAC rule 3745-77-07(A)(3)(c)(i) and (ii) pertaining to the submission of monitoring reports every six months and OAC rule 3745-77-07(A)(3)(c)(iii) pertaining to the prompt reporting of all deviations except malfunctions, which shall be reported in accordance with OAC rule 3745-15-06. The written reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.) See B.8 below if no deviations occurred during the quarter.
 - iii. Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted to the appropriate Ohio EPA District Office or local air agency every six months, i.e., by January 31 and July 31 of each year for the previous six calendar months. These semi-

annual written reports shall satisfy the requirements of OAC rule 3745-77-07(A)(3)(c)(i) and (ii) pertaining to the reporting of any deviations related to the monitoring, recordkeeping, and reporting requirements. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.

- iv. Each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.

2. Scheduled Maintenance/Malfunction Reporting

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction, i.e., upset, of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports submitted pursuant to OAC rule 3745-15-06 shall satisfy the requirements of OAC rule 3745-77-07(A)(3)(c)(iii) pertaining to the prompt reporting of deviations caused by malfunctions or upsets.

Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emission unit(s) that is (are) served by such control system(s).

3. Risk Management Plans

If the permittee is required to develop and register a risk management plan pursuant to section 112(r) of the Clean Air Act, as amended, 42 U.S.C. 7401 et seq. ("Act"), the permittee shall comply with the requirement to register such a plan.

4. Title IV Provisions

If the permittee is subject to the requirements of 40 CFR Part 72 concerning acid rain, the permittee shall ensure that any affected emissions unit complies with those requirements. Emissions exceeding any allowances that are lawfully held under Title IV of the Act, or any regulations adopted thereunder, are prohibited.

5. Severability Clause

A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.

6. General Requirements

- a. The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the

Act, and is grounds for enforcement action or for permit revocation, revocation and reissuance, or modification, or for denial of a permit renewal application.

- b. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.
- c. This permit may be modified, reopened, revoked, or revoked and reissued, for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.
- d. This permit does not convey any property rights of any sort, or any exclusive privilege.
- e. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

7. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78.

8. Marketable Permit Programs

No revision of this permit is required under any approved economic incentive, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for in this permit.

9. Reasonably Anticipated Operating Scenarios

The permittee is hereby authorized to make changes among operating scenarios authorized in this permit without notice to the Ohio EPA, but, contemporaneous with making a change from one operating scenario to another, the permittee must record in a log at the permitted facility the scenario under which the permittee is operating. The permit shield provided in these general terms and conditions shall apply to all operating scenarios authorized in this permit.

10. Reopening for Cause

This Title V permit will be reopened prior to its expiration date under the following conditions:

- a. Additional applicable requirements under the Act become applicable to one or more emissions units covered by this permit, and this permit has a remaining term of three or more years. Such a reopening shall be completed not later than eighteen months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to paragraph (E)(1) of OAC rule 3745-77-08.
- b. This permit is issued to an affected source under the acid rain program and additional requirements (including excess emissions requirements) become applicable. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the permit, and shall not require a reopening of this permit.
- c. The Director of the Ohio EPA or the Administrator of the U.S. EPA determines that the federally applicable requirements in this permit are based on a material mistake, or that inaccurate statements were made in establishing the emissions standards or other terms and conditions of this permit related to such federally applicable requirements.
- d. The Administrator of the U.S. EPA or the Director of the Ohio EPA determines that this permit must be revised or revoked to assure compliance with the applicable requirements.

11. Federal and State Enforceability

Only those terms and conditions designated in this permit as federally enforceable, that are required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA, the State, and citizens under the Act. All other terms and conditions of this permit shall not be federally enforceable and shall be enforceable under State law only.

12. Compliance Requirements

- a. Any document (including reports) required to be submitted and required by a federally applicable requirement in this Title V permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.
- b. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
 - i. At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.

- ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with paragraph (E) of OAC rule 3745-77-03.
 - iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
 - iv. As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- c. The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually, or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
- i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
 - ii. An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.
- d. Compliance certifications concerning the terms and conditions contained in this permit that are federally enforceable emission limitations, standards, or work practices, shall be submitted to the appropriate Ohio EPA District Office or local air agency in the following manner and with the following content:
- i. Compliance certifications shall be submitted annually on a calendar year basis. The annual certification shall be submitted on or before April 30th of each year during the permit term.
 - ii. Compliance certifications shall include the following:
 - (a) An identification of each term or condition of this permit that is the basis of the certification.
 - (b) The permittee's current compliance status.
 - (c) Whether compliance was continuous or intermittent.
 - (d) The method(s) used for determining the compliance status of the source currently and over the required reporting period.
 - (e) Such other facts as the Director of the Ohio EPA may require in the permit to determine the compliance status of the source.
 - iii. Compliance certifications shall contain such additional requirements as may be specified pursuant to sections 114(a)(3) and 504(b) of the Act.

13. Permit Shield

- a. Compliance with the terms and conditions of this permit (including terms and conditions established for alternate operating scenarios, emissions trading, and emissions averaging, but excluding terms and conditions for which the permit shield is expressly prohibited under OAC

rule 3745-77-07) shall be deemed compliance with the applicable requirements identified and addressed in this permit as of the date of permit issuance.

- b. This permit shield provision shall apply to any requirement identified in this permit pursuant to OAC rule 3745-77-07(F)(2), as a requirement that does not apply to the source or to one or more emissions units within the source.

14. Operational Flexibility

The permittee is authorized to make the changes identified in OAC rule 3745-77-07(H)(1)(a) to (H)(1)(c) within the permitted stationary source without obtaining a permit revision, if such change is not a modification under any provision of Title I of the Act [as defined in OAC rule 3745-77-01(JJ)], and does not result in an exceedance of the emissions allowed under this permit (whether expressed therein as a rate of emissions or in terms of total emissions), and the permittee provides the Administrator of the U.S. EPA and the appropriate Ohio EPA District Office or local air agency with written notification within a minimum of seven days in advance of the proposed changes, unless the change is associated with, or in response to, emergency conditions. If less than seven days notice is provided because of a need to respond more quickly to such emergency conditions, the permittee shall provide notice to the Administrator of the U.S. EPA and the appropriate District Office of the Ohio EPA or local air agency as soon as possible after learning of the need to make the change. The notification shall contain the items required under OAC rule 3745-77-07(H)(2)(d).

15. Emergencies

The permittee shall have an affirmative defense of emergency to an action brought for noncompliance with technology-based emission limitations if the conditions of OAC rule 3745-77-07(G)(3) are met. This emergency defense provision is in addition to any emergency or upset provision contained in any applicable requirement.

16. Off Permit Changes

The owner or operator of a Title V source may make any change in its operations or emissions at the source that is not specifically addressed or prohibited in the Title V permit, without obtaining an amendment or modification of the permit, provided that the following conditions are met:

- a. The change does not result in conditions that violate any applicable requirements or that violate any existing federally enforceable permit term or condition;
- b. The permittee provides contemporaneous written notice of the change to the director and the administrator, except that no such notice shall be required for changes that qualify as insignificant emission levels or activities as defined in OAC rule 3745-77-01(U). Such written notice shall describe each such change, the date of such change, any change in emissions or pollutants emitted, and any federally applicable requirement that would apply as a result of the change;
- c. The change shall not qualify for the permit shield under OAC rule 3745-77-07(F);

- d. The permittee shall keep a record describing all changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes; and
- e. The change is not subject to any applicable requirement under Title IV of the Act or is not a modification under any provision of Title I of the Act.

Paragraph (I) of rule 3745-77-07 of the Administrative Code applies only to modification or amendment of the permittee's Title V permit. The change made may require a permit to install under Chapter 3745-31 of the Administrative Code if the change constitutes a modification as defined in that Chapter. Nothing in paragraph (I) of rule 3745-77-07 of the Administrative Code shall affect any applicable obligation under Chapter 3745-31 of the Administrative Code.

(For further clarification, the permittee can refer to Engineering Guide #63 that is available in their STARSHIP software package.)

17. Compliance Method Requirements

Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defenses otherwise available to the permittee, including but not limited to, any challenge to the Credible Evidence Rule (see 62 Fed. Reg. 8314, Feb. 24, 1997), in the context of any future proceeding.

18. Insignificant Activity

Each insignificant activity that has one or more applicable requirements shall comply with those applicable requirements.

B. State Only Enforceable Section

1. Permit to Install Requirement

Prior to the “installation” or “modification” of any “air contaminant source,” as those terms are defined in OAC rule 3745-31-01, a permit to install must be obtained from the Ohio EPA pursuant to OAC Chapter 3745-31.

2. Reporting Requirements Related to Monitoring and Recordkeeping Requirements

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or recordkeeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
- b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

3. Records Retention Requirements

Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

4. Inspections and Information Requests

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon the premises of this source at any reasonable time for purposes of making inspections, conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

5. Scheduled Maintenance/Malfunction Reporting

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s).

6. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

7. Air Pollution Nuisance

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

8. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations (See Section A of This Permit)

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

Part II - Specific Facility Terms and Conditions

A. State and Federally Enforcable Section

None

B. State Only Enforceable Section

1. The following insignificant emissions units are located at this facility:

T001 - Solvent storage tank
T002 - Solvent storage tank
T003 - Solvent storage tank
T004 - Solvent storage tank
T005 - Solvent storage tank
T006 - Solvent storage tank
T007 - Solvent storage tank
T008 - Solvent storage tank
T010 - Propellant tank
T011 - Propellant tank
T012 - Propellant tank
T013 - Propellant tank
T014 - Propellant tank
T015 - Propellant tank
T016 - Propellant tank
T017 - Propellant tank
T018 - Propellant tank
T019 - Propellant tank
T020 - Propellant tank
T021 - Propellant tank
T022 - Propellant tank
T023 - Propellant tank
B001 - Boiler
B002 - Boiler
B003 - Boiler
B004 - Boiler
B005 - Boiler
B006 - Boiler
B007 - Boiler
P008 - Quality Assurance/Quality Control Laboratory
Z002 - Emergency Diesel Fire Water Pump
Z003 - Parts Cleaning Stations

Each insignificant emissions unit at this facility must comply with all applicable State and federal regulations, as well as any emission limitations and/or control requirements contained within a Permit to Install for the emissions unit.

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Line # 3 (P002)
Activity Description: Mixing, Filling, & Charging of Aerosol Containers

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Aerosol filling line (liquid mixing, liquid filling of aerosol cans, propellant filling of aerosol cans, propellant line purging, and manual cleaning of filled aerosol cans) with the gashouse operations (propellant filling and propellant line purging) controlled by thermal incinerator	OAC rule 3745-31-05(A)(3) PTI 13-3186 (issued 02/26/97, and modified 04/30/97)	Volatile organic compound (VOC) emissions from liquid mixing and liquid filling of aerosol cans shall not exceed 8 lbs/hr, 40 lbs/day, and 7.3 tons/year.
	Findings and Orders entered into the Director's Journal on August 18, 1995 and approved by USEPA as a SIP revision for this facility (formerly Sprayon Products Incorporated) on April 25, 1996	See section A.1.2.a. below.
	OAC rule 3745-21-07(G)(2)	See section A.1.2.b. below.
	OAC rule 3745-17-11(B)(1)	During the loading of solid materials into a liquid mixing tank, particulate emissions shall not exceed 0.551 pound/hour (based on Table I).
	OAC rule 3745-17-07(A)	During the loading of solid materials into a liquid mixing tank, visible particulate emissions shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

2. Additional Terms and Conditions

- 2.a. For the mixing tanks, gasser operations, can brushing operations, and can piercing operations at this facility, the total VOC emissions in any month shall not exceed 0.75 pound of VOC per 1000 aerosol cans produced. (Note: This includes all VOC emissions from emissions units P002 through P006, except for liquid filling of aerosol cans. Emissions unit P001 has been shut down.)

2. Additional Terms and Conditions (continued)

- 2.b.** The requirements under this rule are not applicable due to the federally enforceable, site-specific requirements, based on reasonably available control technology (RACT), contained in the 8/18/95 Director's Findings and Orders. These RACT requirements are intended to be added to OAC rule 3745-21-09 pursuant to "Section VII.: Termination" of the 8/18/95 Findings and Orders. Also, as specified within OAC rule 3745-21-07(A)(2)(a), the requirements under OAC rule 3745-21-07 shall not apply to " . . . sources which are in compliance with or specifically exempted from the applicable requirements of rule 3745-21-09 of the Administrative Code."

II. Operational Restrictions

1. When the gashouse is in VOC operation, the emissions from the gashouse shall be vented to the thermal incinerator. The gashouse is in VOC operation when either the propellant being used to fill the aerosol cans contains VOC or the propellant being purged from the propellant line contains VOC.
2. The average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit's gashouse is vented to the thermal incinerator, shall not be more than 50 degrees Fahrenheit below the average combustion temperature during the most recent emissions test during which the destruction efficiency of the thermal incinerator was determined as specified under section A.V.3., and the test results showed compliance with the VOC emissions limit for this emissions unit as specified under A.V.1.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall collect and record for this emissions unit the following production information each day and maintain the information at the facility:
 - a. number of operating hours for the aerosol filling line, and
 - b. number of aerosol cans produced.
2. The permittee shall collect and record for this emissions unit the following production information each month and maintain the information at the facility:
 - a. number of operating hours for the aerosol filling line (sum of daily section A.III.1.a. data);
 - b. number of aerosol cans produced (sum of daily section A.III.1.b. data);
 - c. name and amount (gallons) of each VOC liquid filled into aerosol cans;
 - d. number of aerosol cans filled with a VOC propellant by name of propellant, type of propellant filler (needle fill or Sepro fill), and type of emissions venting (vented to thermal incinerator or not vented to thermal incinerator);
 - e. number of VOC propellant line purges by name of propellant and type of emissions venting (vented to thermal incinerator or not vented to thermal incinerator); and
 - f. name and amount (gallons) of each VOC liquid (solvent) used in the manual aerosol can cleaning operation (can brushing operation).
3. The permittee shall collect and record for this emissions unit the following chemical and physical properties for the VOC liquids and VOC propellants used in this emissions unit:
 - a. for any VOC liquid used in liquid mixing and liquid filling of aerosol cans, the liquid name, the liquid density (pounds/gallon), and the vapor pressure (mm Hg) at 80 degrees F and 90 degrees F;
 - b. for any VOC liquid used in manual aerosol can cleaning, the liquid name and the liquid density (lbs/gal); and
 - c. for any VOC propellant, the liquid density (lbs/gal) under usual propellant storage temperature and pressure, the vapor density (lbs/cc) at propellant filler temperature, and the fraction VOC by weight.

III. Monitoring and/or Record Keeping Requirements (continued)

4. The permittee shall calculate and record for each month the following information for this emissions unit:
 - a. monthly amount of VOC emissions (pounds) from the liquid mixing operation, in accordance with section A.V.2.a.;
 - b. monthly amount of VOC emissions (pounds) from the liquid filling operation, in accordance with section A.V.2.b.;
 - c. monthly amount of VOC emissions (pounds) from the gashouse operations (propellant filling and propellant line purging), in accordance with section A.V.2.c.;
 - d. monthly amount of VOC emissions (pounds) from the manual aerosol can cleaning operation (can brushing operation), in accordance with section A.V.2.d.;
 - e. monthly number of aerosol cans produced (sum of daily section A.III.1.b. data);
 - f. monthly amount of VOC emissions (pounds) from this emissions unit, excluding liquid can filling, which is the sum of data recorded under sections A.III.4.a., A.III.4.c., and A.III.4.d. for this emissions unit;
 - g. VOC emissions (pounds) for each day in the month from the combined liquid mixing and filling operations, in accordance with section A.V.1.b.i.; and
 - h. average hourly amount of VOC emissions (pounds) for each day in the month from the combined liquid mixing and filling operations, in accordance with section A.V.1.b.ii.
5. The permittee shall calculate and record for each month the following information for emissions units P002 through P006:
 - a. monthly amount of VOC emissions (pounds), which is a sum of the monthly VOC emissions recorded under section A.III.4.f. of the part III terms and conditions for emissions units P002 through P005 plus the monthly VOC emissions recorded under section A.III.2. of the part III terms and conditions for emissions unit P006;
 - b. monthly number of aerosol cans produced, which is a sum of the monthly aerosol can production recorded under section A.III.4.e. of the part III terms and conditions for emissions units P002 through P005; and
 - c. monthly VOC emissions rate in pound/1000 cans, which is 1000 times the value from section A.III. 5.a. divided by the value from section A.III.5.b., and rounded to two decimal places.
6. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal incinerator when the emissions unit's gashouse is in VOC operation. Temperature shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

The permittee shall collect and record the following information for each day of gashouse operation:

- a. a log of operating time for each of the following: gashouse ventilation to the thermal incinerator, gashouse ventilation directly to ambient air, thermal incinerator operation, temperature monitoring equipment operation, gashouse in VOC operation, and gashouse not in VOC operation;
- b. a log of all 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit's gashouse is in VOC operation, was more than 50 degrees Fahrenheit below the average combustion temperature during the most recent emissions test during which the destruction efficiency of the thermal incinerator was determined as specified under section A.V.3., and the test results showed compliance with the VOC emissions limit for this emissions unit as specified under A.V.1.; and
- c. a log of the bypass venting of gashouse emissions to ambient air and any downtime for the thermal incinerator and temperature monitoring equipment, when the emissions unit's gashouse is in VOC operation.

III. Monitoring and/or Record Keeping Requirements (continued)

7. The permittee shall perform weekly checks, when pigment is added to the mixing tanks of this emissions unit and when the weather conditions allow, for any visible particulate emissions from the stack(s) serving the mixing tanks. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emissions incident; and
 - e. any corrective actions taken to eliminate the visible emissions.

IV. Reporting Requirements

1. The permittee shall notify the appropriate Ohio EPA District Office or local air agency of any record of an emissions rate exceedance listed below. This notification shall be submitted within 45 days after the end of the month that the exceedance occurs.
 - a. Emissions rate recorded under section A.III.5.c. exceeds 0.75 lb VOC/1000 cans produced.
 - b. Emissions rate under section A.III.4.h. exceeds 8 lbs VOC/hr.
 - c. Emissions rate under section A.III.4.g. exceeds 40 lbs VOC/day.
2. The permittee shall submit to the appropriate Ohio EPA District Office or local air agency quarterly deviation (excursion) reports which identify the deviations recorded under sections A.III.6.b. and A.III.6.c. These quarterly summaries shall be submitted by April 30, July 31, October 31, and January 31 and shall cover the records for the previous calendar quarters.
3. The permittee shall submit to the appropriate Ohio EPA District Office or local air agency quarterly summaries of the records specified under sections A.III.2., A.III.3., A.III.4., and A.III.5. These quarterly summaries shall be submitted by April 30, July 31, October 31, and January 31 and shall cover the records for the previous calendar quarters.
4. The permittee shall submit to the appropriate Ohio EPA District Office or local air agency quarterly written reports of the records specified under section A.III.7. which (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These quarterly reports shall be submitted to the appropriate Ohio EPA District Office or local air agency by April 30, July 31, October 31, and January 31 and shall cover the records for the previous calendar quarters.

V. Testing Requirements

1. Compliance with the emissions limitations in section A.I. of these terms and conditions shall be determined as follows:

V. Testing Requirements (continued)

1.a. Emission Limitation:

For the mixing tanks, gasser operations, can brushing operations, and can piercing operations at this facility, the total VOC emissions in any month shall not exceed 0.75 pound of VOC per 1000 aerosol cans produced.

Applicable Compliance Method:

Compliance shall be demonstrated by means of:

- i. record keeping specified in sections A.III.2., A.III.3., A.III.4., and A.III.5. of the part III terms and conditions of emissions units P002 through P005;
- ii. record keeping specified in sections A.III.1., A.III.2., and A.III.3. of the part III terms and conditions of emissions unit P006;
- iii. calculating the VOC emissions rate for the mixing tanks (mixing operations), gasser operations (gashouse operations), can brushing operations (manual can cleaning), and can piercing operations at this facility, as specified in section A.V.2. of the part III terms and conditions of emissions units P002 through P006;
- iv. testing the thermal incinerator, as specified in A.V.3. of the part III terms and conditions of emissions units P002 through P005; and
- v. operating and maintaining a continuous temperature monitor and recorder for the thermal incinerator and maintaining a log of gashouse operations, as specified in section A.III.6. of the part III terms and conditions of emissions units P002 through P005.

In the event additional emissions testing is required to demonstrate compliance, the VOC emissions shall be determined in accordance with OAC rule 3745-21-10(C).

1.b. Emission Limitation:

Volatile organic compound (VOC) emissions from liquid mixing and liquid filling shall not exceed 8 lbs/hr, 40 lbs/day, and 7.3 tons/year.

Applicable Compliance Method:

Compliance shall be demonstrated by the record keeping in sections A.III.1., A.III.3.a., A.III.4.a. and A.III.4.b. and by calculating VOC emissions from liquid mixing and liquid filling as follows:

- i. VOC emissions for each day in the month shall be calculated as (sum of monthly VOC emissions, in pounds, from sections A.IV.4.a and A.IV.4.b..) x (number of aerosol cans produced that day)/(total number of aerosol cans produced during the month).
- ii. VOC emissions for each hour in the day shall be an hourly average VOC emission that is calculated as (daily VOC emissions from section A.V.1.b.i.)/(operating hours in that day).
- iii. VOC emissions for the year are not needed to demonstrate compliance because the annual VOC emissions limit of 7.3 tons/year is not more stringent than the daily VOC limit multiplied by 365 days per year.

In the event emissions testing is required to demonstrate compliance, the VOC emissions shall be determined in accordance with OAC rule 3745-21-10(C).

V. Testing Requirements (continued)

- 1.c.** Emission Limitation:
Particulate emissions shall not exceed 0.551 pound/hour during the loading of solid materials into a liquid mixing tank.

Applicable Compliance Method:

The liquid mixing tanks for this emissions unit are similar to the mixing tanks at paint manufacturing facilities in which the particulate emissions are estimated to be 0.5 to 1.0 percent of the pigment handled, based on USEPA reference document AP-42: Compilation of Air Pollutant Emission Factors, Fifth Edition (page 6.4-1). This facility infrequently adds some pigment to the liquid mixing tanks, and such infrequent and low usage of pigment would not normally cause a particulate emissions to exceed this emissions limitation. Compliance with the visible particulate emissions limitation under section A.III.V.1.d. provides further assurance of compliance of this emissions limitation.

In the event testing is required to demonstrate compliance, the particulate emissions shall be determined by Method 5, 40 CFR 60, Appendix A.

- 1.d.** Emission Limitation:
During the loading of solid materials into a liquid mixing tank, visible particulate emissions shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:

Compliance shall be demonstrated by the record keeping in section A.III.7. and the reporting in section A.IV.4.

In the event testing is required to demonstrate compliance, the visible emissions shall be determined by OAC rule 3745-17-03(B)(1).

- 2.** The VOC emission calculations for this facility were taken in part from the permittee's Air Pollution Emission Model. The VOC emissions from this emissions unit shall be calculated as follows:

- 2.a.** For liquid mixing operations, the monthly VOC emissions rate, $E(\text{mixing})$, shall be calculated as follows:

i. $E(\text{mixing}) = E_i(\text{loading}) + E_i(\text{venting})$

where:

$E(\text{loading}) =$ monthly VOC emissions from loading VOC liquids into mixing tanks

$E(\text{venting}) =$ monthly VOC emissions from venting VOC liquids during mixing .

ii. For loading VOC liquid into a mixing tank, the monthly VOC emissions shall be calculated, based on the Ideal Gas Law and displacement of saturated vapors at 80 degrees F (27 degrees C), as follows:

$E(\text{loading}) =$ monthly sum of $E_i(\text{loading})$ for all VOC liquid "i" loaded into mixing tanks

$$E_i(\text{loading}) = P_i * X_i * V_i * MW_i / (R * T)$$

where:

$E_i(\text{loading}) =$ lbs of VOC emissions during the month from loading VOC liquid "i" into mixing tanks

$P_i =$ vapor pressure of VOC liquid "i" at 80 degrees F, in mmHg

$V_i =$ volume of VOC liquid "i" charged to mixing tanks during the month in cubic feet (equals monthly gallons of liquid "i" divided by 7.48 gal/cu ft)

$R = 999$ mmHg-cubic feet/lb mole-degrees K

$T =$ temperature in degrees K (equals 273 plus 27 degrees C)

$MW_i =$ molecular weight of VOC liquid "i", in lbs/lb mole

V. Testing Requirements (continued)

iii. For venting of VOC liquids during mixing, the monthly VOC emissions shall be calculated, based on the Ideal Gas Law and venting of saturated vapors at 90 degrees F (32 degrees C) as follows:

$E(\text{venting}) = \text{monthly sum of } E_i(\text{venting}) \text{ for all VOC liquid "i" loaded into mixing tanks}$

$$E_i(\text{venting}) = P_i * X_i * V_{i,v} * MW_i / (R * T)$$

where:

$E_i(\text{venting}) = \text{lbs of VOC emissions during the month for venting a VOC liquid "i" during mixing}$

$P_i = \text{vapor pressure of VOC liquid "i" at 90 degrees F, in mmHg}$

$V_{i,v} = \text{volume (cu ft) of saturated vapors removed by the ventilation system during mixing of VOC liquid "i" (equals monthly gallons of VOC liquid "i" times } 5 * 30 / 350 \text{ based on 5\% of the total ventilation flow rate or 5 cu ft/min, an average mixing time of 30 minutes per batch, and a typical batch size of 350 gallons)}$

$R = 999 \text{ mmHg-cubic feet/lb mole-degrees K}$

$T = \text{temperature in degrees K (equals 273 plus 32 degrees C)}$

$MW_i = \text{molecular weight of VOC liquid "i", in lbs/lb mole}$

2.b. For the liquid filling of aerosol cans, the monthly VOC emissions shall be calculated, based on the Ideal Gas Law and displacement of saturated vapors at 80 degrees F (27 degrees C) as follows:

$E(\text{filling}) = \text{monthly sum of } E_i(\text{filling}) \text{ for all VOC liquid "i" filling of aerosol cans}$

$$E_i(\text{filling}) = P_i * X_i * V_i * MW_i / (R * T)$$

where:

$E_i(\text{filling}) = \text{lbs of VOC emissions during the month for VOC liquid "i" filling of aerosol cans}$

$P_i = \text{vapor pressure of VOC liquid "i" at 80 degrees F, in mmHg}$

$V_i = \text{volume of VOC liquid "i" filled into aerosol cans during the month in cubic feet (equals monthly gallons of VOC liquid "i" divided by 7.48 gal/cu ft)}$

$R = 999 \text{ mmHg-cubic feet/lb mole-degrees K}$

$T = \text{temperature in degrees K (equals 273 plus 27 degrees C)}$

$MW_i = \text{molecular weight of VOC liquid "i", in lbs/lb mole}$

V. Testing Requirements (continued)

2.c. For the gasser (gashouse) operations, the monthly VOC emissions rate, EG(total), shall be calculated as follows:

i. $EG(\text{total}) = EG(\text{filling}) + EG(\text{purging})$

where:

$EG(\text{filling}) =$ monthly VOC emissions from filling aerosol cans with VOC propellant

$EP(\text{purging}) =$ monthly VOC emissions from purging of lines containing VOC propellant

ii. For the filling of aerosol cans with VOC propellant and the purging of lines containing VOC propellant, the monthly VOC emissions shall be calculated as follows:

$EG(\text{filling}) =$ monthly sum of $(NC_{p,f,v}) \times (EF_{p,f}) \times (K_p) \times (1 - CE_{p,v}/100) \times (VOC_p)$

$EP(\text{purging}) =$ monthly sum of $(NP_{p,v}) \times (V_p) \times (LD_p) \times (1 - R_p) \times (1 - CE_{p,v}/100) \times (VOC_p)$

where:

$CE_{p,v}$ = control efficiency for propellant "p" VOC emissions and type of venting "v" for those emissions, based on venting of VOC propellant emissions to thermal incinerator or not and the VOC control efficiency of the thermal incinerator

$CE_{p,v} = 0\%$ if propellant "p" VOC emissions are not vented to the thermal incinerator

$CE_{p,v} = 98\%$ if propellant "p" VOC emissions are vented to the thermal incinerator and the thermal incinerator has not yet been compliance tested (98% is based on design efficiency from PTI application for emissions unit P003)

$CE_{p,v}$ = overall VOC control efficiency from most recent compliance test of the thermal incinerator, if propellant "p" VOC emissions are vented to the thermal incinerator and the thermal incinerator has been compliance tested

$EF_{p,f}$ = emission factor for VOC propellant gas loss when filling cans with VOC propellant "p", based on propellant filler type "f" (needle filling or Sepro filling)

$EF_{p,f} = 0.2$ cc/can for needle filling of VOC propellant "p"

$EF_{p,f} = 1.0$ cc/can for Sepro filling of VOC propellant "p"

K_p = conversion factor for gaseous VOC propellant "p" expressed in lbs/cc at standard conditions

LD_p = liquid density of VOC propellant "p" at storage temperature and pressure, in pounds/gallon

$NC_{p,f,v}$ = number of cans produced with VOC propellant "p" and filling type "f" during the month by type of venting "v" (vented to thermal incinerator or not vented to thermal incinerator)

$NP_{p,v}$ = number of propellant line purges during the month for VOC propellant "p" by type of venting "v" (vented to thermal incinerator or not vented to thermal incinerator)

R_p = fraction by weight of purged VOC propellant "p" which is recovered and stored in a pressure tank

V_p = volume of propellant line purged for VOC propellant "p", in gallons

VOC_p = fraction VOC by weight for VOC propellant "p" (usually 1 for a VOC containing propellant)

V. Testing Requirements (continued)

- 2.d. For the manual aerosol can cleaning operation (can brushing operation), VOC emissions shall be equal to the mass of VOC solvent consumed in the operation. The monthly VOC emissions from can brushing shall be calculated as the sum of VOC emissions for all solvents consumed during that month. The VOC emissions from each VOC solvent consumed is calculated as the number of VOC solvent gallons consumed during the month times the VOC solvent density (pounds/gallon).
3. The permittee shall conduct, or have conducted, emissions testing for the thermal incinerator to demonstrate the thermal incinerator's control efficiency for VOC emissions from this emissions unit's gashouse operations in accordance with the following requirements:
- a. The emissions testing shall be conducted within 3 months after completed installation of the thermal incinerator, and subsequent emissions testing shall be conducted within 36 months after the previous emissions testing.
 - b. The emissions testing shall be conducted to determine the incinerator's destruction efficiency for volatile organic compounds by means of the test method in Method 25 or 25A of 40 CFR Part 60, Appendix A.
 - c. The emissions testing shall be conducted to determine the VOC capture efficiency of the vapor collection system used to transport VOC emissions from the emissions unit's gashouse operations (propellant filling of aerosol cans and propellant line purging) to the thermal incinerator by means of test methods contained in Method 204 through 204E of 40CFR Part 51, Appendix M, or the alternative capture efficiency testing protocols specified in the USEPA, Office of Air Quality Planning and Standards document entitled "Guidelines for Determining Capture Efficiency," dated January 9, 1995.
 - d. The tests shall be conducted while the emissions unit's gashouse is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.
 - e. The control efficiency of the thermal incinerator shall be the destruction efficiency times the capture efficiency divided by 100.
4. For any emissions testing conducted under section A.V., the permittee shall meet the following requirements:
- a. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).
 - b. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
 - c. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s).

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Line # 5 (P003)

Activity Description: Mixing, Filling, & Charging of Aerosol Containers

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Aerosol filling line (liquid mixing, liquid filling of aerosol cans, propellant filling of aerosol cans, propellant line purging, and manual cleaning of filled aerosol cans) with the gashouse operations (propellant filling and propellant line purging) controlled by thermal incinerator	OAC rule 3745-31-05(A)(3) PTI 13-03644 (issued 6/28/00)	Organic compound (OC) emissions from this emissions unit shall not exceed 23.7 lbs/hr and 103.80 tons/year.
	Findings and Orders entered into the Director's Journal on August 18, 1995 and approved by USEPA as a SIP revision for this facility (formerly Sprayon Products Incorporated) on April 25, 1996	See section A.1.2.a. below.
	OAC rule 3745-21-07(G)(2)	See section A.1.2.b. below.
	OAC rule 3745-17-11(B)(1)	During the loading of solid materials into a liquid mixing tank, particulate emissions shall not exceed 0.551 pound/hour (based on Table I).
	OAC rule 3745-17-07(A)	During the loading of solid materials into a liquid mixing tank, visible particulate emissions shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

2. Additional Terms and Conditions

- 2.a. For the mixing tanks, gasser operations, can brushing operations, and can piercing operations at this facility, the total VOC emissions in any month shall not exceed 0.75 pound of VOC per 1000 aerosol cans produced. (Note: This includes all VOC emissions from emissions units P002 through P006, except for liquid filling of aerosol cans. Emissions unit P001 has been shut down.)

2. Additional Terms and Conditions (continued)

- 2.b.** The requirements under this rule are not applicable due to the federally enforceable, site-specific requirements, based on reasonably available control technology (RACT), contained in the 8/18/95 Director's Findings and Orders. These RACT requirements are intended to be added to OAC rule 3745-21-09 pursuant to "Section VII.: Termination" of the 8/18/95 Findings and Orders. Also, as specified within OAC rule 3745-21-07(A)(2)(a), the requirements under OAC rule 3745-21-07 shall not apply to " . . . sources which are in compliance with or specifically exempted from the applicable requirements of rule 3745-21-09 of the Administrative Code."

II. Operational Restrictions

1. When the gashouse is in VOC operation, the emissions from the gashouse shall be vented to the thermal incinerator. The gashouse is in VOC operation when either the propellant being used to fill the aerosol cans contains VOC or the propellant being purged from the propellant line contains VOC.
2. The average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit's gashouse is vented to the thermal incinerator, shall not be more than 50 degrees Fahrenheit below the average combustion temperature during the most recent emissions test during which the destruction efficiency of the thermal incinerator was determined as specified under section A.V.3., and the test results showed compliance with the VOC emissions limit for this emissions unit as specified under A.V.1.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall collect and record for this emissions unit the following production information each day and maintain the information at the facility:
 - a. number of operating hours for the aerosol filling line, and
 - b. number of aerosol cans produced.
2. The permittee shall collect and record for this emissions unit the following production information each month and maintain the information at the facility:
 - a. number of operating hours for the aerosol filling line (sum of daily section A.III.1.a. data);
 - b. number of aerosol cans produced (sum of daily section A.III.1.b. data);
 - c. name and amount (gallons) of each VOC liquid filled into aerosol cans;
 - d. number of aerosol cans filled with a VOC propellant by name of propellant, type of propellant filler (needle fill or Sepro fill), and type of emissions venting (vented to thermal incinerator or not vented to thermal incinerator);
 - e. number of VOC propellant line purges by name of propellant and type of emissions venting (vented to thermal incinerator or not vented to thermal incinerator); and
 - f. name and amount (gallons) of each VOC liquid (solvent) used in the manual aerosol can cleaning operation (can brushing operation).
3. The permittee shall collect and record for this emissions unit the following chemical and physical properties for the VOC liquids and VOC propellants used in this emissions unit:
 - a. for any VOC liquid used in liquid mixing and liquid filling of aerosol cans, the liquid name, the liquid density (pounds/gallon), and the vapor pressure (mm Hg) at 80 degrees F and 90 degrees F;
 - b. for any VOC liquid used in manual aerosol can cleaning, the liquid name and the liquid density (lbs/gal); and
 - c. for any VOC propellant, the liquid density (lbs/gal) under usual propellant storage temperature and pressure, the vapor density (lbs/cc) at propellant filler temperature, and the fraction VOC by weight.

III. Monitoring and/or Record Keeping Requirements (continued)

4. The permittee shall calculate and record for each month the following information for this emissions unit:
 - a. monthly amount of VOC emissions (pounds) from the liquid mixing operation, in accordance with section A.V.2.a.;
 - b. monthly amount of VOC emissions (pounds) from the liquid filling operation, in accordance with section A.V.2.b.;
 - c. monthly amount of VOC emissions (pounds) from the gashouse operations (propellant filling and propellant line purging), in accordance with section A.V.2.c.;
 - d. monthly amount of VOC emissions (pounds) from the manual aerosol can cleaning operation (can brushing operation), in accordance with section A.V.2.d.;
 - e. monthly number of aerosol cans produced (sum of daily section A.III.1.b. data); and
 - f. monthly amount of VOC emissions (pounds) from this emissions unit, excluding liquid can filling, which is the sum of data recorded under sections A.III.4.a., A.III.4.c., and A.III.4.d. for this emissions unit.
5. The permittee shall calculate and record for each month the following information for emissions units P002 through P006:
 - a. monthly amount of VOC emissions (pounds), which is a sum of the monthly VOC emissions recorded under section A.III.4.f. of the part III terms and conditions for emissions units P002 through P005 plus the monthly VOC emissions recorded under section A.III.2. of the part III terms and conditions for emissions unit P006;
 - b. monthly number of aerosol cans produced, which is a sum of the monthly aerosol can production recorded under section A.III.4.e. of the part III terms and conditions for emissions units P002 through P005; and
 - c. monthly VOC emissions rate in pound/1000 cans, which is 1000 times the value from section A.III. 5.a. divided by the value from section A.III.5.b., and rounded to two decimal places.
6. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal incinerator when the emissions unit's gashouse is in VOC operation. Temperature shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

The permittee shall collect and record the following information for each day of gashouse operation:

 - a. a log of operating time for each of the following: gashouse ventilation to the thermal incinerator, gashouse ventilation directly to ambient air, thermal incinerator operation, temperature monitoring equipment operation, gashouse in VOC operation, and gashouse not in VOC operation;
 - b. a log of all 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit's gashouse is in VOC operation, was more than 50 degrees Fahrenheit below the average combustion temperature during the most recent emissions test during which the destruction efficiency of the thermal incinerator was determined as specified under section A.V.3., and the test results showed compliance with the VOC emissions limit for this emissions unit as specified under A.V.1.; and
 - c. a log of the bypass venting of gashouse emissions to ambient air and any downtime for the thermal incinerator and temperature monitoring equipment, when the emissions unit's gashouse is in VOC operation.

III. Monitoring and/or Record Keeping Requirements (continued)

7. The permittee shall perform weekly checks, when pigment is added to the mixing tanks of this emissions unit and when the weather conditions allow, for any visible particulate emissions from the stack(s) serving the mixing tanks. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emissions incident; and
 - e. any corrective actions taken to eliminate the visible emissions.

IV. Reporting Requirements

1. The permittee shall notify the appropriate Ohio EPA District Office or local air agency of any record of an emissions rate exceedance listed below. This notification shall be submitted within 45 days after the end of the month that the exceedance occurs.
 - a. Emissions rate recorded under section A.III.5.c. exceeds 0.75 lb VOC/1000 cans produced.
2. The permittee shall submit to the appropriate Ohio EPA District Office or local air agency quarterly deviation (excursion) reports which identify the deviations recorded under sections A.III.6.b. and A.III.6.c. These quarterly summaries shall be submitted by April 30, July 31, October 31, and January 31 and shall cover the records for the previous calendar quarters.
3. The permittee shall submit to the appropriate Ohio EPA District Office or local air agency quarterly summaries of the records specified under sections A.III.2., A.III.3., A.III.4., and A.III.5. These quarterly summaries shall be submitted by April 30, July 31, October 31, and January 31 and shall cover the records for the previous calendar quarters.
4. The permittee shall submit to the appropriate Ohio EPA District Office or local air agency quarterly written reports of the records specified under section A.III.7. which (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These quarterly reports shall be submitted to the appropriate Ohio EPA District Office or local air agency by April 30, July 31, October 31, and January 31 and shall cover the records for the previous calendar quarters.

V. Testing Requirements

1. Compliance with the emissions limitations in section A.I. of these terms and conditions shall be determined as follows:

V. Testing Requirements (continued)

1.a. Emission Limitation:

For the mixing tanks, gasser operations, can brushing operations, and can piercing operations at this facility, the total VOC emissions in any month shall not exceed 0.75 pound of VOC per 1000 aerosol cans produced.

Applicable Compliance Method:

Compliance shall be demonstrated by means of:

- i. record keeping specified in sections A.III.2., A.III.3., A.III.4., and A.III.5. of the part III terms and conditions of emissions units P002 through P005;
- ii. record keeping specified in sections A.III.1., A.III.2., and A.III.3. of the part III terms and conditions of emissions unit P006;
- iii. calculating the VOC emissions rate for the mixing tanks (mixing operations), gasser operations (gashouse operations), can brushing operations (manual can cleaning), and can piercing operations at this facility, as specified in section A.V.2. of the part III terms and conditions of emissions units P002 through P006;
- iv. testing the thermal incinerator, as specified in A.V.3. of the part III terms and conditions of emissions units P002 through P005; and
- v. operating and maintaining a continuous temperature monitor and recorder for the thermal incinerator and maintaining a log of gashouse operations, as specified in section A.III.6. of the part III terms and conditions of emissions units P002 through P005.

In the event additional emissions testing is required to demonstrate compliance, the VOC emissions shall be determined in accordance with OAC rule 3745-21-10(C).

1.b. Emission Limitation:

Organic compound (OC) emissions from this emissions unit shall not exceed 23.7 lbs/hr and 103.80 tons/year.

Applicable Compliance Method:

Compliance shall be demonstrated by calculating the worst case hourly emissions. Hour by hour calculations are not necessary as long as the worst case hourly calculation shows compliance. The worst case hourly OC emissions shall be calculated for each operation within this emissions unit as described in section A.V.2., however, OC should replace VOC for all materials and emissions and maximum hourly usage of liquids and propellants should replace monthly usage of those materials. Compliance with the OC emissions limit of 23.7 lbs/hr ensures compliance with the OC emissions limit of 103.80 tons/year, based on multiplying 23.7 lbs/hr by 8,760 hrs/year and dividing by 2000 lbs/ton.

In the event emissions testing is required to demonstrate compliance, the OC emissions shall be determined in accordance with OAC rule 3745-21-10(C).

1.c. Emission Limitation:

Particulate emissions shall not exceed 0.551 pound/hour during the loading of solid materials into a liquid mixing tank.

Applicable Compliance Method:

The liquid mixing tanks for this emissions unit are similar to the mixing tanks at paint manufacturing facilities in which the particulate emissions are estimated to be 0.5 to 1.0 percent of the pigment handled, based on USEPA reference document AP-42: Compilation of Air Pollutant Emission Factors, Fifth Edition (page 6.4-1). This facility infrequently adds some pigment to the liquid mixing tanks, and such infrequent and low usage of pigment would not normally cause a particulate emissions to exceed this emissions limitation. Compliance with the visible particulate emissions limitation under section A.III.V.1.d. provides further assurance of compliance of this emissions limitation.

In the event testing is required to demonstrate compliance, the particulate emissions shall be determined by Method 5, 40 CFR 60, Appendix A.

V. Testing Requirements (continued)

- 1.d.** Emission Limitation:
 During the loading of solid materials into a liquid mixing tank, visible particulate emissions shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:

Compliance shall be demonstrated by the record keeping in section A.III.7. and the reporting in section A.IV.4.

In the event testing is required to demonstrate compliance, the visible emissions shall be determined by OAC rule 3745-17-03(B)(1).

- 2.** The VOC emission calculations for this facility were taken in part from the permittee's Air Pollution Emission Model. The VOC emissions from this emissions unit shall be calculated as follows:

- 2.a.** For liquid mixing operations, the monthly VOC emissions rate, E(mixing), shall be calculated as follows:

i. $E(\text{mixing}) = E_i(\text{loading}) + E_i(\text{venting})$

where:

$E(\text{loading}) =$ monthly VOC emissions from loading VOC liquids into mixing tanks

$E(\text{venting}) =$ monthly VOC emissions from venting VOC liquids during mixing

- ii. For loading VOC liquid into a mixing tank, the monthly VOC emissions shall be calculated, based on the Ideal Gas Law and displacement of saturated vapors at 80 degrees F (27 degrees C), as follows:

$E(\text{loading}) =$ monthly sum of $E_i(\text{loading})$ for all VOC liquid "i" loaded into mixing tanks

$E_i(\text{loading}) = P_i * X_i * V_i * MW_i / (R * T)$

where:

$E_i(\text{loading}) =$ lbs of VOC emissions during the month from loading VOC liquid "i" into mixing tanks

$P_i =$ vapor pressure of VOC liquid "i" at 80 degrees F, in mmHg

$V_i =$ volume of VOC liquid "i" charged to mixing tanks during the month in cubic feet (equals monthly gallons of liquid "i" divided by 7.48 gal/cu ft)

$R = 999$ mmHg-cubic feet/lb mole-degrees K

$T =$ temperature in degrees K (equals 273 plus 27 degrees C)

$MW_i =$ molecular weight of VOC liquid "i", in lbs/lb mole

V. Testing Requirements (continued)

iii. For venting of VOC liquids during mixing, the monthly VOC emissions shall be calculated, based on the Ideal Gas Law and venting of saturated vapors at 90 degrees F (32 degrees C) as follows:

$E(\text{venting}) = \text{monthly sum of } E_i(\text{venting}) \text{ for all VOC liquid "i" loaded into mixing tanks}$

$$E_i(\text{venting}) = P_i * X_i * V_{i,v} * MW_i / (R * T)$$

where:

$E_i(\text{venting}) = \text{lbs of VOC emissions during the month for venting a VOC liquid "i" during mixing}$

$P_i = \text{vapor pressure of VOC liquid "i" at 90 degrees F, in mmHg}$

$V_{i,v} = \text{volume (cu ft) of saturated vapors removed by the ventilation system during mixing of VOC liquid "i" (equals monthly gallons of VOC liquid "i" times } 5 * 30 / 350 \text{ based on 5\% of the total ventilation flow rate or 5 cu ft/min, an average mixing time of 30 minutes per batch, and a typical batch size of 350 gallons)}$

$R = 999 \text{ mmHg-cubic feet/lb mole-degrees K}$

$T = \text{temperature in degrees K (equals 273 plus 32 degrees C)}$

$MW_i = \text{molecular weight of VOC liquid "i", in lbs/lb mole}$

2.b. For the liquid filling of aerosol cans, the monthly VOC emissions shall be calculated, based on the Ideal Gas Law and displacement of saturated vapors at 80 degrees F (27 degrees C) as follows:

$E(\text{filling}) = \text{monthly sum of } E_i(\text{filling}) \text{ for all VOC liquid "i" filling of aerosol cans}$

$$E_i(\text{filling}) = P_i * X_i * V_i * MW_i / (R * T)$$

where:

$E_i(\text{filling}) = \text{lbs of VOC emissions during the month for VOC liquid "i" filling of aerosol cans}$

$P_i = \text{vapor pressure of VOC liquid "i" at 80 degrees F, in mmHg}$

$V_i = \text{volume of VOC liquid "i" filled into aerosol cans during the month in cubic feet (equals monthly gallons of VOC liquid "i" divided by 7.48 gal/cu ft)}$

$R = 999 \text{ mmHg-cubic feet/lb mole-degrees K}$

$T = \text{temperature in degrees K (equals 273 plus 27 degrees C)}$

$MW_i = \text{molecular weight of VOC liquid "i", in lbs/lb mole}$

V. Testing Requirements (continued)

2.c. For the gasser (gashouse) operations, the monthly VOC emissions rate, EG(total), shall be calculated as follows:

i. $EG(\text{total}) = EG(\text{filling}) + EG(\text{purging})$

where:

$EG(\text{filling}) =$ monthly VOC emissions from filling aerosol cans with VOC propellant

$EP(\text{purging}) =$ monthly VOC emissions from purging of lines containing VOC propellant

ii. For the filling of aerosol cans with VOC propellant and the purging of lines containing VOC propellant, the monthly VOC emissions shall be calculated as follows:

$EG(\text{filling}) =$ monthly sum of $(NC_{p,f,v}) \times (EF_{p,f}) \times (K_p) \times (1 - CE_{p,v}/100) \times (VOC_p)$

$EP(\text{purging}) =$ monthly sum of $(NP_{p,v}) \times (V_p) \times (LD_p) \times (1 - R_p) \times (1 - CE_{p,v}/100) \times (VOC_p)$

where:

$CE_{p,v}$ = control efficiency for propellant "p" VOC emissions and type of venting "v" for those emissions, based on venting of VOC propellant emissions to thermal incinerator or not and the VOC control efficiency of the thermal incinerator

$CE_{p,v} = 0\%$ if propellant "p" VOC emissions are not vented to the thermal incinerator

$CE_{p,v} = 98\%$ if propellant "p" VOC emissions are vented to the thermal incinerator and the thermal incinerator has not yet been compliance tested (98% is based on design efficiency from PTI application for emissions unit P003)

$CE_{p,v}$ = overall VOC control efficiency from most recent compliance test of the thermal incinerator, if propellant "p" VOC emissions are vented to the thermal incinerator and the thermal incinerator has been compliance tested

$EF_{p,f}$ = emission factor for VOC propellant gas loss when filling cans with VOC propellant "p", based on propellant filler type "f" (needle filling or Sepro filling)

$EF_{p,f} = 0.2$ cc/can for needle filling of VOC propellant "p"

$EF_{p,f} = 1.0$ cc/can for Sepro filling of VOC propellant "p"

K_p = conversion factor for gaseous VOC propellant "p" expressed in lbs/cc at standard conditions

LD_p = liquid density of VOC propellant "p" at storage temperature and pressure, in pounds/gallon

$NC_{p,f,v}$ = number of cans produced with VOC propellant "p" and filling type "f" during the month by type of venting "v" (vented to thermal incinerator or not vented to thermal incinerator)

$NP_{p,v}$ = number of propellant line purges during the month for VOC propellant "p" by type of venting "v" (vented to thermal incinerator or not vented to thermal incinerator)

R_p = fraction by weight of purged VOC propellant "p" which is recovered and stored in a pressure tank

V_p = volume of propellant line purged for VOC propellant "p", in gallons

VOC_p = fraction VOC by weight for VOC propellant "p" (usually 1 for a VOC containing propellant)

V. Testing Requirements (continued)

- 2.d. For the manual aerosol can cleaning operation (can brushing operation), VOC emissions shall be equal to the mass of VOC solvent consumed in the operation. The monthly VOC emissions from can brushing shall be calculated as the sum of VOC emissions for all solvents consumed during that month. The VOC emissions from each VOC solvent consumed is calculated as the number of VOC solvent gallons consumed during the month times the VOC solvent density (pounds/gallon).
3. The permittee shall conduct, or have conducted, emissions testing for the thermal incinerator to demonstrate the thermal incinerator's control efficiency for VOC emissions from this emissions unit's gashouse operations in accordance with the following requirements:
- a. The emissions testing shall be conducted within 3 months after completed installation of the thermal incinerator, and subsequent emissions testing shall be conducted within 36 months after the previous emissions testing.
 - b. The emissions testing shall be conducted to determine the incinerator's destruction efficiency for volatile organic compounds by means of the test method in Method 25 or 25A of 40 CFR Part 60, Appendix A.
 - c. The emissions testing shall be conducted to determine the VOC capture efficiency of the vapor collection system used to transport VOC emissions from the emissions unit's gashouse operations (propellant filling of aerosol cans and propellant line purging) to the thermal incinerator by means of test methods contained in Method 204 through 204E of 40CFR Part 51, Appendix M, or the alternative capture efficiency testing protocols specified in the USEPA, Office of Air Quality Planning and Standards document entitled "Guidelines for Determining Capture Efficiency," dated January 9, 1995.
 - d. The tests shall be conducted while the emissions unit's gashouse is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.
 - e. The control efficiency of the thermal incinerator shall be the destruction efficiency times the capture efficiency divided by 100.
4. For any emissions testing conducted under section A.V., the permittee shall meet the following requirements:
- a. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).
 - b. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
 - c. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s).

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Aerosol filling line (liquid mixing, liquid filling of aerosol cans, propellant filling of aerosol cans, propellant line purging, and manual cleaning of filled aerosol cans) with the gashouse operations (propellant filling and propellant line purging) controlled by thermal incinerator		

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

1. The permit to install for this emissions unit P003 was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: Toluene
TLV (ug/m3): 188,500
Maximum Hourly Emission Rate (lbs/hr): 0.527
Predicted 1 Hour Maximum Ground-Level Concentration at the Fence Line (ug/m3): 73.85
Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m3): 4488

Pollutant: MEK
TLV (ug/m3): 590,000
Maximum Hourly Emission Rate (lbs/hr): 0.221
Predicted 1 Hour Maximum Ground-Level Concentration at the Fence Line (ug/m3): 31.33
Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m3): 14048

Pollutant: Hexane
TLV (ug/m3): 176,500
Maximum Hourly Emission Rate (lbs/hr): 0.524
Predicted 1 Hour Maximum Ground-Level Concentration at the Fence Line (ug/m3): 73.85
Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m3): 4202

Pollutant: Perchloroethylene
TLV (ug/m3): 169,500
Maximum Hourly Emission Rate (lbs/hr): 0.200
Predicted 1 Hour Maximum Ground-Level Concentration at the Fence Line (ug/m3): 27.97
Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m3): 4036

2. Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:
 - a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
 - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
 - c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

III. Monitoring and/or Record Keeping Requirements (continued)

3. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"
 - a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
 - b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
 - c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Line # 6 (P004)
Activity Description: Mixing, Filling, & Charging of Aerosol Containers

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Aerosol filling line (liquid mixing, liquid filling of aerosol cans, propellant filling of aerosol cans, propellant line purging, and manual cleaning of filled aerosol cans) with the gashouse operations (propellant filling and propellant line purging) controlled by thermal incinerator	OAC rule 3745-31-05(A)(3) PTI 13-3186 (issued 02/26/97, and modified 04/30/97)	Volatile organic compound (VOC) emissions from liquid mixing and liquid filling of aerosol cans shall not exceed 8 lbs/hr, 40 lbs/day, and 7.3 tons/year.
	Findings and Orders entered into the Director's Journal on August 18, 1995 and approved by USEPA as a SIP revision for this facility (formerly Sprayon Products Incorporated) on April 25, 1996	See section A.1.2.a. below.
	OAC rule 3745-21-07(G)(2)	See section A.1.2.b. below.
	OAC rule 3745-17-11(B)(1)	During the loading of solid materials into a liquid mixing tank, particulate emissions shall not exceed 0.551 pound/hour (based on Table I).
	OAC rule 3745-17-07(A)	During the loading of solid materials into a liquid mixing tank, visible particulate emissions shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

2. Additional Terms and Conditions

- 2.a. For the mixing tanks, gasser operations, can brushing operations, and can piercing operations at this facility, the total VOC emissions in any month shall not exceed 0.75 pound of VOC per 1000 aerosol cans produced. (Note: This includes all VOC emissions from emissions units P002 through P006, except for liquid filling of aerosol cans. Emissions unit P001 has been shut down.)

2. Additional Terms and Conditions (continued)

- 2.b.** The requirements under this rule are not applicable due to the federally enforceable, site-specific requirements, based on reasonably available control technology (RACT), contained in the 8/18/95 Director's Findings and Orders. These RACT requirements are intended to be added to OAC rule 3745-21-09 pursuant to "Section VII.: Termination" of the 8/18/95 Findings and Orders. Also, as specified within OAC rule 3745-21-07(A)(2)(a), the requirements under OAC rule 3745-21-07 shall not apply to " . . . sources which are in compliance with or specifically exempted from the applicable requirements of rule 3745-21-09 of the Administrative Code."

II. Operational Restrictions

1. When the gashouse is in VOC operation, the emissions from the gashouse shall be vented to the thermal incinerator. The gashouse is in VOC operation when either the propellant being used to fill the aerosol cans contains VOC or the propellant being purged from the propellant line contains VOC.
2. The average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit's gashouse is vented to the thermal incinerator, shall not be more than 50 degrees Fahrenheit below the average combustion temperature during the most recent emissions test during which the destruction efficiency of the thermal incinerator was determined as specified under section A.V.3., and the test results showed compliance with the VOC emissions limit for this emissions unit as specified under A.V.1.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall collect and record for this emissions unit the following production information each day and maintain the information at the facility:
 - a. number of operating hours for the aerosol filling line, and
 - b. number of aerosol cans produced.
2. The permittee shall collect and record for this emissions unit the following production information each month and maintain the information at the facility:
 - a. number of operating hours for the aerosol filling line (sum of daily section A.III.1.a. data);
 - b. number of aerosol cans produced (sum of daily section A.III.1.b. data);
 - c. name and amount (gallons) of each VOC liquid filled into aerosol cans;
 - d. number of aerosol cans filled with a VOC propellant by name of propellant, type of propellant filler (needle fill or Sepro fill), and type of emissions venting (vented to thermal incinerator or not vented to thermal incinerator);
 - e. number of VOC propellant line purges by name of propellant and type of emissions venting (vented to thermal incinerator or not vented to thermal incinerator); and
 - f. name and amount (gallons) of each VOC liquid (solvent) used in the manual aerosol can cleaning operation (can brushing operation).
3. The permittee shall collect and record for this emissions unit the following chemical and physical properties for the VOC liquids and VOC propellants used in this emissions unit:
 - a. for any VOC liquid used in liquid mixing and liquid filling of aerosol cans, the liquid name, the liquid density (pounds/gallon), and the vapor pressure (mm Hg) at 80 degrees F and 90 degrees F;
 - b. for any VOC liquid used in manual aerosol can cleaning, the liquid name and the liquid density (lbs/gal); and
 - c. for any VOC propellant, the liquid density (lbs/gal) under usual propellant storage temperature and pressure, the vapor density (lbs/cc) at propellant filler temperature, and the fraction VOC by weight.

III. Monitoring and/or Record Keeping Requirements (continued)

4. The permittee shall calculate and record for each month the following information for this emissions unit:
 - a. monthly amount of VOC emissions (pounds) from the liquid mixing operation, in accordance with section A.V.2.a.;
 - b. monthly amount of VOC emissions (pounds) from the liquid filling operation, in accordance with section A.V.2.b.;
 - c. monthly amount of VOC emissions (pounds) from the gashouse operations (propellant filling and propellant line purging), in accordance with section A.V.2.c.;
 - d. monthly amount of VOC emissions (pounds) from the manual aerosol can cleaning operation (can brushing operation), in accordance with section A.V.2.d.;
 - e. monthly number of aerosol cans produced (sum of daily section A.III.1.b. data);
 - f. monthly amount of VOC emissions (pounds) from this emissions unit, excluding liquid can filling, which is the sum of data recorded under sections A.III.4.a., A.III.4.c., and A.III.4.d. for this emissions unit;
 - g. VOC emissions (pounds) for each day in the month from the combined liquid mixing and filling operations, in accordance with section A.V.1.b.i.; and
 - h. average hourly amount of VOC emissions (pounds) for each day in the month from the combined liquid mixing and filling operations, in accordance with section A.V.1.b.ii.
5. The permittee shall calculate and record for each month the following information for emissions units P002 through P006:
 - a. monthly amount of VOC emissions (pounds), which is a sum of the monthly VOC emissions recorded under section A.III.4.f. of the part III terms and conditions for emissions units P002 through P005 plus the monthly VOC emissions recorded under section A.III.2. of the part III terms and conditions for emissions unit P006;
 - b. monthly number of aerosol cans produced, which is a sum of the monthly aerosol can production recorded under section A.III.4.e. of the part III terms and conditions for emissions units P002 through P005; and
 - c. monthly VOC emissions rate in pound/1000 cans, which is 1000 times the value from section A.III. 5.a. divided by the value from section A.III.5.b., and rounded to two decimal places.
6. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal incinerator when the emissions unit's gashouse is in VOC operation. Temperature shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

The permittee shall collect and record the following information for each day of gashouse operation:

- a. a log of operating time for each of the following: gashouse ventilation to the thermal incinerator, gashouse ventilation directly to ambient air, thermal incinerator operation, temperature monitoring equipment operation, gashouse in VOC operation, and gashouse not in VOC operation;
- b. a log of all 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit's gashouse is in VOC operation, was more than 50 degrees Fahrenheit below the average combustion temperature during the most recent emissions test during which the destruction efficiency of the thermal incinerator was determined as specified under section A.V.3., and the test results showed compliance with the VOC emissions limit for this emissions unit as specified under A.V.1.; and
- c. a log of the bypass venting of gashouse emissions to ambient air and any downtime for the thermal incinerator and temperature monitoring equipment, when the emissions unit's gashouse is in VOC operation.

III. Monitoring and/or Record Keeping Requirements (continued)

7. The permittee shall perform weekly checks, when pigment is added to the mixing tanks of this emissions unit and when the weather conditions allow, for any visible particulate emissions from the stack(s) serving the mixing tanks. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emissions incident; and
 - e. any corrective actions taken to eliminate the visible emissions.

IV. Reporting Requirements

1. The permittee shall notify the appropriate Ohio EPA District Office or local air agency of any record of an emissions rate exceedance listed below. This notification shall be submitted within 45 days after the end of the month that the exceedance occurs.
 - a. Emissions rate recorded under section A.III.5.c. exceeds 0.75 lb VOC/1000 cans produced.
 - b. Emissions rate under section A.III.4.h. exceeds 8 lbs VOC/hr.
 - c. Emissions rate under section A.III.4.g. exceeds 40 lbs VOC/day.
2. The permittee shall submit to the appropriate Ohio EPA District Office or local air agency quarterly deviation (excursion) reports which identify the deviations recorded under sections A.III.6.b. and A.III.6.c. These quarterly summaries shall be submitted by April 30, July 31, October 31, and January 31 and shall cover the records for the previous calendar quarters.
3. The permittee shall submit to the appropriate Ohio EPA District Office or local air agency quarterly summaries of the records specified under sections A.III.2., A.III.3., A.III.4., and A.III.5. These quarterly summaries shall be submitted by April 30, July 31, October 31, and January 31 and shall cover the records for the previous calendar quarters.
4. The permittee shall submit to the appropriate Ohio EPA District Office or local air agency quarterly written reports of the records specified under section A.III.7. which (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These quarterly reports shall be submitted to the appropriate Ohio EPA District Office or local air agency by April 30, July 31, October 31, and January 31 and shall cover the records for the previous calendar quarters.

V. Testing Requirements

1. Compliance with the emissions limitations in section A.I. of these terms and conditions shall be determined as follows:

V. Testing Requirements (continued)

1.a. Emission Limitation:

For the mixing tanks, gasser operations, can brushing operations, and can piercing operations at this facility, the total VOC emissions in any month shall not exceed 0.75 pound of VOC per 1000 aerosol cans produced.

Applicable Compliance Method:

Compliance shall be demonstrated by means of:

- i. record keeping specified in sections A.III.2., A.III.3., A.III.4., and A.III.5. of the part III terms and conditions of emissions units P002 through P005;
- ii. record keeping specified in sections A.III.1., A.III.2., and A.III.3. of the part III terms and conditions of emissions unit P006;
- iii. calculating the VOC emissions rate for the mixing tanks (mixing operations), gasser operations (gashouse operations), can brushing operations (manual can cleaning), and can piercing operations at this facility, as specified in section A.V.2. of the part III terms and conditions of emissions units P002 through P006;
- iv. testing the thermal incinerator, as specified in A.V.3. of the part III terms and conditions of emissions units P002 through P005; and
- v. operating and maintaining a continuous temperature monitor and recorder for the thermal incinerator and maintaining a log of gashouse operations, as specified in section A.III.6. of the part III terms and conditions of emissions units P002 through P005.

In the event additional emissions testing is required to demonstrate compliance, the VOC emissions shall be determined in accordance with OAC rule 3745-21-10(C).

1.b. Emission Limitation:

Volatile organic compound (VOC) emissions from liquid mixing and liquid filling shall not exceed 8 lbs/hr, 40 lbs/day, and 7.3 tons/year.

Applicable Compliance Method:

Compliance shall be demonstrated by the record keeping in sections A.III.1., A.III.3.a., A.III.4.a. and A.III.4.b. and by calculating VOC emissions from liquid mixing and liquid filling as follows:

- i. VOC emissions for each day in the month shall be calculated as (sum of monthly VOC emissions, in pounds, from sections A.IV.4.a and A.IV.4.b..) x (number of aerosol cans produced that day)/(total number of aerosol cans produced during the month).
- ii. VOC emissions for each hour in the day shall be an hourly average VOC emission that is calculated as (daily VOC emissions from section A.V.1.b.i.)/(operating hours in that day).
- iii. VOC emissions for the year are not needed to demonstrate compliance because the annual VOC emissions limit of 7.3 tons/year is not more stringent than the daily VOC limit multiplied by 365 days per year.

In the event emissions testing is required to demonstrate compliance, the VOC emissions shall be determined in accordance with OAC rule 3745-21-10(C).

V. Testing Requirements (continued)

- 1.c.** Emission Limitation:
Particulate emissions shall not exceed 0.551 pound/hour during the loading of solid materials into a liquid mixing tank.

Applicable Compliance Method:

The liquid mixing tanks for this emissions unit are similar to the mixing tanks at paint manufacturing facilities in which the particulate emissions are estimated to be 0.5 to 1.0 percent of the pigment handled, based on USEPA reference document AP-42: Compilation of Air Pollutant Emission Factors, Fifth Edition (page 6.4-1). This facility infrequently adds some pigment to the liquid mixing tanks, and such infrequent and low usage of pigment would not normally cause a particulate emissions to exceed this emissions limitation. Compliance with the visible particulate emissions limitation under section A.III.V.1.d. provides further assurance of compliance of this emissions limitation.

In the event testing is required to demonstrate compliance, the particulate emissions shall be determined by Method 5, 40 CFR 60, Appendix A.

- 1.d.** Emission Limitation:
During the loading of solid materials into a liquid mixing tank, visible particulate emissions shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:

Compliance shall be demonstrated by the record keeping in section A.III.7. and the reporting in section A.IV.4.

In the event testing is required to demonstrate compliance, the visible emissions shall be determined by OAC rule 3745-17-03(B)(1).

- 2.** The VOC emission calculations for this facility were taken in part from the permittee's Air Pollution Emission Model. The VOC emissions from this emissions unit shall be calculated as follows:

- 2.a.** For liquid mixing operations, the monthly VOC emissions rate, $E(\text{mixing})$, shall be calculated as follows:

i. $E(\text{mixing}) = E_i(\text{loading}) + E_i(\text{venting})$

where:

$E(\text{loading}) =$ monthly VOC emissions from loading VOC liquids into mixing tanks

$E(\text{venting}) =$ monthly VOC emissions from venting VOC liquids during mixing .

ii. For loading VOC liquid into a mixing tank, the monthly VOC emissions shall be calculated, based on the Ideal Gas Law and displacement of saturated vapors at 80 degrees F (27 degrees C), as follows:

$E(\text{loading}) =$ monthly sum of $E_i(\text{loading})$ for all VOC liquid "i" loaded into mixing tanks

$$E_i(\text{loading}) = P_i * X_i * V_i * MW_i / (R * T)$$

where:

$E_i(\text{loading}) =$ lbs of VOC emissions during the month from loading VOC liquid "i" into mixing tanks

$P_i =$ vapor pressure of VOC liquid "i" at 80 degrees F, in mmHg

$V_i =$ volume of VOC liquid "i" charged to mixing tanks during the month in cubic feet (equals monthly gallons of liquid "i" divided by 7.48 gal/cu ft)

$R = 999$ mmHg-cubic feet/lb mole-degrees K

$T =$ temperature in degrees K (equals 273 plus 27 degrees C)

$MW_i =$ molecular weight of VOC liquid "i", in lbs/lb mole

V. Testing Requirements (continued)

iii. For venting of VOC liquids during mixing, the monthly VOC emissions shall be calculated, based on the Ideal Gas Law and venting of saturated vapors at 90 degrees F (32 degrees C) as follows:

$E(\text{venting}) = \text{monthly sum of } E_i(\text{venting}) \text{ for all VOC liquid "i" loaded into mixing tanks}$

$$E_i(\text{venting}) = P_i * X_i * V_{i,v} * MW_i / (R * T)$$

where:

$E_i(\text{venting}) = \text{lbs of VOC emissions during the month for venting a VOC liquid "i" during mixing}$

$P_i = \text{vapor pressure of VOC liquid "i" at 90 degrees F, in mmHg}$

$V_{i,v} = \text{volume (cu ft) of saturated vapors removed by the ventilation system during mixing of VOC liquid "i" (equals monthly gallons of VOC liquid "i" times } 5 * 30 / 350 \text{ based on 5\% of the total ventilation flow rate or 5 cu ft/min, an average mixing time of 30 minutes per batch, and a typical batch size of 350 gallons)}$

$R = 999 \text{ mmHg-cubic feet/lb mole-degrees K}$

$T = \text{temperature in degrees K (equals 273 plus 32 degrees C)}$

$MW_i = \text{molecular weight of VOC liquid "i", in lbs/lb mole}$

2.b. For the liquid filling of aerosol cans, the monthly VOC emissions shall be calculated, based on the Ideal Gas Law and displacement of saturated vapors at 80 degrees F (27 degrees C) as follows:

$E(\text{filling}) = \text{monthly sum of } E_i(\text{filling}) \text{ for all VOC liquid "i" filling of aerosol cans}$

$$E_i(\text{filling}) = P_i * X_i * V_i * MW_i / (R * T)$$

where:

$E_i(\text{filling}) = \text{lbs of VOC emissions during the month for VOC liquid "i" filling of aerosol cans}$

$P_i = \text{vapor pressure of VOC liquid "i" at 80 degrees F, in mmHg}$

$V_i = \text{volume of VOC liquid "i" filled into aerosol cans during the month in cubic feet (equals monthly gallons of VOC liquid "i" divided by 7.48 gal/cu ft)}$

$R = 999 \text{ mmHg-cubic feet/lb mole-degrees K}$

$T = \text{temperature in degrees K (equals 273 plus 27 degrees C)}$

$MW_i = \text{molecular weight of VOC liquid "i", in lbs/lb mole}$

V. Testing Requirements (continued)

2.c. For the gasser (gashouse) operations, the monthly VOC emissions rate, EG(total), shall be calculated as follows:

i. $EG(\text{total}) = EG(\text{filling}) + EG(\text{purging})$

where:

$EG(\text{filling}) =$ monthly VOC emissions from filling aerosol cans with VOC propellant

$EP(\text{purging}) =$ monthly VOC emissions from purging of lines containing VOC propellant

ii. For the filling of aerosol cans with VOC propellant and the purging of lines containing VOC propellant, the monthly VOC emissions shall be calculated as follows:

$EG(\text{filling}) =$ monthly sum of $(NC_{p,f,v}) \times (EF_{p,f}) \times (K_p) \times (1 - CE_{p,v}/100) \times (VOC_p)$

$EP(\text{purging}) =$ monthly sum of $(NP_{p,v}) \times (V_p) \times (LD_p) \times (1 - R_p) \times (1 - CE_{p,v}/100) \times (VOC_p)$

where:

$CE_{p,v}$ = control efficiency for propellant "p" VOC emissions and type of venting "v" for those emissions, based on venting of VOC propellant emissions to thermal incinerator or not and the VOC control efficiency of the thermal incinerator

$CE_{p,v} = 0\%$ if propellant "p" VOC emissions are not vented to the thermal incinerator

$CE_{p,v} = 98\%$ if propellant "p" VOC emissions are vented to the thermal incinerator and the thermal incinerator has not yet been compliance tested (98% is based on design efficiency from PTI application for emissions unit P003)

$CE_{p,v}$ = overall VOC control efficiency from most recent compliance test of the thermal incinerator, if propellant "p" VOC emissions are vented to the thermal incinerator and the thermal incinerator has been compliance tested

$EF_{p,f}$ = emission factor for VOC propellant gas loss when filling cans with VOC propellant "p", based on propellant filler type "f" (needle filling or Sepro filling)

$EF_{p,f} = 0.2$ cc/can for needle filling of VOC propellant "p"

$EF_{p,f} = 1.0$ cc/can for Sepro filling of VOC propellant "p"

K_p = conversion factor for gaseous VOC propellant "p" expressed in lbs/cc at standard conditions

LD_p = liquid density of VOC propellant "p" at storage temperature and pressure, in pounds/gallon

$NC_{p,f,v}$ = number of cans produced with VOC propellant "p" and filling type "f" during the month by type of venting "v" (vented to thermal incinerator or not vented to thermal incinerator)

$NP_{p,v}$ = number of propellant line purges during the month for VOC propellant "p" by type of venting "v" (vented to thermal incinerator or not vented to thermal incinerator)

R_p = fraction by weight of purged VOC propellant "p" which is recovered and stored in a pressure tank

V_p = volume of propellant line purged for VOC propellant "p", in gallons

VOC_p = fraction VOC by weight for VOC propellant "p" (usually 1 for a VOC containing propellant)

V. Testing Requirements (continued)

- 2.d. For the manual aerosol can cleaning operation (can brushing operation), VOC emissions shall be equal to the mass of VOC solvent consumed in the operation. The monthly VOC emissions from can brushing shall be calculated as the sum of VOC emissions for all solvents consumed during that month. The VOC emissions from each VOC solvent consumed is calculated as the number of VOC solvent gallons consumed during the month times the VOC solvent density (pounds/gallon).
3. The permittee shall conduct, or have conducted, emissions testing for the thermal incinerator to demonstrate the thermal incinerator's control efficiency for VOC emissions from this emissions unit's gashouse operations in accordance with the following requirements:
- a. The emissions testing shall be conducted within 3 months after completed installation of the thermal incinerator, and subsequent emissions testing shall be conducted within 36 months after the previous emissions testing.
 - b. The emissions testing shall be conducted to determine the incinerator's destruction efficiency for volatile organic compounds by means of the test method in Method 25 or 25A of 40 CFR Part 60, Appendix A.
 - c. The emissions testing shall be conducted to determine the VOC capture efficiency of the vapor collection system used to transport VOC emissions from the emissions unit's gashouse operations (propellant filling of aerosol cans and propellant line purging) to the thermal incinerator by means of test methods contained in Method 204 through 204E of 40CFR Part 51, Appendix M, or the alternative capture efficiency testing protocols specified in the USEPA, Office of Air Quality Planning and Standards document entitled "Guidelines for Determining Capture Efficiency," dated January 9, 1995.
 - d. The tests shall be conducted while the emissions unit's gashouse is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.
 - e. The control efficiency of the thermal incinerator shall be the destruction efficiency times the capture efficiency divided by 100.
4. For any emissions testing conducted under section A.V., the permittee shall meet the following requirements:
- a. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).
 - b. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
 - c. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s).

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Line # 7 (P005)
Activity Description: Mixing, Filling, & Charging of Aerosol Containers

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Aerosol filling line (liquid mixing, liquid filling of aerosol cans, propellant filling of aerosol cans, propellant line purging, and manual cleaning of filled aerosol cans) with the gashouse operations (propellant filling and propellant line purging) controlled by thermal incinerator	OAC rule 3745-31-05(A)(3) PTI 13-3186 (issued 02/26/97, and modified 04/30/97)	Volatile organic compound (VOC) emissions from liquid mixing and liquid filling of aerosol cans shall not exceed 8 lbs/hr, 40 lbs/day, and 7.3 tons/year.
	Findings and Orders entered into the Director's Journal on August 18, 1995 and approved by USEPA as a SIP revision for this facility (formerly Sprayon Products Incorporated) on April 25, 1996	See section A.1.2.a. below.
	OAC rule 3745-21-07(G)(2)	See section A.1.2.b. below.
	OAC rule 3745-17-11(B)(1)	During the loading of solid materials into a liquid mixing tank, particulate emissions shall not exceed 0.551 pound/hour (based on Table I).
	OAC rule 3745-17-07(A)	During the loading of solid materials into a liquid mixing tank, visible particulate emissions shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

2. Additional Terms and Conditions

- 2.a. For the mixing tanks, gasser operations, can brushing operations, and can piercing operations at this facility, the total VOC emissions in any month shall not exceed 0.75 pound of VOC per 1000 aerosol cans produced. (Note: This includes all VOC emissions from emissions units P002 through P006, except for liquid filling of aerosol cans. Emissions unit P001 has been shut down.)

2. Additional Terms and Conditions (continued)

- 2.b.** The requirements under this rule are not applicable due to the federally enforceable, site-specific requirements, based on reasonably available control technology (RACT), contained in the 8/18/95 Director's Findings and Orders. These RACT requirements are intended to be added to OAC rule 3745-21-09 pursuant to "Section VII.: Termination" of the 8/18/95 Findings and Orders. Also, as specified within OAC rule 3745-21-07(A)(2)(a), the requirements under OAC rule 3745-21-07 shall not apply to " . . . sources which are in compliance with or specifically exempted from the applicable requirements of rule 3745-21-09 of the Administrative Code."

II. Operational Restrictions

1. When the gashouse is in VOC operation, the emissions from the gashouse shall be vented to the thermal incinerator. The gashouse is in VOC operation when either the propellant being used to fill the aerosol cans contains VOC or the propellant being purged from the propellant line contains VOC.
2. The average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit's gashouse is vented to the thermal incinerator, shall not be more than 50 degrees Fahrenheit below the average combustion temperature during the most recent emissions test during which the destruction efficiency of the thermal incinerator was determined as specified under section A.V.3., and the test results showed compliance with the VOC emissions limit for this emissions unit as specified under A.V.1.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall collect and record for this emissions unit the following production information each day and maintain the information at the facility:
 - a. number of operating hours for the aerosol filling line, and
 - b. number of aerosol cans produced.
2. The permittee shall collect and record for this emissions unit the following production information each month and maintain the information at the facility:
 - a. number of operating hours for the aerosol filling line (sum of daily section A.III.1.a. data);
 - b. number of aerosol cans produced (sum of daily section A.III.1.b. data);
 - c. name and amount (gallons) of each VOC liquid filled into aerosol cans;
 - d. number of aerosol cans filled with a VOC propellant by name of propellant, type of propellant filler (needle fill or Sepro fill), and type of emissions venting (vented to thermal incinerator or not vented to thermal incinerator);
 - e. number of VOC propellant line purges by name of propellant and type of emissions venting (vented to thermal incinerator or not vented to thermal incinerator); and
 - f. name and amount (gallons) of each VOC liquid (solvent) used in the manual aerosol can cleaning operation (can brushing operation).
3. The permittee shall collect and record for this emissions unit the following chemical and physical properties for the VOC liquids and VOC propellants used in this emissions unit:
 - a. for any VOC liquid used in liquid mixing and liquid filling of aerosol cans, the liquid name, the liquid density (pounds/gallon), and the vapor pressure (mm Hg) at 80 degrees F and 90 degrees F;
 - b. for any VOC liquid used in manual aerosol can cleaning, the liquid name and the liquid density (lbs/gal); and
 - c. for any VOC propellant, the liquid density (lbs/gal) under usual propellant storage temperature and pressure, the vapor density (lbs/cc) at propellant filler temperature, and the fraction VOC by weight.

III. Monitoring and/or Record Keeping Requirements (continued)

4. The permittee shall calculate and record for each month the following information for this emissions unit:
 - a. monthly amount of VOC emissions (pounds) from the liquid mixing operation, in accordance with section A.V.2.a.;
 - b. monthly amount of VOC emissions (pounds) from the liquid filling operation, in accordance with section A.V.2.b.;
 - c. monthly amount of VOC emissions (pounds) from the gashouse operations (propellant filling and propellant line purging), in accordance with section A.V.2.c.;
 - d. monthly amount of VOC emissions (pounds) from the manual aerosol can cleaning operation (can brushing operation), in accordance with section A.V.2.d.;
 - e. monthly number of aerosol cans produced (sum of daily section A.III.1.b. data);
 - f. monthly amount of VOC emissions (pounds) from this emissions unit, excluding liquid can filling, which is the sum of data recorded under sections A.III.4.a., A.III.4.c., and A.III.4.d. for this emissions unit;
 - g. VOC emissions (pounds) for each day in the month from the combined liquid mixing and filling operations, in accordance with section A.V.1.b.i.; and
 - h. average hourly amount of VOC emissions (pounds) for each day in the month from the combined liquid mixing and filling operations, in accordance with section A.V.1.b.ii.
5. The permittee shall calculate and record for each month the following information for emissions units P002 through P006:
 - a. monthly amount of VOC emissions (pounds), which is a sum of the monthly VOC emissions recorded under section A.III.4.f. of the part III terms and conditions for emissions units P002 through P005 plus the monthly VOC emissions recorded under section A.III.2. of the part III terms and conditions for emissions unit P006;
 - b. monthly number of aerosol cans produced, which is a sum of the monthly aerosol can production recorded under section A.III.4.e. of the part III terms and conditions for emissions units P002 through P005; and
 - c. monthly VOC emissions rate in pound/1000 cans, which is 1000 times the value from section A.III. 5.a. divided by the value from section A.III.5.b., and rounded to two decimal places.
6. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal incinerator when the emissions unit's gashouse is in VOC operation. Temperature shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

The permittee shall collect and record the following information for each day of gashouse operation:

- a. a log of operating time for each of the following: gashouse ventilation to the thermal incinerator, gashouse ventilation directly to ambient air, thermal incinerator operation, temperature monitoring equipment operation, gashouse in VOC operation, and gashouse not in VOC operation;
- b. a log of all 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit's gashouse is in VOC operation, was more than 50 degrees Fahrenheit below the average combustion temperature during the most recent emissions test during which the destruction efficiency of the thermal incinerator was determined as specified under section A.V.3., and the test results showed compliance with the VOC emissions limit for this emissions unit as specified under A.V.1.; and
- c. a log of the bypass venting of gashouse emissions to ambient air and any downtime for the thermal incinerator and temperature monitoring equipment, when the emissions unit's gashouse is in VOC operation.

III. Monitoring and/or Record Keeping Requirements (continued)

7. The permittee shall perform weekly checks, when pigment is added to the mixing tanks of this emissions unit and when the weather conditions allow, for any visible particulate emissions from the stack(s) serving the mixing tanks. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emissions incident; and
 - e. any corrective actions taken to eliminate the visible emissions.

IV. Reporting Requirements

1. The permittee shall notify the appropriate Ohio EPA District Office or local air agency of any record of an emissions rate exceedance listed below. This notification shall be submitted within 45 days after the end of the month that the exceedance occurs.
 - a. Emissions rate recorded under section A.III.5.c. exceeds 0.75 lb VOC/1000 cans produced.
 - b. Emissions rate under section A.III.4.h. exceeds 8 lbs VOC/hr.
 - c. Emissions rate under section A.III.4.g. exceeds 40 lbs VOC/day.
2. The permittee shall submit to the appropriate Ohio EPA District Office or local air agency quarterly deviation (excursion) reports which identify the deviations recorded under sections A.III.6.b. and A.III.6.c. These quarterly summaries shall be submitted by April 30, July 31, October 31, and January 31 and shall cover the records for the previous calendar quarters.
3. The permittee shall submit to the appropriate Ohio EPA District Office or local air agency quarterly summaries of the records specified under sections A.III.2., A.III.3., A.III.4., and A.III.5. These quarterly summaries shall be submitted by April 30, July 31, October 31, and January 31 and shall cover the records for the previous calendar quarters.
4. The permittee shall submit to the appropriate Ohio EPA District Office or local air agency quarterly written reports of the records specified under section A.III.7. which (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These quarterly reports shall be submitted to the appropriate Ohio EPA District Office or local air agency by April 30, July 31, October 31, and January 31 and shall cover the records for the previous calendar quarters.

V. Testing Requirements

1. Compliance with the emissions limitations in section A.I. of these terms and conditions shall be determined as follows:

V. Testing Requirements (continued)

1.a. Emission Limitation:

For the mixing tanks, gasser operations, can brushing operations, and can piercing operations at this facility, the total VOC emissions in any month shall not exceed 0.75 pound of VOC per 1000 aerosol cans produced.

Applicable Compliance Method:

Compliance shall be demonstrated by means of:

- i. record keeping specified in sections A.III.2., A.III.3., A.III.4., and A.III.5. of the part III terms and conditions of emissions units P002 through P005;
- ii. record keeping specified in sections A.III.1., A.III.2., and A.III.3. of the part III terms and conditions of emissions unit P006;
- iii. calculating the VOC emissions rate for the mixing tanks (mixing operations), gasser operations (gashouse operations), can brushing operations (manual can cleaning), and can piercing operations at this facility, as specified in section A.V.2. of the part III terms and conditions of emissions units P002 through P006;
- iv. testing the thermal incinerator, as specified in A.V.3. of the part III terms and conditions of emissions units P002 through P005; and
- v. operating and maintaining a continuous temperature monitor and recorder for the thermal incinerator and maintaining a log of gashouse operations, as specified in section A.III.6. of the part III terms and conditions of emissions units P002 through P005.

In the event additional emissions testing is required to demonstrate compliance, the VOC emissions shall be determined in accordance with OAC rule 3745-21-10(C).

1.b. Emission Limitation:

Volatile organic compound (VOC) emissions from liquid mixing and liquid filling shall not exceed 8 lbs/hr, 40 lbs/day, and 7.3 tons/year.

Applicable Compliance Method:

Compliance shall be demonstrated by the record keeping in sections A.III.1., A.III.3.a., A.III.4.a. and A.III.4.b. and by calculating VOC emissions from liquid mixing and liquid filling as follows:

- i. VOC emissions for each day in the month shall be calculated as (sum of monthly VOC emissions, in pounds, from sections A.IV.4.a and A.IV.4.b..) x (number of aerosol cans produced that day)/(total number of aerosol cans produced during the month).
- ii. VOC emissions for each hour in the day shall be an hourly average VOC emission that is calculated as (daily VOC emissions from section A.V.1.b.i.)/(operating hours in that day).
- iii. VOC emissions for the year are not needed to demonstrate compliance because the annual VOC emissions limit of 7.3 tons/year is not more stringent than the daily VOC limit multiplied by 365 days per year.

In the event emissions testing is required to demonstrate compliance, the VOC emissions shall be determined in accordance with OAC rule 3745-21-10(C).

V. Testing Requirements (continued)

- 1.c.** Emission Limitation:
Particulate emissions shall not exceed 0.551 pound/hour during the loading of solid materials into a liquid mixing tank.

Applicable Compliance Method:

The liquid mixing tanks for this emissions unit are similar to the mixing tanks at paint manufacturing facilities in which the particulate emissions are estimated to be 0.5 to 1.0 percent of the pigment handled, based on USEPA reference document AP-42: Compilation of Air Pollutant Emission Factors, Fifth Edition (page 6.4-1). This facility infrequently adds some pigment to the liquid mixing tanks, and such infrequent and low usage of pigment would not normally cause a particulate emissions to exceed this emissions limitation. Compliance with the visible particulate emissions limitation under section A.III.V.1.d. provides further assurance of compliance of this emissions limitation.

In the event testing is required to demonstrate compliance, the particulate emissions shall be determined by Method 5, 40 CFR 60, Appendix A.

- 1.d.** Emission Limitation:
During the loading of solid materials into a liquid mixing tank, visible particulate emissions shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:

Compliance shall be demonstrated by the record keeping in section A.III.7. and the reporting in section A.IV.4.

In the event testing is required to demonstrate compliance, the visible emissions shall be determined by OAC rule 3745-17-03(B)(1).

- 2.** The VOC emission calculations for this facility were taken in part from the permittee's Air Pollution Emission Model. The VOC emissions from this emissions unit shall be calculated as follows:

- 2.a.** For liquid mixing operations, the monthly VOC emissions rate, $E(\text{mixing})$, shall be calculated as follows:

i. $E(\text{mixing}) = E_i(\text{loading}) + E_i(\text{venting})$

where:

$E(\text{loading}) =$ monthly VOC emissions from loading VOC liquids into mixing tanks

$E(\text{venting}) =$ monthly VOC emissions from venting VOC liquids during mixing .

ii. For loading VOC liquid into a mixing tank, the monthly VOC emissions shall be calculated, based on the Ideal Gas Law and displacement of saturated vapors at 80 degrees F (27 degrees C), as follows:

$E(\text{loading}) =$ monthly sum of $E_i(\text{loading})$ for all VOC liquid "i" loaded into mixing tanks

$$E_i(\text{loading}) = P_i * X_i * V_i * MW_i / (R * T)$$

where:

$E_i(\text{loading}) =$ lbs of VOC emissions during the month from loading VOC liquid "i" into mixing tanks

$P_i =$ vapor pressure of VOC liquid "i" at 80 degrees F, in mmHg

$V_i =$ volume of VOC liquid "i" charged to mixing tanks during the month in cubic feet (equals monthly gallons of liquid "i" divided by 7.48 gal/cu ft)

$R = 999$ mmHg-cubic feet/lb mole-degrees K

$T =$ temperature in degrees K (equals 273 plus 27 degrees C)

$MW_i =$ molecular weight of VOC liquid "i", in lbs/lb mole

V. Testing Requirements (continued)

iii. For venting of VOC liquids during mixing, the monthly VOC emissions shall be calculated, based on the Ideal Gas Law and venting of saturated vapors at 90 degrees F (32 degrees C) as follows:

$E(\text{venting}) = \text{monthly sum of } E_i(\text{venting}) \text{ for all VOC liquid "i" loaded into mixing tanks}$

$$E_i(\text{venting}) = P_i * X_i * V_{i,v} * MW_i / (R * T)$$

where:

$E_i(\text{venting}) = \text{lbs of VOC emissions during the month for venting a VOC liquid "i" during mixing}$

$P_i = \text{vapor pressure of VOC liquid "i" at 90 degrees F, in mmHg}$

$V_{i,v} = \text{volume (cu ft) of saturated vapors removed by the ventilation system during mixing of VOC liquid "i" (equals monthly gallons of VOC liquid "i" times } 5 * 30 / 350 \text{ based on 5\% of the total ventilation flow rate or 5 cu ft/min, an average mixing time of 30 minutes per batch, and a typical batch size of 350 gallons)}$

$R = 999 \text{ mmHg-cubic feet/lb mole-degrees K}$

$T = \text{temperature in degrees K (equals 273 plus 32 degrees C)}$

$MW_i = \text{molecular weight of VOC liquid "i", in lbs/lb mole}$

2.b. For the liquid filling of aerosol cans, the monthly VOC emissions shall be calculated, based on the Ideal Gas Law and displacement of saturated vapors at 80 degrees F (27 degrees C) as follows:

$E(\text{filling}) = \text{monthly sum of } E_i(\text{filling}) \text{ for all VOC liquid "i" filling of aerosol cans}$

$$E_i(\text{filling}) = P_i * X_i * V_i * MW_i / (R * T)$$

where:

$E_i(\text{filling}) = \text{lbs of VOC emissions during the month for VOC liquid "i" filling of aerosol cans}$

$P_i = \text{vapor pressure of VOC liquid "i" at 80 degrees F, in mmHg}$

$V_i = \text{volume of VOC liquid "i" filled into aerosol cans during the month in cubic feet (equals monthly gallons of VOC liquid "i" divided by 7.48 gal/cu ft)}$

$R = 999 \text{ mmHg-cubic feet/lb mole-degrees K}$

$T = \text{temperature in degrees K (equals 273 plus 27 degrees C)}$

$MW_i = \text{molecular weight of VOC liquid "i", in lbs/lb mole}$

V. Testing Requirements (continued)

2.c. For the gasser (gashouse) operations, the monthly VOC emissions rate, EG(total), shall be calculated as follows:

i. $EG(\text{total}) = EG(\text{filling}) + EG(\text{purging})$

where:

$EG(\text{filling}) =$ monthly VOC emissions from filling aerosol cans with VOC propellant

$EP(\text{purging}) =$ monthly VOC emissions from purging of lines containing VOC propellant

ii. For the filling of aerosol cans with VOC propellant and the purging of lines containing VOC propellant, the monthly VOC emissions shall be calculated as follows:

$EG(\text{filling}) =$ monthly sum of $(NC_{p,f,v}) \times (EF_{p,f}) \times (K_p) \times (1 - CE_{p,v}/100) \times (VOC_p)$

$EP(\text{purging}) =$ monthly sum of $(NP_{p,v}) \times (V_p) \times (LD_p) \times (1 - R_p) \times (1 - CE_{p,v}/100) \times (VOC_p)$

where:

$CE_{p,v} =$ control efficiency for propellant "p" VOC emissions and type of venting "v" for those emissions, based on venting of VOC propellant emissions to thermal incinerator or not and the VOC control efficiency of the thermal incinerator

$CE_{p,v} = 0\%$ if propellant "p" VOC emissions are not vented to the thermal incinerator

$CE_{p,v} = 98\%$ if propellant "p" VOC emissions are vented to the thermal incinerator and the thermal incinerator has not yet been compliance tested (98% is based on design efficiency from PTI application for emissions unit P003)

$CE_{p,v} =$ overall VOC control efficiency from most recent compliance test of the thermal incinerator, if propellant "p" VOC emissions are vented to the thermal incinerator and the thermal incinerator has been compliance tested

$EF_{p,f} =$ emission factor for VOC propellant gas loss when filling cans with VOC propellant "p", based on propellant filler type "f" (needle filling or Sepro filling)

$EF_{p,f} = 0.2$ cc/can for needle filling of VOC propellant "p"

$EF_{p,f} = 1.0$ cc/can for Sepro filling of VOC propellant "p"

$K_p =$ conversion factor for gaseous VOC propellant "p" expressed in lbs/cc at standard conditions

$LD_p =$ liquid density of VOC propellant "p" at storage temperature and pressure, in pounds/gallon

$NC_{p,f,v} =$ number of cans produced with VOC propellant "p" and filling type "f" during the month by type of venting "v" (vented to thermal incinerator or not vented to thermal incinerator)

$NP_{p,v} =$ number of propellant line purges during the month for VOC propellant "p" by type of venting "v" (vented to thermal incinerator or not vented to thermal incinerator)

$R_p =$ fraction by weight of purged VOC propellant "p" which is recovered and stored in a pressure tank

$V_p =$ volume of propellant line purged for VOC propellant "p", in gallons

$VOC_p =$ fraction VOC by weight for VOC propellant "p" (usually 1 for a VOC containing propellant)

V. Testing Requirements (continued)

- 2.d. For the manual aerosol can cleaning operation (can brushing operation), VOC emissions shall be equal to the mass of VOC solvent consumed in the operation. The monthly VOC emissions from can brushing shall be calculated as the sum of VOC emissions for all solvents consumed during that month. The VOC emissions from each VOC solvent consumed is calculated as the number of VOC solvent gallons consumed during the month times the VOC solvent density (pounds/gallon).
3. The permittee shall conduct, or have conducted, emissions testing for the thermal incinerator to demonstrate the thermal incinerator's control efficiency for VOC emissions from this emissions unit's gashouse operations in accordance with the following requirements:
- a. The emissions testing shall be conducted within 3 months after completed installation of the thermal incinerator, and subsequent emissions testing shall be conducted within 36 months after the previous emissions testing.
 - b. The emissions testing shall be conducted to determine the incinerator's destruction efficiency for volatile organic compounds by means of the test method in Method 25 or 25A of 40 CFR Part 60, Appendix A.
 - c. The emissions testing shall be conducted to determine the VOC capture efficiency of the vapor collection system used to transport VOC emissions from the emissions unit's gashouse operations (propellant filling of aerosol cans and propellant line purging) to the thermal incinerator by means of test methods contained in Method 204 through 204E of 40CFR Part 51, Appendix M, or the alternative capture efficiency testing protocols specified in the USEPA, Office of Air Quality Planning and Standards document entitled "Guidelines for Determining Capture Efficiency," dated January 9, 1995.
 - d. The tests shall be conducted while the emissions unit's gashouse is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.
 - e. The control efficiency of the thermal incinerator shall be the destruction efficiency times the capture efficiency divided by 100.
4. For any emissions testing conducted under section A.V., the permittee shall meet the following requirements:
- a. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).
 - b. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
 - c. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s).

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Can Piercing (P006)
Activity Description: Equipment Used to Pierce Aerosol Containers

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Aerosol can piercing operation	Findings and Orders entered into the Director's Journal on August 18, 1995 and approved by USEPA as a SIP revision for this facility (formerly Sprayon Products Incorporated) on April 25, 1996 OAC rule 3745-21-07(G)(2)	See section A.I.2.a. below. See section A.I.2.b. below.

2. Additional Terms and Conditions

- 2.a. For the mixing tanks, gasser operations, can brushing operations, and can piercing operations at this facility, the total VOC emissions in any month shall not exceed 0.75 pound of VOC per 1000 aerosol cans produced. (Note: This includes all VOC emissions from emissions units P002 through P006, except for liquid filling of aerosol cans. Emissions unit P001 has been shut down.)
- 2.b. The requirements under this rule are not applicable due to the federally enforceable, site-specific requirements, based on reasonably available control technology (RACT), contained in the 8/18/95 Director's Findings and Orders. These RACT requirements are intended to be added to OAC rule 3745-21-09 pursuant to "Section VII.: Termination" of the 8/18/95 Findings and Orders. Also, as specified within OAC rule 3745-21-07(A)(2)(a), the requirements under OAC rule 3745-21-07 shall not apply to "... sources which are in compliance with or specifically exempted from the applicable requirements of rule 3745-21-09 of the Administrative Code."

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall collect and record for this emissions unit the following information each month and maintain the information at the facility:
 - a. number of aerosol cans pierced, categorized by type of product/propellant and size;
 - b. for each category of aerosol can identified under section A.III.1.a., the name and amount (lbs/can) of VOC liquid (solvent) and VOC propellant contained within the aerosol can;
 - c. for each VOC liquid, the vapor pressure (mm Hg) at 80 degrees F and the molecular weight (lbs/lb mole).

III. Monitoring and/or Record Keeping Requirements (continued)

2. The permittee shall calculate and record for each month the monthly amount of VOC emissions (pounds) from this can piercing operation in accordance with section A.V.2.a.
3. The permittee shall calculate and record for each month the following information for emissions units P002 through P006:
 - a. monthly amount of VOC emissions (pounds), which is a sum of the monthly VOC emissions recorded under section A.III.4.h. of the part III terms and conditions for emissions units P002 through P005 plus the monthly VOC emissions recorded under section A.III.2. of the part III terms and conditions for emissions unit P006;
 - b. monthly number of aerosol cans produced, which is a sum of the monthly aerosol can production recorded under section A.III.4.e. of the part III terms and conditions for emissions units P002 through P005; and
 - c. monthly VOC emissions rate in pound/1000 cans, which is 1000 times the value from section A.III.5.a. divided by the value from section A.III.5.b., and rounded to two decimal places.

IV. Reporting Requirements

1. The permittee shall notify the appropriate Ohio EPA District Office or local air agency of any record that shows that the emission rate recorded under section A.III.5.c. exceeds 0.75 lb VOC/1000 cans produced. This notification shall be submitted within 45 days after the end of the month that the exceedance occurs.
2. The permittee shall submit to the appropriate Ohio EPA District Office or local air agency quarterly summaries of the records specified under sections A.III.1. and A.III.2. These quarterly summaries shall be submitted by April 30, July 31, October 31, and January 31 and shall cover the records for the previous calendar quarters.

V. Testing Requirements

1. Compliance with the emissions limitations in section A.I. of these terms and conditions shall be determined as follows:
 - 1.a. Emission Limitation:
For the mixing tanks, gasser operations, can brushing operations, and can piercing operations at this facility, the total VOC emissions in any month shall not exceed 0.75 pound of VOC per 1000 aerosol cans produced.

Applicable Compliance Method:
Compliance shall be demonstrated by means of:
 - i. record keeping specified in sections A.III.2., A.III.3., A.III.4., and A.III.5. of the part III terms and conditions of emissions units P002 through P005;
 - ii. record keeping specified in sections A.III.1., A.III.2., and A.III.3. of the part III terms and conditions of emissions unit P006;
 - iii. calculating the VOC emissions rate for the mixing tanks (mixing operations), gasser operations (gashouse operations), can brushing operations (manual can cleaning), and can piercing operations at this facility, as specified in section A.V.2. of the part III terms and conditions of emissions units P002 through P006;
 - iv. testing the thermal incinerator, as specified in A.V.3. of the part III terms and conditions of emissions units P002 through P005; and
 - v. operating and maintaining a continuous temperature monitor and recorder for the thermal incinerator and maintaining a log of gashouse operations, as specified in section A.III.6. of the part III terms and conditions of emissions units P002 through P005.

In the event additional emissions testing is required to demonstrate compliance, the VOC emissions shall be determined in accordance with OAC rule 3745-21-10(C).

V. Testing Requirements (continued)

2. The VOC emission calculations for this facility were taken in part from the permittee's Air Pollution Emission Model. For the can piecing operation, monthly VOC emissions shall be the total VOC emissions from propellants plus the total VOC emissions from liquid recovery.
- a. The total VOC emissions (pounds) from propellants is the sum of the amount of VOC propellant within all cans pierced during that month. For a grouping of pierced cans by type and size, the monthly amount of VOC propellant is calculated as the amount of propellant VOC per can (lbs VOC /can), which is based on the type and size category, times the number of cans pierced during the month for that type and size category.
- b. The total VOC emissions (pounds) from liquid recovery for all cans pierced during a month is the sum of VOC emissions from the liquids (solvents) within all cans pierced during that month. The VOC emissions from the liquids shall be calculated, based on the Ideal Gas Law and displacement of saturated vapors at 80 degrees F (27 degrees C) for liquid flowing into a recovery drum or vessel, using the following formulas:

$E(\text{piercing}) = \text{sum of } E_i(\text{piercing}) \text{ for all VOC liquid "i" within the cans pierced in the month}$

$E_i(\text{piercing}) = P_i * X_i * V_i * MW_i / (R * T)$

$V_i = W_i * N_c / (7.48 * D_i)$

$W_i = \text{sum of } (W_{i,c} * N_c) \text{ for VOC liquid "i" for all cans pierced (by can type and size category "c") during the month}$

where:

$D_i = \text{density of VOC liquid "i", in lbs/gal}$

$E(\text{piercing}) = \text{total VOC emissions from liquid recovery for all cans pierced in the month, in pounds}$

$E_i(\text{piercing}) = \text{lbs of VOC emissions from VOC liquid "i" recovered from cans pierced in the month}$

$MW_i = \text{molecular weight of VOC liquid "i", in lbs/lb mole}$

$N_c = \text{number of cans pierced during the month for can type and size category "c"}$

$P_i = \text{vapor pressure of VOC liquid "i" at 80 degrees F, in mmHg}$

$R = 999 \text{ mmHg-cubic feet/lb mole-degrees K}$

$T = \text{temperature in degrees K (equals 460 plus 80 degrees F)}$

$V_i = \text{volume of VOC liquid "i" within the pierced cans for the month, in cubic feet}$

$W_i = \text{amount of VOC liquid "i" within the pierced cans for the month, in pounds}$

$W_{i,c} = \text{amount of VOC liquid "i" for can type and size category "c", in lbs/can}$

7.48 = conversion factor in gallons per cubic foot

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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