

Facility ID: 1318040267 Issuance type: Title V Preliminary Proposed Permit

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In addition to the terms and conditions, hyperlinks have been inserted into the document so you may more readily access the section of the document you wish to review.

Finally, the term language under "Part III" and before "I. Applicable Emissions Limitations..." has been added to aid in document conversion, and was not part of the original issued permit.

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## Part II - Specific Facility Terms and Conditions

### a State and Federally Enforceable Section

1. None

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### b State Only Enforceable Section

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

#### Boilers:

B001 - Boiler # 8 / (Area G) 2,320,000 Btu/Hr Natural Gas Boiler  
 Z101 - Boiler # 9 / (Area G) 2,320,000 Btu/Hr Natural Gas Boiler  
 B002 - Boilers # 5 / (Main Boiler Room) 1,260,000 Btu/Hr Natural Gas Boiler  
 B003 - Boiler # 6 / (Mezzanine Boiler) 735,000 Btu/Hr Natural Gas Boiler  
 B004 - Boiler # 7 / (Mezzanine Boiler) 1,050,000 Btu/Hr Natural Gas Boiler  
 B005 - Boilers # 1 / (Main Boiler Room) 3,060,000 Btu/Hr Natural Gas Boiler  
 Z105 - Boilers # 2 / (Main Boiler Room) 3,060,000 Btu/Hr Natural Gas Boiler  
 B006 - Boilers # 3 / (Main Boiler Room) 3,150,000 Btu/Hr Natural Gas Boilers  
 Z106 - Boilers # 4 / (Main Boiler Room) 3,150,000 Btu/Hr Natural Gas Boilers  
 B007 - Boiler # 10 / (Pump House, Water Tank) 1,680,000 Btu/Hr Natural Gas Boilers  
 Bulk Storage - Raw Materials:  
 T001 - Tank # 2 / 4,000-Gallon Solvent Storage Tank / 1,1,1 Trichloroethane  
 T002 - Tank # 4 / 6,000-Gallon Propellant Storage Tank / Dimethyl Ether  
 T003 - Tank # 6 / 6,000-Gallon Propellant Storage Tank / Dimethyl Ether  
 T004 - Tank # 8 / 8,000-Gallon Propellant Storage Tank / NP-108 Propane  
 T005 - Tank # 10 / 8,000-Gallon Propellant Storage Tank / NP-108 Propane  
 T006 - Tank # 12 / 10,000-Gallon Propellant Storage Tank / NP-85 Propane/Butane  
 T007 - Tank # 14 / 10,000-Gallon Propellant Storage Tank / NP-46 Propane/Butane  
 T008 - Tank # 16 / 10,000-Gallon Propellant Storage Tank / A-70 Propane/Butane  
 T010 - Tank # 20 / 2,200-Gallon Propellant Storage Tank / F113 Freon  
 T011 - Tank # 22 / 5,000-Gallon Propellant Storage Tank / F-11 Freon  
 T012 - Tank # 24 / 7,700-Gallon Propellant Storage Tank / F-134A Freon  
 T013 - Tank # 26 / 10,000-Gallon Propellant Storage Tank / F-22 Freon  
 T014 - Tank # 28 / 12,000-Gallon Solvent Storage Tank /Toluene  
 T015 - Tank # 30 / 12,000-Gallon Solvent Storage Tank / Methyl Ethyl Ketone  
 T016 - Tank # 32 / 5,000-Gallon Solvent Storage Tank / Ethyl Ethoxy Propanol  
 T017 - Tank # 34 / 12,000-Gallon Solvent Storage Tank / Acetone  
 T018 - Tank # 36 / 5,000-Gallon Solvent Storage Tank / Hexane  
 T019 - Tank # 38 / 12,000-Gallon Solvent Storage Tank / Perchloroethane  
 T020 - Tank # 40 / 5,000-Gallon Solvent Storage Tank / Xylene  
 T021 - Tank # 42 / 12,000-Gallon Solvent Storage Tank / Acetone  
 T022 - Tank # 44 / 12,000-Gallon Propellant Storage Tank / NP-70 Propane/Butane  
 T023 - Tank # 46 / 12,000-Gallon Propellant Storage Tank / NP-70 Propane/Butane  
 Z020 - Tank #18 / 7,000-Gallon Propellant Tank / carbon dioxide  
 Z021 - Tank #50 / 3,000-Gallon propellant tank / nitrogen  
 Z022 - Tank #20 / 1,000-Gallon propellant tank / hydrocarbon mixture  
 Z023 - Tank #54 / 250-Gallon propellant tank / hydrocarbon mixture  
 Z024 - Tank #56 / 50-Gallon propellant tank / hydrocarbon mixture  
 Z025 - 250-Gallon Diesel Tank (associated with Z003)

#### Heaters, Roof Units:

Z010 - Area G/1,600,000 Btu/Hr Input Natural Gas  
 Z011 - Lab-South/300,000 Btu/Hr Input Natural Gas  
 Z012 - Lab-North Unit/100,000 Btu/Hr Input Natural Gas  
 Z013 - Lab-North Unit 1/400,000 Btu/Hr Input Natural Gas  
 Z014 - Lab-East Unit 1/  
 Z015 - Lab-East Unit 2/300,000 Btu/Hr Input Natural Gas

Z016 - Production Office-Unit 1/1,900,000 Btu/Hr Input Natural Gas  
Z017 - New Ware House-Unit 1/3,698,000 Btu/Hr Input Natural Gas  
Z018 - Area Near Valve Room North-Unit 1/1,848,000 Btu/Hr Input Natural Gas

Other:

Z001 - QA/QC Laboratory (test spray booth, hoods, single-head gasser, and solvent filling stations)  
Z002 - Diesel Fire Water Pump (Emergency) / 220 Hp @ 2100 RPM  
Z003 - Line # 3 Parts Cleaning Station (small parts cleaning station used by maintenance)  
Z004 - Tow Motor Parts Cleaning Station (small parts cleaning station used by maintenance)  
Z005 - R&D Lab (test spray booth, hoods, and single-head gasser)

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.

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- [Go to Part III for Emissions Unit P003](#)
- [Go to Part III for Emissions Unit P004](#)
- [Go to Part III for Emissions Unit P005](#)
- [Go to Part III for Emissions Unit P006](#)

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**Part III - Terms and Conditions for Emissions Units**

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Facility ID: 1318040267 Emissions Unit ID: P002 Issuance type: Title V Preliminary Proposed Permit

**A. State and Federally Enforceable Section**

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

**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 by under-the-cup fill, propellant line purging, and manual cleaning of filled aerosol cans) with the gashouse operations (propellant filling and propellant line purging) controlled by thermal incinerator  (See section A.VI.1. for listing of liquid mixing tanks.)	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 filling of aerosol cans shall not exceed 8 lbs/hr, 40 lbs/day, and 7.3 tons/year.  The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07 and 3745-17-11.
	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.I.2.a. below.
	OAC rule 3745-21-07(G)(2) OAC rule 3745-17-11(B)(1)	See section A.I.2.b. below.
	OAC rule 3745-17-07(A)	During the loading of solid materials into a liquid mixing tank, particulate emissions shall not exceed 0.551 pound/hour (based on Table I).  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**

- a. For the liquid mixing tanks, can liquid filling operations, gasser operations, can brushing operations, and can piercing operations at this facility, the total VOC emissions in any rolling 12-month period 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. Emissions unit P001 has been shut down.)
- (a) (This VOC emissions limitation is based on a pending resolution of the facility's appeal of the August 18, 1995 Findings and Orders and a pending resolution of the facility's appeal of USEPA's April 25, 1996 approval of the August 18, 1995 Findings and Orders as a SIP revision. A revised Findings and Orders that includes such pending resolution is to be issued by the Director with appropriate public notice and submitted to USEPA as a SIP revision.)
- 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."

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**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 and mass emission rate of the thermal incinerator were 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.

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**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 (pounds) of each VOC liquid charged to the mixing tanks and filled into aerosol cans;
  - d. number of aerosol cans filled with a VOC propellant by name of propellant, type of propellant filler (under-the-cup fill, 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);
  - f. name and amount (pounds) of each VOC liquid (solvent) used in the manual aerosol can cleaning operation (can brushing operation); and
    - g. number of safety diversion events and number of safety diversion events that are not emergency events (see safety diversions under section A.V.5.).
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 70 degrees F and 80 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.
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, propellant line purging, and safety diversions), 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, which is the sum of data recorded under sections A.III.4.a., A.III.4.b., 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\*.
- \* Unless no longer required pursuant to section A.V.1.b.iv.
5. The permittee shall calculate and record for each month the following information for emissions units P002 through P006:
- 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;
  - 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;
  - 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;
  - amount of VOC emissions (pounds) during the rolling 12-month period, which is the sum of the values recorded under section A.III.5.a. for this month and the previous 11 consecutive months;
  - number of aerosol can produced during the rolling 12-month period, which is the sum of the values recorded under section A.III.5.b. for this month and the previous 11 consecutive months; and
  - VOC emissions rate during the rolling 12-month period in pound/1000 cans, which is 1000 times the value from section A.III. 5.d. divided by the value from section A.III.5.e., 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 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;
  - 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
  - a log of the dates and times of the bypass venting of gashouse emissions to ambient air (see safety diversions under section A.V.5.) and any downtime for the thermal incinerator and temperature monitoring equipment, when the emissions unit's gashouse is in VOC operation.
7. Visible Emissions from Mixing Tanks
- 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:
    - the color of the emissions;
    - whether the emissions are representative of normal operations;
    - if the emissions are not representative of normal operations, the cause of the abnormal emissions;
    - the total duration of any visible emissions incident; and
    - any corrective actions taken to eliminate the visible emissions.
  - In the event of two consecutive quarters in which no visible emissions are observed under section A.III.7.a. for all mixing tanks of this emissions unit, the permittee can elect to perform checks for visible emissions on a monthly basis in the manner described under section A.III.7.a. If visible emissions are subsequently observed during any month, the permittee shall immediately go back to checks for visible emissions during each week as described under section A.III.7.a, and the permittee may again elect to use the provisions under this section.

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#### IV. Reporting Requirements

- The permittee shall submit quarterly deviation (excursion) reports that identify the emission rate exceedances identified below.

- a. Emissions rate recorded under section A.III.5.f. for a rolling 12-month period exceeds 0.75 lb VOC/1000 cans produced.
  - b. Emissions rate recorded under section A.III.4.h. exceeds 8 lbs VOC/hr.
  - c. Emissions rate recorded under section A.III.4.g. exceeds 40 lbs VOC/day.  
 These quarterly deviation reports shall be submitted in accordance with paragraph A.1.c.ii of the General Terms and Conditions of this permit.
2. The permittee shall submit quarterly deviation (excursion) reports which identify the deviations recorded under sections A.III.6.b. and A.III.6.c. These quarterly deviation reports shall be submitted in accordance with paragraph A.1.c.ii of the General Terms and Conditions of this permit.
  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.

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#### V. Testing Requirements

1. Compliance with the emissions limitations in section A.I. of these terms and conditions shall be determined as follows:
  - a. Emission Limitation:  
 For the liquid mixing tanks, can liquid filling operations, gasser operations, can brushing operations, and can piercing operations at this facility, the total VOC emissions in any rolling 12-month period 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), can liquid filling 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).
  - 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.b., A.III.4.g., and A.III.4.h. and by calculating VOC emissions from can 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 section 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.
    - iv. In the event the permittee demonstrates to the satisfaction of the Director that the VOC emissions from can liquid filling cannot exceed 8 lbs/hr and 40 lbs/day on a worst case emissions basis for the various

types of liquids being filled and the maximum liquid filling rate achievable by the fillers, the recordkeeping in sections A.III.1., A.III.3.a., A.III.4.b., A.III.4.g., and A.III.4.h. and the calculations in sections A.V.1.b.i. and A.V.1.b.ii. shall no longer be required for demonstrating compliance with these emissions limitations. The continued applicability of such worst case calculations shall be documented and submitted annually to the appropriate Ohio EPA District Office or local air agency

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).

- 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 (Table 6.4-1 which has a "C" emission factor rating). 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.
- 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:
- a. For liquid mixing operations, the monthly VOC emissions (pounds), 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
- a. 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 80 degrees F (27 degrees C), as follows:
- $E(\text{venting})$  = monthly sum of  $E_i(\text{venting})$  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:

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

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

$V_{i,v}$  = 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  $5 \cdot 30 / 350$  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 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

iv. (Alternative method to sections A.V.2.a.i through A.V.2.a.iii)

An alternative method for calculating the monthly emissions rate for liquid mixing operations shall be as follows:

$E(\text{mixing}) = EFM \cdot V(\text{mixing})$

where:

$EFM$  = emission factor of 0.00131 lb VOC/lb VOC liquid throughput (This emission factor is based on the highest annual average emission factor for mixing operations during 1997 to 2000.)

$V(\text{mixing})$  = monthly throughput of VOC liquid employed for mixing, in pounds

If for any month in which the use of this alternative method shows non-compliance with the VOC emissions limit, the method described in sections A.V.2.a.i through A.V.2.a.iii. shall be used to calculate monthly emissions. The compliance determination will then be based on the more detailed calculations.

- b. i. For the liquid filling of aerosol cans, the monthly VOC emissions (pounds) shall be calculated, based on the Ideal Gas Law and displacement of saturated vapors at 70 degrees F (21 degrees C) as follows:

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

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

where:

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

$P_i$  = vapor pressure of VOC liquid "i" at 70 degrees F, in mmHg

$V_i$  = 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 mmHg-cubic feet/lb mole-degrees K

$T$  = temperature in degrees K (equals 273 plus 21 degrees C)

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

ii. (Alternative method to section A.V.2.b.i)

An alternative method for calculating the monthly emissions for liquid can filling operations shall be as follows:

$E(\text{filling}) = EFF \cdot V(\text{filling})$

where:

$EFF$  = emission factor of 0.00026 lb VOC/lb VOC liquid throughput (This emission factor is based on the highest annual average emission factor for liquid can filling operations during 1997 to 2000.)

$V(\text{filling})$  = monthly throughput of VOC liquid employed for can filling, in pounds

If for any month in which the use of this alternative method shows non-compliance with the VOC emissions limit, the method described in section A.V.2.b.i shall be used to calculate monthly emissions. The compliance determination will then be based on the more detailed calculations.

- c. For the gasser (gashouse) operations, the monthly VOC emissions (pounds),  $EG(\text{total})$ , shall be calculated as follows:

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

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

$EG(\text{safety diversions})$  = monthly VOC emissions from safety diversions of VOC control equipment

- ii. For the filling of aerosol cans with VOC propellant and the purging of lines containing VOC propellant, the monthly VOC emissions for filling and line purging shall be calculated as follows:
- $$EG(\text{filling}) = \text{monthly sum of } (NC_{p,f,v}) \times (EF_{p,f}) \times (K_p) \times (1 - CE_{p,v}/100) \times (VOC_p)$$
- $$EP(\text{purging}) = \text{monthly sum of } (NP_{p,v}) \times (V_p) \times (LD_p) \times (1 - R_p) \times (1 - CE_{p,v}/100) \times (VOC_p)$$
- 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 (based on the 9/24/02 test,  $CE_{p,v}$  = 96.73%)
- c.  $EF_{p,f}$  = emission factor for VOC propellant gas loss when filling cans with VOC propellant "p", based on propellant filler type "f" (under-the-cup fill, needle fill, or Sepro fill)
- $EF_{p,f}$  = 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"
- $EF_{p,f}$  = 1.75 cc/can for under-the-cup 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)
- c. iii. (Alternative method to section A.V.2.c.ii)
- For gasser operations equipped with a thermal incinerator in which the VOC emissions from the filling of aerosol cans with VOC propellant are vented to the thermal incinerator and the line purging of VOC propellant is recovered for use as a fuel in the thermal incinerator, the monthly VOC emissions for filling and line purging shall be calculated as follows:
- $$EG(\text{filling}) + EG(\text{purging}) = EF * NC/1000$$
- where:
- $EF$  = VOC emissions factor from most recent compliance test of the thermal incinerator, expressed in lbs VOC/1000 aerosol cans produced (based on the 9/24/02,  $EF$  = 0.16 lb VOC/1000 aerosol cans)
- $NC$  = number of aerosol cans produced with VOC propellant during the month
- iv.  $EG(\text{safety diversions})$  = the sum of the VOC emissions determined for each safety diversion event that is not an emergency event during the month (See section A.V.5. for information on safety diversions.)
- 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 mass emission rate and 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 mass emission rate and destruction efficiency for volatile organic compounds by means of the test method under OAC rule 3745-21-10(C) with concentration of VOC in the inlet and outlet gas streams determined by utilizing Method 25 or 25A of 40 CFR Part 60, Appendix A, and
  - 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 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.
  - f. The mass emissions rate of the thermal incinerator, expressed in pounds VOC per 1000 aerosol cans produced, shall be the hourly mass emissions rate (lbs VOC/hour) divided by the hourly production rate (1000 cans/hour).
 

For the 9/24/02 compliance test of the thermal incinerator controlling the gashouse operations within emissions units P002, P003, P004, and P005, it was determined that the thermal incinerator emitted 0.16 pound VOC/1000 aerosol cans produced, demonstrated an overall control efficiency of 96.73% (destruction efficiency of 96.73% and capture efficiency of 100%), and showed a monitored combustion temperature average of 1,574 degrees F when operating at a combustion temperature set point of 1,510 degrees F for both the natural gas burner and the recovered propellant burner. The 9/24/02 compliance test comprised six 1-hour runs for emissions units P002, P003, P004, and P005 that operated at a combined production average of 19,932 cans/hour and a combined production range of 13,502 to 24,507 cans/hour.
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).
5. Safety Diversions for Gasser Operations Vented to a Thermal Incinerator.
- a. A safety diversion is the venting of gasser operations directly to ambient air, instead of being vented to the thermal incinerator, in order to meet National Fire Protection Association (NFPA) 30B requirements. Under a safety diversion, the ventilation rate of the affected gashouse line is quickly increased, the gashouse line is vented immediately to ambient air (i.e., thermal incinerator is bypassed), and production activities usually continue unless there is a production shutdown due to an emergency event. Safety diversion events shall be included in the determination of compliance with the monthly VOC emission limitation of 0.75 lb VOC/1000 aerosol cans produced. The permittee shall maintain a list of criteria for safety diversions that are not emergency events and safety diversions that are emergency events.
  - b. The VOC emissions for a safety diversion event shall be calculated based on the average concentration of the LEL detectors associated with the gashouse line, the flow rate of the gashouse line (measured with a mass flow meter), the propellant being filled, and the length of the event (seconds).
  - c. The permittee shall calibrate the LEL detectors once per month following the manufacturer's protocol and shall check the flow meters once every six months for accuracy using a pitot tube.
  - d. For the next compliance testing of the thermal incinerator, the permittee shall conduct testing and evaluation of the accuracy of the mass flow meters. The permittee shall submit a report on such testing and evaluation at the time of the submittal of the thermal incinerator compliance test.

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VI. **Miscellaneous Requirements**

1. Liquid Mixing Tanks: 29 Total Tanks

Mixing tanks primarily reside in Fill Room as listed. However, tanks of 350 Gal or less are portable and may be transported to other lines. Contents from any tank in a fill room may also be pumped through a hose to any other process fill line. No tank is specifically dedicated to any one process fill line.

Line 3 Fill Room:

- 1 Inerting Prototype / 350 Gal / Solvent/Other Material Blends
  - 1 Tank / 1,400 Gal / Solvent/Other Material Blends
  - 2 Tanks / @3,400 Gal Solvent/Other Material Blends
  - 2 Tanks / @250 Gal / Solvent/Other Material Blends
  - 3 Tanks / @350 Gal / Solvent/Other Material Blends
  - 2 Fiberglass Tanks / @3,300 Gal / Solvent/Other Material Blends

- Line 5 Fill Room:
- 2 Tanks / @350 Gal / Solvent/Other Material Blends
  - 1 Tank / 250 Gal / Solvent/Other Material Blends

- Line 6 & 7 Fill Room:
- 1 Tank / 1,400 Gal / Solvent/Other Material Blends
  - 6 Tanks / @350 Gal / Solvent/Other Material Blends
  - 2 Tanks / @250 Gal / Solvent/Other Material Blends
  - 2 Tanks / @1,300 Gal / Solvent/Other Material Blends
  - 2 Tanks/ @3,300 Gal / Solvent/Other Material Blends
  - 1 Water Heat Exch / 250 Gal / Water
  - 1 Undercoat Tank / 150 Gal / Undercoat

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Facility ID: 1318040267 Emissions Unit ID: P002 Issuance type: Title V Preliminary Proposed Permit

**B. State Enforceable Section**

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

**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>
2. <b>Additional Terms and Conditions</b>			
1.	None		

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**II. Operational Restrictions**

- 1. None

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**III. Monitoring and/or Record Keeping Requirements**

- 1. None

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**IV. Reporting Requirements**

- 1. None

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**V. Testing Requirements**

- 1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 1318040267 Emissions Unit ID: P003 Issuance type: Title V Preliminary Proposed Permit

**A. State and Federally Enforceable Section**

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

**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 by needle fill and Sepro fill, 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.  The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07 and 3745-17-11.

(See section A.VI.1. for listing of liquid mixing tanks.)

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)  
OAC rule 3745-17-11(B)(1)

See section A.I.2.b. below.  
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**

- a. For the liquid mixing tanks, can liquid filling operations, gasser operations, can brushing operations, and can piercing operations at this facility, the total VOC emissions in any rolling 12-month period 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. Emissions unit P001 has been shut down.)
- (a) (This VOC emissions limitation is based on a pending resolution of the facility's appeal of the August 18, 1995 Findings and Orders and a pending resolution of the facility's appeal of USEPA's April 25, 1996 approval of the August 18, 1995 Findings and Orders as a SIP revision. A revised Findings and Orders that includes such pending resolution is to be issued by the Director with appropriate public notice and submitted to USEPA as a SIP revision.)
- 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."

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## 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 and mass emission rate of the thermal incinerator were 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.

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## 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 (pounds) of each VOC liquid charged to the mixing tanks and filled into aerosol cans;
  - d. number of aerosol cans filled with a VOC propellant by name of propellant, type of propellant filler (under-the-cup fill, 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);
  - f. name and amount (pounds) of each VOC liquid (solvent) used in the manual aerosol can cleaning operation (can brushing operation); and
    - g. number of safety diversion events and number of safety diversion events that are not emergency events (see safety diversions under section A.V.5.).
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 70 degrees F and 80 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.
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, propellant line purging, and safety diversions), 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, which is the sum of data recorded under sections A.III.4.a., A.III.4.b., 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\*.
- \* Unless no longer required pursuant to section A.V.1.b.iv.
5. The permittee shall calculate and record for each month the following information for emissions units P002 through P006:
- 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;
  - 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;
  - 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;
  - amount of VOC emissions (pounds) during the rolling 12-month period, which is the sum of the values recorded under section A.III.5.a. for this month and the previous 11 consecutive months;
  - number of aerosol can produced during the rolling 12-month period, which is the sum of the values recorded under section A.III.5.b. for this month and the previous 11 consecutive months; and
  - VOC emissions rate during the rolling 12-month period in pound/1000 cans, which is 1000 times the value from section A.III. 5.d. divided by the value from section A.III.5.e., 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 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;
  - 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
  - a log of the dates and times of the bypass venting of gashouse emissions to ambient air (see safety diversions under section A.V.5.) and any downtime for the thermal incinerator and temperature monitoring equipment, when the emissions unit's gashouse is in VOC operation.
7. Visible Emissions from Mixing Tanks
- 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:
    - the color of the emissions;
    - whether the emissions are representative of normal operations;
    - if the emissions are not representative of normal operations, the cause of the abnormal emissions;
    - the total duration of any visible emissions incident; and
    - any corrective actions taken to eliminate the visible emissions.

b. In the event of two consecutive quarters in which no visible emissions are observed under section A.III.7.a. for all mixing tanks of this emissions unit, the permittee can elect to perform checks for visible emissions on a monthly basis in the manner described under section A.III.7.a. If visible emissions are subsequently observed during any month, the permittee shall immediately go back to checks for visible emissions during each week as described under section A.III.7.a, and the permittee may again elect to use the provisions under this section.

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#### IV. Reporting Requirements

- The permittee shall submit quarterly deviation (excursion) reports that identify any emissions rate recorded under section A.III.5.f. for a rolling 12-month period which exceeds 0.75 lb VOC/1000 cans produced. The

quarterly deviation reports shall be submitted in accordance with paragraph A.1.c.ii of the General Terms and Conditions of this permit.

2. The permittee shall submit quarterly deviation (excursion) reports which identify the deviations recorded under sections A.III.6.b. and A.III.6.c. These quarterly deviation reports shall be submitted in accordance with paragraph A.1.c.ii of the General Terms and Conditions of this permit.
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.

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#### V. Testing Requirements

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

- a. Emission Limitation:

For the liquid mixing tanks, can liquid filling operations, gasser operations, can brushing operations, and can piercing operations at this facility, the total VOC emissions in any rolling 12-month period 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), can liquid filling 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).

- 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.

The worst case hourly OC emissions calculations shall be documented and submitted annually to the appropriate Ohio EPA District Office or local air agency.

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).

- 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

(Table 6.4-1 which has a "C" emission factor rating). 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.

- 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:
- a. For liquid mixing operations, the monthly VOC emissions (pounds), 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
- 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 80 degrees F (27 degrees C), as follows:  
 $E(\text{venting}) =$  monthly sum of  $E_i(\text{venting})$  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:  
 $E_i(\text{venting}) =$  lbs of VOC emissions during the month for venting a VOC liquid "i" during mixing  
 $P_i =$  vapor pressure of VOC liquid "i" at 80 degrees F, in mmHg  
 $V_{i,v} =$  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 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)  
 $R = 999$  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
- iv. (Alternative method to sections A.V.2.a.i through A.V.2.a.iii)  
An alternative method for calculating the monthly emissions rate for liquid mixing operations shall be as follows:

$$E(\text{mixing}) = EFM * V(\text{mixing})$$

where:

EFM = emission factor of 0.00131 lb VOC/lb VOC liquid throughput (This emission factor is based on the highest annual average emission factor for mixing operations during 1997 to 2000.)

V(mixing) = monthly throughput of VOC liquid employed for mixing, in pounds

If for any month in which the use of this alternative method shows non-compliance with the VOC emissions limit, the method described in sections A.V.2.a.i through A.V.2.a.iii. shall be used to calculate monthly emissions. The compliance determination will then be based on the more detailed calculations.

- b. i. For the liquid filling of aerosol cans, the monthly VOC emissions (pounds) shall be calculated, based on the Ideal Gas Law and displacement of saturated vapors at 70 degrees F (21 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:

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

$P_i = \text{vapor pressure of VOC liquid "i" at 70 degrees F, in mmHg}$

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

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

$T = \text{temperature in degrees K (equals 273 plus 21 degrees C)}$

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

ii. (Alternative method to section A.V.2.b.i)

An alternative method for calculating the monthly emissions for liquid can filling operations shall be as follows:

$$E(\text{filling}) = EFF * V(\text{filling})$$

where:

EFF = emission factor of 0.00026 lb VOC/lb VOC liquid throughput (This emission factor is based on the highest annual average emission factor for liquid can filling operations during 1997 to 2000.)

V(filling) = monthly throughput of VOC liquid employed for can filling, in pounds

If for any month in which the use of this alternative method shows non-compliance with the VOC emissions limit, the method described in section A.V.2.b.i shall be used to calculate monthly emissions. The compliance determination will then be based on the more detailed calculations.

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

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

where:

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

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

$EG(\text{safety diversions}) = \text{monthly VOC emissions from safety diversions of VOC control equipment}$

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

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

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

where:

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

$CE_{p,v} = 0\%$  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 (based on the 9/24/02 test,  $CE_{p,v} = 96.73\%$ )

- c.  $EF_{p,f}$  = emission factor for VOC propellant gas loss when filling cans with VOC propellant "p", based on propellant filler type "f" (under-the-cup fill, needle fill, or Sepro fill)
- $EF_{p,f} = 0.2$  cc/can for needle filling of VOC propellant "p"
- $EF_{p,f} = 1.0$  cc/can for Sepro filling of VOC propellant "p"
- $EF_{p,f} = 1.75$  cc/can for under-the-cup 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)
- c. iii. (Alternative method to section A.V.2.c.ii)
- For gasser operations equipped with a thermal incinerator in which the VOC emissions from the filling of aerosol cans with VOC propellant are vented to the thermal incinerator and the line purging of VOC propellant is recovered for use as a fuel in the thermal incinerator, the monthly VOC emissions for filling and line purging shall be calculated as follows:
- $EG(\text{filling}) + EG(\text{purging}) = EF * NC/1000$
- where:
- $EF$  = VOC emissions factor from most recent compliance test of the thermal incinerator, expressed in lbs VOC/1000 aerosol cans produced (based on the 9/24/02,  $EF = 0.16$  lb VOC/1000 aerosol cans)
- $NC$  = number of aerosol cans produced with VOC propellant during the month
- iv.  $EG(\text{safety diversions})$  = the sum of the VOC emissions determined for each safety diversion event that is not an emergency event during the month (See section A.V.5. for information on safety diversions.)
- 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 mass emission rate and 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 mass emission rate and destruction efficiency for volatile organic compounds by means of the test method under OAC rule 3745-21-10(C) with concentration of VOC in the inlet and outlet gas streams determined by utilizing Method 25 or 25A of 40 CFR Part 60, Appendix A, and
- 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 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.

- f. The mass emissions rate of the thermal incinerator, expressed in pounds VOC per 1000 aerosol cans produced, shall be the hourly mass emissions rate (lbs VOC/hour) divided by the hourly production rate (1000 cans/hour).
- For the 9/24/02 compliance test of the thermal incinerator controlling the gashouse operations within emissions units P002, P003, P004, and P005, it was determined that the thermal incinerator emitted 0.16 pound VOC/1000 aerosol cans produced, demonstrated an overall control efficiency of 96.73% (destruction efficiency of 96.73% and capture efficiency of 100%), and showed a monitored combustion temperature average of 1,574 degrees F when operating at a combustion temperature set point of 1,510 degrees F for both the natural gas burner and the recovered propellant burner. The 9/24/02 compliance test comprised six 1-hour runs for emissions units P002, P003, P004, and P005 that operated at a combined production average of 19,932 cans/hour and a combined production range of 13,502 to 24,507 cans/hour.
4. For any emissions testing conducted under section A.V., the permittee shall meet the following requirements:
- 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).
  - 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.
  - 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).
5. Safety Diversions for Gasser Operations Vented to a Thermal Incinerator.
- A safety diversion is the venting of gasser operations directly to ambient air, instead of being vented to the thermal incinerator, in order to meet National Fire Protection Association (NFPA) 30B requirements. Under a safety diversion, the ventilation rate of the affected gashouse line is quickly increased, the gashouse line is vented immediately to ambient air (i.e., thermal incinerator is bypassed), and production activities usually continue unless there is a production shutdown due to an emergency event. Safety diversion events shall be included in the determination of compliance with the monthly VOC emission limitation of 0.75 lb VOC/1000 aerosol cans produced. The permittee shall maintain a list of criteria for safety diversions that are not emergency events and safety diversions that are emergency events.
  - The VOC emissions for a safety diversion event shall be calculated based on the average concentration of the LEL detectors associated with the gashouse line, the flow rate of the gashouse line (measured with a mass flow meter), the propellant being filled, and the length of the event (seconds).
  - The permittee shall calibrate the LEL detectors once per month following the manufacturer's protocol and shall check the flow meters once every six months for accuracy using a pitot tube.
  - For the next compliance testing of the thermal incinerator, the permittee shall conduct testing and evaluation of the accuracy of the mass flow meters. The permittee shall submit a report on such testing and evaluation at the time of the submittal of the thermal incinerator compliance test.

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#### VI. Miscellaneous Requirements

##### 1. Liquid Mixing Tanks: 29 Total Tanks

Mixing tanks primarily reside in Fill Room as listed. However, tanks of 350 Gal or less are portable and may be transported to other lines. Contents from any tank in a fill room may also be pumped through a hose to any other process fill line. No tank is specifically dedicated to any one process fill line.

###### Line 3 Fill Room:

1 Inerting Prototype / 350 Gal / Solvent/Other Material Blends  
 1 Tank / 1,400 Gal / Solvent/Other Material Blends  
 2 Tanks / @3,400 / Gal Solvent/Other Material Blends  
 2 Tanks / @250 Gal / Solvent/Other Material Blends  
 3 Tanks / @350 Gal / Solvent/Other Material Blends  
 2 Fiberglass Tanks / @3,300 Gal / Solvent/Other Material Blends

###### Line 5 Fill Room:

2 Tanks / @350 Gal / Solvent/Other Material Blends  
 1 Tank / 250 Gal / Solvent/Other Material Blends

###### Line 6 & 7 Fill Room:

1 Tank / 1,400 Gal / Solvent/Other Material Blends  
 6 Tanks / @350 Gal / Solvent/Other Material Blends  
 2 Tanks / @250 Gal / Solvent/Other Material Blends  
 2 Tanks / @1,300 Gal / Solvent/Other Material Blends  
 2 Tanks / @3,300 Gal / Solvent/Other Material Blends  
 1 Water Heat Exch / 250 Gal / Water  
 1 Undercoat Tank / 150 Gal / Undercoat

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Facility ID: 1318040267 Emissions Unit ID: P003 Issuance type: Title V Preliminary Proposed Permit

#### B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

#### 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 by needle fill and Sepro fill, 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

1. None

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#### II. Operational Restrictions

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.

- 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.

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**III. Monitoring and/or Record Keeping Requirements**

- 1. None

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**IV. Reporting Requirements**

- 1. None

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**V. Testing Requirements**

- 1. None

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**VI. Miscellaneous Requirements**

- 1. None

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**Part III - Terms and Conditions for Emissions Units**

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Facility ID: 1318040267 Emissions Unit ID: P004 Issuance type: Title V Preliminary Proposed Permit

**A. State and Federally Enforceable Section**

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

**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 by under-the-cup fill, propellant line purging, and manual cleaning of filled aerosol cans) with the gashouse operations (propellant filling and propellant line purging) controlled by thermal incinerator  (See section A.VI.1. for listing of liquid mixing tanks.)	OAC rule 3745-31-05(A)(3) PTI 13-3186 (issued 02/26/97, and modified 04/30/97)  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) OAC rule 3745-17-11(B)(1)  OAC rule 3745-17-07(A)	Volatile organic compound (VOC) emissions from liquid filling of aerosol cans shall not exceed 8 lbs/hr, 40 lbs/day, and 7.3 tons/year.  The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07 and 3745-17-11.  See section A.I.2.a. below.  See section A.I.2.b. below. During the loading of solid materials into a liquid mixing tank, particulate emissions shall not exceed 0.551 pound/hour (based on Table I). 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**

- a. For the liquid mixing tanks, can liquid filling operations, gasser operations, can brushing operations, and can piercing operations at this facility, the total VOC emissions in any rolling 12-month period 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. Emissions unit P001 has been shut down.)
- (a) (This VOC emissions limitation is based on a pending resolution of the facility's appeal of the August 18, 1995 Findings and Orders and a pending resolution of the facility's appeal of USEPA's April 25, 1996 approval of the August 18, 1995 Findings and Orders as a SIP revision. A revised Findings and Orders that includes such pending resolution is to be issued by the Director with appropriate public notice and submitted to USEPA as a SIP revision.)
- 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."

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**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 and mass emission rate of the thermal incinerator were 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.

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**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 (pounds) of each VOC liquid charged to the mixing tanks and filled into aerosol cans;
  - d. number of aerosol cans filled with a VOC propellant by name of propellant, type of propellant filler (under-the-cup fill, 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);
  - f. name and amount (pounds) of each VOC liquid (solvent) used in the manual aerosol can cleaning operation (can brushing operation); and
    - g. number of safety diversion events and number of safety diversion events that are not emergency events (see safety diversions under section A.V.5.).
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 70 degrees F and 80 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.
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, propellant line purging, and safety diversions), 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, which is the sum of data recorded under sections A.III.4.a., A.III.4.b., 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.\*.
- \* Unless no longer required pursuant to section A.V.1.b.iv.
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;
  - 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;
  - d. amount of VOC emissions (pounds) during the rolling 12-month period, which is the sum of the values recorded under section A.III.5.a. for this month and the previous 11 consecutive months;
  - e. number of aerosol can produced during the rolling 12-month period, which is the sum of the values recorded under section A.III.5.b. for this month and the previous 11 consecutive months; and
  - f. VOC emissions rate during the rolling 12-month period in pound/1000 cans, which is 1000 times the value

from section A.III. 5.d. divided by the value from section A.III.5.e., 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 dates and times of the bypass venting of gashouse emissions to ambient air (see safety diversions under section A.V.5.) and any downtime for the thermal incinerator and temperature monitoring equipment, when the emissions unit's gashouse is in VOC operation.
7. Visible Emissions from Mixing Tanks
  - a. 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:
    - i. the color of the emissions;
    - ii. whether the emissions are representative of normal operations;
    - iii. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
    - iv. the total duration of any visible emissions incident; and
    - v. any corrective actions taken to eliminate the visible emissions.
  - b. In the event of two consecutive quarters in which no visible emissions are observed under section A.III.7.a. for all mixing tanks of this emissions unit, the permittee can elect to perform checks for visible emissions on a monthly basis in the manner described under section A.III.7.a. If visible emissions are subsequently observed during any month, the permittee shall immediately go back to checks for visible emissions during each week as described under section A.III.7.a, and the permittee may again elect to use the provisions under this section.

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#### IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify the emission rate exceedances identified below.
  - a. Emissions rate recorded under section A.III.5.f. for a rolling 12-month period exceeds 0.75 lb VOC/1000 cans produced.
  - b. Emissions rate recorded under section A.III.4.h. exceeds 8 lbs VOC/hr.
  - c. Emissions rate recorded under section A.III.4.g. exceeds 40 lbs VOC/day.

These quarterly deviation reports shall be submitted in accordance with paragraph A.1.c.ii of the General Terms and Conditions of this permit.
2. The permittee shall submit quarterly deviation (excursion) reports which identify the deviations recorded under sections A.III.6.b. and A.III.6.c. These quarterly deviation reports shall be submitted in accordance with paragraph A.1.c.ii of the General Terms and Conditions of this permit.
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.

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V. **Testing Requirements**

1. Compliance with the emissions limitations in section A.I. of these terms and conditions shall be determined as follows:
  - a. **Emission Limitation:**  
For the liquid mixing tanks, can liquid filling operations, gasser operations, can brushing operations, and can piercing operations at this facility, the total VOC emissions in any rolling 12-month period 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), can liquid filling 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).
  - 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.b., A.III.4.g., and A.III.4.h. and by calculating VOC emissions from can 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 section 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.
    - iv. In the event the permittee demonstrates to the satisfaction of the Director that the VOC emissions from can liquid filling cannot exceed 8 lbs/hr and 40 lbs/day on a worst case emissions basis for the various types of liquids being filled and the maximum liquid filling rate achievable by the fillers, the recordkeeping in sections A.III.1., A.III.3.a., A.III.4.b., A.III.4.g., and A.III.4.h. and the calculations in sections A.V.1.b.i. and A.V.1.b.ii. shall no longer be required for demonstrating compliance with these emissions limitations. The continued applicability of such worst case calculations shall be documented and submitted annually to the appropriate Ohio EPA District Office or local air agency  
  
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).
  - 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 (Table 6.4-1 which has a "C" emission factor rating). 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.

- 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:
- a. For liquid mixing operations, the monthly VOC emissions (pounds), 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)
- $R = 999 \text{ mmHg-cubic feet/lb mole-degrees K}$
- $T$  = temperature in degrees K (equals 273 plus 27 degrees C)
- $MW_i$  = molecular weight of VOC liquid "i", in lbs/lb mole
- 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 80 degrees F (27 degrees C), as follows:
- $E(\text{venting})$  = monthly sum of  $E_i(\text{venting})$  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:
- $E_i(\text{venting})$  = lbs of VOC emissions during the month for venting a VOC liquid "i" during mixing
- $P_i$  = vapor pressure of VOC liquid "i" at 80 degrees F, in mmHg
- $V_{i,v}$  = 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  $5 * 30 / 350$  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)
- $R = 999 \text{ mmHg-cubic feet/lb mole-degrees K}$
- $T$  = temperature in degrees K (equals 273 plus 27 degrees C)
- $MW_i$  = molecular weight of VOC liquid "i", in lbs/lb mole
- iv. (Alternative method to sections A.V.2.a.i through A.V.2.a.iii)
- An alternative method for calculating the monthly emissions rate for liquid mixing operations shall be as follows:
- $E(\text{mixing}) = EFM * V(\text{mixing})$
- where:
- EFM = emission factor of 0.00131 lb VOC/lb VOC liquid throughput (This emission factor is based on the highest annual average emission factor for mixing operations during 1997 to 2000.)
- $V(\text{mixing})$  = monthly throughput of VOC liquid employed for mixing, in pounds

If for any month in which the use of this alternative method shows non-compliance with the VOC emissions limit, the method described in sections A.V.2.a.i through A.V.2.a.iii. shall be used to calculate monthly emissions. The compliance determination will then be based on the more detailed calculations.

- b. i. For the liquid filling of aerosol cans, the monthly VOC emissions (pounds) shall be calculated, based on the Ideal Gas Law and displacement of saturated vapors at 70 degrees F (21 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:

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

$P_i = \text{vapor pressure of VOC liquid "i" at 70 degrees F, in mmHg}$

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

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

$T = \text{temperature in degrees K (equals 273 plus 21 degrees C)}$

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

ii. (Alternative method to section A.V.2.b.i)

An alternative method for calculating the monthly emissions for liquid can filling operations shall be as follows:

$$E(\text{filling}) = EFF * V(\text{filling})$$

where:

$EFF = \text{emission factor of } 0.00026 \text{ lb VOC/lb VOC liquid throughput (This emission factor is based on the highest annual average emission factor for liquid can filling operations during 1997 to 2000.)}$

$V(\text{filling}) = \text{monthly throughput of VOC liquid employed for can filling, in pounds}$

If for any month in which the use of this alternative method shows non-compliance with the VOC emissions limit, the method described in section A.V.2.b.i shall be used to calculate monthly emissions. The compliance determination will then be based on the more detailed calculations.

- c. For the gasser (gashouse) operations, the monthly VOC emissions (pounds),  $EG(\text{total})$ , shall be calculated as follows:

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

where:

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

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

$EG(\text{safety diversions}) = \text{monthly VOC emissions from safety diversions of VOC control equipment}$

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

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

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

where:

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

$CE_{p,v} = 0\%$  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)

$CE_{p,v} = \text{overall VOC control efficiency from most recent compliance test of the thermal incinerator, if propellant "p" VOC emissions are vented to the thermal incinerator and the thermal incinerator has been compliance tested (based on the 9/24/02 test, } CE_{p,v} = 96.73\% \text{)}$

- c.  $EF_{p,f} = \text{emission factor for VOC propellant gas loss when filling cans with VOC propellant "p", based on propellant filler type "f" (under-the-cup fill, needle fill, or Sepro fill)}$

EF<sub>p,f</sub> = 0.2 cc/can for needle filling of VOC propellant "p"

EF<sub>p,f</sub> = 1.0 cc/can for Sepro filling of VOC propellant "p"

EF<sub>p,f</sub> = 1.75 cc/can for under-the-cup filling of VOC propellant "p"

K<sub>p</sub> = conversion factor for gaseous VOC propellant "p" expressed in lbs/cc at standard conditions

LD<sub>p</sub> = liquid density of VOC propellant "p" at storage temperature and pressure, in pounds/gallon

NC<sub>p,f,v</sub> = 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)

NPP<sub>p,v</sub> = 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<sub>p</sub> = fraction by weight of purged VOC propellant "p" which is recovered and stored in a pressure tank

V<sub>p</sub> = volume of propellant line purged for VOC propellant "p", in gallons

VOC<sub>p</sub> = fraction VOC by weight for VOC propellant "p" (usually 1 for a VOC containing propellant)

c. iii. (Alternative method to section A.V.2.c.ii)

For gasser operations equipped with a thermal incinerator in which the VOC emissions from the filling of aerosol cans with VOC propellant are vented to the thermal incinerator and the line purging of VOC propellant is recovered for use as a fuel in the thermal incinerator, the monthly VOC emissions for filling and line purging shall be calculated as follows:

$$EG(\text{filling}) + EG(\text{purging}) = EF * NC/1000$$

where:

EF = VOC emissions factor from most recent compliance test of the thermal incinerator, expressed in lbs VOC/1000 aerosol cans produced (based on the 9/24/02, EF = 0.16 lb VOC/1000 aerosol cans)

NC = number of aerosol cans produced with VOC propellant during the month

iv. EG(safety diversions) = the sum of the VOC emissions determined for each safety diversion event that is not an emergency event during the month (See section A.V.5. for information on safety diversions.)

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 mass emission rate and 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 mass emission rate and destruction efficiency for volatile organic compounds by means of the test method under OAC rule 3745-21-10(C) with concentration of VOC in the inlet and outlet gas streams determined by utilizing Method 25 or 25A of 40 CFR Part 60, Appendix A, and

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 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.

f. The mass emissions rate of the thermal incinerator, expressed in pounds VOC per 1000 aerosol cans produced, shall be the hourly mass emissions rate (lbs VOC/hour) divided by the hourly production rate (1000 cans/hour).

For the 9/24/02 compliance test of the thermal incinerator controlling the gashouse operations within emissions units P002, P003, P004, and P005, it was determined that the thermal incinerator emitted 0.16 pound VOC/1000 aerosol cans produced, demonstrated an overall control efficiency of 96.73% (destruction efficiency of 96.73% and capture efficiency of 100%), and showed a monitored combustion temperature average of 1,574 degrees F when operating at a combustion temperature set point of 1,510

- degrees F for both the natural gas burner and the recovered propellant burner. The 9/24/02 compliance test comprised six 1-hour runs for emissions units P002, P003, P004, and P005 that operated at a combined production average of 19,932 cans/hour and a combined production range of 13,502 to 24,507 cans/hour.
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).
  5. Safety Diversions for Gasser Operations Vented to a Thermal Incinerator.
    - a. A safety diversion is the venting of gasser operations directly to ambient air, instead of being vented to the thermal incinerator, in order to meet National Fire Protection Association (NFPA) 30B requirements. Under a safety diversion, the ventilation rate of the affected gashouse line is quickly increased, the gashouse line is vented immediately to ambient air (i.e., thermal incinerator is bypassed), and production activities usually continue unless there is a production shutdown due to an emergency event. Safety diversion events shall be included in the determination of compliance with the monthly VOC emission limitation of 0.75 lb VOC/1000 aerosol cans produced. The permittee shall maintain a list of criteria for safety diversions that are not emergency events and safety diversions that are emergency events.
    - b. The VOC emissions for a safety diversion event shall be calculated based on the average concentration of the LEL detectors associated with the gashouse line, the flow rate of the gashouse line (measured with a mass flow meter), the propellant being filled, and the length of the event (seconds).
    - c. The permittee shall calibrate the LEL detectors once per month following the manufacturer's protocol and shall check the flow meters once every six months for accuracy using a pitot tube.
    - d. For the next compliance testing of the thermal incinerator, the permittee shall conduct testing and evaluation of the accuracy of the mass flow meters. The permittee shall submit a report on such testing and evaluation at the time of the submittal of the thermal incinerator compliance test.

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VI. **Miscellaneous Requirements**

1. Liquid Mixing Tanks: 29 Total Tanks

Mixing tanks primarily reside in Fill Room as listed. However, tanks of 350 Gal or less are portable and may be transported to other lines. Contents from any tank in a fill room may also be pumped through a hose to any other process fill line. No tank is specifically dedicated to any one process fill line.

Line 3 Fill Room:

1 Inerting Prototype / 350 Gal / Solvent/Other Material Blends  
 1 Tank / 1,400 Gal / Solvent/Other Material Blends  
 2 Tanks / @3,400 / Gal Solvent/Other Material Blends  
 2 Tanks / @250 Gal / Solvent/Other Material Blends  
 3 Tanks / @350 Gal / Solvent/Other Material Blends  
 2 Fiberglass Tanks / @3,300 Gal / Solvent/Other Material Blends

Line 5 Fill Room:

2 Tanks / @350 Gal / Solvent/Other Material Blends  
 1 Tank / 250 Gal / Solvent/Other Material Blends

Line 6 & 7 Fill Room:

1 Tank / 1,400 Gal / Solvent/Other Material Blends  
 6 Tanks / @350 Gal / Solvent/Other Material Blends  
 2 Tanks / @250 Gal / Solvent/Other Material Blends  
 2 Tanks / @1,300 Gal / Solvent/Other Material Blends  
 2 Tanks / @3,300 Gal / Solvent/Other Material Blends  
 1 Water Heat Exch / 250 Gal / Water  
 1 Undercoat Tank / 150 Gal / Undercoat

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Facility ID: 1318040267 Emissions Unit ID: P004 Issuance type: Title V Preliminary Proposed Permit

**B. State Enforceable Section**

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

**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>
<b>2. Additional Terms and Conditions</b>		
1. None		

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**II. Operational Restrictions**

1. None

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**III. Monitoring and/or Record Keeping Requirements**

1. None

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**IV. Reporting Requirements**

1. None

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**V. Testing Requirements**

1. None

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**VI. Miscellaneous Requirements**

1. None

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Facility ID: 1318040267 Emissions Unit ID: P005 Issuance type: Title V Preliminary Proposed Permit

**A. State and Federally Enforceable Section**

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

**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 by under-the-cup fill, 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 filling of aerosol cans shall not exceed 8 lbs/hr, 40 lbs/day, and 7.3 tons/year.  The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07 and 3745-17-11.
(See section A.VI.1. for listing of liquid mixing tanks.)	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.I.2.a. below.
	OAC rule 3745-21-07(G)(2) OAC rule 3745-17-11(B)(1)	See section A.I.2.b. below.
	OAC rule 3745-17-07(A)	During the loading of solid materials into a liquid mixing tank, particulate emissions shall not exceed 0.551 pound/hour (based on Table I). 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**

- a. For the liquid mixing tanks, can liquid filling operations, gasser operations, can brushing operations, and can piercing operations at this facility, the total VOC emissions in any rolling 12-month period 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. Emissions unit P001 has been shut down.)
- (a) (This VOC emissions limitation is based on a pending resolution of the facility's appeal of the August 18, 1995 Findings and Orders and a pending resolution of the facility's appeal of USEPA's April 25, 1996 approval of the August 18, 1995 Findings and Orders as a SIP revision. A revised Findings and Orders that includes such pending resolution is to be issued by the Director with appropriate public notice and submitted to USEPA as a SIP revision.)
- 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."

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**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 and mass emission rate of the thermal incinerator were 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.

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**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 (pounds) of each VOC liquid charged to the mixing tanks and filled into aerosol cans;
  - d. number of aerosol cans filled with a VOC propellant by name of propellant, type of propellant filler (under-the-cup fill, 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);
  - f. name and amount (pounds) of each VOC liquid (solvent) used in the manual aerosol can cleaning operation (can brushing operation); and
    - g. number of safety diversion events and number of safety diversion events that are not emergency events (see safety diversions under section A.V.5.).
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 70 degrees F and 80 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.
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, propellant line purging, and safety diversions), 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, which is the sum of data recorded under sections A.III.4.a., A.III.4.b., 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\*.
- \* Unless no longer required pursuant to section A.V.1.b.iv.
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;
  - 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;
  - d. amount of VOC emissions (pounds) during the rolling 12-month period, which is the sum of the values recorded under section A.III.5.a. for this month and the previous 11 consecutive months;
  - e. number of aerosol can produced during the rolling 12-month period, which is the sum of the values recorded under section A.III.5.b. for this month and the previous 11 consecutive months; and
  - f. VOC emissions rate during the rolling 12-month period in pound/1000 cans, which is 1000 times the value from section A.III. 5.d. divided by the value from section A.III.5.e., 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 dates and times of the bypass venting of gashouse emissions to ambient air (see safety diversions under section A.V.5.) and any downtime for the thermal incinerator and temperature monitoring equipment, when the emissions unit's gashouse is in VOC operation.
7. Visible Emissions from Mixing Tanks
- a. 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:
    - i. the color of the emissions;
    - ii. whether the emissions are representative of normal operations;
    - iii. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
    - iv. the total duration of any visible emissions incident; and
    - v. any corrective actions taken to eliminate the visible emissions.
  - b. In the event of two consecutive quarters in which no visible emissions are observed under section A.III.7.a. for all mixing tanks of this emissions unit, the permittee can elect to perform checks for visible emissions on a monthly basis in the manner described under section A.III.7.a. If visible emissions are subsequently observed during any month, the permittee shall immediately go back to checks for visible emissions during each week as described under section A.III.7.a, and the permittee may again elect to use the provisions under this section.

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#### IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify the emission rate exceedances identified below.
  - a. Emissions rate recorded under section A.III.5.f. for a rolling 12-month period exceeds 0.75 lb VOC/1000 cans produced.
  - b. Emissions rate recorded under section A.III.4.h. exceeds 8 lbs VOC/hr.
  - c. Emissions rate recorded under section A.III.4.g. exceeds 40 lbs VOC/day.

These quarterly deviation reports shall be submitted in accordance with paragraph A.1.c.ii of the General Terms and Conditions of this permit.
2. The permittee shall submit quarterly deviation (excursion) reports which identify the deviations recorded under sections A.III.6.b. and A.III.6.c. These quarterly deviation reports shall be submitted in accordance with paragraph A.1.c.ii of the General Terms and Conditions of this permit.
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.

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V. **Testing Requirements**

1. Compliance with the emissions limitations in section A.I. of these terms and conditions shall be determined as follows:
  - a. **Emission Limitation:**  
For the liquid mixing tanks, can liquid filling operations, gasser operations, can brushing operations, and can piercing operations at this facility, the total VOC emissions in any rolling 12-month period 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), can liquid filling 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).
  - 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.b., A.III.4.g., and A.III.4.h. and by calculating VOC emissions from can 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 section 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.
    - iv. In the event the permittee demonstrates to the satisfaction of the Director that the VOC emissions from can liquid filling cannot exceed 8 lbs/hr and 40 lbs/day on a worst case emissions basis for the various types of liquids being filled and the maximum liquid filling rate achievable by the fillers, the recordkeeping in sections A.III.1., A.III.3.a., A.III.4.b., A.III.4.g., and A.III.4.h. and the calculations in sections A.V.1.b.i. and A.V.1.b.ii. shall no longer be required for demonstrating compliance with these emissions limitations. The continued applicability of such worst case calculations shall be documented and submitted annually to the appropriate Ohio EPA District Office or local air agency  
  
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).
  - 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 (Table 6.4-1 which has a "C" emission factor rating). 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.
  - 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:

a. For liquid mixing operations, the monthly VOC emissions (pounds), 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

a. 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 80 degrees F (27 degrees C), as follows:

$E(\text{venting})$  = monthly sum of  $E_i(\text{venting})$  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:

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

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

$V_{i,v}$  = 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 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)

$R = 999$  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

iv. (Alternative method to sections A.V.2.a.i through A.V.2.a.iii)

An alternative method for calculating the monthly emissions rate for liquid mixing operations shall be as follows:

$E(\text{mixing}) = EFM * V(\text{mixing})$

where:

EFM = emission factor of 0.00131 lb VOC/lb VOC liquid throughput (This emission factor is based on the highest annual average emission factor for mixing operations during 1997 to 2000.)

$V(\text{mixing})$  = monthly throughput of VOC liquid employed for mixing, in pounds

If for any month in which the use of this alternative method shows non-compliance with the VOC emissions limit, the method described in sections A.V.2.a.i through A.V.2.a.iii. shall be used to calculate

monthly emissions. The compliance determination will then be based on the more detailed calculations.

- b. i. For the liquid filling of aerosol cans, the monthly VOC emissions (pounds) shall be calculated, based on the Ideal Gas Law and displacement of saturated vapors at 70 degrees F (21 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:

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

$P_i = \text{vapor pressure of VOC liquid "i" at 70 degrees F, in mmHg}$

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

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

$T = \text{temperature in degrees K (equals 273 plus 21 degrees C)}$

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

- ii. (Alternative method to section A.V.2.b.i)

An alternative method for calculating the monthly emissions for liquid can filling operations shall be as follows:

$E(\text{filling}) = EFF * V(\text{filling})$

where:

$EFF = \text{emission factor of } 0.00026 \text{ lb VOC/lb VOC liquid throughput (This emission factor is based on the highest annual average emission factor for liquid can filling operations during 1997 to 2000.)}$

$V(\text{filling}) = \text{monthly throughput of VOC liquid employed for can filling, in pounds}$

If for any month in which the use of this alternative method shows non-compliance with the VOC emissions limit, the method described in section A.V.2.b.i shall be used to calculate monthly emissions. The compliance determination will then be based on the more detailed calculations.

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

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

where:

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

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

$EG(\text{safety diversions}) = \text{monthly VOC emissions from safety diversions of VOC control equipment}$

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

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

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

where:

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

$CE_{p,v} = 0\%$  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)

$CE_{p,v} = \text{overall VOC control efficiency from most recent compliance test of the thermal incinerator, if propellant "p" VOC emissions are vented to the thermal incinerator and the thermal incinerator has been compliance tested (based on the 9/24/02 test, } CE_{p,v} = 96.73\%)$

- c.  $EF_{p,f} = \text{emission factor for VOC propellant gas loss when filling cans with VOC propellant "p", based on propellant filler type "f" (under-the-cup fill, needle fill, or Sepro fill)}$

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

EF<sub>p,f</sub> = 1.0 cc/can for Sepro filling of VOC propellant "p"

EF<sub>p,f</sub> = 1.75 cc/can for under-the-cup filling of VOC propellant "p"

K<sub>p</sub> = conversion factor for gaseous VOC propellant "p" expressed in lbs/cc at standard conditions

L<sub>Dp</sub> = liquid density of VOC propellant "p" at storage temperature and pressure, in pounds/gallon

NC<sub>p,f,v</sub> = 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<sub>p,v</sub> = 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<sub>p</sub> = fraction by weight of purged VOC propellant "p" which is recovered and stored in a pressure tank

V<sub>p</sub> = volume of propellant line purged for VOC propellant "p", in gallons

VOC<sub>p</sub> = fraction VOC by weight for VOC propellant "p" (usually 1 for a VOC containing propellant)

c. iii. (Alternative method to section A.V.2.c.ii)

For gasser operations equipped with a thermal incinerator in which the VOC emissions from the filling of aerosol cans with VOC propellant are vented to the thermal incinerator and the line purging of VOC propellant is recovered for use as a fuel in the thermal incinerator, the monthly VOC emissions for filling and line purging shall be calculated as follows:

$$EG(\text{filling}) + EG(\text{purging}) = EF * NC/1000$$

where:

EF = VOC emissions factor from most recent compliance test of the thermal incinerator, expressed in lbs VOC/1000 aerosol cans produced (based on the 9/24/02, EF = 0.16 lb VOC/1000 aerosol cans)

NC = number of aerosol cans produced with VOC propellant during the month

iv. EG(safety diversions) = the sum of the VOC emissions determined for each safety diversion event that is not an emergency event during the month (See section A.V.5. for information on safety diversions.)

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 mass emission rate and 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 mass emission rate and destruction efficiency for volatile organic compounds by means of the test method under OAC rule 3745-21-10(C) with concentration of VOC in the inlet and outlet gas streams determined by utilizing Method 25 or 25A of 40 CFR Part 60, Appendix A, and

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 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.

f. The mass emissions rate of the thermal incinerator, expressed in pounds VOC per 1000 aerosol cans produced, shall be the hourly mass emissions rate (lbs VOC/hour) divided by the hourly production rate (1000 cans/hour).

For the 9/24/02 compliance test of the thermal incinerator controlling the gashouse operations within emissions units P002, P003, P004, and P005, it was determined that the thermal incinerator emitted 0.16 pound VOC/1000 aerosol cans produced, demonstrated an overall control efficiency of 96.73% (destruction efficiency of 96.73% and capture efficiency of 100%), and showed a monitored combustion temperature average of 1,574 degrees F when operating at a combustion temperature set point of 1,510 degrees F for both the natural gas burner and the recovered propellant burner. The 9/24/02 compliance test comprised six 1-hour runs for emissions units P002, P003, P004, and P005 that operated at a

combined production average of 19,932 cans/hour and a combined production range of 13,502 to 24,507 cans/hour.

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).
5. Safety Diversions for Gasser Operations Vented to a Thermal Incinerator.
  - a. A safety diversion is the venting of gasser operations directly to ambient air, instead of being vented to the thermal incinerator, in order to meet National Fire Protection Association (NFPA) 30B requirements. Under a safety diversion, the ventilation rate of the affected gashouse line is quickly increased, the gashouse line is vented immediately to ambient air (i.e., thermal incinerator is bypassed), and production activities usually continue unless there is a production shutdown due to an emergency event. Safety diversion events shall be included in the determination of compliance with the monthly VOC emission limitation of 0.75 lb VOC/1000 aerosol cans produced. The permittee shall maintain a list of criteria for safety diversions that are not emergency events and safety diversions that are emergency events.
  - b. The VOC emissions for a safety diversion event shall be calculated based on the average concentration of the LEL detectors associated with the gashouse line, the flow rate of the gashouse line (measured with a mass flow meter), the propellant being filled, and the length of the event (seconds).
  - c. The permittee shall calibrate the LEL detectors once per month following the manufacturer's protocol and shall check the flow meters once every six months for accuracy using a pitot tube.
  - d. For the next compliance testing of the thermal incinerator, the permittee shall conduct testing and evaluation of the accuracy of the mass flow meters. The permittee shall submit a report on such testing and evaluation at the time of the submittal of the thermal incinerator compliance test.

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#### VI. Miscellaneous Requirements

##### 1. Liquid Mixing Tanks: 29 Total Tanks

Mixing tanks primarily reside in Fill Room as listed. However, tanks of 350 Gal or less are portable and may be transported to other lines. Contents from any tank in a fill room may also be pumped through a hose to any other process fill line. No tank is specifically dedicated to any one process fill line.

###### Line 3 Fill Room:

- 1 Inerting Prototype / 350 Gal / Solvent/Other Material Blends
- 1 Tank / 1,400 Gal / Solvent/Other Material Blends
- 2 Tanks / @3,400 / Gal Solvent/Other Material Blends
- 2 Tanks / @250 Gal / Solvent/Other Material Blends
- 3 Tanks / @350 Gal / Solvent/Other Material Blends
- 2 Fiberglass Tanks / @3,300 Gal / Solvent/Other Material Blends

###### Line 5 Fill Room:

- 2 Tanks / @350 Gal / Solvent/Other Material Blends
- 1 Tank / 250 Gal / Solvent/Other Material Blends

###### Line 6 & 7 Fill Room:

- 1 Tank / 1,400 Gal / Solvent/Other Material Blends
- 6 Tanks / @350 Gal / Solvent/Other Material Blends
- 2 Tanks / @250 Gal / Solvent/Other Material Blends
- 2 Tanks / @1,300 Gal / Solvent/Other Material Blends
- 2 Tanks/ @3,300 Gal / Solvent/Other Material Blends
- 1 Water Heat Exch / 250 Gal / Water
- 1 Undercoat Tank / 150 Gal / Undercoat

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Facility ID: 1318040267 Emissions Unit ID: P005 Issuance type: Title V Preliminary Proposed Permit

**B. State Enforceable Section**

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

**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>
<b>2. Additional Terms and Conditions</b>		
1. None		

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**II. Operational Restrictions**

1. None

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**III. Monitoring and/or Record Keeping Requirements**

1. None

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**IV. Reporting Requirements**

1. None

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**V. Testing Requirements**

1. None

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**VI. Miscellaneous Requirements**

1. None

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Facility ID: 1318040267 Emissions Unit ID: P006 Issuance type: Title V Preliminary Proposed Permit

**A. State and Federally Enforceable Section**

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

**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	See section A.I.2.a. below.
	OAC rule 3745-21-07(G)(2)	See section A.I.2.b. below.

2. **Additional Terms and Conditions**

- a. For the liquid mixing tanks, can liquid filling operations, gasser operations, can brushing operations, and can piercing operations at this facility, the total VOC emissions in any rolling 12-month period 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. Emissions unit P001 has been shut down.)
- (a) (This VOC emissions limitation is based on a pending resolution of the facility's appeal of the August 18, 1995 Findings and Orders and a pending resolution of the facility's appeal of USEPA's April 25, 1996 approval of the August 18, 1995 Findings and Orders as a SIP revision. A revised Findings and Orders that includes such pending resolution is to be issued by the Director with appropriate public notice and submitted to USEPA as a SIP revision.)
- 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."

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II. **Operational Restrictions**

1. None

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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:
- number of aerosol cans pierced, categorized by type of product/propellant and size;
  - 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;
  - for each VOC liquid, the vapor pressure (mm Hg) at 80 degrees F and the molecular weight (lbs/lb mole).
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:
- 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;
  - 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;
  - 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;
  - amount of VOC emissions (pounds) during the rolling 12-month period, which is the sum of the values recorded under section A.III.5.a. for this month and the previous 11 consecutive months;
  - number of aerosol can produced during the rolling 12-month period, which is the sum of the values recorded under section A.III.5.b. for this month and the previous 11 consecutive months; and
  - VOC emissions rate during the rolling 12-month period in pound VOC/1000 cans, which is 1000 times the

value from section A.III. 5.d. divided by the value from section A.III.5.e., and rounded to two decimal places.

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**IV. Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports that identify any emissions rate recorded under section A.III.3.f. for a rolling 12-month period which exceeds 0.75 lb VOC/1000 cans produced. The quarterly deviation reports shall be submitted in accordance with paragraph A.1.c.ii of the General Terms and Conditions of this permit.
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.

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**V. Testing Requirements**

1. Compliance with the emissions limitations in section A.I. of these terms and conditions shall be determined as follows:
  - a. Emission Limitation:  
For the liquid mixing tanks, can liquid filling operations, gasser operations, can brushing operations, and can piercing operations at this facility, the total VOC emissions in any rolling 12-month period 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), can liquid filling 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).
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<sub>i</sub>(piercing) = lbs of VOC emissions from VOC liquid "i" recovered from cans pierced in the month  
 MW<sub>i</sub> = molecular weight of VOC liquid "i", in lbs/lb mole

N<sub>c</sub> = number of cans pierced during the month for can type and size category "c"

P<sub>i</sub> = vapor pressure of VOC liquid "i" at 80 degrees F, in mmHg

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

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

V<sub>i</sub> = volume of VOC liquid "i" within the pierced cans for the month, in cubic feet

W<sub>i</sub> = amount of VOC liquid "i" within the pierced cans for the month, in pounds

W<sub>i,c</sub> = amount of VOC liquid "i" for can type and size category "c", in lbs/can

7.48 = conversion factor in gallons per cubic foot

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 1318040267 Emissions Unit ID: P006 Issuance type: Title V Preliminary Proposed Permit

**B. State Enforceable Section**

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

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>
2. <b>Additional Terms and Conditions</b>			
1.	None		

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None