6 October 2009

Ms. Kathryn Hinckley
Environmental Health and Safety Manager
Stanley Fastening Systems, L.P.
2 Briggs Drive
East Greenwich, RI 02818-9949

Dear Ms. Hinckley:

The Department of Environmental Management, Office of Air Resources has reviewed and approved your application for the installation of process equipment at your facility located at 2 Briggs Drive, East Greenwich, RI.

Enclosed is a minor source permit issued pursuant to our review of your application (Approval Nos. 2071-2079).

We will incorporate the terms and conditions of this minor source permit in to your operating permit (RI-30-08). No additional documentation or information needs to be provided to amend the operating permit to incorporate the nine N90 nail head forming machines.

If there are any questions concerning this permit, please contact me at 222-2808, extension 7020.

Sincerely,

Pamela E. Crump, EIT
Air Quality Specialist
Office of Air Resources

cc: East Greenwich Building Official
Peter Anderson, ERM

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR RESOURCES

MINOR SOURCE PERMIT

STANLEY FASTENING SYSTEMS, L.P.

APPROVAL NOs. 2071-2079

Pursuant to the provisions of Air Pollution Control Regulation No. 9, this minor source permit is issued to:

Stanley Fastening Systems, L.P.

For the following:

Installation of six, new N90 nail head forming machines in addition to the three, existing machines. The terms and conditions of this permit shall apply to both the new and existing machines.

Located at:

2 Briggs Drive, East Greenwich

This permit shall be effective from the date of its issuance and shall remain in effect until revoked by or surrendered to the Department. This permit does not relieve *Stanley Fastening Systems, L.P.* **from compliance with applicable state and federal air pollution control rules and regulations. The design, construction and operation of this equipment shall be subject to the attached permit conditions and emission limitations.**

Douglas L. McVay, Acting Chief
Office of Air Resources

Date of issuance

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR RESOURCES

Permit Conditions and Emission Limitations

Stanley Fastening Systems, L.P.

Approval Nos. 2071-2079

A. Emission Limitations

1. Volatile Organic Compounds (VOC)

   a. The VOC content of all coatings used on the nail head forming machines shall not exceed 3.0 pounds of VOC per gallon of coating (minus water and exempt compounds).

2. Hazardous Air Pollutants (HAP)

   a. The owner/operator shall demonstrate that, based on the coatings, thinners and/or other additives and cleaning materials used in the coating operations on the nail head forming machines, the organic HAP emission rate for the coating operations is less than or equal to 2.6 lbs of organic HAP per gallon of coating solids, calculated as a rolling 12-month emission rate and determined on a monthly basis.

3. Listed Toxic Air Contaminants

   a. The total quantity of ethylene glycol monobutyl ether emitted to the atmosphere from the nail head forming machines shall not exceed:

      (1) 1.4 pounds per hour; and

      (2) 11,951 pounds in any consecutive 12-month period.

B. Compliance Demonstration

1. Compliance with the coating emission limitation contained in Condition A.1 of this permit shall be demonstrated in accordance with 40 CFR 60, Appendix A, Methods 24, 24A as amended or any other USEPA approved method which has been accepted by the Director. A one-hour bake time

shall be used for Methods 24 and 24A, which apply to multi-component coatings.

2. The owner/operator shall, on a monthly basis demonstrate continuous compliance with the emission standard in Condition A.2 of this permit by following the conditions specified in Conditions B.2.a-g of this permit.

   a. Follow the procedures specified below to determine the mass fraction of organic HAP for material applied during the compliance period by using one of the following options.

      (1) *Method 311 (appendix A to 40 CFR part 63).* The owner/operator can use Method 311 for determining the mass fraction of organic HAP. Use the procedures specified in the paragraphs below when performing a Method 311 test.

         (a) Count each organic HAP that is measured to be present at 0.1 percent by mass or more for Occupational Safety and Health Administration (OSHA)-defined carcinogens as specified in 29 CFR 1910.1200(d)(4) and at 1.0 percent by mass or more for other compounds. For example, if toluene (not an OSHA carcinogen) is measured to be 0.5 percent of the material by mass, you do not have to count it. Express the mass fraction of each organic HAP you count as a value truncated to four places after the decimal point (*e.g.*, 0.3791).

         (b) Calculate the total mass fraction of organic HAP in the test material by adding up the individual organic HAP mass fractions and truncating the result to three places after the decimal point (*e.g.*, 0.763).

      (2) *Method 24 (appendix A to 40 CFR part 60).* For coatings, the owner/operator can use Method 24 to determine the mass fraction of nonaqueous volatile matter and use that value as a substitute for mass fraction of organic HAP. For reactive adhesives in which some of the HAP react to form solids and are not emitted to the atmosphere, you may use the alternative method contained in Appendix A of this permit, rather than Method 24. The owner/operator can use the volatile fraction that is emitted, as measured by the alternative method in Appendix A of this permit, as a substitute for the mass fraction of organic HAP.

(3) *Alternative method.* The owner/operator can use an alternative test method for determining the mass fraction of organic HAP once the Administrator has approved it. The owner/operator shall follow the procedure in §63.7(f) to submit an alternative test method for approval.

(4) *Information from the supplier or manufacturer of the material.* The owner/operator can rely on information other than that generated by the test methods specified in Conditions B.2.a(1-3) of this permit, such as manufacturer's formulation data, if it represents each organic HAP that is present at 0.1 percent by mass or more for OSHA-defined carcinogens as specified in 29 CFR 1910.1200(d)(4) and at 1.0 percent by mass or more for other compounds. For example, if toluene (not an OSHA carcinogen) is 0.5 percent of the material by mass, you do not have to count it. For reactive adhesives in which some of the HAP react to form solids and are not emitted to the atmosphere, you may rely on manufacturer's data that expressly states the organic HAP or volatile matter mass fraction emitted. If there is a disagreement between such information and results of a test conducted according to Conditions B.2.a(1-3) of this permit, then the test method results will take precedence unless, after consultation, you demonstrate to the satisfaction of the Office of Air Resources and USEPA that the formulation data are correct.

(5) *Solvent blends.* Solvent blends may be listed as single components for some materials in data provided by manufacturers or suppliers. Solvent blends may contain organic HAP which must be counted toward the total organic HAP mass fraction of the materials. When test data and manufacturer's data for solvent blends are not available, the owner/operator can use the default values for the mass fraction of organic HAP in these solvent blends listed in Appendix B or C of this permit. If the owner/operator uses the tables, the owner/operator shall use the values in Appendix B for all solvent blends that match Appendix B entries according to the instructions for Appendix B, and the owner/operator may use Appendix C only if the solvent blends in the materials do not match any of the solvent blends in Appendix B and you know only whether the blend is aliphatic or aromatic. However, if the results of a Method 311 (appendix A to 40 CFR part 63) test indicate higher values than those listed on Appendix B or C of this permit, the Method 311 results will take

precedence unless, after consultation, you demonstrate to the satisfaction of the Office of Air Resources and USEPA that the formulation data are correct.

b. *Determine the volume fraction of coating solids for each coating.* The owner/operator shall determine the volume fraction of coating solids (liters (gal) of coating solids per liter (gal) of coating) for each coating used during the compliance period by a test, by information provided by the supplier or the manufacturer of the material, or by calculation, as specified in paragraphs b(1) through (4) of this section. If test results obtained according to paragraph b(1) of this section do not agree with the information obtained under paragraph b(3) or (4) of this section, the test results will take precedence unless, after consultation, you demonstrate to the satisfaction of the Office of Air Resources and USEPA that the formulation data are correct.

(1) *ASTM Method D2697–86 (Reapproved 1998) or ASTM Method D6093–97 (Reapproved 2003).* The owner/operator may use ASTM Method D2697–86 (Reapproved 1998), "Standard Test Method for Volume Nonvolatile Matter in Clear or Pigmented Coatings" (incorporated by reference, see §63.14), or ASTM Method D6093–97 (Reapproved 2003), "Standard Test Method for Percent Volume Nonvolatile Matter in Clear or Pigmented Coatings Using a Helium Gas Pycnometer" (incorporated by reference, see §63.14), to determine the volume fraction of coating solids for each coating. Divide the nonvolatile volume percent obtained with the methods by 100 to calculate volume fraction of coating solids.

(2) *Alternative method.* The owner/operator may use an alternative test method for determining the solids content of each coating once the Administrator has approved it. The owner/operator must follow the procedure in 40 CFR 63.7(f) to submit an alternative test method for approval.

(3) *Information from the supplier or manufacturer of the material.* The owner/operator may obtain the volume fraction of coating solids for each coating from the supplier or manufacturer.

(4) *Calculation of volume fraction of coating solids.* The owner/operator may determine the volume fraction of coating solids using Equation 4 of this section:

$$V_s = 1 - \frac{m_{volatiles}}{D_{avg}} \qquad \text{(Equation 4)}$$

Where:

V_s= Volume fraction of coating solids, liters (gal) coating solids per liter (gal) coating.

$m_{volatiles}$= Total volatile matter content of the coating, including HAP, volatile organic compounds (VOC), water, and exempt compounds, determined according to Method 24 in appendix A of 40 CFR part 60, grams volatile matter per liter coating.

D_{avg}= Average density of volatile matter in the coating, grams volatile matter per liter volatile matter, determined from test results using ASTM Method D1475–98, "Standard Test Method for Density of Liquid Coatings, Inks, and Related Products" (incorporated by reference, see §63.14), information from the supplier or manufacturer of the material, or reference sources providing density or specific gravity data for pure materials. If there is disagreement between ASTM Method D1475–98 test results and other information sources, the test results will take precedence unless, after consultation you demonstrate to the satisfaction of the Office of Air Resources and USEPA that the formulation data are correct.

c. *Determine the density of each material.* The owner/operator shall determine the density of each liquid coating, thinner and/or other additive, and cleaning material used during each month from test results using ASTM Method D1475–98, "Standard Test Method for Density of Liquid Coatings, Inks, and Related Products" (incorporated by reference, see §63.14), information from the supplier or manufacturer of the material, or reference sources providing density or specific gravity data for pure materials. If you are including powder coatings in the compliance determination, determine the density of powder coatings, using ASTM Method D5965–02, "Standard Test Methods for Specific Gravity of Coating Powders" (incorporated by reference, see §63.14), or information from the supplier. If there is disagreement between ASTM Method D1475–98 or ASTM Method D5965–02 test results and other such information sources, the test results will take precedence unless, after consultation you demonstrate to the satisfaction of the Office of Air Resources and USEPA that the formulation data are correct. If you purchase materials or monitor

consumption by weight instead of volume, you do not need to determine material density. Instead, you may use the material weight in place of the combined terms for density and volume in Equations 1A, 1B, 1C, and 2 of this section.

d. *Determine the volume of each material used.* The owner/operator shall determine the volume (liters) of each coating, thinner and/or other additive, and cleaning material used during each month by measurement or usage records. If you purchase materials or monitor consumption by weight instead of volume, you do not need to determine the volume of each material used. Instead, you may use the material weight in place of the combined terms for density and volume in Equations 1A, 1B, and 1C of this section.

e. *Calculate the mass of organic HAP emissions.* The mass of organic HAP emissions is the combined mass of organic HAP contained in all coatings, thinners and/or other additives, and cleaning materials used during each month minus the organic HAP in certain waste materials. Calculate the mass of organic HAP emissions using Equation 1 of this permit.

$$H_e = A + B + C - R_w \qquad \text{(Equation 1)}$$

Where:

H_e= Total mass of organic HAP emissions during the month, kg.

A = Total mass of organic HAP in the coatings used during the month, kg, as calculated in Equation 1A of this section.

B = Total mass of organic HAP in the thinners and/or other additives used during the month, kg, as calculated in Equation 1B of this section.

C = Total mass of organic HAP in the cleaning materials used during the month, kg, as calculated in Equation 1C of this section.

R_w= Total mass of organic HAP in waste materials sent or designated for shipment to a hazardous waste TSDF for treatment or disposal during the month, kg, determined according to Condition B.2.e(4) of this permit. (You may assign a value of zero to R_w if you do not wish to use this allowance.)

(1) Calculate the kg organic HAP in the coatings used during the month using Equation 1A of this permit:

$$A = \sum_{i=1}^{m} (Vol_{c,i})(D_{c,i})(W_{c,i}) \qquad \text{(Equation 1A)}$$

Where:

A = Total mass of organic HAP in the coatings used during the month, kg.

$Vol_{c,i}$= Total volume of coating, i, used during the month, liters.

$D_{c,i}$= Density of coating, i, kg coating per liter coating.

$W_{c,i}$=Mass fraction of organic HAP in coating, i, kg organic HAP per kg coating. For reactive adhesives as defined in §63.3981, use the mass fraction of organic HAP that is emitted as determined using the method in Appendix A of this permit.

m = Number of different coatings used during the month.

(2) Calculate the kg of organic HAP in the thinners and/or other additives used during the month using Equation 1B of this permit:

$$B = \sum_{j=1}^{n} (Vol_{t,j})(D_{t,j})(W_{t,j}) \qquad \text{(Equation 1B)}$$

Where:

B = Total mass of organic HAP in the thinners and/or other additives used during the month, kg.

$Vol_{t,j}$= Total volume of thinner and/or other additive, j, used during the month, liters.

$D_{t,j}$= Density of thinner and/or other additive, j, kg per liter.

$W_{t,j}$= Mass fraction of organic HAP in thinner and/or other additive, j, kg organic HAP per kg thinner and/or other additive. For reactive adhesives as defined in §63.3981, use the mass fraction of organic HAP that

is emitted as determined using the method in Appendix A of this permit.

n = Number of different thinners and/or other additives used during the month.

(3) Calculate the kg organic HAP in the cleaning materials used during the month using Equation 1C of this permit:

$$C = \sum_{k=1}^{p} (Vol_{s,k})(D_{s,k})(W_{s,k}) \qquad \text{(Equation 1C)}$$

Where:

C = Total mass of organic HAP in the cleaning materials used during the month, kg.

$Vol_{s,k}$= Total volume of cleaning material, k, used during the month, liters.

$D_{s,k}$= Density of cleaning material, k, kg per liter.

$W_{s,k}$= Mass fraction of organic HAP in cleaning material, k, kg organic HAP per kg material.

p = Number of different cleaning materials used during the month.

(4) If the owner/operator chooses to account for the mass of organic HAP contained in waste materials sent or designated for shipment to a hazardous waste TSDF in Equation 1 of this permit, then you must determine the mass according to the following requirements.

(a) The owner/operator may only include waste materials in the determination that are generated by coating operations for which you use Equation 1 of this permit and that will be treated or disposed of by a facility that is regulated as a TSDF under 40 CFR part 262, 264, 265, or 266. The TSDF may be either off-site or on-site. The owner/operator may not include organic HAP contained in wastewater.

(b) The owner/operator must determine either the amount of the waste materials sent to a TSDF during the month or the amount collected and stored

during the month and designated for future transport to a TSDF. Do not include in your determination any waste materials sent to a TSDF during a month if you have already included them in the amount collected and stored during that month or a previous month.

(c) Determine the total mass of organic HAP contained in the waste materials specified in Condition B.2.e(4)(b) of this permit.

(d) The owner/operator must document the methodology used to determine the amount of waste materials and the total mass of organic HAP they contain, as required in Condition C.1.o of this permit. If waste manifests include this information, they may be used as part of the documentation of the amount of waste materials and mass of organic HAP contained in them.

f. *Calculate the total volume of coating solids used.* The owner/operator shall determine the total volume of coating solids used, liters, which is the combined volume of coating solids for all the coatings used during each month, using Equation 2 of this permit:

$$V_{st} = \sum_{i=1}^{m} (Vol_{c,i})(V_{s,i}) \qquad \text{(Equation 2)}$$

Where:

V_{st}= Total volume of coating solids used during the month, liters.

$Vol_{c,i}$= Total volume of coating, i, used during the month, liters.

$V_{s,i}$= Volume fraction of coating solids for coating, i, liter solids per liter coating, determined according to §63.3941(b).

m = Number of coatings used during the month.

g. *Calculate the organic HAP emission rate.* Calculate the organic HAP emission rate for the compliance period, kg (lb) organic HAP emitted per liter (gal) coating solids used, using Equation 3 of this permit:

$$H_{yr} = \frac{\sum_{y=1}^{n} H_e}{\sum_{y=1}^{n} V_{st}} \qquad \text{(Equation 3)}$$

Where:

H_{yr}= Average organic HAP emission rate for the compliance period, kg organic HAP emitted per liter coating solids used.

H_e= Total mass of organic HAP emissions from all materials used during month, y, kg, as calculated by Equation 1 of this section.

V_{st}= Total volume of coating solids used during month, y, liters, as calculated by Equation 2 of this section.

y = Identifier for months.

n = Number of full or partial months in the compliance period (for the initial compliance period, n equals 12 if the compliance date falls on the first day of a month; otherwise n equals 13; for all following compliance periods, n equals 12).

3. If the organic HAP emission rate for any 12-month compliance period exceeded the applicable emission limit specified in Condition A.2 of this permit, this is a deviation from the emission limitation for that compliance period and must be reported as specified in C.8.g of this permit.

4. As part of each semiannual compliance report required by Condition C.7 of this permit, the owner/operator must identify the coating operation(s) for which you used the emission rate without add-on controls option. If there were no deviations from the emission limitations, the owner/operator shall submit a statement that the coating operation(s) was (were) in compliance with the emission limitations during the reporting period because the organic HAP emission rate for each compliance period was less than or equal to the applicable emission limit specified in A.2 of this permit, determined according to Condition B.2 of this permit.

5. You must maintain records as specified in Conditions C.1(f-o) and C.11 of this permit.

6. Compliance with the emission limitations contained in Condition A.3 of this permit shall be demonstrated based on mass balance calculations based on records of material usage and vendor MSDSs.

C. Recordkeeping and Reporting Requirements

1. The owner/operator shall collect, record and maintain the following information each month for each nail head forming machine:

a. The name, identification number and amount of each coating used, as applied, on each nail head forming machine.

b. The mass of VOC per volume of the coating (excluding water and exempt compounds), as applied, used each month on each nail head forming machine.

c. The mass of HAP per volume of coating solids, as applied, used each month on each nail head forming machine.

d. The mass of any listed toxic air contaminant per volume of the coating, as applied, used each month on each nail head forming machine.

e. The type and amount of solvent used for diluents and cleanup operations.

f. A copy of each notification and report that is submitted to comply with 40 CFR 63 Subpart MMMM, and the documentation supporting each notification and report.

g. A current copy of information provided by materials suppliers or manufacturers, such as manufacturer's formulation data or test data used to determine the mass fraction of organic HAP and density for each coating, thinner and/or other additive, and cleaning material, and volume fraction of coating solids. If the owner/operator conducted testing to determine mass fraction of organic HAP, density, or volume fraction of coating solids, the owner/operator shall keep a copy of the complete test report. If the owner/operator used information provided by the manufacturer or supplier of the material that was based on testing, the owner/operator shall keep the summary sheet of results provided by the manufacturer or supplier. The owner/operator is not required to obtain the test report or other supporting documentation from the manufacturer or supplier.

h. A record of the coating operations on which each compliance option was used and the time periods (beginning and ending dates and times) for each option used.

i. A record of the calculation of the total mass of organic HAP emissions for the coatings, thinners and/or other additives, and cleaning materials used each month using Equations 1, 1A through 1C, and 2 of this section; and, if applicable, the calculation used to determine mass of organic HAP in waste materials according to §63.3951(e)(4); the calculation of the total volume of coating solids used each month using Equation 2 of this section; and the calculation of each 12-month organic HAP emission rate using Equation 3 of this section.

j. A record of the name and volume of each coating, thinner and/or other additive, and cleaning material used during each compliance period.

k. A record of the mass fraction of organic HAP for each coating, thinner and/or other additive, and cleaning material used during each compliance period unless the material is tracked by weight.

l. A record of the volume fraction of coating solids for each coating used during each compliance period.

m. The density for each coating, thinner and/or other additive, and cleaning material used during each compliance period.

n. A record of the date, time, and duration of each deviation.

o. If an allowance is used in Equation 1 of this section for organic HAP contained in waste materials sent to or designated for shipment to a treatment, storage, and disposal facility (TSDF) according to Condition B.2.e(4) of this permit, the owner/operator shall keep the following records:

(1) The name and address of each TSDF to which the waste materials was sent for which an allowance is used in Equation 1 of this section; a statement of which subparts under 40 CFR parts 262, 264, 265, and 266 apply to the facility; and the date of each shipment.

(2) Identification of the coating operations producing waste materials included in each shipment and the month or months in which an allowance was used for these materials in Equation 1 of this section.

(3) The methodology used in accordance with Condition B.2.e(4) of this permit, to determine the total amount of waste materials sent to or the amount collected, stored, and designated for transport to a TSDF each month; and the methodology to determine the mass of organic HAP contained in these waste materials. This must include the sources for all data used in the determination, methods used to generate the data, frequency of testing or monitoring, and supporting calculations and documentation, including the waste manifest for each shipment.

2. The owner/operator shall, on a monthly basis, no later than 15 business days after the first of the month, determine the total quantity of ethylene glycol monobutyl ether discharged to the atmosphere from the nail head forming machines. The owner/operator shall keep records of this determination and provide such records to the Office of Air Resources upon request.

3. The owner/operator shall notify the Office of Air Resources in writing, within 15 days, whenever the total quantity of ethylene glycol monobutyl ether discharged to the atmosphere from the nail head forming machines exceeds:

   a. 1.4 pounds per hour; or,

   b. 11,951 pounds in any consecutive 12-month period.

4. The owner/operator shall notify the Office of Air Resources of any anticipated noncompliance with the terms of this permit or any other applicable air pollution control rules and regulations.

5. The owner/operator shall notify the Office of Air Resources in writing of the date of actual start-up of each of the nail head forming machines no later than 15 days after such date.

6. Pursuant to APC Regulation No. 19, the owner/operator, before changing the method of compliance from complying coatings to daily-weighted averaging or control devices, shall submit a Compliance Certification Plan to the Office of Air Resources for review and approval. Such plan shall include:

   a. The name and location of the facility.

b. The name, address and telephone number of the person responsible for the facility.

c. The name and identification number of the emission units which will comply by means of daily-weighted averaging or control devices.

d. For daily-weighted averaging:

(1) The instrument or method by which the owner/operator will accurately measure or calculate the volume of each coating (excluding water), as applied, used each day on each emission unit.

(2) The method by which the owner/operator will create and maintain records each day as required by Subsection 19.5.2(c) of APC Regulation No. 19.

(3) The time at which the facility's day begins if a time other than midnight local time is used to define a day.

e. For control devices:

(1) The name and identification number of each coating, as applied, on each coating line or operation.

(2) The mass of VOC per volume coating solids applied and the gallons of solids of each coating applied.

(3) Identification of each control device which will be or has been installed and date of installation.

(4) Identification of coating lines which will be controlled by each control device and documentation of expected capture and destruction efficiency or reduction efficiency.

(5) Control device design information;

(a) For thermal incinerators – the design combustion temperature (°F).

(b) For catalytic incinerators – design exhaust gas temperature (°F), design temperature rise across catalyst bed (°F), anticipated frequency of catalyst change, and catalyst changes.

(c) For condensers – design inlet temperature of cooling medium (°F), design exhaust gas temperature (°F).

(d) For carbon adsorbers – design pressure drop across the adsorber, VOC concentration at breakthrough.

f. Information describing the effect of the change on the emissions of any air contaminant.

g. A demonstration that emissions from the stationary source will not cause an increase in the ground level ambient concentration at or beyond the property line in excess of that allowed by APC Regulation No. 22.

7. The owner/operator shall submit semiannual compliance reports to the Office of Air Resources and USEPA.

a. Each compliance report must cover the applicable semiannual reporting period from January 1 through June 30 or July 1 through December 31.

b. Each compliance report must be postmarked or delivered no later than 45 calendar days after the end of the semiannual reporting period.

8. The compliance report must include the following information:

a. Company name and address.

b. Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.

c. Date of report and beginning and ending dates of the reporting period. The reporting period is the 6-month period ending on June 30 or December 31. Note that the information reported for each of the 6 months in the reporting period will be based on the last 12 months of data prior to the date of each monthly calculation.

d. Identification of the compliance option used on the nail head forming machines during the reporting period. If you switched between compliance options during the reporting period, you must report the beginning and ending dates for each option you used.

e. The calculation results for each rolling 12-month organic HAP emission rate during the 6-month reporting period.

f. If there were no deviations from the emission limitations in specified in Condition A.2 of this permit, the semiannual compliance report must include a statement that there were no deviations from the emission limitations during the reporting period.

g. If there was a deviation from the applicable emission limit specified in Condition A.2 of this permit, the semiannual compliance report must contain the following information:

(1) The beginning and ending dates of each compliance period during which the 12-month organic HAP emission rate exceeded the applicable emission limit specified in Condition A.2 of this permit, and

(2) The calculations used to determine the 12-month organic HAP emission rate for the compliance period in which the deviation occurred. The owner/operator shall submit the calculations for Equations 1, 1A through 1C, 2, and 3 of this section; and if applicable, the calculation used to determine mass of organic HAP in waste materials according to Condition B.2.e(4) of this permit. The owner/operator is not required to submit background data supporting these calculations (*e.g.,* information provided by materials suppliers or manufacturers, or test reports), and

(3) A statement of the cause of each deviation.

9. Deviations from permit conditions shall be reported, in writing, within five business days of the deviation, to the Office of Air Resources. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken.

10. The owner/operator shall notify the Office of Air Resources in writing of any planned physical or operational change to any equipment covered under this approval that would:

a. Change the representation of the facility in the application.

b. Alter the applicability of any state or federal air pollution rules or regulations.

c. Result in the violation of any terms or conditions of this permit.

d. Qualify as a modification under APC Regulation No. 9.

Such notification shall include:

- Information describing the nature of the change.
- Information describing the effect of the change on the emission of any air contaminant.
- The scheduled completion date of the planned change.

Any such change shall be consistent with the appropriate regulation and have the prior approval of the Director.

11. All records required in this permit shall be maintained for a minimum of five years after the date of each record and shall be made available to representatives of the Office of Air Resources upon request.

D. Other Permit Conditions

1. To the extent consistent with the requirements of this permit and applicable federal and state laws, the facility shall be designed, constructed and operated in accordance with the representation of the facility in the permit application.

2. The facility is subject to the requirements of 40 CFR 63.1-15, Subpart A, "General Provisions" (as indicated in Table 2 to Subpart MMMM of 40 CFR 63) and 40 CFR 63, Subpart MMMM, National Emission Standards for Hazardous Air Pollutants: Surface Coating of Miscellaneous Metal Parts and Products. Compliance with all applicable provisions therein is required, unless otherwise stated in this permit.

3. Employees of the Office of Air Resources and its authorized representatives shall be allowed to enter the facility at all times for the purpose of inspecting any air pollution source, investigating any condition it believes may be causing air pollution or examining any records required to be maintained by the Office of Air Resources.

4. At all times, including periods of startup, shutdown and malfunction, the owner/operator shall, to the extent practicable, maintain and operate the facility in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Office of Air Resources, which may include, but is not

limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

5. The emission and dispersion characteristics of all sources of any listed toxic air contaminant at the facility shall be consistent with the parameters used in the air quality modeling to demonstrate that the emissions do not cause an impact, at or beyond the property line of the facility, which exceeds the Acceptable Ambient Level for that substance. The Office of Air Resources, in its sole discretion, may reopen this minor source permit if it determines that the emission and dispersion characteristics have changed significantly and that emission limitations must be revised and/or added to this permit to ensure compliance with Air Pollution Control Regulation No. 22

Appendix A

Determination of Weight Volatile Matter Content and Weight Solids Content of Reactive Adhesives

1.0 Applicability and Principle

1.1 *Applicability:* This method applies to the determination of weight volatile matter content and weight solids content for most one-part or multiple-part reactive adhesives. Reactive adhesives are composed, in large part, of monomers that react during the adhesive curing reaction, and, as a result, do not volatilize. The monomers become integral parts of the cured adhesive through chemical reaction. At least 70 weight percent of the system, excluding water and non-volatile solids such as fillers, react during the process. This method is not appropriate for cyanoacrylates. For cyanoacrylates, South Coast Air Quality Management District Test Method 316B should be used. This method is not appropriate for one-part moisture cure urethane adhesives or for silicone adhesives. For one-part moisture cure urethane adhesives and for silicone adhesives, USEPA Method 24 should be used.

1.2 Principle: One-part and multiple-part reactive adhesives undergo a reactive conversion from liquid to solid during the application and assembly process. Reactive adhesives are applied to a single surface, but then are usually quickly covered with another mating surface to achieve a bonded assembly. The monomers employed in such systems typically react and are converted to non-volatile solids. If left uncovered, as in a Method 24 (ASTM D2369) test, the reaction is inhibited by the presence of oxygen and volatile loss of the reactive components competes more heavily with the cure reaction. If this were to happen under normal use conditions, the adhesives would not provide adequate performance. This method minimizes this undesirable deterioration of the adhesive performance.

2.0 Materials and Apparatus

2.1 Aluminum foil, aluminum sheet, non-leaching plastic film or non-leaching plastic sheet, approximately 3 inches by 3 inches. Precondition the foil, film, or sheet for 30 minutes in an oven at 110 ±5 degrees Celsius and store in a desiccator prior to use. Use tongs or rubber gloves or both to handle the foil, film, or sheet.

2.2 Flat, rigid support panels slightly larger than the foil, film, or sheet. Polypropylene with a minimum thickness of1/8inch is recommended for the support panels. Precondition the support panels for 30 minutes in an oven at 110 ±5 degrees Celsius and store in a desiccator prior to use. Use tongs or rubber gloves or both to handle the support panels.

2.3 Aluminum spacers,1/8inch thick. Precondition the spacers for 30 minutes in an oven at 110 ±5 degrees Celsius and store in a desiccator prior to use. Use tongs or rubber gloves or both to handle the spacers.

2.4 Forced draft oven, type IIA or IIB as specified in ASTM E145–94 (Reapproved 2001), "Standard Specification for Gravity-Convection and Forced-Ventilation Ovens" (incorporated by reference, see §63.14).

2.5 Electronic balance capable of weighing to ±0.0001 grams (0.1 mg).

2.6 Flat bottom weight (approximately 3 lbs) or clamps.

Material and Apparatus Notes

1—The foil, film, or sheet should be thick or rigid enough so that it can be easily handled in the test procedure.

3.0 Procedure

3.1 Two procedures are provided. In Procedure A the initial specimen weight is determined by weighing the foil, film, or sheet before and after the specimen is dispensed onto the foil, film, or sheet. In Procedure B the initial specimen weight is determined by weighing the adhesive cartridge (kit) before and after the specimen is dispensed.

3.2 At least four test specimens should be run for each test material. Run the test at room temperature, 74 degrees Fahrenheit (23 degrees Celsius).

Procedure A

1. Zero electronic balance.

2. Place 2 pieces of aluminum foil (or aluminum sheet, plastic film, or plastic sheet) on scale.

3. Record weight of aluminum foils. (A).

4. Tare balance.

5. Remove top piece of aluminum foil.

6. Dispense a 10 to 15 gram specimen of premixed adhesive onto bottom piece of aluminum foil. Place second piece of aluminum foil on top of the adhesive specimen to make a sandwich.

7. Record weight of sandwich (specimen and aluminum foils). (B).

8. Remove sandwich from scale, place sandwich between two support panels with aluminum spacers at the edges of the support panels to make a supported sandwich. The spacers provide a standard gap. Take care to mate the edges.

9. Place the supported sandwich on a flat surface.

10. Place the weight on top of the supported sandwich to spread the adhesive specimen to a uniform thickness within the sandwich. Check that no adhesive squeezes out from between the pieces of aluminum foil or through tears in the aluminum foil.

11. Allow to cure 24 hours.

12. Remove the sandwich from between the support panels. Record the weight of the sandwich. This is referred to as the 24 hr weight. (C).

13. Bake sandwich at 110 degrees Celsius for 1 hour.

14. Remove sandwich from the oven, place immediately in a desiccator, and cool to room temperature. Record post bake sandwich weight. (D).

Procedure B

1. Zero electronic balance.

2. Place two pieces of aluminum foil (or aluminum sheet, plastic film, or plastic sheet) on scale.

3. Record weight of aluminum foils. (A).

4. Tare balance.

5. Place one support panel on flat surface. Place first piece of aluminum foil on top of this support panel.

6. Record the weight of a pre-mixed sample of adhesive in its container. If dispensing the adhesive from a cartridge (kit), record the weight of the cartridge (kit) plus any dispensing tips. (F).

7. Dispense a 10 to 15 gram specimen of mixed adhesive onto the first piece of aluminum foil. Place second piece of aluminum foil on top of the adhesive specimen to make a sandwich.

8. Record weight of the adhesive container. If dispensing the adhesive from a cartridge (kit), record the weight of the cartridge (kit) plus any dispensing tips. (G).

9. Place the aluminum spacers at the edges of the bottom support panel polypropylene sheet. The spacers provide a standard gap.

10. Place the second support panel on top of the assembly to make a supported sandwich. Take care to mate the edges.

11. Place the supported sandwich on a flat surface.

12. Place the weight on top of the supported sandwich to spread the adhesive specimen to a uniform thickness within the sandwich. Check that no adhesive squeezes out from between the pieces of aluminum foil or through tears in the aluminum foil.

13. Allow to cure 24 hours.

14. Remove the sandwich from between the support panels. Record the weight of the sandwich. This is referred to as the 24 hr weight. (C).

15. Bake sandwich at 110 degrees Celsius for 1 hour.

16. Remove sandwich from the oven, place immediately in a desiccator, and cool to room temperature.

17. Record post-bake sandwich weight. (D).

Procedural Notes

1—The support panels may be omitted if the aluminum foil (or aluminum sheet, plastic film, or plastic sheet) will not tear and the adhesive specimen will spread to a uniform thickness within the sandwich when the flat weight is placed directly on top of the sandwich.

2—Clamps may be used instead of a flat bottom weight to spread the adhesive specimen to a uniform thickness within the sandwich.

3—When dispensing from a static mixer, purging is necessary to ensure uniform, homogeneous specimens. The weighing in Procedure B, Step 6 must be performed after any purging.

4—Follow the adhesive manufacturer's directions for mixing and for dispensing from a cartridge (kit).

4.0 Calculations

4.1 The total weight loss from curing and baking of each specimen is used to determine the weight percent volatile matter content of that specimen

Procedure A

Weight of original specimen (S) = (B)−(A)

Weight of post-bake specimen (P) = (D)−(A)

Total Weight Loss (L) = (S)−(P)

Procedure B

Weight of original specimen (S) = (F)−(G)

Weight of post-bake specimen (P) = (D)−(A)

Total Weight Loss (L) = (S)−(P)

Procedure A and Procedure B

Weight Percent Volatile Matter Content

(V) = [(Total weight loss)/(Initial specimen weight)] × 100 = [(L)/(S)] × 100

4.2 The weight volatile matter content of a material is the average of the weight volatile matter content of each specimen of that material. For example, if four specimens of a material were tested, then the weight percent volatile matter content for that material is: V = [V1 + V2 + V3 + V4]/4

Where:

Vi = the weight percent volatile matter content of specimen i of the material.

4.3 The weight percent solids content of the material is calculated from the weight percent volatile content of the material.

Weight Percent Solids Content (N) = 100−(V)

Calculation Notes

1—The weight loss during curing and the weight loss during baking may be calculated separately. These values may be useful for identifying sources of variation in the results obtained for different specimens of the same material.

2—For both Procedure A and Procedure B, the weight loss during curing is (S)−[(C)−(A)] and the weight loss during baking is (C)−(D).

Appendix B

Default Organic HAP Mass Fraction for Solvents and Solvent Blends

The owner/operator may use the mass fraction values in the following table for solvent blends for which you do not have test data or manufacturer's formulation data and which match either the solvent blend name or the chemical abstract series (CAS) number. If a solvent blend matches both the name and CAS number for an entry, that entry's organic HAP mass fraction must be used for that solvent blend. Otherwise, use the organic HAP mass fraction for the entry matching either the solvent blend name or CAS number, or use the organic HAP mass fraction from Appendix C of this permit if neither the name nor CAS number match.

Solvent/solvent blend	CAS. No.	Average organic HAP mass fraction	Typical organic HAP, percent by mass
1. Toluene	108–88–3	1.0	Toluene.
2. Xylene(s)	1330–20–7	1.0	Xylenes, ethylbenzene.
3. Hexane	110–54–3	0.5	n-hexane.
4. n-Hexane	110–54–3	1.0	n-hexane.
5. Ethylbenzene	100–41–4	1.0	Ethylbenzene.
6. Aliphatic 140		0	None.
7. Aromatic 100		0.02	1% xylene, 1% cumene.
8. Aromatic 150		0.09	Naphthalene.
9. Aromatic naphtha	64742–95–6	0.02	1% xylene, 1% cumene.
10. Aromatic solvent	64742–94–5	0.1	Naphthalene.
11. Exempt mineral spirits	8032–32–4	0	None.
12. Ligroines (VM & P)	8032–32–4	0	None.
13. Lactol spirits	64742–89–6	0.15	Toluene.
14. Low aromatic white spirit	64742–82–1	0	None.
15. Mineral spirits	64742–88–7	0.01	Xylenes.
16. Hydrotreated naphtha	64742–48–9	0	None.
17. Hydrotreated light distillate	64742–47–8	0.001	Toluene.
18. Stoddard solvent	8052–41–3	0.01	Xylenes.
19. Super high-flash naphtha	64742–95–6	0.05	Xylenes.

20. Varsol® solvent	8052–49–3	0.01	0.5% xylenes, 0.5% ethylbenzene.
21. VM & P naphtha	64742–89–8	0.06	3% toluene, 3% xylene.
22. Petroleum distillate mixture	68477–31–6	0.08	4% naphthalene, 4% biphenyl.

Appendix C

Default Organic HAP Mass Fraction for Petroleum Solvent Groups[a]

You may use the mass fraction values in the following table for solvent blends for which you do not have test data or manufacturer's formulation data.

Solvent type	Average organic HAP mass fraction	Typical organic HAP, percent by mass
Aliphatic[b]	0.03	1% Xylene, 1% Toluene, and 1% Ethylbenzene.
Aromatic[c]	0.06	4% Xylene, 1% Toluene, and 1% Ethylbenzene.

[a]Use this table only if the solvent blend does not match any of the solvent blends in Appendix B of this permit by either solvent blend name or CAS number and you only know whether the blend is aliphatic or aromatic.

[b]Mineral Spirits 135, Mineral Spirits 150 EC, Naphtha, Mixed Hydrocarbon, Aliphatic Hydrocarbon, Aliphatic Naphtha, Naphthol Spirits, Petroleum Spirits, Petroleum Oil, Petroleum Naphtha, Solvent Naphtha, Solvent Blend.

[c]Medium-flash Naphtha, High-flash Naphtha, Aromatic Naphtha, Light Aromatic Naphtha, Light Aromatic Hydrocarbons, Aromatic Hydrocarbons, Light Aromatic Solvent.