

11 August 2006

Mr. Donald Stinnett  
General Manager  
Saint-Gobain Performance Plastics, Inc.  
386 Metacom Avenue  
Bristol, Rhode Island 02809

Dear Mr. Stinnett:

The Department of Environmental Management, Office of Air Resources has reviewed and approved your request for a minor source permit for process and air pollution control equipment at your facility's location of 386 Metacom Avenue, Bristol, Rhode Island.

Enclosed is a minor source permit issued pursuant to our review (Approval Nos. 1901-1907).

I can be reached at 401-222-2808, extension 7011 if you have any questions.

Very truly yours,

Douglas L. McVay,  
Associate Supervising Engineer  
Office of Air Resources

cc: Bristol Building Official  
Teresa Medley - SGPPL  
Sarah Simon – Shaw Environmental

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

MINOR SOURCE PERMIT

*SAINT-GOBAIN PERFORMANCE PLASTICS, INC.*

APPROVAL NOs. 1901-1907

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

*Saint-Gobain Performance Plastics, Inc.*

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**For the following:**

*Installation of process and ancillary equipment to add a "commercial" production line for the production of Meldin 7000<sup>®</sup> (Approval No. 1901) to the existing "pilot" production line. The "commercial" production line includes two condensers to control VOC emissions from the polymer vessel and the vacuum oven (Approval Nos. 1902 and 1903). The "pilot" production line includes four condensers to control VOC emissions from two polymer vessels and two vacuum ovens (Approval Nos. 1904 -1907).*

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**Located at:** 386 Metacom Avenue, Bristol

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**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 *Saint-Gobain Performance Plastics, Incorporated* 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.**

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**Stephen Majkut, Chief  
Office of Air Resources**

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**Date of issuance**

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

Permit Conditions and Emission Limitations

**Saint-Gobain Performance Plastics, Inc.**

**Approval Nos. 1901-1907**

A. Emission Standards

1. Polymer vessels

- a. The vent stream from each of the polymer vessels shall be controlled by a condenser before discharge to the atmosphere.
- b. The maximum coolant temperature at the inlet of each condenser shall not exceed 68°F (20°C).

2. Storage tanks

The following requirements are applicable to the storage and/or transfer of VOCs:

- a. All storage tanks that store VOC shall have a vapor balance system that is designed and operated to route VOCs displaced from loading of the storage tank to the railcar or tank truck from which the storage tank is filled.
- b. Tank trucks and railcars must have a current certification in accordance with the U.S. Department of Transportation (DOT) pressure test requirements of 49 CFR 180 for tank trucks and 49 CFR 173.31 for railcars.
- c. VOCs must only be unloaded from tank trucks or railcars when vapor balance systems are connected to the storage tank's vapor balance system.
- d. No pressure relief device on the storage tank, railcar or tank truck shall open during loading or as a result of temperature changes (breathing losses).
- e. Pressure relief devices will be in place on all storage tanks that store VOC to minimize breathing losses.
- f. The pressure relief devices on storage tanks shall be set to no less than 10 inches water column at all times to prevent breathing losses.

3. Vacuum Ovens

- a. All VOC emissions generated from the three vacuum ovens shall be controlled by a condenser before discharge to the atmosphere.
- b. The maximum coolant temperature at the inlet of each condenser shall not exceed 68°F (20°C).

4. Volatile Organic Compound (VOC) Emission Limitations

The total quantity of VOC emissions discharged to the atmosphere from the entire facility shall not exceed 8167 pounds of VOC per calendar month based upon a 12 month rolling average.

5. Listed Toxic Air Contaminants

- a. The total quantity of acetone emissions discharged to the atmosphere from the entire facility shall not exceed:
  - (1) 40.7 pounds per hour; and,
  - (2) 976 pounds per day.
- b. The total quantity of xylene emissions discharged to the atmosphere from the entire facility shall not exceed:
  - (1) 2.7 pounds per hour; and,
  - (2) 65 pounds per day; and,
  - (3) 7421.5 pounds in any consecutive 12-month period.
- c. The total quantity of isopropyl alcohol emissions discharged to the atmosphere from the entire facility shall not exceed 14.8 pounds per hour.

6. Hazardous Air Pollutant (HAP) Emission Limitations

The total quantity of HAP emissions discharged to the atmosphere from the entire facility shall not exceed 1,500 pounds of any one (1) HAP or 4,000 pounds of any combination of HAPs per calendar month based upon a 12-month rolling average. Hazardous Air Pollutant shall mean an air pollutant which has been listed pursuant to Section 112(b) of the Clean Air Act Amendments of 1990.

## B. Operating Requirements

1. The owner/operator shall not produce more than 260 batches in any consecutive 12-month period of Meldin 7000<sup>®</sup> in the commercial process line and 520 batches in any consecutive 12-month period of Meldin 7000<sup>®</sup> in the existing pilot plant.
2. Use of isopropyl alcohol in the pilot area shall be discontinued no later than 180 days after the issuance of this permit after which Production of Meldin 7000<sup>®</sup> using isopropyl alcohol as a wash solvent shall only be processed in the commercial process line.
3. All VOC emissions generated from the polymer vessels and the vacuum ovens shall be captured, contained and routed to the condensers for treatment prior to discharge to the atmosphere.
4. The condensers used for air pollution control shall be operated according to their design specifications whenever the emission points vented to the control system are emitting air contaminants.
5. VOC emissions generated from the cleaning of the Meldin 7000<sup>®</sup> production equipment with VOC containing material shall be captured, contained and routed to the condensers for treatment prior to discharge to the atmosphere.
6. The centrifuge and pelletizing units on a process line shall not operate simultaneously.
7. All containers used to store VOC-containing materials must be equipped with a tight fitting lid which is kept closed when the container is not in use so as to minimize VOC emissions to the atmosphere.

## C. Monitoring

1. The coolant temperature at the inlet of each condenser used to comply with the requirements of this permit, shall be monitored and indicated continuously. This temperature shall be checked a minimum of once per batch, and the date, time and reading shall be recorded. The temperature monitoring device shall be certified by the manufacturer to be accurate within  $\pm 1$  percent of the temperature measured in degrees Celsius or  $\pm 2.5^{\circ}\text{C}$ , whichever is greater.
2. The maximum coolant temperature at the inlet of each condenser shall not exceed 68°F (20°C).
3. The temperature monitoring device shall be calibrated annually.

D. Testing

1. Within 180 days of the startup of the equipment installed under this approval, emissions testing shall be conducted for VOCs/HAPs, and each listed toxic air contaminant to determine compliance with all applicable emission limitations and to determine the accuracy of the emission estimates used in the permit application.
2. An emissions testing protocol shall be submitted to the Office of Air Resources for review and approval at least 60 days prior to the performance of the emissions tests.
3. All test procedures used for emissions testing shall be conducted in accordance with Appendix A of 40 CFR 60 or another method approved by the Office of Air Resources and U.S. Environmental Protection Agency (EPA) prior to the performance of any emissions tests.
4. The owner/operator shall install any and all test ports or platforms necessary to conduct the required testing, provide safe access to any platforms and provide the necessary utilities for sampling and testing equipment.
5. All testing shall be conducted under operating conditions deemed acceptable and representative for the purposes of assessing compliance with the applicable emissions limitations and/or to determine the accuracy of the emission estimates used in the permit application..
6. The owner/operator shall notify the Office of Air Resources at least 60 days before the tests are scheduled in order to allow for testing to be observed by an Office of Air Resources representative.
7. A final report of the results of the emissions testing shall be submitted to the Office of Air Resources no later than 60 days following completion of testing.
8. All emissions testing must be observed by the Office of Air Resources or its authorized representative to be considered acceptable.

E. Recordkeeping and Reporting

1. The owner/operator shall maintain the following records:
  - a. The number of batches per month for each process line.
  - b. The inlet coolant temperature of each condenser used to comply with the requirements of this permit.
  - c. The hours of operation of each chiller, including any start-up, shut down or malfunction

- d. For each clean-up material, each VOC component, and the content in volume percent.
  - e. All monitoring equipment calibration records.
2. The owner/operator shall keep and maintain records sufficient to determine actual volatile organic compound emissions, hazardous air pollutant emissions and listed toxic air contaminant emissions for the entire facility. All purchase orders, invoices, emission factors, calculation procedures and other documentation to support the determination of actual volatile organic compound emissions, hazardous air pollutant emissions and listed toxic air contaminant emissions shall be maintained and be made available to the Office of Air Resources upon request.
  3. The owner/operator shall, on a daily basis, determine the total quantity of acetone, isopropyl alcohol, and xylene discharged to the atmosphere from the entire facility. The owner/operator shall keep records of this determination and provide such records to the Office of Air Resources upon request.
  4. The owner/operator shall notify the Office of Air Resources within 24 hours, whenever:
    - a. the total quantity of acetone discharged to the atmosphere from the entire facility exceeds 40.7 pounds per hour or 976 pounds per day, or;
    - b. the total quantity of isopropyl alcohol discharged to the atmosphere from the entire facility exceeds 14.8 pounds per hour, or;
    - c. the total quantity of xylene discharged to the atmosphere from the entire facility exceeds 2.7 pounds per hour or 65 pounds per day.
  5. The owner/operator shall on a monthly basis, no later than 5 business days after the first of the month determine the total quantity of xylene discharged to the atmosphere from the entire facility for the previous 12 months. The owner/operator shall keep records of this determination and provide such records to the Office of Air Resources upon request.
  6. The owner/operator shall notify the Office of Air Resources, within 15 days, whenever the quantity of xylene discharged to the atmosphere from the entire facility exceeds 7421.5 pounds in any consecutive 12-month period.
  7. The owner/operator shall, on a monthly basis, no later than 5 business days after the first of the month, determine the total quantity of VOC discharged to the atmosphere from the entire facility. The owner/operator shall keep records of this determination and provide such records to the Office of Air Resources upon request.

8. The owner/operator shall notify the Office of Air Resources, within 15 days, whenever the quantity of VOC discharged to the atmosphere from the entire facility exceeds 8167 pounds per month (12-month rolling average).
9. The owner/operator shall, on a monthly basis, no later than 5 business days after the first of the month, determine the total quantity of each HAP discharged to the atmosphere from the entire facility. The owner/operator shall keep records of this determination and provide such records to the Office of Air Resources upon request.
10. The owner/operator shall notify the Office of Air Resources, within 15 days, whenever the quantity of HAPs discharged to the atmosphere from the entire facility exceeds 1500 pounds of any one (1) HAP or 4000 pounds of any combination of HAPs per calendar month (12-month rolling average).
11. The owner/operator shall, on a monthly basis, no later than 5 business days after the first of the month, determine the number of batches per month for each process line. The owner/operator shall keep records of this determination and provide such records to the Office of Air Resources upon request.
12. The owner/operator shall notify the Office of Air Resources, within 15 days, whenever the number of batches exceeds 260 batches in any consecutive 12-month period in the commercial process line and 520 batches in any consecutive 12-month period in the existing pilot plant.
13. The owner/operator shall notify the Office of Air Resources, in writing, within 5 business days, of any period of operation in which the coolant temperature at the inlet of any condenser exceeds 20°C.
14. The owner/operator must notify the Office of Air Resources no later than 15 days after noncompliance with any emission standard is discovered. The notification required under Conditions E.4, E.6, E.8, E.10, and this condition shall include:
  - a. Identification of the emission limitation exceeded
  - b. Suspected reason for the exceedance
  - c. Corrective action taken or to be taken
  - d. Anticipated length of the exceedance
15. The owner/operator shall notify the Office of Air Resources, in writing, of the date of actual initial start-up of the equipment covered by this permit no later than fifteen days after such date.
16. The owner/operator shall notify the Office of Air Resources in writing of any planned physical or operational change to any equipment 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.

17. 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.
18. The owner/operator shall notify the Office of Air Resources, in writing, of any noncompliance with the terms of this permit within 30 calendar days of becoming aware of such occurrence and supply the Director with the following information:
  - a. The name and location of the facility;
  - b. The subject source(s) that caused the noncompliance with the permit term;
  - c. The time and date of first observation of the incident of noncompliance;
  - d. The cause and expected duration of the incident of noncompliance;
  - e. The estimated rate of emissions (expressed in lbs/hr or lbs/day) during the incident and the operating data and calculations used in estimating the emission rate.
  - f. The proposed corrective actions and schedule to correct the conditions causing the incidence of noncompliance.

19. 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.

F. Malfunctions

1. Malfunction means a sudden and unavoidable breakdown of process or control equipment. In the case of a malfunction of any air pollution control system, all reasonable measures shall be taken to assure resumption of the designed control efficiency as soon as possible. In the event that the malfunction of an air pollution control system is expected or may reasonably be expected to continue for longer than 24 hours and if the owner/operator wishes to operate the source on which it is installed at any time beyond that period, the Director shall be petitioned for a variance under Section 23-23-15 of the General Laws of Rhode Island, as amended. Such petition shall include, but is not limited to, the following:
  - a. Identification of the specific air pollution control system and source on which it is installed;
  - b. The expected period of time that the air pollution control system will be malfunctioning or out of service;
  - c. The nature and quantity of air contaminants likely to be emitted during said period;
  - d. Measures that will be taken to minimize the length of said period;
  - e. The reasons that it would be impossible or impractical to cease the source operation during said period.
2. The owner/operator may seek to establish that a malfunction of any air pollution control system that would result in noncompliance with any of the terms of this permit or any other applicable air pollution control rules and regulations was due to unavoidable increases in emissions attributable to the malfunction. To do so, the owner/operator must demonstrate to the Office of Air Resources that:
  - a. The malfunction was not attributable to improperly designed equipment, lack of preventative maintenance, careless or improper operation or operator error;
  - b. The malfunction is not part of a recurring pattern indicative of inadequate design, operation or maintenance;
  - c. Repairs were performed in an expeditious fashion. Off-shift labor and overtime should be utilized, to the extent practicable, to ensure that such repairs were completed as expeditiously as practicable.

- d. All possible steps were taken to minimize emissions during the period of time that repairs were performed.
- e. Emissions during the period of time that the repairs were performed will not:
  - (1) Cause and increase in the ground level ambient concentration at or beyond the property line in excess of that allowed by Air Pollution Control Regulation No. 22 and any Calculated Acceptable Ambient Levels; and
  - (2) Cause or contribute to air pollution in violation of any applicable state or national ambient air quality standard.
- f. The reasons that it would be impossible or impractical to cease the source operation during said period.
- g. The owner/operator's actions in response to the excess emissions were documented by properly signed, contemporaneous operating logs or other relevant evidence.

This demonstration must be provided to the Office of Air Resources within two working days of the time when the malfunction occurred and contain a description of the malfunction, any steps taken to minimize emissions and corrective actions taken.

The owner/operator shall have the burden of proof in seeking to establish that noncompliance was due to unavoidable increases in emissions attributable to the malfunction.

#### G. 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 prepared by Shaw Environmental, Incorporated, dated December 2005.
2. 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, investigation any condition it believes may be causing air pollution or examining any records required to be maintained by the Office of Air Resources.
3. 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.

4. The emission and dispersion characteristics of all sources of listed toxic air contaminants at the facility shall be consistent with the parameters used in the air quality modeling to demonstrate that the emissions of each listed toxic air contaminant from the facility does 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 the emission limitations in this minor source permit must be revised to ensure compliance with Air Pollution Control Regulation No. 22.