



The State of New Hampshire
Department of Environmental Services



Robert R. Scott, Commissioner

June 20, 2022

David Calentine, Plant Manager
Saint-Gobain Performance Plastics Corporation
701 Daniel Webster Hwy
Merrimack, NH 03054

RE: Partial Compliance Evaluation Report – AFS# 3301100165

Dear Mr. Calentine:

On January 6, 2022, the New Hampshire Department of Environmental Services, Air Resources Division (NHDES) conducted an on-site Partial Compliance Evaluation (PCE) of Saint-Gobain Performance Plastics Corporation (SGPP) located in Merrimack, NH. In addition, NHDES completed a subsequent off-site records review that encompassed data from July 14, 2021, through April 16, 2022, submitted by SGPP.

The purpose of the PCE was to review the on-site records associated with the operation of the emergency bypass stack in conjunction with the information submitted by SGPP in response to Letter of Deficiency No. ARD 21-010. NHDES also evaluated SGPP's compliance with the monitoring, recordkeeping and reporting requirements contained in Temporary Permit TP-0256 (the Permit) related specifically to operation of the regenerative thermal oxidizer (RTO).

During the on-site PCE, SGPP provided the following:

- Tour of the duct work and RTO.
- Demonstration of the data acquisition system.
- Discussion of the parameters monitored by the company for the RTO and bypass operations.
- Records pertaining to the RTO temperature, natural gas flow, exhaust flow, and tower operational information for various times and dates of reported emergency bypass events or other periods chosen by NHDES' staff.
- Maintenance records kept by SGPP in accordance with the RTO vendor's recommendations, and maintenance and malfunction reports generated pursuant to SGPP's RTO Compliance Plan P-EHS-018¹.
- Additional bypass instances that occurred after SGPP's original submittal of information in response to Letter of Deficiency No. ARD 21-010.

¹ SGPP submitted RTO Compliance Plan P-EHS-018 on December 18, 2021.

After the PCE, SGPP submitted the following:

- Electronic copies of RTO data and tower operational history from July 2021 to January 2022.
- Supplemental information to its December 18, 2021, response to Letter of Deficiency No. ARD 21-010.
- An updated Air Pollution Control Equipment Monitoring Plan² (the Updated Plan).
- Additional records and data requested by NHDES covering the period from January 2022 to April 16, 2022.

NHDES has reviewed all the information provided during the on-site PCE and subsequent submittals from SGPP. NHDES has determined that the records maintained by SGPP and provided to NHDES are consistent with and support the information submitted by SGPP with regards to emergency bypass operation. NHDES has confirmed that the RTO has operated at all times that the coating towers or auxiliary equipment are operating pursuant to Table 5, Item 5(b) of the Permit, with the exception of a limited number of hours of bypass. Between August 2021 and April 2022, SGPP operated the bypass stack a total of 45 hours.

During the PCE, NHDES identified deficiencies related to the operation of the bypass stack and RTO which are described below:

1. Table 5, Item 5(b) of the Permit requires the RTO to operate at all times the coating towers or auxiliary equipment are operating.

On December 28, 2021, SGPP submitted a significant permit amendment application (Application #21-0198). In Application #21-0198, SGPP requested a revision to the Permit to include an operational limit of 175 hours per year for utilization of the emergency bypass stack for three specific RTO modes of operation. Those three modes of operation include instances of “Burner Off”, “Emergency Shutdown” and “High Inlet Temperature Shutdown”. NHDES is currently reviewing Application #21-0198.

NHDES determined that SGPP maintains sufficient information to identify and track instances when the exhaust gasses from the process are diverted to the ambient air through the emergency bypass stack. However, SGPP did not submit notification to NHDES of these permit deviations. Nonetheless, NHDES acknowledges that SGPP has provided this information upon request by NHDES.

2. Table 5, Item 5(c) of the Permit requires that the active combustion chamber of the RTO be maintained at a minimum temperature of 1832°F (1000°C). Table 6, Item 11 of the Permit requires the thermal oxidizer combustion chamber temperature to be monitored

² SGPP submitted an updated Air Pollution Control Equipment Monitoring Plan on February 28, 2022, which included an Air Monitoring Plan (PL-EHS-003), Capture Efficiency Verification Plans (G-EHS-004 to G-EHS-015), Fire Prevention Plan (PL-EHS-001), and two drawings – 1095 (Fuel Trains & Burner PID Drawing) and 1135 (PID Legend Sheet).

at least once every 15 minutes and recorded as an hourly average temperature. SGPP monitors the temperature continuously and has records of measurements every 1-minute and average temperatures every 15-minute and every hour. Reports provided by SGPP indicated that during production operations, there were instances when the RTO hourly average temperature was recorded below 1832°F. NHDES determined that SGPP did not submit notification to NHDES of these permit deviations. However, NHDES acknowledges that SGPP has provided this information upon request by NHDES.

To maintain compliance with the Permit, NHDES recommends the following:

1. SGPP should continue to take all necessary and appropriate steps to eliminate RTO malfunctions which cause the emergency bypass stack to open.
2. SGPP should continue to take steps to reduce the instances when the hourly average RTO temperature drops below the minimum temperature of 1832°F.

If you have any questions, please do not hesitate to contact me at (603) 271-0650 or by email at Thomas.Guertin@des.nh.gov.

Sincerely,



Thomas V. Guertin
Compliance Programs Manager
Air Resources Division

ec: Mark Collette, Saint-Gobain Performance Plastics
William Kempkie, Saint-Gobain Performance Plastics
Paul Micali, Town Manager, Town of Merrimack