



The State of New Hampshire  
**Department of Environmental Services**

**Robert R. Scott, Commissioner**



November 18, 2021

Gabriel Caridade, Plant Manager  
Saint-Gobain Performance Plastics Corporation  
701 Daniel Webster Highway  
Merrimack, NH 03054-1137

**LETTER OF DEFICIENCY**  
**No. ARD 21-010**

**Re: Air Pollution Capture and Control System**

Dear Mr. Caridade:

The purpose of this Letter of Deficiency (LOD) is to notify Saint-Gobain Performance Plastics Corporation (SGPP) that the New Hampshire Department of Environmental Services, Air Resources Division, (NHDES) has identified deficiencies, listed below, related to SGPP's operations under Temporary Permit TP-0256 (the Permit) at 701 Daniel Webster Highway in Merrimack, New Hampshire (the Facility). In addition, NHDES has identified specific actions and timeframes required by SGPP to demonstrate compliance.

**Background**

On March 26, 2019, NHDES received Application 18-0227 (the Application) from SGPP to install air pollution controls as required by RSA 125-C:10-e. In the application, SGPP provided a best available control technology (BACT) analysis and proposed the installation of a regenerative thermal oxidizer (RTO) as the air pollution control device meeting the requirements of BACT. SGPP stated that all emissions from the manufacturing processes, with the exception of the antenna fabrication facility, would be routed to and controlled by the RTO. SGPP also stated that it would not initiate process operations with perfluorinated compounds prior to the RTO reaching the established operational temperature. In addition, during any shutdown condition, SGPP stated that process operations would proceed to a safe stopping point to minimize potential uncontrolled emissions.

On February 11, 2020, NHDES issued the Permit to SGPP with an expiration date of August 31, 2021. The Permit authorized SGPP to operate seventeen coating/ casting towers, laminators and finishing devices (collectively referred to as "the Associated Devices"); the antenna fabrication facility; an emergency water pump; an emergency generator and the RTO, designated as PCE01.

On June 1, 2021, NHDES received a letter from SGPP requesting reissuance of the Permit. NHDES reissued the Permit on August 5, 2021, with an expiration date of August 31, 2022.

SGPP conducted, and NHDES observed, the required performance test series on September 7 and 8, 2021 and an additional research test series conducted on September 9 and 10, 2021.

### **Applicable Requirements and Deficiencies**

1. Condition IV, Table 4 of the Permit lists the stacks and configurations of the stacks for the permitted devices as presented by SGPP in the Application. Condition IV, Table 4 specifies a vertical and unobstructed stack configuration for PCE01 and three horizontal exhaust points associated with the antenna fabrication facility that are not controlled by PCE01.

Outcome: During the test series that SGPP conducted during the period of September 7 through 10, 2021, NHDES observed that PCE01 had been equipped with a bypass stack. Condition IV, Table 4 does not identify or allow for the installation and use of a bypass stack. Therefore, NHDES determined that the bypass stack is not authorized by the Permit.

#### Requested action:

- **No later than 15 days from the date of this letter**, provide description of the reason(s) for having a bypass stack and a chronology of events that describes the process and timing which resulted in a bypass stack being included in the design of PCE01.
  - **No later than 30 days from the date of this letter**, provide a compliance plan detailing how SGPP proposes to manage and use the bypass stack.
  - **No later than 45 days from the date of this letter**, submit a permit application requesting a significant permit amendment pursuant to Env-A 612 regarding installation and operation of the bypass stack, including a process flow diagram for the currently installed air pollution capture and control system. SGPP shall specify in the application the maximum number of bypass hours requested for any consecutive 12-month period.
2. Condition V, Table 5, Item 5b of the Permit requires SGPP to operate PCE01 at all times that the Associated Devices connected to PCE01 are operating.

Outcome: During the period of September 7 through 10, 2021, NHDES observed uncontrolled emissions from the bypass stack as a result of the inadvertent shutdown of PCE01. NHDES also determined that the Associated Devices continued to operate

during PCE01 downtime periods and emitted uncontrolled exhaust gases through the bypass stack. NHDES determined that the annual emission limits for perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS) specified in Condition V, Table 5, Item 5(f) of the Permit assume that emissions of PFOA and PFOS would be controlled at all times. Therefore, SGPP is not authorized in the Permit to emit uncontrolled emissions of PFOA and PFOS through a bypass stack.

Requested action:

- **No later than 45 days from the date of this letter**, provide a written procedure detailing how SGPP will record bypass events, report those events to NHDES and estimate uncontrolled emissions if the bypass stack is being used.
3. Env-A 810.01; Condition VI, Table 6, Item 13b; and Condition VIII, Table 8, Item 10 of the Permit require SGPP to establish and maintain an Air Pollution Control Equipment Monitoring Plan that establishes the startup and shutdown requirements for PCE01. Specifically, Condition VI, Table 6, Item 13b requires that during any shutdown condition of PCE01, operation of the Associated Devices will proceed to a safe stopping point to minimize potential emissions. Condition VII, Table 7, Item 13c requires SGPP to maintain records of the hourly averaged combustion temperature readings of PCE01.

Outcome: NHDES observed that the Associated Devices continued to operate during shutdown periods of PCE01 and that procedures were not in place to address the orderly shutdown of the Associated Devices during the period when PCE01 was down. NHDES also determined that SGPP's Air Pollution Control Equipment Monitoring Plan does not contain appropriate shutdown requirements for PCE01 and the Associated Devices.

Requested action:

- **No later than 30 days from the date of this letter**, submit an update to the Air Pollution Control Equipment Monitoring Plan which describes the steps that SGPP will take to shut down the Associated Devices in an orderly manner when PCE01 shuts down and the duration required to implement these shut-down procedures when PCE01 goes offline.
- **No later than 30 days from the date of this letter**, provide a list of dates and hours that the Associated Devices continued to operate while PCE01 was below the minimum combustion chamber temperature of 1,832 degrees F during the period of July 14, 2021 through the date that SGPP responds to this LOD.

4. Condition VIII, Table 8, Item 6 of the Permit requires SGPP to update the air dispersion and deposition modeling analysis that SGPP included as part of the Application if there are significant changes to stack parameters or the addition of stacks not included in the original application.

Outcome: NHDES determined that the bypass stack that was observed during the performance and research test series was not included in the modeling analysis provided in the Application and SGPP made no allowance in the analysis for emitting uncontrolled emissions of PFOA or PFOS through this emission point.

Requested action:

- **No later than 30 days from the date of this letter**, provide an update to the modeling analysis that was submitted with the Application that includes the bypass stack in the analysis. In addition, present the methodology for estimating uncontrolled per- and polyfluoroalkyl substances (PFAS) emissions and the rationale for the number of hours for any consecutive 12-month included in the analysis.
5. Env-A 911.04(a); Condition VIII, Table 8, Item 7; and Condition IX.B. of the Permit require SGPP to notify NHDES of permit deviations that cause excess emissions within 24 hours followed by a written permit deviation report within ten days of the discovery of the excess emissions. Condition III of the Permit requires that SGPP route all exhaust gases from the Associated Devices to PCE01 prior to emission to the atmosphere.

Outcome: NHDES determined that operating any of the Associated Devices while PCE01 is not operating results in uncontrolled emissions being emitted through the bypass stack. Therefore, NHDES considers the uncontrolled emissions from the bypass stack to be excess emissions and, therefore, SGPP must report those emissions to NHDES as permit deviations. In addition, SGPP's continued operation of the Associated Devices during shutdown and re-start periods of PCE01 when PCE01 has not reached the required minimum combustion chamber temperature, as specified in Condition V, Table 5, Item 5c of the Permit, results in excess emissions and, therefore, SGPP must report those emissions to NHDES as permit deviations. To date, NHDES has not received permit deviation reports for the times when the bypass stack operated or when operations occur before PCE01 reaches the required minimum combustion chamber temperature.

Requested action:

- **No later than 30 days from the date of this letter**, provide permit deviation reports that include the following information for time periods that SGPP

operated the bypass stack during the period of July 14, 2021 through the date of SGPP's response to this LOD.

- i. Date and time of each event including duration of bypass usage from the time PCE01 goes offline until the time when PCE01 comes back online and duration of usage of PCE01 below the minimum combustion chamber temperature;
  - ii. A list of the Associated Devices that operated during each event;
  - iii. Estimated excess emissions of regulated pollutants on a mass basis during each event;
  - iv. The basis and methodology used to estimate excess emissions during each event; and
  - v. A description of the approach used for including these excess emissions in the annual totals for PFOA and PFOS in order to demonstrate compliance with limits in the Permit.
6. Env-A 705; and Condition VII.C, Table 8, Item 8 of the Permit require SGPP to submit to NHDES an annual emission fee for emissions from the Facility during the previous calendar year. Env-A 705.05 requires SGPP to submit the annual emission fee each year by May 15.

Outcome: NHDES did not receive the annual emission fee from SGPP for calendar year 2020 emissions until June 18, 2021.

Requested action:

- **No further action is required at this time.**

Please address all information to Edward Peduto, Enforcement Section Supervisor, at the following address:

NHDES Air Resources Division  
Enforcement Section  
29 Hazen Drive, P.O. Box 95  
Concord, NH 03302-0095

In the event that compliance is not achieved within the time period indicated, NHDES may initiate formal action against SGPP, including issuing an order requiring the deficiencies to be corrected and/or referring this matter to the NH Department of Justice. NHDES reserves the right to pursue administrative fines for the violations noted above.

If you believe that NHDES has cited these violations in error, or have questions regarding these matters, please contact Edward Peduto, Enforcement Section Supervisor at (603) 271-1374 or by email at [Edward.F.PedutoJr@des.nh.gov](mailto:Edward.F.PedutoJr@des.nh.gov). A current copy of the Air Resources Division Rules can be obtained from the NHDES website at <https://www.des.nh.gov/rules-and-regulatory/administrative-rules> or by contacting the NHDES Public Information Center at (603) 271-2975.

Sincerely,



Sheri Eldridge  
Compliance Bureau Administrator  
Air Resources Division

SRE/efp

cc: NHDES Legal Unit  
NH DOJ  
EPA Region 1  
Town Manager, Town of Merrimack

AFS #3301100165  
(Stationary Source)

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