A. Introduction

This NOx RACT Order is issued by the New Hampshire Department of Environmental Services, Air Resources Division, to Granite Shore Power (GSP) Schiller LLC pursuant to RSA 125-C.

B. Parties

1. The New Hampshire Department of Environmental Services, Air Resources Division (NHDES), is a duly constituted administrative agency of the State of New Hampshire having its principal offices at 29 Hazen Drive, Concord, NH 03301, telephone number (603) 271-1370.

2. Schiller Station is owned and operated by GSP Schiller LLC (GSP Schiller), a wholly owned subsidiary of Granite Shore Power LLC, with a mailing address of 431 River Road, Bow, NH 03304.

C. Statements of Fact and Law

1. GSP Schiller LLC owns and operates the Schiller Station Power Facility (Schiller Station) located at 400 Gosling Road in Portsmouth, NH. Schiller Station is a 155 megawatt (MW) wood and fossil fuel-fired electric generating facility.

2. The facility includes three utility boilers: one wood and fossil fuel-fired boiler (designated as emission unit SR5) and two fossil fuel-fired boilers (designated as emission units SR4 and SR6). The facility also operates one combustion turbine operating as a load shaving unit, and an emergency generator.

3. SR4 and SR6 are dry-bottom, face-fired utility boilers capable of firing bituminous coal or residual fuel oil. Each boiler is rated at 575 MMBtu/hr. SR4 and SR6 were installed in 1952 and 1957, respectively. SR4 and SR6 are rated at approximately 48 MW each.

4. Effective May 20, 1994, NHDES adopted the New Hampshire Code of Administrative Rules Env-A 1211, Nitrogen Oxides (NOx). This part defines the sources that are subject to Reasonably Available Control Technology (RACT) requirements and specifies the RACT requirements.¹

5. SR4 and SR6 are currently subject to a NOx RACT limit of 0.50 lb/MMBtu of heat input based on a 24-hour calendar day average, as per Env-A 1303.06(b) RACT Requirements: Dry-Bottom Utility Boilers Firing Coal and/or Oil.

¹ Effective October 31, 2010, NHDES adopted Part Env-A 1300 Nitrogen Oxides (NOx) Reasonably Available Control Technology (RACT) which replaced Part Env-A 1211.
6. SR4 and SR6 boilers are each equipped with low NOx burners$^2$, overfire air (OFA) systems$^3$ and selective non-catalytic reduction (SNCR) systems$^4$. As per Schiller Station's Title V Operating Permit$^5$, SNCR systems are operated on an "as needed" basis to comply with the current permit limits for NOx.

7. In accordance with 40 Code of Federal Regulation (CFR) 51.1116, states within the Ozone Transport Region (OTR) must submit a SIP revision that meets the RACT requirements of Section 182(b)(2) of the Clean Air Act within 24 months after designation of an Ozone National Ambient Air Quality Standard (NAASQ). In an effort to meet those obligations for both the 2008 and 2015 Ozone NAAQS, NHDES requested in a letter dated May 3, 2018 that GSP conduct a NOx RACT analysis for optimization of the SNCR systems on utility boilers SR4 and SR6 including an evaluation of the technical and economic feasibility of operating the SNCR systems on a year-round basis to achieve more stringent NOx emission levels.


9. GSP Schiller conducted a technical and economic feasibility analysis of year-round SNCR operation to achieve the NOx emission levels of 0.15 lb/MMBtu, 0.20 lb/MMBtu and 0.25 lb/MMBtu (calendar day average) as requested by NHDES.

10. GSP Schiller contends that NOx emission levels of 0.15 and 0.20 lb/MMBtu are technically not feasible. GSP concluded that NOx emission level of 0.25 lb/MMBtu can be achieved using existing combustion controls (i.e., LNB and OFA).

11. Economic feasibility analysis conducted by GSP Schiller indicated that year-round mandatory operation of SNCR to achieve compliance with the NOx RACT limit is not cost effective or economically feasible.

12. Based on technical and economic analysis, GSP Schiller proposed a NOx RACT limit of 0.25 lb/MMBtu, 24-hour calendar day average, for each of SR4 and SR6. GSP proposed to comply with this emission limit using existing combustion controls (i.e., LNB and OFA).

13. GSP Schiller proposed to use SNCR systems on an as needed basis to achieve compliance with the proposed emission limit.

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2 SR4 and SR6 boilers were each retrofitted with RJM Corporation's low-NOx burners in mid-1999.
3 Selective non-catalytic reduction NOx control systems were installed on SR4 and SR6 in 1999.
4 Overfire air systems were installed in the early 2000's. The OFA systems are comprised of ports, ducts, and dampers that allow up to 15 percent of the combustion airflow to be diverted from the top of the window box through ports located above the top elevation of burners.
5 [http://www4.des.state.nh.us/OneStopPub/Air/330150001218-0008TypePermit.pdf](http://www4.des.state.nh.us/OneStopPub/Air/330150001218-0008TypePermit.pdf)
D. Order

Based upon the above findings and determinations, NHDES hereby orders GSP Schiller as follows:

1. Comply with a NOx emission limit of less than or equal to 0.25 lb NOx/MMBtu on a 24-hour calendar day average, for each of SR4 and SR6. This limit applies at all times, including periods of startup and shutdown.

2. Operate the SNCR as necessary to comply with the NOx emission rate when the boiler(s) is in operation.

3. Use the continuous emissions monitoring systems to determine compliance with the NOx emission rate.


5. Comply with the recordkeeping and reporting requirements of Env-A 900 Owner or Operator Recordkeeping and Reporting Obligations.

Please address any correspondence and communication in reference to this Order to the following:

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