



**PERMIT APPLICATION
REVIEW SUMMARY**

**New Hampshire Department of Environmental Services
Air Resources Division
P.O. Box 95, 29 Hazen Drive
Concord, NH 03302-0095
Phone: 603-271-1370 Fax: 603-271-7053**

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|------------------|-----------------------|-----------------------|--------------|
| Facility: | PSNH-Schiller Station | Engineer: | PB |
| Location: | Portsmouth | | |
| AFS #: | 3301500012 | Application #: | 14-0081 |
| | | Date: | 2/6/15 |
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PROJECT DESCRIPTION

- On October 21, 2013, the Public Service Company of New Hampshire (PSNH) submitted a request for a one year compliance extension to the Code of Federal Regulations, 40 CFR 63 Subpart UUUUU NESHAP: *Coal- and Oil-Fired Electric Utility Steam Generating Units* (also known as Mercury and Other Air Toxics Standards or MATS) for PSNH Schiller Station units SR4 & SR6. PSNH submitted supplemental information on December 17, 2013. The request was filed in accordance with 40 CFR 63.6(i). The compliance date for MATS is April 16, 2015.
- On January 10, 2014, DES approved the compliance extension request by requiring PSNH to submit a temporary permit application for the installation of MATS controls.
- On February 27, 2014, PSNH submitted an application requesting to install Dry Sorbent Injection (DSI) and Activated Carbon Injection (ACI) systems on SR4 and SR6 for the purpose of complying with Subpart UUUUU. Additional information on the project was submitted on April 29, May 27 and October 21, 2014.

The DSI system will be used to control the emissions of acid gases such as hydrogen chloride (HCl) and sulfur dioxide (SO₂). Sorbents may include trona (sodium sesquicarbonate) and sodium bicarbonate. The ACI system will be used to control mercury emissions. Sorbents and activated carbon will be injected into the flue gas stream through strategically located ports upstream of the existing electrostatic precipitators (ESPs). The reaction products and sorbents are then removed downstream by the ESPs.

- The purpose of this permitting project is to:
 - Allow for the installation of the DSI and ACI systems; and
 - Extend the MATS compliance date to April 16, 2016.
- MATS provides multiple monitoring options to demonstrate compliance with applicable emission limits. The permit includes options requested/selected by PSNH. These options are explained in detail in Table 4 of this document. In future, PSNH may request a permit amendment in accordance with Env-A 612 in order to switch to other available compliance options.

FACILITY DESCRIPTION

Schiller Station is a wood and fossil fuel-fired electricity generating facility owned and operated by PSNH, a subsidiary of Northeast Utilities. 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 includes a combustion turbine, an emergency generator, primary and secondary coal crushers, coal and wood handling systems, and various insignificant and exempt activities.

Emission units SR4 and SR6 are equipped with electrostatic precipitators (ESPs) to control the emissions of particulate matter (PM), and selective non-catalytic reduction (SNCR) systems and overfire air (OFA) to control nitrogen oxides (NOx) emissions. PSNH operates SNCR on units SR4 and SR6 as necessary to maintain compliance with NOx emission limits. Each boiler stack is equipped with a continuous emissions monitoring system (CEMS) for NOx and SO₂ and a continuous opacity monitoring system (COMS). Boiler stacks are also equipped with continuous flow monitors and carbon dioxide (CO₂) diluent gas monitors. PSNH-Schiller is currently operating under Title V Operating Permit TV-0053, which was issued on June 6, 2014 and expires on June 30, 2019.

CHANGES FROM PREVIOUS PERMIT

The Temporary Permit includes applicable requirements of Subpart UUUUU.

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DEVICE DESCRIPTION

The permit covers the following devices:

Table 1 - Emission Units

| Emission Unit ID | Device Identification | Installation Date | Maximum Design Capacity and Permitted Fuel Type(s)¹ |
|-------------------------|---|--------------------------|--|
| SR4 | Steam Generating Unit No. 4 with low-NOx Burners (LNB) & overfire air Dry bottom wall-fired boiler Manufacturer: Foster Wheeler Model # FW; Serial # 90-1628 | 1952 | 574 MMBtu/hr Bituminous coal or Bituminous coal/biomass mixture ² - 22.6 tons/hr 575 MMBtu/hr No. 6 fuel oil - 3,833 gal/hr |
| SR6 | Steam Generating Unit No. 6 with LNB & overfire air Dry bottom wall-fired boiler Manufacturer: Foster Wheeler Model # FW; Serial # 36-3413 | 1957 | 574 MMBtu/hr Bituminous coal or Bituminous coal/biomass mixture - 22.6 tons/hr 575 MMBtu/hr No. 6 fuel oil - 3,833 gal/hr |

POLLUTION CONTROL EQUIPMENT

PSNH-Schiller operates the following air pollution control equipment (except as noted in Table 3, Item 4 of the Temporary Permit) on emission units SR4 and SR6:

Table 2 - Pollution Control Equipment Identification

| Pollution Control Equipment ID | Description | Purpose | Emission Unit Controlled |
|---------------------------------------|--|---------------------------|---------------------------------|
| SR4-PC1 | ESP | For control of PM | SR4 |
| SR4-PC3 | Sorbent Injection System | For control of acid gases | SR4 |
| SR4&6-PC4 | Activated Carbon Injection System ³ | For control of mercury | SR4 & SR6 |
| SR6-PC1 | ESP | For control of PM | SR6 |
| SR6-PC3 | Sorbent Injection System | For control of acid gases | SR6 |

Emission units SR4 and SR6 are both equipped with SNCR systems for the control of NOx emissions. Please see the discussion under “Additional Notes” section of this document.

¹ The fuel consumption rates presented in Table 1 are based on the following assumed heating values: Bituminous coal - 12,700 Btu/lb and No. 6 fuel oil - 150,000 Btu/gal. The maximum fuel consumption of the unit may vary based on the actual heat content of the fuel burned.

² In addition to bituminous coal and residual fuel oil, SR4 & SR6 are allowed to combust up to 10% by weight of biomass. Cellulosic biomass is considered a “traditional fuel” under 40 CFR 241.2. SR4 & SR6 are currently not permitted to combust any non-hazardous secondary materials.

³ A single activated carbon injection system will serve both units SR4 & SR6.

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EMISSION CALCULATIONS

Table 3 - Potential Emissions for SR4 & SR6 (each unit)

| Pollutant | Potential Emissions prior to April 16, 2016 | | | | Potential Emissions on or after April 16, 2016 | | |
|-----------|---|------------------------------|--------|--------|--|--------|-------|
| | Emission factor | Basis | lb/hr | tpy | Emission factor (MATS) | lb/hr | tpy |
| TSP | 0.10 lb/MMBtu | Permit TV-0053 | 57.4 | 251 | 0.030 lb/MMBtu | 17.22 | 75.42 |
| HCl | 0.0485 lb/MMBtu | AP-42 Chapter 1.1 | 19.1 | 84 | 0.0020 lb/MMBtu | 1.15 | 5.03 |
| Hg | 3.3 lb/TBtu | AP-42 Chapter 1.1 | 0.0019 | 0.0083 | 1.2 lb/TBtu | 0.0007 | 0.003 |
| | 2.89 lb/TBtu | 2014 Stack test ⁴ | 0.0017 | 0.0073 | | | |

Please see the permit application review summary for Title V renewal application #11-0134 for other pollutant emission calculations.

COMPLIANCE STATUS

❖ **Reports**

Annual compliance certification (for 2013) was received on April 15, 2014.

Semi-annual Permit Deviation/Monitoring report (covering July1 - December 31, 2014) was received on January 28, 2015.

❖ **Fees**

Emission reports and fees for the facility are current through the third calendar quarter of 2014.

REVIEW OF REGULATIONS

State Laws and Regulations

Env-A 607.01(u) & (y) - *Temporary Permits* - Applicable

Env-A 700 *Permit Fee System* - Applicable

Env-A 800 *Testing and Monitoring Procedures* - Applicable

Note that the Title V Operating Permit TV-0053 includes all applicable requirements of Env-A 802 (*Compliance Stack Testing*) and Env-A 808 (*Continuous Emissions Monitoring*). Therefore, these requirements are not included in the Temporary Permit. PSNH shall continue to comply with these requirements while conducting compliance stack testing and Continuous Monitoring System performance testing & audits.

Env-A 900 *Owner or Operator Recordkeeping and Reporting Obligations* - Applicable

Env-A 1400 *Regulated Toxic Air Pollutants* - Not Applicable to DSI/ACI installation project.

The sorbent trona contains trace amounts of Silica (CAS# 14808-60-7), which is a regulated toxic air pollutant. PM emissions from SR4 & SR6 are controlled by existing ESPs. PSNH is required to control PM emissions to the same degree of efficiency as particulate matter HAP emissions regulated under MATS. Therefore, Silica emissions from SR4 & SR6 are exempt from Env-A 1400 based on Env-A 1402.03(b).

NH RSA 125-O (*Mercury Emissions*) - Units SR4 and SR6 are affected units under this program.

The MATS rule requires affected sources to monitor mercury emissions. The MATS rule includes several mercury emissions monitoring options (e.g., CEMS, sorbent trap monitoring system, periodic stack testing). DES has determined that any of MATS mercury emissions monitoring options will also satisfy the mercury emission monitoring requirements of NH RSA Section 125-O:15. Therefore, once PSNH transitions to MATS mercury emissions monitoring, it will not have to also perform the periodic stack tests or install a CEMS as specified in RSA 125-O:15.

⁴ Average of two stack tests conducted on May 20-21 & July 29, 2014

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Federal Regulations

40 CFR 60 New Source Performance Standards (NSPS)

40 CFR 60 Subpart Da - *NSPS for Electric Utility Steam Generating Units for Which Construction, Modification, or Reconstruction is Commenced After September 18, 1978* - Not Applicable; 40 CFR 60.14, *Modification*, exempts from the NSPS “the addition or use of any system or device whose primary function is the reduction of air pollutants.” The purpose of the DSI and ACI systems is to control the emissions of acid gases and mercury, respectively.

New Source Review

This facility is considered an existing major source under the federal Prevention of Significant Deterioration (PSD) and the Nonattainment New Source Review (NSR) programs. The dry sorbent materials that will be injected into the flue gas streams from SR4 and SR6 represent additional PM loading to the existing electrostatic precipitators. PSNH provided NSR/PSD applicability analyses in the application. PSNH conducted dry sorbent injection research and development (R & D) trials in August of 2012 and 2013. R & D trials were performed during the firing of several coal blends, sorbent types and sorbent injection rates. PSNH provided the summary of EPA Method 5 test results for the R & D trial runs. Testing indicated that the additional sorbents are readily removed by the existing ESPs and no increase in particulate emissions over the baseline is anticipated to occur. The DSI system will also lower SO₂ emissions. The project will not result in increases of other NSR/PSD pollutants. Therefore the DSI/ACI installation project does not trigger PSD/NSR requirements.

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Table 4 – Requirements of Subpart UUUUU NESHAP: COAL- AND OIL FIRED ELECTRICITY UTILITY STEAM GENERATING UNITS

WHAT THIS SUBPART COVERS

- §63.9980 What is the purpose of this subpart?
- §63.9981 Am I subject to this subpart?
- §63.9982 What is the affected source of this subpart?
- §63.9983 Are any EGUs not subject to this subpart?
- §63.9984 When do I have to comply with this subpart?
- §63.9985 What is a new EGU?

- PSNH-Schiller is a major source of hazardous air pollutants (HAPs). SR4 & SR6 are considered “existing EGUs” as they were installed prior to May 3, 2011.
- Through an approved compliance extension, SR4 & SR6 must complete the installation of all required air pollution control equipment by April 16, 2016, and demonstrate compliance with emission limits and tune-up requirements within 180 days after the compliance date, i.e., by October 13, 2016.
- Emission unit SR5 is a dual fuel unit and is permitted to combust bituminous coal and wood. Currently, SR5 combusts 100% wood and does not meet the definition of “coal-fired EGU” under MATS. If SR5 combusts coal for more than 10.0 percent of the average annual heat input during any 3 consecutive calendar years or for more than 15.0 percent of the annual heat input during any one calendar year, SR5 will be subject to MATS. SR5 must comply with the applicable provisions of MATS on the date it meets the definition of an existing coal-fired EGU.

EMISSION LIMITATIONS AND WORK PRACTICE STANDARDS

- §63.9990 What are the subcategories of EGUs?
- §63.9991 What emission limitations, work practice standards, and operating limits must I meet?

- SR4 & SR6 are permitted to burn bituminous coal and No. 6 fuel oil. Based on historical operating data, SR4 and SR6 meet the definition of coal-fired EGUs as specified in 40 CFR 63.10042.
- The heating value of coal combusted in SR4 & SR6 is approximately 12,700 Btu/lb and therefore SR4 & SR6 are in the subcategory “Unit designed for coal > 8,300 Btu/lb”.
- SR4 & SR6 are subject to emission limits specified in Table 2 of Subpart UUUUU for existing EGUs. Specifically, these units are subject to Table 2, Item 1 - *Coal-fired unit not low rank virgin coal*. Emission limits are specified in lb/MMBtu or lb/MWh.
- PSNH chose to comply with the following emission limits for particulate matter (as a surrogate for non-Hg metallic HAPs), hydrogen chloride and Hg.
 - PM - 0.030 lb/MMBtu
 - HCl - 0.0020 lb/MMBtu
 - Hg - 1.2 lb/TBtu
- SR4 & SR6 are subject to work practice standards specified in Table 3 to Subpart UUUUU. Specifically, SR4 & SR6 are subject to startup/shutdown work practices

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Table 4 – Requirements of Subpart UUUUU NESHAP: COAL- AND OIL FIRED ELECTRICITY UTILITY STEAM GENERATING UNITS

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| | <p>and initial and periodic (once every 36 months) tune-up requirements.</p> <ul style="list-style-type: none"> • PSNH chose to comply with startup option 1 provided in §63.10042⁵. |
| <p>GENERAL COMPLIANCE REQUIREMENTS</p> <p>§63.10000 What are my general requirements for complying with this subpart?</p> <p>§63.10001 Affirmative defense for exceedence of emission limit during malfunction.</p> | <ul style="list-style-type: none"> • Subpart UUUUU provides a low emitting EGU (LEE) option for existing coal-fired units. • If an EGU does not qualify as a LEE for Hg, then demonstrate compliance by using Hg CEMS or sorbent trap monitoring system (STMS) in accordance with Appendix A to Subpart UUUUU. PSNH chose to install a single STMS on each EGU⁶. The permit also includes the option to demonstrate compliance with a Hg CEMS. • If an EGU does not qualify as a LEE for PM, then demonstrate compliance by conducting quarterly stack testing (except as specified in §63.10021(d)) or by using PM CEMS or CPMS. The permit includes quarterly testing and PM CEMS options. • If an EGU does not qualify as a LEE for HCl, then demonstrate compliance by conducting quarterly stack testing (except as specified in §63.10021(d)) or by operating an HCl CEMS in accordance with Appendix B to Subpart UUUUU. EGUs may also use SO₂ data collected using a Part 75-certified CEMS as a surrogate⁷ for HCl. The permit includes quarterly testing and HCl CEMS options. • §63.10000(d) requires a site-specific monitoring plan if compliance is demonstrated using a CMS. The permit streamlines the requirements of §63.10000(d) and Env-A 808. Per §63.10000(d), a monitoring plan must be submitted at least 60 days prior to the initial performance evaluation of CMS, if requested by the Administrator. Env-A 808.04 is more stringent in that it requires the submittal of a monitoring plan at least 90 days prior to the installation of a CMS. The QA/QC Plan required pursuant to Env-A 808.06 should also include the items listed in §63.10000(d)(5)(iii) through (vii). The updated QA/QC Plan must be submitted within 45 days after conducting the performance specification test of the system. |
| <p>TESTING AND INITIAL COMPLIANCE REQUIREMENTS</p> <p>§63.10005 What are my initial compliance requirements and by what date must I conduct them?</p> | <ul style="list-style-type: none"> • PSNH must conduct an initial compliance stack test and boiler tune-up by October 13, 2016. • Compliance stack testing must be conducted in accordance with §63.10007 and Table 5 to Subpart UUUUU. |

⁵ MATS rule - most recently amended on November 29, 2014, provides two options in the definition of startup as noted in 40 CFR 63.10042.

⁶ MATS provides two options for STMS: A facility may use - (A) separate sorbent trap monitoring systems to comply with Subpart UUUUU: One sorbent trap monitoring system to demonstrate compliance with the numeric mercury emissions limit during periods other than startup or shutdown and the other sorbent trap monitoring system to report average Hg concentration during startup periods or shutdown periods; (B) A facility may choose to use one sorbent trap monitoring system to demonstrate compliance with the mercury emissions limit at all times (including startup periods and shutdown periods) and to report average mercury concentration.

⁷ Under this option, EGUs have to meet an emission rate of 0.20 lb/MMBtu of SO₂.

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Table 4 – Requirements of Subpart UUUUU NESHAP: COAL- AND OIL FIRED ELECTRICITY UTILITY STEAM GENERATING UNITS

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| §63.10006 | When must I conduct subsequent performance tests or tune-ups? | <ul style="list-style-type: none"> • LEE Option: <ul style="list-style-type: none"> ○ For PM or HCl, conduct quarterly testing (except as specified in §63.10021(d)) for 3 calendar years to qualify for LEE. In all the tests, emission results must be less than 50% of the emission limit. If an EGU qualifies as a LEE for a given pollutant, conduct subsequent tests once every three years to demonstrate that the EGU continues to qualify as a LEE. ○ For Hg, either average emissions less than 10% of the emission limit; or potential Hg mass emissions of 29.0 or fewer pounds per year and compliance with the emission limit. Conduct compliance test once every year. • If a CMS is used to demonstrate compliance with an emission limit, the CMS must first pass an initial performance evaluation. CMS requirements: <ul style="list-style-type: none"> ○ PM CEMS - §63.10010(i) ○ Hg CEMS or STMS - App. A to Subpart UUUUU ○ HCl CEMS - App. B to Subpart UUUUU • If a CMS is used, compliance with an emission limit is determined on a 30-boiler operating day rolling average basis. • Subpart UUUUU provides emissions averaging option for EGUs in the same subcategory. Should PSNH choose to use this option, an emissions averaging plan must be submitted for DES approval in accordance with §63.10009(f). • Conduct initial tune-up of each EGU by 10/13/16 and once every 36 months thereafter. |
| §63.10007 | What methods and other procedures must I use for the performance tests? | |
| §63.10008 | [Reserved] | |
| §63.10009 | May I use emissions averaging to comply with this subpart? | |
| §63.10010 | What are my monitoring, installation, operation, and maintenance requirements? | |
| §63.10011 | How do I demonstrate initial compliance with the emissions limits and work practice standards? | |
| CONTINUOUS COMPLIANCE REQUIREMENTS | | <ul style="list-style-type: none"> • If CMS is used to demonstrate compliance: <ul style="list-style-type: none"> ○ Operate the CMS and collect data at all-times, except for periods of CMS malfunctions or out-of-control periods. ○ Data recorded during startup and shutdown may not be used to report emissions, except in the case where a single sorbent trap monitoring system is used to collect Hg data. Also see §63.10020(b) & (c) for details. • Required performance tests must be conducted at the intervals specified in §63.10006(f). Quarterly performance test may be skipped in those quarters during which less than 168 boiler operating hours occur, except that a performance test must be conducted at least once every calendar year. • PSNH is not using PM Continuous Parameter Monitoring System (CPMS) as a compliance option. |
| §63.10020 | How do I monitor and collect data to demonstrate continuous compliance? | |
| §63.10021 | How do I demonstrate continuous compliance with the emission limitations, operating limits, and work practice standards? | |
| §63.10022 | How do I demonstrate continuous compliance under the emissions averaging provision? | |
| §63.10023 | How do I establish my PM CPMS operating limit and determine compliance with it? | <ul style="list-style-type: none"> • As required by §63.10030(b), PSNH submitted their initial notification for units SR4 & SR6 on August 13, 2012. • Per Env-A 802.03 and §63.10030(b), PSNH shall submit to the Division a Notification of Intent to conduct a performance test at least 30 days prior to test. |
| NOTIFICATION, REPORTS, AND RECORDS | | |
| §63.10030 | What notifications must I submit and when? | |

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| <p>§63.10031 What reports must I submit and when?</p> <p>§63.10032 What records must I keep?</p> <p>§63.10033 In what form and how long must I keep my records?</p> | <ul style="list-style-type: none"> • Submit a Notification of Compliance Status (NOCS) within 60 days after completing initial compliance demonstrations (including performance tests and tune-ups). Since this report is due prior to April 16, 2017, the NOCS must be submitted to EPA via ECMPS. • Submit semi-annual MACT compliance reports on July 31st (for January 1 - June 30) and January 31st (for July 1 -December 31). • Prior to April 16, 2017, the semi-annual MACT compliance reports and performance test results must be submitted to EPA in a pdf format using ECMPS. On or after April 16, 2017, these reports must be submitted to EPA via CDX. Performance test results must be submitted to EPA and DES within 60 days after completing each test. |
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Additional Notes

- Emission units SR4 and SR6 are both equipped with SNCR systems for the control of NOx emissions. PSNH installed SNCR systems in 1999. Currently, PSNH operates the SNCR on as needed basis to maintain compliance with the NOx emission limits. MATS work practice standards (Table 3 to Subpart UUUUU) which are applicable during an EGU startup and shutdown, require the following:
 - Upon converting to firing coal or residual oil, engage all of the applicable control technologies except dry scrubber⁸ and SCR⁹. Start the dry scrubber and SCR systems, if present, appropriately to comply with relevant standards applicable during normal operation.
 - While firing coal or residual oil during shutdown, vent emissions to the main stack(s) and operate all applicable control devices and continue to operate those control devices after the cessation of coal or residual oil being fed into the EGU and for as long as possible thereafter, considering operational and safety concerns. In any case, operate the controls when necessary to comply with other standards made applicable to the EGU by a permit limit or a rule other than Subpart UUUUU and that require operation of the control devices.At the time of this permit issuance, there is no indication that the SNCR system is required to achieve compliance with MATS, and DES is therefore not requiring the operation of SNCR. Upon converting to firing coal or residual oil, PSNH shall engage ESPs (i.e., SR4-PC1 and SR6-PC1). DSI and ACI systems must be started appropriately to comply with HCl and Hg emissions limits, respectively.
- If compliance is demonstrated using CMS, a default CO₂ cap value of 5% may be used in the emission rate calculations during startup periods or shutdown periods as per 40 CFR §§ 63.10007(f) & 63.10011(g). The default CO₂ cap value may be used for a startup or shutdown hour in which the measured CO₂ concentration is below the cap value. The default value is not considered to be substitute data.
- 40 CFR 63.10030(e)(7)(i) requires the following information to be included in the NOCS:

If stack tests are conducted once every 3 years consistent with § 63.10006(b), include the date of the last three stack tests, a comparison of the emission level achieved in the last three stack tests to the 50 percent emission limit threshold required in § 63.10006(i), and a statement as to whether there have been any operational changes since the last stack test that could increase emissions. The purpose of NOCS is to report the summary of all initial compliance demonstrations, i.e., initial compliance test and tune up. If an EGU qualifies for reduced stack testing frequency in accordance with § 63.10006(b), the information specified in §63.10021(e)(7)(i) should be included in semi-annual compliance reports.
- Air pollution control equipment (APCE) monitoring plans are required to be submitted at the time of submission of a temporary permit application. Not all information necessary for the full plan is available at this time. PSNH provided part of the information specified in Env-A 810.01 in the temporary permit application for the MATS control project. PSNH will be required to submit a complete APCE monitoring plan for the DSI and ACI systems 90 days prior to the final compliance date for MATS (i.e., by January 17, 2016).
- Carbon injection rates - If mercury emissions are not continuously monitored, PSNH is required to maintain the 30-boiler operating day average activated carbon injection rate in lbs/hr at or above the average injection rate observed during the most recent performance test demonstrating compliance with Hg emission limit. PSNH may vary carbon injection rates during boiler operation if the Hg emissions are continuously monitored. Carbon injection rates may be adjusted up or down in order to manage compliance with the Hg limit on a 30-boiler operating rolling average basis.

⁸ Per 40 CFR 63.10042, *Dry flue gas desulfurization technology, or dry FGD, or spray dryer absorber (SDA), or spray dryer, or dry scrubber* means an add-on air pollution control system located downstream of the steam generating unit that injects a dry alkaline sorbent (**dry sorbent injection**) or sprays an alkaline sorbent slurry (spray dryer) to react with and neutralize acid gases such as SO₂ and HCl in the exhaust stream forming a dry powder material. **Dry sorbent injection** (DSI) means an add-on air pollution control system in which sorbent (e.g., **conventional activated carbon**, brominated activated carbon, **Trona**, hydrated lime, sodium carbonate, etc.) is injected into the flue gas steam upstream of a PM control device to react with and neutralize acid gases (such as SO₂ and HCl) or Hg in the exhaust stream forming a dry powder material that may be removed in a primary or secondary PM control device.

⁹ Table 3 to Subpart UUUUU specified selective catalytic reduction (SCR systems). It was assumed that the intent of the rule is either SCR or SNCR systems for NOx control.

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6. The Temporary Permit requires PSNH to maintain the calendar daily average sorbent injection rate (in lbs/hr) at or above the injection rate observed during the most recent compliance test demonstrating compliance with HCl emission limit. When an EGU operates at lower loads, sorbent injection rates may be multiplied by the load fraction to determine the required injection rate (for e.g., for 50% load, multiply the injection rate operating limit by 0.5)¹⁰.
7. DES is aware that PSNH intends to vary the sorbent injection rates based on the injection rate curves provided by the APCE manufacturer. However, insufficient data is available at time of application review for DES to approve this APCE operation method. PSNH will be required to submit and obtain DES approval of an APCE monitoring plan that incorporates these provisions, and obtain an amended permit prior to operating the APCE in any manner other than that approved by the current permit.
8. §63.10001 provides affirmative defense for exceedance of emission limit during malfunction. On April 18, 2014, the US Court of Appeals for the District of Columbia Circuit vacated¹¹ the affirmative defense provision in one of EPA's Clean Air Act Section 112 regulations (*National Emission Standards for Hazardous Air Pollutants for the Portland Cement Manufacturing Industry and Standards of Performance for Portland Cement Plants*, also known as Portland Cement Rule). In light of this court decision, EPA has proposed¹² to remove affirmative defense for malfunction events from the MATS rule. DES has therefore not included this provision in the Temporary Permit.

¹⁰ This provision for low load boiler operation is included in the Boiler MACT rule (40 CFR 63 Subpart DDDDD).

¹¹ *NRDC v. EPA*, 749 F.3d 1055 (D.C. Cir.,2014)

¹² Technical corrections to *NESHAP from Coal- and Oil- Fired EGUs and NSPS for Fossil Fossil-Fuel-Fired Electric Utility, Industrial-Commercial-Institutional, and Small Industrial- Commercial-Institutional Steam Generating Units* - proposed rule published on February xx, 2015. Insert a link to FR notice.