

**NORTH CAROLINA DIVISION OF
AIR QUALITY**

Application Review

Issue Date: TBD

Region: Raleigh Regional Office
County: Halifax
NC Facility ID: 4200170
Inspector's Name: Mary Rose Fontana
Date of Last Inspection: 08/25/2021
Compliance Code: 3 / Compliance - inspection

Facility Data	Permit Applicability (this application only)
<p>Applicant (Facility's Name): Rosemary Power Station</p> <p>Facility Address: Rosemary Power Station 120 West 12th Street Roanoke Rapids, NC 27870</p> <p>SIC: 4911 / Electric Services NAICS: 221112 / Fossil Fuel Electric Power Generation</p> <p>Facility Classification: Before: Title V After: Title V Fee Classification: Before: Title V After: Title V</p>	<p>SIP: 02D: .0501(c), .0503, .0516, .0521, .0524, .0530, .0614, .1111 02Q: .0317, .0400, .0711 NSPS: 02D .0524 (Subpart GG) NESHAP: 02D .1111 (Subpart JJJJJ) PSD: 02D .0530 PSD Avoidance: n/a NC Toxics: n/a 112(r): n/a Other: Cross State Air Pollution Rule, NSPS Avoidance</p>

Contact Data			Application Data
Facility Contact	Authorized Contact	Technical Contact	<p>Application Number: 4200170.21A & .21B Date Received: 09/30/2021 (.21A & .21B) Application Type: Renewal (TV, .21A; TIV, .21B) Application Schedule: TV-Renewal Existing Permit Data Existing Permit Number: 06586/T20 Existing Permit Issue Date: 11/04/2019 Existing Permit Expiration Date: 07/31/2022</p>
Jessica Kelly Sr. Env. Compliance Coordinator (757) 778-7337 600 Canal Place Richmond, VA 23219	Mohammed Alfayyoumi Dir. of Power Generation II (804) 273-3591 600 Canal Place Richmond, VA 23219	Johnnie Waller Engineer IV (803) 217-7323 220 Operation Way Cayce, SC 29033	

Total Actual emissions in TONS/YEAR:

CY	SO2	NOX	VOC	CO	PM10	Total HAP	Largest HAP
2019	---	3.81	0.1000	0.2600	0.1800	0.0006	0.0004 [Propylene oxide]
2018	---	35.10	0.1000	2.10	1.58	0.0003	0.0002 [Propylene oxide]
2017	0.6000	91.83	1.50	2.54	4.42	0.2386	0.1819 [Formaldehyde]
2016	---	45.93	0.8500	1.16	2.22	0.1118	0.0834 [Formaldehyde]
2015	4.00	71.66	0.2800	0.8500	0.6300	0.0454	0.0208 [Manganese & compounds]

<p>Review Engineer: Russell Braswell</p> <p>Review Engineer's Signature: _____ Date: _____</p>	<p>Comments / Recommendations:</p> <p>Issue 06586/T21 Permit Issue Date: TBD Permit Expiration Date: TBD+5 years</p>
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1. Purpose of Applications:

a. 4200170.21A (received September 30, 2021)

Rosemary Power Station (RPS; the facility) currently operates a power plant in Halifax County under Title V permit 06586T20 (the existing permit). The existing permit is set to expire on July 31, 2022. RPS submitted this application in order to renew the permit.

Because the renewal application was received at least six months before the expiration date, the existing permit will remain in effect, regardless of expiration date, until the renewed permit is issued.

b. 4200170.21B (received September 30, 2021)

The existing permit includes a reference to the facility's Title IV permit (a.k.a. acid rain permit). The acid rain permit is set to expire at the same time as the Title V permit. Therefore, RPS has submitted application .21B in order to renew the acid rain permit.

2. Facility Description:

This facility is a power plant that consists of two natural gas/fuel oil-fired combined-cycle turbines. Electricity produced at this facility is sold on the power grid. According to the renewal application, the two turbines are connected to three generators with a total capacity of 180 megawatts. According to DAQ's most recent inspection report, this facility primarily operates for demand response during the summer months.

This facility also includes activities that support the turbines and generators, such as a fuel oil storage tank, cooling tower, and temporary boiler used to produce steam for facility needs (such as freeze protection).

3. Title V Permit Modifications Following the Previous Permit Renewal:

- August 14, 2017 Permit T18 issued. This action renewed the Title V and Title IV permits.
- February 9, 2018 Permit T19 issued. This action was a TV-Minor modification that added a new temporary boiler (ES-TEMP) to the facility.
- November 4, 2019 Permit T20 issued. This action was a TV-Significant modification that reclassified the boiler ES-TEMP as a "seasonal" boiler under 40 CFR Part 63, Subpart JJJJJ. In addition, RPS stated that an emergency generator had been removed from the facility and could be removed from the permit.

4. Application Chronology:

- September 30, 2021 Applications .21A and .21B received.
- October 19, 2021 Email sent to RPS staff (Johnnie Waller) requesting a CAM plan for the water injection control devices on both of the turbines.
- January 21, 2022 RPS submitted the requested CAM plan.
- February 1, 2022 An initial draft of the CAM plan as it would appear in the new Title V permit was sent to RPS staff for review.

- February 14 – April 1, 2022 Phone and email correspondence between DAQ and RPS regarding the draft CAM plan.
- April 4, 2022 RPS approved of the draft CAM plan.
- April 8, 2022 Initial internal draft to RCO staff.
- April 25, 2022 Draft to RRO, SSCB, and RPS staff.
- XXXX Public Notice
- XXXX Permit issued.

5. Changes to the Existing Permit:

The following changes were made to the Rosemary Power Station Air Quality Permit No. 06586T20:*

Page No.	Section	Description of Changes
Throughout	Throughout	<ul style="list-style-type: none"> • Updated dates and permit numbers. • Updated permit format to current DAQ standard. Changes to formatting are not intended to affect the Permittee's compliance requirements.
13	2.2 A.2	<ul style="list-style-type: none"> • Moved the specific condition for NSPS Subpart GG to this section. This change is only for clarity and should not affect the Permittee's compliance requirements. • Combined NO_x and SO₂ limits for NSPS Subpart GG into one specific condition. This change is to match DAQ's format for this requirement in similar Title V permits, and will not affect compliance requirements. • Reduced frequency of reporting to semiannual because NSPS Subpart GG does not require quarterly reporting.
14	2.2 A.3	<ul style="list-style-type: none"> • Added specific condition for new CAM plan.
17	2.2 B.1.e	<ul style="list-style-type: none"> • Removed requirement to perform emission testing after the issuance of the T19 permit because that requirement has been completed.
n/a	2.2 C. (former)	<ul style="list-style-type: none"> • Removed this section because it was redundant to Section 2.2 A. The conditions in this section have been moved to Section 2.2 A (NSPS) or Section 2.4 (CSAPR).
20	2.4 (new)	<ul style="list-style-type: none"> • Moved the CSAPR requirements (formerly 2.2 C.3) to this section. This change is to match DAQ's format for this requirement in similar Title V permits, and will not affect compliance requirements. • Removed references to 40 CFR Part 97, Subpart BBBB from the permit because this rule no longer applies within North Carolina.
21	3.	<ul style="list-style-type: none"> • Created this section for insignificant activities. • This section is reserved for future use. There are no insignificant activities listed on the permit at this time.
21	4.	<ul style="list-style-type: none"> • Created this section. Moved General Conditions to this section. • Updated General Conditions to v6.0.

* This list is not intended to be a detailed record of every change made to the permit but a summary of those changes.

6. Regulatory Overview and Rules Review:

Under the existing permit, RPS is subject to the following State Implementation Plan (SIP) rules:

- 15A NCAC 02D .0501(c) “Compliance with Emission Control Standards”
- 15A NCAC 02D .0503 “Particulates from Fuel Burning Indirect Heat Exchangers”
- 15A NCAC 02D .0516 “Sulfur Dioxide from Combustion Sources”
- 15A NCAC 02D .0521 “Control of Visible Emissions”
- 15A NCAC 02D .0524 “New Source Performance Standards” (40 CFR Part 60, Subpart GG)
- 15A NCAC 02D .0530 “Prevention of Significant Deterioration”
- 15A NCAC 02D .0614 “Compliance Assurance Monitoring”
- 15A NCAC 02D .1111 “Maximum Achievable Control Technology” (40 CFR Part 63, Subpart JJJJJ)
- 15A NCAC 02Q .0317 “Avoidance Conditions” (NSPS avoidance)
- 15A NCAC 02Q .0400 “Acid Rain Procedures”
- 15A NCAC 02Q .0711 “Emission Rates Requiring a Permit”

In addition to the above SIP rules, RPS is also subject to the Cross State Air Pollution Rule; this rule is not included in North Carolina's SIP. RPS's requirements under each of these rules are discussed below. In addition, a discussion of several non-applicable rules is also included below.

a. 15A NCAC 02D .0501(c) “Compliance with Emission Control Standards”

This rule applies to facilities as deemed necessary by DAQ to ensure compliance with the ambient air quality standards in 15A NCAC 02D .0400. Per 02D .0501(c), DAQ must include a permit condition requiring additional controls when it is determined that controls required by other rules are not sufficient to prevent violation of the ambient air quality standards.

DAQ has previously determined that the permit must include the following maximum heat input limit for each turbine in order to ensure compliance with the ambient air quality standards:

- ID No. ES2-CT2: 541 MMBtu/hr natural gas, 525 MMBtu/hr No. 2 fuel oil, 24-hour block average
- ID No. ES1-CT1: 1,136 MMBtu/hr natural gas, 1,095 MMBtu/hr No. 2 fuel oil, 24-hour block average

Note that the above limits are the same as the nominal heat inputs listed in Section 1 of the existing permit. These limits have been present in the Title V permit since before the T10¹ permit revision, issued November 22, 2000. Since the T10 permit was issued, the heat input limits for the turbines have not been modified (although references to defunct auxiliary boilers were removed from this specific condition).

The permit does not include any monitoring, recordkeeping, or reporting for this requirement. DAQ has reviewed this analysis and agrees with this analysis, and continued compliance is expected.

b. 15A NCAC 02D .0503 “Particulates from Fuel Burning Indirect Heat Exchangers”

This rule limits particulate matter (PM) emitted from indirect heat exchangers. The limit is calculated using the following formula: $E = 1.090 \times Q^{-0.2594}$, where E is the emission limit in pounds per million Btu and Q is the combined heat input for all sources at the facility that are subject to this rule.

¹ The T10 permit revision is the beginning of DAQ's electronic record for this facility.

At this facility, the only subject source is the temporary boiler ES-TEMP. The particulate limit for this source is 0.44 pounds per million Btu of heat input. The limit was determined when the T19 permit revision was issued.

The boiler ES-TEMP can use either natural gas or No. 2 fuel oil. In order to calculate PM emissions from the combustion of natural gas or No. 2 fuel oil in boilers, the emission factors published by EPA in the document “AP-42: Compilation of Air Emission Factors” can be applied. The published emission factors are not in units of pounds per million Btu, so the emission factor must be converted in each case.

- Natural gas (Chapter 1.4, Table 1.4-2 PM (total)):

$$\frac{7.6 \text{ lb}}{\text{million scf}} \times \frac{1 \text{ scf}}{1,020 \text{ Btu}} = \frac{0.007 \text{ lb}}{\text{million Btu}}$$

- No. 2 fuel oil (a.k.a. distillate fuel oil; Chapter 1.3, Table 1.3-1 filterable PM, and Table 1.3-2 CPM-TOT):

$$\left(\frac{2 \text{ lb}}{1,000 \text{ gal}} + \frac{1.3 \text{ lb}}{1,000 \text{ gal}} \right) \times \frac{1,000 \text{ gal}}{140 \text{ million Btu}} = \frac{0.02 \text{ lb}}{\text{million Btu}}$$

Based on the AP-42 emission factors, compliance with this emission limit is expected without the use of any control devices. The permit does not include any monitoring, recordkeeping, or reporting for this requirement. DAQ has reviewed this analysis and agrees with this analysis, and continued compliance is expected.

c. 15A NCAC 02D .0516 “Sulfur Dioxide from Combustion Sources”

This rule limits sulfur dioxide (SO₂) emissions from combustion sources that are not subject to another SO₂ limit under chapter 02D .0500. At this facility, the only subject source is the temporary boiler ES-TEMP. In all cases, the SO₂ limit is 2.3 pounds per million Btu of heat input.

The boiler ES-TEMP can use either natural gas or No. 2 fuel oil. In order to calculate SO₂ emissions from the combustion of natural gas or No. 2 fuel oil in boilers, the emission factors published by EPA in the document “AP-42: Compilation of Air Emission Factors” can be applied. The published emission factors are not in units of pounds per million Btu, so the emission factor must be converted in each case.

- Natural gas (Chapter 1.4, Table 1.4-2 SO₂):

$$\frac{0.6 \text{ lb}}{\text{million scf}} \times \frac{1 \text{ scf}}{1,020 \text{ Btu}} = \frac{0.001 \text{ lb}}{\text{million Btu}}$$

- No. 2 fuel oil (a.k.a. distillate fuel oil; Chapter 1.3, Table 1.3-1 SO₂ with S=0.5):

$$\left(\frac{142 \text{ lb}}{1,000 \text{ gal}} \times 0.5 \right) \times \frac{1 \text{ gal}}{0.14 \text{ million Btu}} = \frac{0.51 \text{ lb}}{\text{million Btu}}$$

Based on the AP-42 emission factors, compliance with this emission limit is expected without the use of any control devices. The permit does not include any monitoring, recordkeeping, or reporting for this requirement. DAQ has reviewed this analysis and agrees with this analysis, and continued compliance is expected.

d. 15A NCAC 02D .0521 “Control of Visible Emissions”

This rule limits visible emissions (VE) from emission sources that are not subject to another VE limit under chapter 02D .0500 and VE can be expected to occur at all. No VE is expected from the storage tank ES6-STR1 or the cooling tower ES-7 (note that condensed water vapor is not considered VE). The two turbines and temporary boiler are subject to this rule.

The VE limit for this rule depends on the construction date of the individual source in question. At this facility, the VE limit is 20% in each case. The rule allows for one exceedance of the 20% limit per hour, and four exceedances per 24-hour period.

The two turbines and temporary boiler burn natural gas and No. 2 fuel oil. In general, well-operated combustion sources that burn these fuels are not expected to produce VE greater than the limit. The permit does not include any monitoring, recordkeeping, or reporting for this requirement. DAQ has reviewed this analysis and agrees with this analysis, and continued compliance is expected.

e. 15A NCAC 02D .0524 “New Source Performance Standards”

This rule incorporates the New Source Performance Standards (NSPS) rules into North Carolina's SIP (excluding those rules listed in 02D .0524(b)). The only NSPS rule that applies to this facility is Subpart GG “Standards of Performance for Stationary Gas Turbines.” See Section 0.m.i for a discussion of NSPS rules that do not apply to this facility.

NSPS Subpart GG applies to stationary gas turbines constructed after October 3, 1977 but that are also not subject to NSPS Subpart KKKK. The two turbines at this facility are subject to this rule.

In general, this rule limits NO_x and SO₂ emissions from the turbines. The rule has specific requirements for each limit.

i. NO_x:

RPS operates a water injection system in each turbine to reduce NO_x formation. In order to demonstrate compliance, RPS monitors the water-to-fuel ratio for each turbine. Instead of complying with the specific monitoring requirements of NSPS Subpart GG, RPS follows the NO_x emission measurement methodology in Appendix E to 40 CFR Part 75 as allowed by 40 CFR 60.334(g). RPS must keep records of the monitoring activities and submit a summary report twice per year.

ii. SO₂

RPS demonstrates compliance with the SO₂ limits by limiting the sulfur content of fuel in used in the turbines. RPS must keep records of the sulfur content of the No. 2 fuel oil delivered to the facility, and must keep records of the sulfur content of the natural gas purchased from the gas supplier. RPS must keep records of the monitoring activities and submit a summary report twice per year.

The existing permit includes two specific conditions that reference NSPS Subpart GG. These two conditions have been combined into a single condition. This change is only for clarity and is not expected to impact RPS's compliance requirements.

The existing permit requires quarterly reporting of SO₂ monitoring activities. NSPS Subpart GG does not specifically require quarterly reporting, so the permit has been changed to semiannual reporting in line with 40 CFR 60.7(c).

Based on the most recent inspection report, RPS appears to be in compliance with this rule. Continued compliance will be determined with subsequent inspections and reports.

f. 15A NCAC 02D .0530 “Prevention of Significant Deterioration”

This facility is considered a major source for Prevention of Significant Deterioration (PSD). As a result, the permit includes Best Available Control Technology (BACT) short-term and long-term emission limits for all permitted emission sources. Table 1 summarizes the BACT requirements and when they were included in the permit.

Table 1: Summary of BACT requirements

Emission Sources	Pollutants	Requirements	Notes
Turbines	NO _x , SO ₂ , H ₂ SO ₄ , CO, PM/PM ₁₀ VOC	<ul style="list-style-type: none"> • Short-term emission standards based on fuel; • Less than 2,000 hours per year for ES1-CT1; • Less than 4,000 hours per year for ES1-CT1 and ES2-CT2 combined; • Monitor water-to-fuel ratio as required by NSPS Subpart GG; • Semiannual reporting. 	<ul style="list-style-type: none"> • Included in the Title V permit as of the T10 revision, which is the beginning of DAQ’s electronic record for this facility
Tank	VOC	<ul style="list-style-type: none"> • Annual emission limit 	
Cooling Tower	PM	<ul style="list-style-type: none"> • Drift guarantee 	

As of the T10 permit revision, the BACT standards and compliance requirements for the above requirements have not changed, except to remove references to sources that are no longer at the facility.

The existing permit includes a requirement to perform emission testing within 100 days of the issuance of the T19 permit. RPS completed this requirement on April 3, 2018 (test reference numbers 2017-375ST). The results of this test indicated a violation of the CO emission limit (limit: 11 lb/hr, tested value: 11.5 lb/hr). RPS was issued a Notice of Violation and required to re-test. The required re-test was performed June 8, 2018 (test reference number 2018-202ST) and showed compliance for all tested pollutants. The permit requires RPS to conduct a new emission test on a turbine if that turbine begins operating with a fuel other than the one used during the most recent test.

References to testing after the issuance of the T19 permit will be removed from this condition because that requirement has been completed.

Based on the most recent inspection report, RPS appears to be in compliance with this rule. Continued compliance will be determined with subsequent inspections, reports, and emission tests (as necessary).

g. 15A NCAC 02D .0614 “Compliance Assurance Monitoring”

The compliance assurance monitoring (CAM) rule requires owners and operators to conduct monitoring to provide a reasonable assurance of compliance with applicable requirements under the act. Monitoring focuses on emissions units that rely on pollution control device equipment to achieve compliance with applicable standards. An emission unit is subject to CAM, under 40 CFR Part 64, if all of the following three conditions are met:

- I. The unit is subject to any (non-exempt, e.g., pre-November 15, 1990, Section 111 or 112 standard) emission limitation or standard for the applicable regulated pollutant.
- II. The unit uses any control device to achieve compliance with any such emission limitation or standard.
- III. The unit’s pre-control potential emission rate exceeds 100 percent of the amount required for a source to be classified as a major source; i.e., either 100 tpy (for criteria pollutants) or 10 tpy of any individual/25 tpy of any combination of HAP.

Table 2 compares each control device at this facility to the above criteria:

Table 2: CAM analysis

Control Device	Associated Emission Sources	Emission Limit / Rule	Triggers CAM?	Notes
Water injection systems, controlling NOx	Turbines	02D .0524 (NSPS Subpart GG)	Yes	1
		02D .0530 (PSD)		
		02Q .0400 (Acid Rain Permit)	No	2
		40 CFR Part 97 (CSAPR)	No	3

Notes:

1. RPS monitors the water-to-fuel injection rate in order to demonstrate compliance with NSPS and PSD. Monitoring is performed as specified in Appendix E to 40 CFR Part 75. The Appendix E monitoring method does not constitute a continuous compliance determination method (CCDM) under 02D .0614(b)(1)(F). Therefore, the water injection system meets the three criteria above.
2. Acid Rain Program requirements are exempt from CAM per 02D .0614(b)(1)(C). Therefore, CAM is not triggered per condition I.
3. CSAPR is an emissions trading program, which is exempt from CAM per 02D .0614(b)(1)(D). Therefore, CAM is not triggered per condition I.

Based on the above analysis, CAM only applies to the two turbines equipped with water injection systems.

DAQ has previously determined that the Appendix E monitoring method did constitute a CCDM (see the T13 permit revision, issued May 7, 2007). As a result, the existing permit does not include a CAM plan. However, upon reviewing the Appendix E method, this appears to have been a mistake. In order to constitute a CCDM, a monitoring method must be continuous. Because the Appendix E method is only valid for “peaking units” (as defined by 40 CFR 72.2), and because the Appendix E method is only valid

within the minimum and maximum tested loads (the estimation method is based on interpolation between four tested turbine loads), the Appendix E method should not be considered continuous and therefore does not meet the definition of CCDM.

As part of the renewal application, DAQ requested that RPS submit a CAM plan for this facility. The requested CAM plan was received on January 21, 2022. The CAM plan will be included in the new permit as Specific Condition 2.2 A.3.

Compliance with the CAM plan will be determined with subsequent inspections and reports.

h. 15A NCAC 02D .1111 “Maximum Achievable Control Technology”

This rule incorporates the Maximum Achievable Control Technology (MACT) standards under 40 CFR Part 63 into North Carolina's SIP. For the purposes of MACT applicability, this facility is an area source of hazardous air pollutants (HAP) because it does not have the potential to emit more than 10 tons per year (tpy) of any individual hazardous air pollutant (HAP) and/or more than 25 tpy of total combined HAP. Rules that apply to major sources of HAP (e.g., the MACT standards for boilers under 40 CFR Part 63, Subpart DDDDD) do not apply to this facility. The only MACT rule that applies to this facility is 40 CFR Part 63, Subpart JJJJJ “National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources.”

MACT Subpart JJJJJ applies to boilers installed at area sources of HAP. The requirements of the rule differ based on the size and fuel used in the specific boiler.

The boiler ES-TEMP meets the definition of “seasonal boiler” under this rule. In general, the requirements for seasonal boilers are:

- Tune-up ever five years,
- Keep records of fuel use, tune-ups, and all notifications, and
- Keep records of days of operation to verify “seasonal” status.

DAQ has determined that the report associated with the annual compliance certification (found in General Condition P of the existing permit) is sufficient to demonstrate compliance with this rule, and that no further reporting is required. DAQ has reviewed this analysis and agrees with this analysis, and continued compliance is expected.

i. 15A NCAC 02Q .0317 “Avoidance Conditions”

This rule allows a facility to accept enforceable limits in order to avoid applicability of specific rules. RPS has accepted an operational limit in order to avoid the applicability of NSPS Subpart Dc “Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units.”

NSPS Subpart Dc applies to boilers constructed after June 9, 1989 and have a capacity between 10 and 100 million Btu per hour. The boiler ES-TEMP meets these criteria. However, “temporary boilers” are not subject to the rule (see §60.40c(i)). Therefore, as long as ES-TEMP meets the definition of temporary boiler (defined at §60.41c), the boiler will not be subject to this rule.

In order to be considered temporary, the boiler must not remain at the facility for more than 180 consecutive days. Immediately replacing one boiler with a new boiler that serves the same purpose, or moving a boiler specifically to circumvent the residence time requirement disqualifies a boiler as temporary.

In order to demonstrate that ES-TEMP meets the definition of temporary, RPS keeps records of the residence time of the boiler, but no reporting is required. Based on the most recent inspection report, RPS appears to be in compliance with this rule. DAQ has reviewed this analysis and agrees with this analysis, and continued compliance is expected.

j. 15A NCAC 02Q .0400 “Acid Rain Procedures”

This rule incorporates the acid rain program (40 CFR Part 72) into North Carolina's SIP.

The specific requirements for the acid rain program are included in the Phase II permit application submitted by RPS. The Phase II permit application is included in the Title V permit as an attachment. In general, RPS is required to monitor and report NO_x and SO₂ emissions.

In general, compliance with the acid rain program is determined by US EPA, not DAQ. Continued compliance will be determined by US EPA.

k. 15A NCAC 02Q .0711 “Emission Rates Requiring a Permit”

This rule requires that facilities which emit toxic air pollutants (TAP) at a rate greater than the TAP permitting emissions rate (TPER) listed in the rule. Facilities that emit a TAP at a rate greater than the TPER must follow the procedures in 02D .1100 “Control of Toxic Air Pollutants” to ensure compliance with acceptable ambient limits.

The existing permit includes TPERs for several TAPs. The list of TPERs in the permit was included beginning with the T19 permit revision (issued February 9, 2018). As part of the T19 permit revision, RPS demonstrated that none of the TPERs included in the permit would be exceeded.

In order to demonstrate continued compliance, RPS must keep records such that the actual emission rate of each TAP can be compared to the TPERs listed in the permit. No other monitoring or reporting is required.

Based on the most recent inspection report, RPS appears to be in compliance with this rule. Continued compliance will be determined during subsequent inspections.

l. Cross State Air Pollution Rule (“CSAPR”; 40 CFR Part 97, Subparts AAAAA and CCCCC)

This group of rules applies to fossil-fuel-fired combustion sources that 1) produce electricity for sale, and 2) have a generator capacity greater than 25 megawatts. Each combustion turbine at this facility is subject to CSAPR.

CSAPR limits NO_x and SO₂ emissions. In general, CSAPR requires tracking and trading emission credits across multiple facilities, including facilities not within the state of North Carolina. Therefore, compliance with CSAPR is generally determined by US EPA.

The existing permit includes a reference to 40 CFR Part 97, Subpart BBBBB “CSAPR NO_x Ozone Season Group 1 Trading Program.” This rule applies to areas that are part of the summer ozone season trading program. As of 2017, North Carolina is not such an area. Because Subpart BBBBB does not apply to this facility, all references to this rule have been removed from the permit. For further discussion of the nonapplicability of Subpart BBBBB, see 40 CFR 52.1784(b).

m. Nonapplicable Rules:

There are several SIP and Federal rules that could potentially apply at this renewal, but ultimately do not.

i. 40 CFR Part 60, Subpart KKKK “Standards of Performance for Stationary Combustion Turbines” and Subpart TTTT “Standards of Performance for Greenhouse Gas Emissions for Electric Generating Units”

These rules apply to combustion turbines constructed after February 18, 2005 (§60.4305(a)) and January 8, 2014 (§60.5509(a)). Both combustion turbines at this facility were constructed before these dates and have not been modified or reconstructed after these dates. Therefore, these rules do not apply to this facility.

ii. 15A NCAC 02D .0900 “Volatile Organic Compounds” and 15A NCAC 02D .1400 “Nitrogen Oxides” (a.k.a. RACT)

The RACT rules apply geographically per 02D .0902 and 02D .1402. Halifax County is not listed in those rules, so the RACT rules do not apply to this facility.

iii. 15A NCAC 02D .2100 “Risk Management Program” (a.k.a. §112(r), Section 112(r) of the Clean Air Act)

This rule applies to facilities that store materials above their respective thresholds in 40 CFR 68.130. Such facilities are required to prepare and submit a Risk Management Plan (RMP). When RPS submitted this application permit renewal, RPS stated on Form A3 that “No substance covered by Part 68 is at the Rosemary Power Station Site.” Therefore, RPS is not required to submit an RMP and has no other specific requirements under 02D .2100. Note that other requirements under §112(r) (such as the General Duty Clause) may apply to this facility.

7. Compliance Status and Other Regulatory Concerns:

- *Compliance status:* This facility was most recently inspected on September 7, 2021 by Mary Rose Fontana. RPS appeared to be in compliance with the Title V permit during that inspection.
- *Compliance history:* On November 20, 2018, RPS was issued one Notice of Violation for a failed emission test (test reference number 2017-375ST). As a result, RPS was fined \$5,348 on May 28, 2019 (see enforcement file number DAQ2019-003). RPS was required to perform a new emission test. The new test demonstrated compliance for all tested pollutants (test reference number 2018-202ST). DAQ considers this matter resolved.

There have been no other compliance issues noted since the previous Title V renewal.

- *Application fee:* Title V and Title IV permit renewals do not require an application fee.
- *PE Seal:* Pursuant to 15A NCAC 02Q .0112 “Application requiring a Professional Engineering Seal,” a professional engineer’s seal (PE Seal) is required to seal technical portions of air permit applications for new sources and modifications of existing sources as defined in Rule .0103 of this Section that involve:

- (1) design;
- (2) determination of applicability and appropriateness; or

(3) determination and interpretation of performance; of air pollution capture and control systems.

A PE Seal was **NOT** required for this Title V or Title IV permit renewal.

- *Zoning*: A Zoning Consistency Determination per 15A NCAC 02Q .0304(b) was **NOT** required for this Title V or Title IV permit renewal.

8. Facility Emissions Review

The table on the first page of this permit review presents the criteria pollutant (plus total HAP) from the latest available approved facility emissions inventory (2019). The HAP emitted in the largest quantity from the facility is propylene oxide.

The renewal of the Title V and Title IV permits, discussed in Sections 1.a and 1.b above, is not expected to change potential emissions from this facility.

9. Draft Permit Review Summary

Initial internal draft: An initial draft of the permit and application review were sent to RCO staff. Comments on this draft were received on April 21, 2022. RCO staff pointed out typos in the draft permit and application review.

Second draft: After resolving initial comments, a revised draft of the permit and application review were sent to RCO, RRO, and RPS staff. Below is a summary of comments received:

RPS Comment 1: Typos in the draft permit: Section 4 is mislabeled in the Table of Contents (says “General Permit Conditions”, should be “General Conditions”), and Section 2.2 A.2 includes two instances of paragraph h.

Response: The Table of Contents is part of DAQ’s Title V permit template. DAQ will consider correcting the template in the future, but no change will be made at this time. The second instance of 2.2 A.2.h will be corrected to 2.2 A.2.k.

RPS Comment 2: Include “on a dry basis, corrected to 15 percent O₂” in the emission limit table associated with the CAM plan.

Response: The limit table now includes a footnote with this information.

10. Public Notice and EPA Review

A notice of the DRAFT Title V Permit shall be made pursuant to 15A NCAC 02Q .0521. The notice will provide for a 30-day comment period, with an opportunity for a public hearing. Consistent with 15A NCAC 02Q .0525, the EPA will have a concurrent 45-day review period. Copies of the public notice shall be sent to persons on the Title V mailing list and EPA. Pursuant to 15A NCAC 02Q .0522, a copy of each permit application, each proposed permit and each final permit shall be provided to EPA. Also, pursuant to 02Q .0522, a notice of the DRAFT Title V Permit shall be provided to each affected State at or before the time notice is provided to the public under 02Q .0521 above. Virginia is an affected state.

- The Public Notice and EPA Review periods began on
- The Public Notice period ended on

- The EPA Review period ended on

11. Recommendations

This permit application has been reviewed by NC DAQ to determine compliance with all procedures and requirements. NC DAQ has determined that this facility appears to be complying with all applicable requirements.

Recommend Issuance of Permit No.06586T21. RRO has received a copy of this permit and submitted comments that were incorporated as described in Section 9.

DRAFT