# Proposed Statement of Basis for CenTrio

# AOP Renewal Issued January 21, 2025

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# 1 Purpose of this Statement of Basis

## *1.1 General*

This document summarizes the legal and factual bases for the draft permit conditions in the Centrio air operating permit to be issued under the authority of the Washington Clean Air Act, Chapter 70A.15 Revised Code of Washington, Chapter 173-401 of the Washington Administrative Code and Puget Sound Clean Air Agency (PSCAA) Regulation I, Article 7. Unlike the permit, this document is not legally enforceable. It includes references to the applicable statutory or regulatory provisions that relate to Centrio's emissions to the atmosphere. This document also provides a description of the facility's activities and a compliance history.

## *1.2 Why Centrio is an Air Operating Permit Source*

The Centrio facility is a "major source" as defined in the federal and state clean air act and the rules implementing these acts. Major source facilities are required to obtain an operating permit under Title V of the federal Clean Air Act (CAA) Amendments of 1990 and its implementing regulations, 40 CFR Part 70, and WAC Chapter 173-401-300(1)(a)(v). As currently configured, Centrio has potential emissions above source levels for nitrogen oxides and carbon monoxide. Potential to emit for nitrogen oxides is 843 tons per year as of the date of this permit renewal. Potential to emit for carbon monoxide is 251 tons per year as of the date of this permit renewal. The facility's potential emissions of hazardous air pollutants are well below the major source thresholds.

# 2 Source Location, Description and Permitting History

CenTrio produces steam for commercial buildings and healthcare facilities to meet heating and hot water, and sterilization needs in downtown Seattle. The facility has four boilers for steam production and at least one boiler is operating at all times as the facility operates 24 hours per day, 365 days per year.

The facility operates three natural gas water tube boilers, including a Riley-Stoker boiler installed in 1955, a Combustion Engineering (A) boiler installed in 1974, and a Combustion Engineering (D) boiler installed in 1969. A fourth natural gas boiler was removed from service in 2010 (Garrett & Shaffer) when a wood-fired Energy Products of Idaho boiler with natural gas and fuel oil backup received an Order of Approval from the Agency in 2009. From the installation date through 2011 the boiler was fired mainly with wood. After that time, the boiler has only operated using natural gas or distillate fuel oil.

As of the date of issuance of this permit CenTrio no longer burns wood and have no plans to do so in the future. The ancillary equipment needed for burning wood is no longer at the facility. All boilers at the facility, including the former wood-fired boiler, are fired primarily on natural gas with distillate oil as backup fuel.

The exhaust gases from the Riley-Stoker boiler are routed to pass through a multi-clone particulate control system that removes particulate matter before being discharged to the "silver stack" located at the southeast corner of the facility. The multi-clone particulate control system was originally installed to control particulate matter emitted when the facility was firing residual oil. When burning natural gas the multiclones are part of the exhaust system, but there is virtually no particulate matter generated. The Combustion Engineering boilers D and A have no pollution control equipment and discharge to a common "black stack" located in the center of the facility.

Natural gas is brought to the facility by pipeline and is not stored on-site. Ultra-low sulfur distillate fuel oil is brought to the site by truck. It is stored on site in a 126,000 gallon capacity underground storage tank.

CenTrio also has a diesel-fired engine/generator for emergency power production and an associated diesel fuel day storage tank (250 gallon). The engine currently onsite was installed in 2018 and replaced the engine that was previously onsite.

### *2.1 New Source Review Permitting for the Facility*

The following Orders of Approval (OAs) have been issued to the facility:

**Order of Approval No. 106** was issued on July 3, 1969 for the installation of a Combustion Engineering (D) Boiler. The Agency issued this NOC approval with no emission unit-specific approval conditions.

**Order of Approval No. 1066** was issued on September 25, 1973 for the installation of a Combustion Engineering (A) Boiler. This approval was issued with no emission unit-specific approval conditions.

**Order of Approval No. 9382 (superseded)** was issued on June 23, 2006 for a wood-fired boiler and associated equipment. The boiler also had the capability to burn natural gas and oil. This boiler replaced an existing natural gas- and oil-fired boiler. At the same time, all heavy oil firing at the facility was replaced with ultra-low sulfur distillate fuel oil. This Order was superseded and canceled by Order of Approval No. 9938.

**Order of Approval No. 9921 (expired)** was issued on December 18, 2008 for a natural gas and oil-fired boiler. This Order was issued in conjunction with Order of Approval No. 9382 which limited operation of natural gas or oil in the wood-fired boiler to 43,150 MMBtu per year (or about 100 hours of operation per year). Order of Approval No. 9921 was issued to allow additional operation of this burner on natural gas during the winter of 2008/2009. Prior to completion of the wood combustion system, the natural gas and oil burner were allowed up to 2,900 hours of operation (275,790 MMBtu). This Order expired upon first operation of the wood-fired combustor or when the total heat input of all fuels combusted under this Order equaled 275,790 MMBtu, which has since occurred.

**Order of Approval No. 9938 (superseded)** was issued on February 18, 2009 for the wood-fired boiler and associated equipment. It corrected annual emission limits for $NO_x$, carbon monoxide (CO), sulfur dioxide ($SO_2$) and fine particulate matter ($PM_{10}$) and made a minor correction to an erroneous conversion factor used to convert therms to MMBtu in Order of Approval No. 9382. Order of Approval No. 9938 was superseded and canceled by Order of Approval No. 10065.

**Order of Approval No. 10065** was issued on September 3, 2009 for the wood-fired boiler and associated equipment (superseded and cancelled Order of Approval No. 9938). Several conditions in the OA are no longer relevant as they apply to burning wood. However, there are conditions for natural gas and oil that are still in effect.

**Order of Approval No. 10275** was issued concurrently with this AOP renewal and prohibits combustion of residual oil in all of the boilers onsite. Upon issuance of the AOP renewal, it will cancel and supersede General Regulatory Order No. 7740

**Other:** The installation of the Riley-Stoker boiler predates the Agency and the preconstruction permitting program. However, all regulations related to operation of the boiler apply.

### *2.2 Regulatory Orders Issued to the Facility*

**General Regulatory Order No. 6517 (superseded)** was issued on May 8, 1997 for an alternate means of compliance pertaining to use of an alternative monitoring approach in place of a Continuous Opacity Monitoring System (COMS). This Order was superseded and canceled by General Regulatory Order No. 7740.

**General Regulatory Order No. 7740 (superseded)** was issued on September 9, 1999 for an alternate means of compliance. Agency Regulation I, Article 9.04, Opacity Standards for Equipment with COMS, requires emission monitoring for all fuel burning equipment (excluding equipment burning distillate oil or gaseous fuel) rated at 100 million Btu per hour or greater. CenTrio requested an alternate means of compliance, as allowed by Agency Regulation I, Section 3.23, to operate its boilers without the installation of continuous monitors when combusting residual oil. This was because CenTrio used less than 3,822,000 gallons of No. 6 oil (residual oil) as backup fuel per year, which is equivalent to about 30 days per year of operation. The Agency Board of Directors approved the alternate means of compliance as Board Resolution No. 893 on September 9, 1999. This Order was superseded and canceled by Order of Approval No. 10275 which was issued concurrently with this AOP renewal.

### *2.3 Operating Permit Issuance and Renewal*

An air operating permit application was received by the Agency from CenTrio on June 2, 1995 pursuant to WAC 173-401-500(3). The application was acknowledged to be complete in an October 27, 1995 letter from the Puget Sound Clean Air Agency. The draft air operating permit was published on December 8, 1997; the 30-day comment period expired January 7, 1998. The air operating permit had to be redrafted and republished due to the issuance of General Regulatory Order 7740. A final permit was issued on June 24, 2002.

Administrative amendments have been made to the existing AOP to change the Responsible Official in 2005, 2015, 2017, 2018, and twice in 2023.

On June 7, 2006, CenTrio submitted an air operating permit renewal application. This was received on time with more than one year remaining on the active permit, which expired on June 24, 2007. The Agency acknowledged the application to be complete in a June 26, 2006 letter to Enwave. In accordance with WAC 173-401-640, Centrio operated under the authority of their permit shield from June 24, 2007 until the Agency issued this renewal of the operating permit.

## 3 Compliance History

Onsite inspections of the facility since the issuance of the original AOP in 2001 were performed at least once per year from 2002 through 2024. The inspections performed in 2020 and 2021 were conducted via telephone due to the COVID-19 measures to protect agency and CenTrio employees.

The facility has received eight violations in the last five years. The notices of violation for the last five years prior to issuance of this AOP are listed below:

**Table 1. WWS AND NOVS for Last Five Years**

| WW or NOV #[1] | Violation Date | Issue Date | Applicable Reg. or permit | Comment |
|---|---|---|---|---|
| 3-A009810 | 2/14/2019 | 4/12/2019 | OA 10065 condition 16(b) | Exceeded average daily CO limit |
| 2-A000036 | 6/1/2020 | 9/20/2021 | PSCAA Reg 12.03(b) & OA 10065 condition 20 | Failure to recover valid hourly monitoring data with CEM |
| 3-A000530 | 2/18/2022 | 6/3/2022 | PSCAA Reg I 7.07(b) | Failure to pay AOP fees by due date |
| 3-A000692 | 11/4/2022 | 1/13/2023 | PSCAA Reg 12.03(a)(b) & (c) OA 10065 conditions 13 & 16 | Operating without a certified CEM |
| 3-A000710 | 12/21/2022 | 2/17/2023 | PSCAA Reg 12.03(b) & OA 10065 condition 20 | Failure to recover valid hourly monitoring data with CEM |
| 3-A000792 | 7/25/2022 | 5/24/2023 | AOP 13786 V.P. & V.M | Failure to submit semiannual reports<br>Failure to submit compliance certifications |
| 3-A001153 | 1/11/2024 | 3/19/2024 | OA 10065 condition 13(b) | Exceeded average daily NOx limit |
| 3-A001152 | 1/31/2024 | 3/19/2024 | OA 10065 condition 16(b) | Exceeded average daily CO limit |

## 4 Potential to Emit and Actual Emission Inventories

The facility emits primarily nitrogen oxides and carbon monoxide with lesser amounts of other criteria pollutants. The potential to emit for criteria pollutants, TAPs, and HAPs as calculated by CenTrio in 2024 is shown in the table below. CenTrio also provided their CO2 emissions although they are not regulated under the Operating Permit program.

**Summary of Facility-wide Emissions**

| | | | Scenario 1 | Scenario 2 | | |
|---|---|---|---|---|---|---|
| Pollutant | Units | Avg. Period | All Boilers (NG) | All Boilers - NG | All Boilers - Oil | Facility Total |
| $NO_X$ | tpy | Annual | 827 | 782 | 60 | 843 |
| CO | tpy | Annual | 249 | 235 | 16.0 | 251 |
| $PM_{10}$ | tpy | Annual | 23 | 21 | 5.6 | 27 |
| $PM_{2.5}$ | tpy | Annual | 23 | 21 | 1.8 | 23 |
| $SO_2$ | tpy | Annual | 35 | 33 | 1.31 | 35 |
| VOC | tpy | Annual | 17 | 15 | 5.4 | 21 |
| $CO_2e$ | tpy | Annual | 354,369 | 333,758 | 42,306 | 376,063 |

As shown in the table below, Centrio also provided calculations of PTE of both Toxic and Hazardous Pollutants.

| TAPs | CAS No. | Scenario 1[a] - Boiler (NG) (tpy) | Scenario 2[a] - Boiler (NG) (tpy) | Scenario 2[a] - Boiler (Oil) tpy | Total HAP emissions (tpy) |
|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 71-55-6 | 3.6E-05 | -- | 4.8E-04 | |
| 1,4-Dichlorobenzene | 106-46-7 | 3.5E-03 | 3.4E-03 | -- | 3.53E-03 |
| 3-Methylcholanthrene | 56-49-5 | 5.3E-06 | 5.0E-06 | -- | |
| 7,12-Dimethylbenz[a]anthracene | 56-49-5 | 5.3E-06 | 5.0E-06 | -- | |
| Antimony | 7440-36-0 | 8.1E-04 | -- | 1.1E-02 | 1.06E-02 |
| Arsenic | 7440-38-2 | 7.9E-04 | 5.6E-04 | 2.7E-03 | 3.23E-03 |
| Benz(a)anthracene | 56-55-3 | 5.9E-06 | 5.0E-06 | 8.1E-06 | |
| Benzene | 71-43-2 | 6.2E-03 | 5.9E-03 | 4.3E-04 | 6.30E-03 |
| Benzo(a)pyrene | 50-32-8 | 3.5E-06 | 3.4E-06 | -- | |
| Benzo(b)fluoranthene | 205-99-2 | 5.5E-06 | 5.0E-06 | 3.0E-06 | |
| Benzo(k)fluoranthene | 207-08-9 | 5.3E-06 | 5.0E-06 | -- | |
| Beryllium | 7440-41-7 | 4.0E-05 | 3.4E-05 | 5.6E-05 | 8.98E-05 |
| Cadmium | 7440-43-9 | 3.3E-03 | 3.1E-03 | 8.1E-04 | 3.88E-03 |
| Chromium | 7440-47-3 | 4.3E-03 | 3.9E-03 | 1.7E-03 | 5.62E-03 |
| Chromium VI | 18540-29-9 | 3.8E-05 | -- | 5.0E-04 | 5.02E-04 |
| Chrysene | 218-01-9 | 5.7E-06 | 5.0E-06 | 4.8E-06 | |
| Cobalt | 7440-48-4 | 1.2E-03 | 2.3E-04 | 1.2E-02 | 1.24E-02 |
| Copper | 7440-50-8 | 2.8E-03 | 2.4E-03 | 3.6E-03 | |
| Dibenzo(a,h)anthrancene | 53-70-3 | 3.8E-06 | 3.4E-06 | 3.4E-06 | |
| Ethylbenzene | 100-41-4 | 9.8E-06 | -- | 1.3E-04 | 1.29E-04 |
| Ethylbenzene | 100-41-4 | 9.8E-06 | -- | 1.3E-04 | 1.29E-04 |
| Fluoride | 16984-48-8 | 5.7E-03 | -- | 7.6E-02 | |
| Formaldehyde | 50-00-0 | 2.3E-01 | 2.1E-01 | 6.7E-02 | 2.76E-01 |
| Hexane | 110-54-3 | 5.3E+00 | 5.0E+00 | -- | 5.30E+00 |
| Indeno(1,2,3-cd)pyrene | 193-39-5 | 5.6E-06 | 5.0E-06 | 4.3E-06 | |
| Lead | 7439-92-1 | 2.3E-04 | -- | 3.1E-03 | 3.06E-03 |
| Manganese | 7439-96-5 | 1.6E-03 | 1.1E-03 | 6.1E-03 | 7.13E-03 |
| Mercury | 7439-97-6 | 7.8E-04 | 7.3E-04 | 2.3E-04 | 9.55E-04 |
| Naphthalene | 91-20-3 | 2.0E-03 | 1.7E-03 | 2.3E-03 | 3.99E-03 |
| Nickel | 7440-02-0 | 1.9E-02 | 5.9E-03 | 1.7E-01 | 1.77E-01 |
| OCDD | 3268-87-9 | 4.8E-10 | -- | 6.3E-09 | |
| o-Xylene | 1330-20-7 | 1.7E-05 | -- | 2.2E-04 | 2.21E-04 |
| Phosphorus | 7723-14-0 | 1.5E-03 | -- | 1.9E-02 | 1.91E-02 |
| Selenium | 7782-49-2 | 1.8E-04 | 6.7E-05 | 1.4E-03 | |
| Toluene | 108-88-3 | 1.1E-02 | 9.5E-03 | 1.3E-02 | 2.21E-02 |
| Vanadium | 7440-62-2 | 1.2E-02 | 6.4E-03 | 6.4E-02 | |

Actual Emission Inventory Summary 2019-2023(tons per year):

The table below summarizes the primary air emissions for the most recent available 5 years. Emission inventories are estimates of actual emissions from the facility developed by the permittee and submitted to the Agency annually. Emissions from this facility come from burning natural gas and distillate oil boilers and the emergency engine. Emissions will vary from year to year depending on the usage of the equipment.

**Table 2. Summary of Actual Emissions 2019-2023 (tons per year)**

| Pollutant | 2023 | 2022 | 2021 | 2020 | 2019 |
|---|---|---|---|---|---|
| **CO** | 53.383 | 30.6175 | 52.4345 | 51.033 | 54.388 |
| **NO2** | 178.3445 | 101.6984 | 174.132 | 167.517 | 179.9805 |
| **SO2** | BT* | BT* | BT* | BT* | BT* |
| **VOC** | BT* | BT* | BT* | BT* | BT* |
| **PM10** | BT* | BT* | BT* | BT* | BT* |
| **HAP** | BT* | BT* | BT* | BT* | BT* |
| **Toxic Air Contaminants (TAC)** | BT* | BT* | BT* | BT* | BT* |

*BT The emissions for the year were below the required reporting threshold

## 5 Compliance Assurance Monitoring, NESHAP and NSPS Applicability Review

### *5.1 Compliance Assurance Monitoring*

The Compliance Assurance Monitoring (CAM) rule requires owners and operators to monitor the operation and maintenance of their control equipment, so they can evaluate the performance of their control devices and ensure they are working properly. The CAM rule applies to major sources with emission units that have control devices and emissions could exceed 100 tons per year if the control device was not operated. The CAM rule defines a major source using the definition in the Part 70 regulations at 40 CFR 70.2. The three types of major sources in Part 70 are:

Major HAP sources – sources that emit 10 tpy or more of a single HAP or 25 tpy or more of all HAPs combined.

Major air pollutant source – sources that have the potential to emit 100 tpy or more of any air pollutant subject to regulation

Major source in nonattainment areas – sources with specified potential to emit of certain pollutants in nonattainment areas.

***CAM does not apply to any of the emission units at this facility for the following reasons:***

Applicability of the CAM regulation is based on pollutant specific emission units. The definition of a pollutant specific emission unit means “an emission unit considered separately with respect to each regulated air pollutant.”

Boiler #1 meets all the requirements to be defined as a pollutant specific emission unit for NOx:

1. The boiler is subject to NOx emission limitations.
2. The boiler has pre-control NOx emissions greater than 100 tons per year.
3. The boiler uses flue gas recirculation as a NOx control device.

Section 64.2 “Applicability” includes in section (b)(1)(vi) an exemption from the CAM rule for units with continuous compliance determination methods. Boiler #1 has a NOx CEMS which meets the definition of a continuous compliance determination method in 40 CFR 64.1:

> “Continuous compliance determination method” means a method, specified by the applicable standard or an applicable permit condition, which:
>
> > (1) Is used to determine compliance with an emission limitation or standard on a continuous basis, consistent with the averaging period established for the emission limitation or standard; and
> >
> > (2) Provides data either in units of the standard or correlated directly with the compliance limit.”

The NOx emission limits included in the permit are in terms of ppmdv corrected to 7% $O_2$ averaged over 24 hours. These are the units and the averaging period in which the data is available from the CEMS.

The permit also includes an annual limit of 51.1 tons per each consecutive 12-month period. This CEMS data is directly correlated with the compliance limit and is used to determine compliance with the limit.

Boiler #1 does not have any control devices for pollutants other than NOx and CAM does not apply to these other pollutants. None of the other boilers onsite have control devices for any pollutants and are not subject to CAM.

### *5.2 NESHAP for Stationary Reciprocating Internal Combustion Engines (40 CFR 63 Subpart ZZZZ) and NESHAP for Industrial, Commercial, and Institutional Boilers Area Sources (40 CFR 63 Subpart JJJJJJ)*

#### 40 CFR 63 Subpart ZZZZ

The facility has only one engine onsite which is used as emergency backup. The engine is a Caterpillar C18 generator engine, model year 2018 and installed in 2018. It is rated at 900 HP and 18.1 L per cylinder. The engine meets EPA Tier 4 standards. It is subject to 40 CFR 63 Subpart ZZZZ. However, the ZZZZ NESHAP at 40 CFR 63.6590(c)(1) states:

“A new or constructed stationary RICE located at an area source must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines. No further requirements apply for such engines under 40 CFR 63.”

The permit includes the applicable requirements for 40 CFR part 60 subpart IIII.

**40 CFR 63 Subpart JJJJJJ**

All four boilers at the facility are “gas fired-boilers” as defined in 40 CFR 63 JJJJJJ. Boilers that meet the definition of gas-fired boiler in the NESHAP are exempt from all requirements in the NESHAP.

The definition of “gas fired boilers” in 40 CFR 63 JJJJJJ 63.11237:

> *Gas-fired boiler* includes any boiler that burns gaseous fuels not combined with any solid fuels and burns liquid fuel only during periods of gas curtailment, gas supply interruption, startups, or for periodic testing, maintenance, or operator training on liquid fuel. Periodic testing, maintenance, or operator training on liquid fuel shall not exceed a combined total of 48 hours during any calendar year.

### *5.3 Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (40 CFR 60 Subpart IIII)*

As part of the renewal process, the Agency reviewed federal New Source Performance Standards (NSPS) since the last permit issuance to determine applicability. It was determined that one NSPS applies to the emergency engine, Subpart IIII. The permit includes all the applicable requirements for this engine.

### *5.4 Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units (40 CFR 60 Subpart Dc)*

As part of the renewal process, the Agency reviewed federal New Source Performance Standards (NSPS) since the last permit issuance to determine applicability. It was determined that one NSPS applies to the Boiler #1, the Energy Products of Idaho, Subpart Dc.

Boiler #1 was initially installed in 2009 as a wood-fired boiler with natural gas and distillate fuel backup. After several years of operation, CenTrio determined that using wood as fuel was not working well for their facility. CenTrio has since removed all of the equipment associated with firing wood and it is no longer physically possible to burn wood in the boiler. However, they maintained the boiler’s ability to burn natural gas and distillate oil. The boiler is rated at 95.1 MMBTU/hr on natural gas and 95.8 MMBTU/hr on distillate oil. The boiler meets the applicability criteria in 40 CFR 60 Subpart Dc, rated at less than 100 MMTBU/hr and commenced construction after June 9, 1989. The permit includes all applicable requirements of Subpart Dc.

## 6 Applicable Requirements and Significant Changes in the Renewal

### *Emission Unit Summary Table*

A new table was added to the permit located before Section 1 that gives a general description of the emission units at the facility. The table is reproduced below and lists the emission units regulated under this permit. The table is for informational purposes only.

| Source | Description | Emission Control Equipment or Method | Install Date | Rated Capacities |
|---|---|---|---|---|
| EU 1<br>Natural Gas as Primary Fuel<br>&<br>ULSD as backup fuel for emergencies, testing, maintenance and operator training. | Boiler #1<br>Energy Products of Idaho<br>20' diameter boiler | ULSD for SO2 control<br>Flue gas recirculation of 20% for NOx control<br>CEMS & COMS for emission monitoring | 2009 | Maximum Heat Input:<br>95.1 MMBTU/hr on natural gas<br>95.8 MMBTU/hr on oil |
| EU 2<br>Natural Gas as Primary Fuel<br>&<br>ULSD as backup fuel for emergencies, testing, maintenance and operator training. | Combustion Engineering (A Type) Boiler #3 Exhausts to the 'Black Stack'<br>Combustion Engineering (D Type) Boiler #4 Exhausts to the 'Black Stack' | None<br>None | 1974<br>1969 | Maximum Heat Input:<br>238 MMBTU/hr<br>Maximum Heat Input:<br>168 MMBTU/hr |
| EU 3<br>Natural Gas as Primary Fuel<br>&<br>ULSD as backup fuel for emergencies, testing, maintenance and operator training. | Riley Boiler #2<br>Exhausts to the 'Silver Stack' | Multiclone | 1955 | Maximum Heat Input:<br>280 MMBTU/hr |
| EU 4<br>Emergency Engine | Caterpillar C18 generator engine<br>model year 2018<br>900 HP<br>18.1L per cylinder<br>Meets EPA Tier 4 standards | None | 2018 | Maximum Output<br>671 kW |

Sections 1 and 2 are reformatted in the AOP renewal so that all facility-wide requirements and the corresponding compliance methods are in Section 1, and the emission unit specific requirements and corresponding compliance methods are in Section 2. The intent was to make it easier to connect the applicable requirement and the compliance method.

### *Updates, Changes, and Additions to Applicable Requirements*

Many updates, changes and additions were made to the AOP during the renewal process. These are summarized in this section.

### *Removal of Site Contact on Permit Cover Page*

The agency historically had included the current site contact information on the front page of the permit. However, over time it has become apparent that the site contact can change frequently. Per the Washington AOP rules, this change of the site contact requires a permit amendment. However, the AOP rules do not require this information to be in the permit itself. To streamline our system the Agency has removed the site contact from the AOP and instead keeps that information in our files and in our database. This will eliminate extraneous permit amendments while still maintaining the site contact information in an easily accessible and secure location. The responsible official's name and contact information remains in the AOP.

### *Removal of "Emergency" Affirmative Defense Provisions in Title V and WAC 173-401-645*

The affirmative defense provisions provided for in Title V of the Clean Air Act were deleted from the implementing federal rules in section 70.6(g) as of August 21, 2023. Although the WAC language has not yet been removed from the state regulation and EPA's approval of our program still contains this provision, the Federal Register Notice recommended that the emergency affirmative defense not be included in Title V permits issued after the effective date of the Federal Register Notice.

The Federal Register Notice can be found here:
https://www.epa.gov/system/files/documents/2023-07/8961-01-OAR%20Title%20V%20Affirmative%20Defense%20Final%20Rule.pdf

The language that was included in previous Air Operating Permits issued by PSCAA is below:

*"Emergency*

*An emergency, as defined in WAC 173-401-645(1), constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limitation if the conditions below are met.*

a. *The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:*

   i. *An emergency occurred and that the permittee can identify the cause(s) of the emergency;*

   ii. *The permitted facility was at the time being properly operated;*

   iii. *During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and*

   iv. *The permittee submitted notice of the emergency to the Puget Sound Clean Air Agency within two working days of the time when emission limitations were exceeded due to the emergency or shorter periods of time specified in an*

*applicable requirement. This notice fulfills the requirement of WAC 173-401-615(3)(b) unless the excess emissions represent a potential threat to human health or safety. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.*

b. *In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof.*

c. *This condition is in addition to any emergency or upset provision contained in any applicable requirement.*

*[WAC 173-401-645]"*

***PSCAA State Implementation Plan (SIP) Changes***

The PSCAA State Implementation Plan (SIP) was updated since the last permit for this facility was issued. This update resulted in replacing multiple state WAC rules with PSCAA rules and ensuring all state-only enforceable requirements were identified. A table was added to Section 5.32 of the permit entitled "Federal Enforceability" identifying which rules are state-only enforceable and which are also federally enforceable.

***Additional and Modified Conditions***

There are applicable requirements that were not included, were incomplete or were insufficient in the previous AOP that was issued in 2002. Title V of the federal Clean Air Act requires that all air pollution regulations applicable to the source be include in the permit. It also requires that each applicable requirement have a federally enforceable means of "reasonably assuring continuous compliance." Title V, 40 CFR Part 70, and WAC 173-401-615 all contain a "gap filling" provision that enables PSCAA to add monitoring where no monitoring is present. In addition, 40 CFR 70.6(c)(1) and WAC 173-401-630(1) also contain authority to address situations where monitoring exists but is deemed insufficient. PSCAA relied on these authorities to add monitoring where needed.

The Agency has added or changed conditions to address these issues. These additions and changes include:

1. PSCAA Reg I, 3.25 Federal Regulation Reference Date – this rule is cited where federal rules are the underlying requirement for a condition. It specifies that the effective date of the federal rule is the one cited in this Agency regulation.
2. All applicable requirements contained in Orders of Approval issued after the issuance of the previous AOP have been added in this renewed AOP.
3. Federal rules were added that apply to the facility as it exists at the time of permit issuance.
4. Using the authority of gap filling, additional requirements and monitoring were added to ensure that the permit conditions will reasonably assure continuous compliance with all applicable requirements as required by Title V of the Clean Air Act.
    a. Compliance methods contained in conditions 1.14 through 1.20 and in condition 1.23 use the gap filling the authority. These applicable requirements in Table 1 are facility-wide and include agency rules and statewide regulations in the Washington Administrative Code (WAC). Gap filling was used to incorporate continuous compliance methods as these rules and regulations themselves do not generally contain these methods.

b. The compliance methods for two Combustion Engineering Boilers, EU2, Include visible emissions monitoring in Condition 2.38 & 2.39. These were added as gap filling to ensure continuous compliance. Condition 2.38 requires that the facility observe the exhaust stacks for visible emissions while the two Combustion Engineering Boilers are transitioning from natural gas to distillate fuel oil. Condition 2.39 requires that the two boilers are inspected for visible emissions once per calendar month. Conditions 2.47 & 2.48 require the same continuous compliance as Conditions 2.38 & 2.39, but for the Riley Stoker Boiler, EU3.

c. The compliance methods in Conditions 2.40 & 2.41 for the two Combustion Engineering Boilers, EU2, are to ensure continuous compliance with the fuel sulfur content. They require that CenTrio purchase only compliant fuel oil and that they receive a certification from the fuel supplier that the fuel is compliant with the permit. Conditions 2.49 & 2.50 require the same continuous compliance as Conditions 2.40 & 2.41, but for the Riley Stoker Boiler, EU3.Condition 2.68 uses gap filling to require fuel oil certification for the emergency generator, EU4..

d. The compliance methods in Condition 2.66 were added under the gap filling authority to record records of number of hours the emergency engine is operated for various uses.

***Format Changes***

The format and organization of the AOP has been updated from the previous version.

The Agency's current format and organization includes:

Section 1: Facility-wide Applicable Requirements

Section 2: Emission Unit Specific Applicable Requirements

Section 3: Standard Terms and Conditions

Section 4: General Permitting Requirements

Section 5: General Compliance Requirements

Section 6: General Applicable Requirements

Section 7: Test Methods and Averaging Periods

Section 8: Inapplicable Requirements

Section 9: Insignificant Emission Units and Activities

## 7 Public Comments and Responses During Renewal Process

Only one entity, US EPA Region10, submitted comments during the public comment period. The comments are related to the draft permit, the statement of basis, and the public notice process. The comments are summarized below with the Agency's response to the comments. These comments and the agency's response to these comments will be available to the public on the PSCAA website when the final permit has been issued.

Comment #1: .Public notification period is inadequate

According to the announcement on Puget Sound Clean Air Agency's website, the public comment period begins at 8:00 AM on October 10, 2024, and ends at 4:30 PM on November 8, 2024. Although it is a good practice to specify when a public comment period ends, this public comment period is shorter than the 30 days required by 40 CFR 70.7(h)(4) and WAC 173-401-800(3). Thirty days from October 8, 2024, is November 9, 2024. Because this is a Saturday and November 11 is a federal holiday, the standard practice would be to extend the comment period until November 12.

Response to Comment #1:

The Agency posted the public comment documents on the Agency website October 9th, the day prior to the start of the public comment period as required by WAC 173-401-800(3)(a) which states "This comment period begins on the next calendar day after the permitting authority posts the public notice on their website." Additionally, the email to the "Permit Actions" subscribers was sent out on October 10th at 8AM, the time of the start of the public comment period.

The commenter is incorrect in the number of days included in the public comment period. The comment period started on October 10, 2024 and ended November 8, 2024. Both the first and last days of the public comment period are included in the number of days for which the public comment period is open. A careful count of the number of days will show that the public comment period was open for 30 days.

Comment #2: The Administrative record not made available to the public

According to 40 CFR 70.7(h)(2), the public notice must include information where interested parties can obtain additional information including the application and all relevant supporting materials. According to WAC 173-401-800(2)(e), the permitting authority must make the administrative record available for public inspection for the duration of the public comment period. The administrative record must include all nonproprietary information contained in the permit application and supporting materials. It is a good practice to post the administrative record online, but at least the permitting authority must inform the public that the administrative record, including the application, is available for review and how to access it.

The public notice explains that "all supporting materials" are available at the following website: https://pscleanair.gov/175/Permits-Open-for-Comment. However, that website does not provide all the materials listed in 40 CFR 70.7(h)(2), most notably the permit application.

Response to Comment #2:

For this particular permit, the application material that was submitted by the applicant in 2006 consisted primarily of a marked-up version of the facility's initial operating permit. Since 2006, the facility has made considerable changes to its boilers, as noted elsewhere in this SoB. Additionally, the Agency's permit format and permit organization have changed, rendering the marked-up version of the old permit that served as a renewal application essentially useless. The Agency's drafting of this renewal relied on conversations with the applicant, in-person inspections of the facility, and various email correspondence. In this unique case, the facility described in the written application materials bore little resemblance to the facility as it currently exists, and the written application materials would have given a potential permit reviewer a misleading sense of the current state of the facility.

However, it does continue to be the Agency's standard practice to post the application materials and the rest of the permit record on its website when opening a permit for comment. The Agency

commits to including the full administrative record, including all relevant materials for each public comment period for operating permits in the future.

Comment #3: Exemption from the area source boiler rule not established

Page 8 of the statement of basis addresses the applicability of 40 CFR part 63, subpart JJJJJJ: *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial and Institutional Boilers Area Sources* to the four boilers located onsite. According to the SoB, the boilers are not subject to NESHAP JJJJJJ because the boilers are exempted gas fired boilers as defined at 40 CFR 63.11195(e). According to 40 CFR 63.11237, a gas-fired boiler:

"*includes any boiler that burns gaseous fuels not combined with any solid fuels and burns liquid fuel only during periods of gas curtailment, gas supply interruption, startups, or for periodic testing, maintenance, or operator training on liquid fuel. Periodic testing, maintenance, or operator training on liquid fuel shall not exceed a combined total of 48 hours during any calendar year*."

However, the draft title V permit identifies as the four boilers as having both natural gas and ultra-low sulfur diesel as available fuels, does not identify natural gas as the primary fuel, and does not apply any limitations on the use of liquid fuel. For this reason, the SoB does not explain how the area source boiler rule does not apply, and the permit does not include applicable requirements ensuring the boilers operate in compliance with the exemption.

Response to Comment #3:

The Agency did establish that the four boilers at the facility are exempt from the area source boiler rule. During the process of writing the AOP, Centrio confirmed that the facility burns ultra-low sulfur diesel (ULSD) fuel no more than 48 hours per calendar year for the purposes of periodic testing, maintenance, or operator training on liquid fuel. It is not the Agency's standard practice to require a permit condition to show continuously that the boilers meet the definition an exemption. This is typically confirmed during the process of writing the permit and determining applicability of rules. An enforceable requirement in the permit is not required. The Agency can, at any time, obtain records of the number of hours burning ULSD to confirm it continues to meet the definition of 'gas-fired boilers.' The Agency added descriptive language to the permit to clearly state the boilers burn ULSD only as emergency back-up fuel and for testing, maintenance and operator training.

Comment #4: Exemption from Compliance Assurance Monitoring requirements not established

Page 7 of the SoB addresses the applicability of the CAM Rule, found in 40 CFR part 64. According to the SoB, only emission unit number 1, the Energy Products of Idaho boiler meets the initial criteria for CAM applicability because it uses a control device to control NOx (flue gas recirculation) and has a pre-control potential to emit greater than the major source threshold. The SoB incorrectly states that CAM does not apply because the unit has a continuous emissions monitoring system for NOx. This statement is inaccurate because it is too broad.

The CAM Rule, at 40 CFR 64.2(b)(1)(vi) exempts those emission limitations or standards for which a part 70 or 71 permit specifies a continuous compliance determination method. A "continuous compliance determination method" is defined in the CAM Rule and there are limitations on what this means. The existence of a monitor taking continuous readings, by itself, does not exempt a unit from CAM. The monitor must meet all requirements in the definition,

such as that the monitoring method takes readings on a consistent basis according to the averaging period specified in the underlying emission limitation or standard. In addition, the monitor must provide data in the units of the standard or correlated directly with the compliance limit. The SoB states that emission unit number 1 is equipped with continuous monitors for NOx, CO and opacity, but it does not explain how the requirements for CAM exemption have been met.

Response to Comment #4:

The Agency has expanded the language in Section 5.1 of the draft Statement of Basis to include more specific information regarding CAM applicability and exemptions.

Boiler #1 utilizes a continuous emissions monitoring system for NOx that meets the definition in 40 CFR 64.1 of a "continuous compliance determination method":

"A method, specified by the applicable standard or an applicable permit condition, which:

(1) Is used to determine compliance with an emission limitation or standard on a continuous basis, consistent with the averaging period established for the emission limitation or standard; and

(2) Provides data either in units of the standard or correlated directly with the compliance limit."

There are three standards for which the NOx CEMS is used to show compliance. Two of the standards are in terms of ppm corrected to 7% $O_2$ averaged over 24 hours. The CEMS readings are taken every 15 minutes. These 15 minutes readings are used to determine the average over 24 hours. The second standard is in terms of tons of NOx for each consecutive 12-month period. The same 15 minute data is used to determine each consecutive 12-month total.

None of the other pollutants from Boiler #1 are subject to CAM as the boiler does not have control equipment for those pollutants.

None of the other boilers onsite have control devices for NOX or CO. Regarding SO2, the CAM rule specifically speaks to use of "low polluting fuel", like ULSD, In the definition of control device the rule states:

"For purposes of this part, a control device does not include passive control measures that act to prevent pollutants from forming, such as the…use of low-polluting fuel or feedstocks…"

Comment #5: Applicability of the general provisions of part 60 not clear

It is not possible to tell from reviewing the permit and SoB which general provisions from part 60 apply to each of the emission units that are subject to performance standards.

Response to Comment #5:

Boiler #1 is subject to a part 60 regulation, 40 CFR Part 60, Subpart Dc. Only some parts of Subpart Dc apply to this boiler, the opacity and sulfur dioxide limits. More detail was added to the permit to include applicability of 40 CFR 60 Subpart A as it relates to these two pollutants.

The emergency generator, Emission Unit 4, is subject to 40 CFR 63 Subpart ZZZZ. However at 40 CFR 63.6590(c)(1), compliance with the Part 63 rule is met by meeting

the requirements of 40 CFR 60 Subpart IIII. Table 8 to Subpart IIII contains all the general provisions that are applicable for the engine and Table 8 has been added the permit at condition 2.70.

In addition, all of 40 CFR 60 Subpart A has been added to the permit as enforceable conditions.

## 8 US EPA Review Period for Proposed Permit Renewal

The 45-day US EPA review period started December 4, 2024, and the last day was January 17, 2025. US EPA did not object to the permit during this review period and the permit was issued after the review period ended.