

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

IN THE MATTER OF AN]
ADMINISTRATIVE ORDER AGAINST:]
]
TransAlta Centralia Generation LLC]
_____]

SECOND REVISION:
ORDER NO. 6426

TO: Mr. Mickey Dreher TransAlta Centralia Generation LLC
913 Big Hanaford Road
Centralia, WA 98531

~~This is an Administrative Order requiring your company to comply with WAC 173-400-151 by taking the actions that are described below. Chapter 70.94 RCW authorizes the Washington State Department of Ecology's Air Quality Program (Ecology) to issue Administrative Orders to require compliance with the requirements of Chapter 70.94 RCW and regulations issued to implement it.~~

~~Ecology has determined that portions of your facility are subject to the provisions of the state visibility protection program (WAC 173-400-151), which is implemented consistent with the requirements of the federal visibility protection program (40 CFR Part 51, Subpart P). The rules require that the State determine what technologies and level of emission control constitute Best Available Retrofit Technology (BART) for the eligible emission units at your facility. The rules also require the installation and use of those emission controls on the BART-eligible emission units. The emission controls are to be installed as expeditiously as possible, but in no event may the State allow them to start operation later than five years after the State's Regional Haze SIP amendment is approved by the United States Environmental Protection Agency (EPA).~~

FINDINGS

- ~~A. The TransAlta Centralia Generation LLC ("TransAlta") Centralia Power Plant is a coal fired power plant larger than 750 MW output subject to BART. The power plant is comprised of two identical coal fired units referred to as BW21 and BW22.~~
- ~~B. BART emission limitations for sulfur dioxide and particulate matter were determined by the Environmental Protection Agency in 2003. The Centralia Power Plant's Operating Permit incorporates the BART emission limitations determined by EPA.~~
- ~~C. BART for nitrogen oxides at the Centralia Power Plant is based on:~~
- ~~a. Utilization of the selective non-catalytic reduction (SNCR) for nitrogen oxides control as appropriate.~~
 - ~~b. Low NO_x burners with separated and close coupled over fire air systems (aka LNC3).~~

- c. ~~Utilization of the Combustion Optimization System with Neural Network on BW22 as appropriate.~~
 - d. ~~Use and installation of additional boiler heat recovery equipment and boiler tube cleaning equipment to maximize the extraction of fuel energy into boiler steam.~~
- ~~D. RCW 80.80.040 was amended in 2011 (Chapter 180, Laws of 2011) adding greenhouse gas emission requirements applicable to this facility that reduce the remaining useful life of each coal fired unit at the plant to approximately 8 and 13 years, starting from June 2011. The greenhouse gas emission requirements are:~~
- a. ~~Amendments to Chapter 80.80, Revised Code of Washington passed in 2011 require both coal fired units at the Centralia Power Plant to comply with the greenhouse gas emission performance standard requirements of Revised Code of Washington 80.80.040. One unit is required to comply by December 31, 2020. The other unit is required to comply by December 31, 2025.~~
 - b. ~~The requirement to meet the greenhouse gas emission performance standard does not apply if the Department of Ecology determines that a state or federal requirement requires the installation of selective catalytic reduction (SCR) for nitrogen oxides control on the coal units.~~

~~Additional information and analysis is available in the BART Determination Support Document for the Centralia Power Plant, by the Washington State Department of Ecology, November 2008 (revised April 2010 and May 2011); and the BART Analysis for the Centralia Power Plant, June 2008 and the BART Analysis Supplement, December 2008, and supplemental information dated March 2010; and Chapter 180, Laws of 2011.~~

YOU ARE ORDERED: To install and operate in accordance with the following conditions:

BART Emission Limitations

1. Nitrogen Oxides emissions

- 1.1. Emissions of nitrogen oxides from the two coal-fired utility steam generating units (known as BW21 and BW22) at the Centralia Power Plant are limited, from the date of issuance of this Order, to:
 - 1.1.1. 0.21 lb/MMBtu on the unit that does not have the Combustion Optimization System with Neural Network installed. This is a 30 operating day rolling average and includes all emissions during unit start-up and shut-down.
 - 1.1.2. 0.18 lb/MMBtu on the unit that does have the Combustion Optimization System with Neural Network. This is a 30 operating day rolling average and includes all emissions during unit start-up and shut-down.

1.1.3. 0.18 lb/MMBtu on the unit that continues coal fired power generation starting January 1, 2021.

1.2. The 30 day rolling average will be determined per Condition 5.

1.3. TransAlta may use a variety of means as necessary to control emissions of nitrogen oxides to meet the prescribed NOx limit for BW21 and BW22 including the Combustion Optimization System with Neural Network, the SNCR, Low NOx Burners, boiler control, variety (source) of coal, or any combination thereof. Compliance with the nitrogen oxides emission limitation will be determined by use of a continuous emission monitoring system meeting the requirements of 40 CFR Part 75.

2. Ammonia emissions

2.1. Starting no later than the effective date of this order, emissions of ammonia from the two coal-fired utility steam generating units at the Centralia Power Plant are limited to a maximum of:

2.1.1. 10 parts per million, dry volume (ppmdv). This is a 30 operating day rolling average of both units averaged together.

2.1.2. In the event that during a given day, only one unit is operated, the average of both units will be the calendar day average of the operating boiler. The emission rate of zero for the unit that did not operate must not be included in calculating the average emissions.

2.2. The injection rate of urea (as the source of ammonia) to meet the nitrogen oxides emission in Section 1.1.1 and 1.1.2 is solely determined by TransAlta.

Schedule for Compliance

3. Coal units BW21 and BW22 will permanently cease coal-fired power generation operations as follows:

3.1. One of the units must cease no later than December 31, 2020.

3.2. The other unit must cease no later than December 31, 2025.

3.3. The unit that continues coal-fired power generation operations starting January 1, 2021, must comply with section 1.1.3.

3.4. Conditions 3.1 and 3.2 do not apply in the event the Department of Ecology determines as a requirement of state or federal law or regulation that the selective catalytic reduction technology must be installed on either coal fired unit.

[First amendment of the December 23, 2011, Memorandum of Agreement between the State of Washington and TransAlta Centralia Generation LLC, dated July 13, 2017.]

Monitoring and Recordkeeping Requirements

4. Ammonia

TransAlta is required to meet the nitrogen oxides emission limits of 1.1.1 and 1.1.2. Ammonia monitoring is only required when urea injection is used to meet those limits. The entirety of Section 4 applies in any calendar year (CY) in which urea injection is used by TransAlta to meet the emission limits of 1.1.1 or 1.1.2. TransAlta is not required to perform any of the monitoring and recordkeeping requirements in Section 4 if urea is not injected in the CY.

4.1. Ammonia emissions for compliance will be monitored by means of periodic emissions testing utilizing Bay Area Air Quality Management District (BAAQMD) Method ST1B or Environmental Protection Agency Conditional Test Method 027 (CTM-027). The sampling point will be in the stack following the wet scrubber. Stack testing shall occur on the following frequency:

- 4.1.1. Testing shall occur once each calendar year if the ammonia feed-rate exceeds 1.5 gpm during that calendar year. Testing will be performed while the SNCR is in operation and the feed-rate is above 1.5 gpm during testing, with no consecutive tests less than 80 or more than 110 calendar days apart.
- 4.1.2. If two consecutive tests are each more than the ammonia limitation (in 2.1.1), then the testing frequency decreases to once every six calendar months, provided the nitrogen oxides emission limit is complied with during the test.
- 4.1.3. If, after there are three consecutive tests less than the ammonia limitation, the next two consecutive tests are less than 50% of the ammonia emission limitation, then the testing frequency reduces to once annually, provided the nitrogen oxides emission limit is complied with during the tests.
- 4.1.4. The ammonia concentration measured during the periodic emissions testing is the 30 operating day rolling average value used for compliance starting on the date of the completion of the test until the completion of the next required periodic emission test.

5. Nitrogen oxides monitoring and averaging

- 5.1. For any hour in which coal is combusted in a unit, the owner/operator of that unit shall calculate the hourly nitrogen oxides concentration in lb/MMBtu at the CEMS installed in accordance with the requirements of 40 CFR Part 75. The 30-day average lb/MMBtu rate is calculated by summing the hourly emissions in pounds (unit lb/MMBtu multiplied

by unit heat input) from that operating unit and dividing that by the sum of the hourly heat inputs in million Btu for that operating unit. At the end of that boiler's operating day, the owner/operator shall calculate and record a new 30-day rolling average emission rate in lb/MMBtu from all valid hourly data for that boiler's operating day and the previous 29 successive boiler operating days.

- 5.2. An hourly average nitrogen oxides emission rate is valid only if the minimum number of data points, as specified in 40 CFR Part 75, is acquired as necessary to calculate nitrogen oxides emissions and heat rate.
- 5.3. Data reported to meet the requirements of this section shall not include data substituted using the missing data substitution procedures of subpart D of 40 CFR part 75, nor shall the data have been bias adjusted according to the procedures of 40 CFR part 75.
- 5.4. A boiler operating day is a 24-hour period between 12 midnight and the following midnight during which coal is combusted at any time in the boiler. It is not necessary for coal to be combusted for the entire 24-hour period.

Reporting Requirements

6. A letter reporting achievement of each compliance date in the schedule in Condition 3 must be submitted to the Washington State Governor, Ecology, and SWCAA within 30 days of achieving the milestone.
7. A letter reporting TransAlta used urea injection must be sent to Ecology and SWCAA within 30 days of the first urea injection occurring during each calendar year. The letter must contain, at a minimum, the dates of urea injection, urea concentration, and the urea injection rate. No letter is required for any calendar year in which no urea injection occurred.
8. Emissions above the emission limitations in this order due to malfunctions must, at a minimum, be documented in writing and submitted to SWCAA and Ecology with 30 days after the end of each calendar quarter. Additional recordkeeping and notifications related to excess emissions may also be required by SWCAA or Ecology regulation. Excess emissions that TransAlta believes are unavoidable must be documented as required in WAC 173-400-107 (or section 109 after that section is approved into the Washington SIP) and SWCAA's unavoidable excess emissions requirements.
9. Emission monitoring data will be reported to Ecology and to the SWCAA.
 - 9.1. Continuous emission monitoring reports will be submitted within 30 days after the end of each calendar quarter. The reports must contain the following information:

- 9.1.1. The 30 operating day rolling average pound nitrogen oxides/MMBtu for each operating day in the reporting period. The 30 day rolling average nitrogen oxides emission rate shall be reported as lb/MMBtu, with at least two significant figures;
- 9.1.2. The cumulative short tons of nitrogen oxides per unit and for both units combined that has been emitted during the current calendar year. The cumulative tons shall be rounded to the nearest ton;
- 9.1.3. The results of Section 4 testing for ammonia emissions, if they are required, shall be submitted within 45 days of completion of the test.

9.2. The emission monitoring report will be sent to SWCAA and Ecology electronically in a format acceptable to SWCAA.

~~Failure to comply with this Order may result in the issuance of civil penalties or other actions, whether administrative or judicial, to enforce the terms of this Order. Ecology shall enforce the terms of this Order only until such time as SWCAA incorporates the terms of the Order into the Centralia Power Plant's Air Operating Permit or except as provided by RCW 70.94.785.~~

~~You have a right to appeal this Order. To appeal you must:~~

- ~~• File your appeal with the Pollution Control Hearing Board within 30 days of the "date of receipt" of this document. Filing means actual receipt by the Board during regular office hours.~~
- ~~• Serve your appeal on the Department of Ecology within 30 days of the "date of receipt" of this document. Service may be accomplished by any of the procedures identified in WAC 371-08-305(10). "Date of receipt" is defined at RCW 43.21B.001(2).~~

~~If you appeal you must:~~

- ~~• Include a copy of this document with your Notice of Appeal.~~
- ~~• Serve and file your appeal in paper form; electronic copies are not accepted.~~

~~To file your appeal with the Pollution Control Hearing Board:~~

~~Mail appeal to:~~

~~The Pollution Control
Hearings Board
PO Box 40903
Olympia, WA 98504-0903~~

~~OR~~

~~Deliver your appeal in
person to:~~

~~The Pollution Control
Hearings Board
1111 Israel Rd. SW, STE
301
Tumwater, WA 98501~~

~~To serve your appeal on the Department of Ecology:~~

~~Mail appeal to:~~

~~Department of Ecology
Appeals Coordinator
PO Box 47608
Olympia, WA 98504-7608~~

~~OR~~

~~Deliver your appeal in
person to:~~

~~Department of Ecology
Appeals Coordinator
300 Desmond Drive SE
Lacey, WA 98503~~

~~And send a copy of your appeal packet to:~~

~~Philip Gent
Department of Ecology
Air Quality Program
PO Box 47600
Olympia, WA 98504-7600~~

~~For additional information, go to the Environmental Hearings Office website at
<http://www.eho.wa.gov>.~~

~~To find laws and agency rules, go to the Washington State Legislature website at
<http://www1.leg.wa.gov/CodeReviser>.~~

~~Your appeal alone will not stay the effectiveness of this Order. Stay requests must be submitted
in accordance with RCW 43.21B.320. These procedures are consistent with Chapter 43.21B
RCW.~~

DATED this 29th day of July, 2020 at Olympia, Washington.



Martha Hankins
Manager, Policy and Planning Section
Department of Ecology
Air Quality Program