



Puget Sound Clean Air Agency

Notice of
Construction No.

12564

Clean Air Agency

HEREBY ISSUES AN ORDER OF APPROVAL
TO CONSTRUCT, INSTALL, OR ESTABLISH

Registration No. 21147
Date

Two Cleaver Brooks D-Type Industrial Water-Tube boilers each with 30,000 pounds per hour capacity at an approximately 36.5 MMBtu/hr heat input and two Cleaver Brooks D-Type Industrial Water-Tube boilers each with 80,000 pounds per hour capacity at an approximately 96.9 MMBtu/hr heat input. The steam boilers will normally fire on natural gas with ultra-low sulfur diesel back-up. All boilers are equipped with flue gas recirculation, oxygen trim and low-NOx burners. The boilers will be located in Building 3-150.

OWNER

Boeing Commercial Airplane Seattle
PO Box 3707, MC 6X2-06
Seattle, WA 98124

INSTALLATION ADDRESS

Boeing Commercial Airplane Seattle
7700 E Marginal Wy S
Seattle, WA 98108

THIS ORDER IS ISSUED SUBJECT TO THE FOLLOWING RESTRICTIONS AND CONDITIONS

1. Approval is hereby granted as provided in Article 6 of Regulation I of the Puget Sound Clean Air Agency to the applicant to install or establish the equipment, device or process described hereon at the INSTALLATION ADDRESS in accordance with the plans and specifications on file in the Engineering Division of the Puget Sound Clean Air Agency.
2. This approval does not relieve the applicant or owner of any requirement of any other governmental agency.
3. These boilers are subject to the applicable requirements established in 40 CFR Part 60, Subparts A and Dc, and 40 CFR Part 63, Subparts A and DDDDD.

Operational Requirements:

4. The boilers must only fire on natural gas except during times of gas curtailment by the gas supplier or for periodic testing, maintenance, or operator training or maintenance. Periodic testing, maintenance or operator training on fuel oil shall not exceed a combined total of 48 hours during any calendar year and 8 hours during any 24-hr period for each boiler, and only one boiler permitted under this Order may operate on fuel oil during period testing, maintenance or operating training.
5. The boilers may only burn fuel oil that has a maximum sulfur content of 15 ppm by weight. A fuel certification from the fuel supplier may be used to demonstrate compliance with this requirement.

Emission Limits:

6. The exhaust concentration of nitrogen oxides (NO_x) from each boiler must not exceed 9 ppm when fired on natural gas, or 35 ppm when fired on fuel oil, on a dry, volumetric basis corrected to 3% O₂, as measured by the average of three 60-minute tests using EPA Methods 7E and 3A.
7. The exhaust concentration of carbon monoxide (CO) from each boiler must not exceed 50 ppm when fired on natural gas or fuel oil, on a dry, volumetric basis corrected to 3% O₂, as measured by the average of three 60-minute tests using EPA Methods 10 and 3A.
8. When fired on natural gas, there shall be no visible emissions other than steam from the boiler.
9. When fired on fuel oil, except during periods of startup and shutdown, the opacity of the emissions shall not exceed 5% for a period or periods aggregating more than 3 minutes in any 1 hour, as determined by

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Ecology Method 9A. During periods of startup and shutdown when firing on fuel oil, the opacity of the emissions shall not exceed 20% for a period or periods aggregating more than 3 minutes in any 1 hour, as determined by Ecology Method 9A.

Compliance Demonstrations:

10. Initial compliance with Condition Nos. 6 and 7 must be demonstrated by conducting a compliance test on each boiler when firing on natural gas and fuel oil within 90 days of start-up of that boiler in accordance with Section 3.07 of PSCAA Regulation I.
11. Ongoing compliance for the two 30,000 pounds per hour capacity boilers must be demonstrated by conducting compliance tests on each boiler when firing on natural gas and fuel oil within 37 months of the previous compliance test.
12. Ongoing compliance for the two 80,000 pounds per hour capacity boilers must be demonstrated by conducting compliance tests on each boiler when firing on fuel oil within 37 months of the previous compliance test.
13. Ongoing compliance for the two 80,000 pounds per hour capacity boilers must be demonstrated by conducting a compliance test on each boiler annually when firing on natural gas. Each test must be completed within 13 months of the previous compliance test. If results from the three previous compliance tests for a boiler demonstrate that emissions are at or below 80 percent of the emission limit, and if there are no changes in the operation of the individual boiler, the owner or operator may choose to conduct biennial performance tests for that boiler (within 25 months of the previous compliance test). If a compliance test for a boiler shows emissions exceeded 80 percent of the emission limit, the owner or operator must conduct annual performance tests until all tests over a consecutive 3-year period meet the required level at or below 80 percent of the emission limit.
14. Compliance tests must be conducted using EPA Methods 1, 3A, 4, 7E and 10 from Appendix A of 40 CFR Part 60. Compliance testing must consist of at least three separate 60-min test runs when firing on natural gas and three separate 60-min test runs when firing on fuel oil.
15. Compliance testing must be conducted at 90% or higher of the boiler's maximum operational firing rate. The maximum firing rate is set by performance test and can be less than the maximum rated capacity.
16. If a boiler is out of service when the compliance test is required, the owner or operator must conduct the compliance test within 30 days after repairs are completed and the boiler is recertified for operation.
17. Compliance with Condition No. 8 and 9 must at a minimum be demonstrated by inspecting each boiler's stack for visible emissions once each week when the boiler is in operation while firing on natural gas and during each test run when conducting compliance testing on the boiler when firing on natural gas and oil. These inspections must be performed during daylight hours when the boiler is in operation. If a boiler does not operate during a week, then a weekly inspection is not required for that boiler.

Recordkeeping Requirements

18. All records required by this Order of Approval must be maintained for at least five years.
19. The following records must be kept onsite and up-to-date, and be made readily available to Agency personnel upon request:
 - a. Compliance test results.
 - b. Visible emissions inspection results required by Condition No. 17 including the date and time of the observation, the operation status of the boiler, whether visible emissions were observed, and any corrective action or mitigation measure to eliminate the visible emissions.
 - c. Certified opacity reading results.

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- d. Records of the dates when fuel oil was burned and the reasons for burning fuel oil.
- e. Records of the sulfur content of the fuel oil from each supplier. Each record must have the following information:
 - i. The name of the fuel oil supplier, and
 - ii. Documentation from the oil supplier that the fuel oil complies with the specifications of ultra-low sulfur diesel.

APPEAL RIGHTS

Pursuant to Puget Sound Clean Air Agency's Regulation I, Section 3.17 and RCW 43.21B.310, this Order may be appealed to the Pollution Control Hearings Board (PCHB). To appeal to the PCHB, a written notice of appeal must be filed with the PCHB and a copy served upon Puget Sound Clean Air Agency within 30 days of the date the applicant receives this Order.

Maggie Corbin
Reviewing Engineer

John Dawson
Engineering Manager