



Puget Sound Clean Air Agency

Notice of Construction No. 11681

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

Registration No. 11339

Date **APR 08 2019**

Replace main kiln baghouse with a Dustex 10-module pulse jet baghouse with rated flow rate of 185,000 ACFM and incorporate previously approved existing equipment (previous NOC7381 consisting of one dry process 92-ton/hour (2200 ton/day, 750,000 ton/year) coal-fired Cement Plant including the following existing equipment:

- a. systems 216, 311-Limestone Reclaim, 312-Clay/Shale Reclaim, 314-Iron Reclaim, 41A-Coal Silo, 315-Raw Mill Feed, 316-Raw Mill, 317-Transport to Blending, 411-Feed Blending and Storage (Dry), 416-Kiln #1 tube, 41B-Raw Coal Bin and Feed and Coal Mill, 41C-Coal Mill and firing equipment, and 419-Clinker Conveying, with 24 Baghouses of various sizes (1990); and
- b. two 60-ton/hour Finish Mill High Efficiency Separators with two 77,000 cfm Baghouses (515.BF2, 525.BF2) (1995);

APPLICANT

OWNER

Ash Grove Cement Company
3801 E Marginal Way S
Seattle, WA 98134

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3801 E Marginal Way S
Seattle, WA 98134

INSTALLATION ADDRESS

Ash Grove Cement Company , 3801 E Marginal Way S, Seattle, WA 98134-1113

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.

Specific Conditions:

3. This source is subject to Subpart A, F, and Y of 40 CFR Part 60 and Subpart LLL of 40 CFR Part 63.
4. PM-10 emissions from each baghouse, except the main kiln baghouse, shall not exceed 0.005 grains/dscf over a 24-hour period. Ash Grove may demonstrate compliance with this condition by any of the following:
 - a. Performing a Puget Sound Clean Air Agency-approved source test according to EPA Method 5 or EPA Method 201A;
 - b. Demonstrating no visible emissions for 15 consecutive seconds;

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- c. Demonstrating no visible emissions for three consecutive minutes; or
- d. Repairing within 24 hours, any baghouse that has visible emissions for more than three consecutive minutes.

Compliance shall be determined for visible emissions using EPA Method 22. The Puget Sound Clean Air Agency may require a source test for any baghouse that has sustained visible emissions, unless such emissions are unavoidable under WAC 173-400-107.

- 5. Except during startup and shutdown of the kiln, scheduled maintenance and for emissions considered unavoidable under WAC 173-400-107, emissions from the main baghouse shall not exceed the most stringent of PSD limits or the following limits:
 - a. Carbon monoxide (CO) emissions shall not exceed 1049 ppm (parts per million) corrected to 10% oxygen (O₂) for an 8-hour average, and CO shall not exceed 2353 tons per year;
 - b. Nitrogen oxides (NO_x) emissions shall not exceed 650 ppm corrected to 10% O₂ as a 24-hour rolling average, and NO_x emissions shall not exceed 1846 tons as a 12-month running total; and if the NO_x emissions exceed 1400 tons as a 12-month running total, Ash Grove shall notify the Puget Sound Clean Air Agency (Attn: Facility Submittal) describing actions that will be implemented to assure compliance with the annual NO_x limit.
 - c. Sulfur dioxide (SO₂) emissions shall not exceed 180 ppm corrected to 10% O₂ for a one-hr average, and 176 tpy;
 - d. Particulate matter (PM) emissions shall not exceed 10.6 pounds per hour, and 46 tpy.
- 6. Particulate matter (PM) emissions shall not exceed 0.07 lb/ton clinker on a 30-day rolling average.
- 7. To determine continuous compliance, Ash Grove must record the PM CPMS output data for all periods of Kiln Operation when the PM CPMS is not out-of-control. Ash Grove must demonstrate continuous compliance by using all quality-assured hourly average data collected by the PM CPMS for all operating hours to calculate the arithmetic average operating parameter in units of the operating limit (e.g., milliamps, PM concentration, raw 1 data signal) on a 30 operating day rolling average basis, updated at the end of each new kiln operating day. Use the following equation to determine the 30 kiln operating day average.

$$30\text{kiln operating day} = \frac{\sum_{i=1}^n Hpv_i}{n}$$

where: Hpv_i = The hourly parameter value for hour i; n is the number of valid hourly parameter values collected over 30 kiln operating days.

- 8. During startup and shutdown of the kiln, and during scheduled maintenance on the main kiln baghouse, all of the emission limits stated in Condition No. 5 apply, except that emissions from the main kiln stack shall not exceed the following limits.
 - a. During the kiln startup-preheating period prior to kiln feed introduction, the SO₂ emission limit for the main kiln stack shall consist of compliance with the following work practices and fuel restrictions:
 - i. Only natural gas shall be used as fuel and the facility must comply with the start-up and shutdown requirements outlined in 40 CFR Part 63.1346 (g), and

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- ii. Sulfur rings shall be removed from the kiln prior to startup, if sulfur ring formation had required the kiln to be shut down.
 - b. During the kiln startup-feed introduction period, SO₂ emissions from the main kiln stack shall not exceed 200 ppm corrected to 10% O₂ for a one-hr average.
9. Any shutdown of the kiln shall follow the normal rotation and cool down procedures and remove of as much material from the kiln as possible without damaging system components.
10. Ash Grove shall log as part of the Operations and Maintenance Plan and report to the Puget Sound Clean Air Agency as part of the monthly Continuous Emission Monitoring Report:
 - a. The date, start and end times, and the fuel used for kiln startup-preheating periods prior to feed introduction;
 - b. The sulfur ring removal from the kiln, if the ring formation required the kiln to be shut down;
 - c. The date, start and end times for kiln startup-feed introduction periods; and
 - d. The cause for kiln shut down, the duration of kiln cool down and the kiln rotation schedule in kiln cool down.
11. Ash Grove shall monitor and report CO, NO_x, SO₂, and opacity emissions from the main kiln baghouse according to Article 12 of Regulation I. SO₂ emissions from the main stack shall be monitored at all times following the introduction of feed to the kiln.
12. Ash Grove shall monitor and report PM emissions from the main kiln baghouse according to Regulation I Article 12.03 (d), 12.03 (e), and 12.03 (f)(1-3).

Main Kiln Baghouse Operation and Maintenance

13. Main kiln baghouse shall be operated continuously while the kiln is in operation.
14. The differential pressures across the baghouse shall be maintained according to the manufacturer's recommended design minimum and maximum differential pressure. The established manufacturer's design minimum and maximum differential pressures must be clearly marked nearby the monitoring interfaces of the baghouse.
15. Records of all baghouse inspections, corrective actions, and logs shall be maintained for at least five years and made available to Puget Sound Clean Air Agency personnel upon request.
16. This Order of Approval No. 11681 cancels and supersedes Order of Approval 7381, dated 6/6/2001 on startup of the baghouse approved under this Order.

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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.



Sara Conley
Reviewing Engineer



Carole Cenci
Compliance Manager