Statement of Basis for
Ash Grove Cement Company, Inc.
AOP 11339 Renewal
<issuance date TBD>

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1 Applicant

The applicant for this project is Ash Grove Cement Company, Inc.

The applicant's Primary Responsible Official's name and contact information are:

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The applicant's Site Contact's name, phone number and email address are:
Mr. Allen Block – Seattle Plant Environmental Manager
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2 Facility Location

The applicant owns and operates the existing Ash Grove Cement Company – Seattle Plant, which is located in King County at 3801 E Marginal Way South, Seattle, Washington.

Arial View of Ash Grove Cement's Seattle Plant - 2025

3 Purpose of this Statement of Basis

This document summarizes the legal and factual bases for the draft permit conditions in the Ash Grove Cement Company, Inc. (hereafter known as "Ash Grove" or "Permittee") air operating permit to be

issued under the authority of the Washington Clean Air Act, Chapter 70.94 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 Ash Grove's emissions to the atmosphere. In addition, this Statement of Basis provides a description of Ash Grove's activities and a compliance history.

4 Why Ash Grove is an Air Operating Permit Source

The Permittee is subject to the requirement to obtain an air operating permit because it is a "major source" as defined in Title V of the federal Clean Air Act (CAA) Amendments of 1990 and its implementing regulations, 40 CFR Part 70 and Chapter 173-401 WAC. A major source has the potential to emit more than 100 tons per year of any pollutant subject to regulation (CO, SO_2, NO_X, VOC, particulate matter, etc.), 10 tons per year or more of any single hazardous air pollutant (HAP) listed in Section 112(b) of the federal Clean Air Act (such as hydrochloric acid), or 25 tons per year or more of any combination of HAPs.

This source emits more than 100 tons per year of NO_X and CO (see Table 2: Pollutant Emission Inventory Summary in Section 8, below) and has the potential to emit more than 100 tpy of SO_2 when firing coal, and therefore is a major source for purposes of the Title V program. Additionally, the Permittee is subject to Title V permitting requirements per Title 40 of the Code of the Federal Regulations, Part 63, Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry (40 CFR 63.1340(d)) which applies to all new and existing portland cement plants.

Based on the potential to emit levels of NSR regulated pollutants greater than 100 tons per year and the fact that portland cement plants are on the list of 28 source categories, this facility is a "Major Stationary Source" under the Prevention of Significant Deterioration regulations as defined by 40 CFR 52.21.

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5 Source Description

Ash Grove is a major portland cement manufacturing plant.

Ash Grove, located in the Duwamish industrial area of Seattle, King County, Washington, consists of a single dry kiln with a pre-calcining tower for portland cement manufacturing. This kiln was approved for installation and installed in 1990. It has a capacity to process 92 tons per hour (2,200 tons per day and approximately 750,000 tons per year) of type I, II, III clinker.

Portland cement is the principal ingredient in concrete, which is used worldwide as the main building block of infrastructure construction as well as for commercial and residential structures. Portland cement manufacturing is an energy intensive process in which cement is made by grinding and heating a mixture of raw materials such as limestone, clay, sand, and iron ore in a rotary kiln. The kiln is a large furnace that is typically fueled by coal, oil, gas, coke and/or various waste materials. The product (called clinker) from the kiln is cooled, ground, and then mixed with a small amount of gypsum to produce portland cement.

RAW MATERIALS

About 168 tons/hr of raw materials are ground in the raw mill grinder and transferred to the raw mill silos. The ground raw materials are pneumatically conveyed from the storage silos to the pre-calcining tower. The raw materials include limestone, sand, clay, iron ore, iron bearing byproducts, aluminum silicates, natural gravel, fly ash, lime, gypsum, and industrial byproducts containing calcium, silica, iron, and alumna, such as bottom ash, slag and gypsum board. In general, feed stocks containing high concentrations of alkali, organic materials, and metals are avoided. No material regulated as

hazardous waste under the Resource Conservation and Recovery Act (RCRA) or as a toxic substance regulated under the Toxic Substances Control Act (TSCA) is accepted as a feed material.

FUELS

Fuels currently burned in the kiln include natural gas and whole tires. The kiln is also permitted to combust coal and a small amount of internally generated waste lubricating oils and greases. Coal and waste oils have not been combusted since 2016 and Ash Grove has no immediate plans to do so again. However, Ash Grove retains the ability to fire these fuels; therefore, the requirements for coal processing, handling and firing are included in this AOP renewal. The current fuel mixture is roughly 85% natural gas and 15% whole tires, on a heat input percentage basis, or approximately 72% natural gas and 28% tires, on a mass basis. The fuel usage rate is defined by slurry chemistry, fuel availability, and production rate. The nominal heat for clinker production is approximately 4.3×10^6 Btu per ton (Btu/ton). Fuels burned in the kiln provide about 396×10^6 Btu/hr. This results in a current clinker production rate of about 2,100 tons per day compared to the permitted rate of 2,200 tons per day..

PRE-CALCINER TOWER

The pre-calciner tower system is a 5-stage suspension preheater in which, in addition to the kiln flame, extra fuel is burned in the base of the preheater. This system allows more thermal processing to be accomplished efficiently in the preheater.

KILN

Clinker is manufactured at this site in a large rotary kiln approximately 500 feet long and approximately 15 feet in diameter, with nine planetary cooler tubes attached around its lower diameter end. The existing kiln and associated equipment was constructed in 1990 on the plant site of the former Lone Star Cement Company, which was previously constructed before 1970. At the time of the new plant construction in 1990, Ash Grove used some of the remaining Lone Star equipment and air pollution control systems.

The rotating kiln is a dry process kiln with a slightly inclined angle to allow pre-calcined raw materials from the pre-calciner tower to be introduced into the upper end of the kiln and move downward toward the lower heated end as the kiln rotates. The burners are located in the slightly lower end of the kiln. Heat from burning various fuels provides the heat to finish the calcining process in the higher temperature end of the kiln. The raw material introduced into the kiln contains limestone ($CaCO_3$) which decarbonates or calcines (CO_2 is driven off) to lime (CaO). Further heating of the materials traveling down the kiln allows calcium in the lime to fuse with alumina and iron which initiates the inclusion of silica into the chemical process. The reaction with silica is an exothermic reaction initiated by intense heat (>2500°F). The production of the various compounds of calcium silicates $(CaSiO_2)_n$ is called clinker burning. The melted calcium silicates form a viscous semi-liquid material at these higher temperatures where it forms small balls called clinker, as it slides downward along the inclined rotating kiln. This kiln is rated at 92 tons per hour of clinker. The clinker transfers to the planetary coolers and is sent by elevator to the G-Cooler. The cooled clinker is conveyed for storage in the clinker silos and then to the Clinker Cooler Grinder building where it becomes ground with the addition of gypsum, limestone and fly ash to produce portland cement.

MAIN STACK

The kiln exhausts from its upper end in the same area where preheated materials are received from the preheater/pre-calciner tower. The exhaust flows up through the 5-stage preheater tower as raw materials cascade down towards the kiln. The exhaust from the kiln preheats and starts the process of converting the raw materials in the preheat tower. The exhaust ducts back down to ground level where it either routes through the raw mill grinder or is ducted directly to the main baghouse. The exhaust from the main baghouse is sent to the main stack on the side of the preheater tower that is about 250 feet high. Dry gas scrubbing of the exhaust is used at several locations in the exhaust stream.

The main stack is continuously monitored for opacity, SO_2, NO_X, CO, oxygen, temperature and stack flow rate, PM (CPMS), Hg, total hydrocarbons (THC), and baghouse inlet temperature. Typical stack

emissions are about 2 to 4% opacity, about 100 ppm (20 to 30 lb/hr) SO_2, 300 to 400 ppm (300 lb/hr) NO_X, about 500 to 800 ppm (250 lbs/hr) CO, about 7% oxygen, stack temperature of 350 ºF and stack flow of about 170,000 to 180,000 cubic feet per minute.

FINISHED PRODUCT
The clinker is processed in the ball mills with gypsum to form cement at about 60 tons per hour and sent to the cement silos for storage. Cement can be shipped by truck, rail or barge.
Each of the (2) Mill Sweep Baghouses in the Finish Mill operate at 20,000 cfm and each of the (2) High Efficiency Separator baghouses operate at 77,000 cfm.

OTHER PROCESS CONTROL BAGHOUSES
There are more than 60 fabric filter baghouses including the larger baghouses mentioned that control emissions plant-wide for the cement manufacturing operations. All the baghouses except the main baghouse have a particulate emission standard of 0.005 gr/dscf averaged for a 24 hour period.

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6 Permitting History

6.1 New Source Review Permitting for the Facility

A summary of the active new source review permitting at the facility is provided below.

Active NOC's:

NC #	Approval Date	Evaluation Date	Purpose
5006	7/8/1993	3/29/1994	Addition of a Dry Sorbent Silo (90 tons), venting to a Day 16PJF6 Baghouse @ 750 cfm. Currently Inactive
5276	1/19/1994	7/30/1997	Two Baghouses at 20,000 acfm each connected to the Finish Mill Grinding System.
5338	3/5/1994	3/2/1995	One 150 ton Fly Ash Storage Silo with a 750 cfm Fabric Filter, and a pneumatic conveyor.
5351	3/15/1994	3/2/1995	One DCL FS-175 Baghouse at 1,000 cfm for Rail Car Loading.
5687	1/11/1995	10/31/2006	Waste Derived Fuels: Ash Grove Cement Kiln (rated at 92 ton/hr) burning waste derived fuels injected at the calciner level of preheater at feed end of kiln during normal operations.
5755	3/30/1995	7/30/1997	Tire Derived Fuel: One AGC-Seattle Whole Tire Feed System for injecting whole tires as replacement fuel at the Calciner level of the Preheater Tower above the Kiln, which is controlled by an existing Baghouse. Replaced by 12003.
6644	10/18/1996	10/31/2006	Spray Water for Dust Control: Barge Unloading, Transfer and Stockpiling of Solid Raw Materials and Fuels used in the manufacture of Portland cement including the use of Water Sprays to control dust at two locations along the existing Conveyor System at the discharge ends of each conveyor and as necessary at Transfer Towers #1OA and #11. (Superseded and canceled NOC #'s 2399 and 5696)

NC #	Approval Date	Evaluation Date	Purpose
7242	1/6/1998	2/5/1999	One 45,000-ton East Cement Storage Dome with a Pneumatic Material Transport System controlled by an Alanco Baghouse rated at 6,000 acfm, and one Alanco Baghouse rated at 6,000 acfm on the Steel Scale Tank (obsolete) (replaces Baghouse 920.070). 1st cement dome to replace old silos
8318	1/8/2001	1/8/2001	One NBE/2000-3940 Bulk Loading Station with emissions controlled by a 6BR40PPB-RC Pulse Jet Fabric Filter Collector rated at 500 cfm. The agency was informed this equipment was removed. While onsite to observe a RATA on November 25, 2025, Carl Slimp observed that the bulk bag equipment was removed. Bulk bags are now filled underneath the Group II silo, currently permitted under NOC 10695. In an email dated the next day on 11/26/2025, Allen Block confirmed that this was controlled by baghouses 611.BF1 or 611.BF2. This permit was marked as inactive by the Agency on 12/2/2025.
8415	3/20/2001	10/31/2006	Fuller FK Material Pump and Ramsey Horizontal Rotary Gravimetric Metering System controlled by an existing Fly Ash Storage Silo 750 cfm baghouse (NOC 5338).
8600	2/8/2002	10/31/2006	One Pulse Jet R-08-88-81 Baghouse rated at 20,000 cfm to control dust emissions from the Clinker Storage Shed during clinker transfer.
8643	3/21/2002	10/31/2006	Two Pulse Jet Dust Collector Conversions (64 Filters @ 41.5"x6.13" each, @2.26 cfm/ft2) and Fans rated at 4200 CFM each to convert existing Sly Dust Collectors on Group II Cement Silos.
9578	2/13/2007	1/8/2008	Limestone Conveyor Belt #311.BC4 at Tower TT3/4 controlled by existing 4,800 cfm Baghouse (#311.BF2, and Limestone Bucket Elevator at the 331 Tower controlled by existing 10,600 cfm Baghouse #331.BF4.
9711	1/2/2008	9/10/2015	One (2nd) 45,000-ton West Cement Storage Dome with a pneumatic conveyor controlled by a Baghouse rated at 6,000 acfm (replaces BH 920.070). (Included removal of bulk bag loading station and removed old silos)
9769	2/12/2008	10/7/2008	Replacement of clinker/gypsum conveyor (511.BC5).
10695	2/4/2014	9/10/2015	Substantial alteration of Group II silo baghouses 611.BF1 (truck loadout) and 611.BF2 (rail loadout) to decrease fugitive emissions. This is to be

NC #	Approval Date	Evaluation Date	Purpose
			accomplished by changing the fan motor drive ratios to increase airflows from 1,770 cfm to 3,350 cfm and by changing from fabric to pleated cartridge filters.
10742	5/22/2014	9/10/2015	Pneumatic conveying system for shuttling clinker dust (CKD) from the main baghouse to the finish mills, including the installation of a 300-ton CKD storage silo controlled by a FLS Model 64TA I0FM baghouse and a FLS Model 25TA I0FM baghouse for the existing 25-ton fringe bin (located in the finish mill building). This permit authorizes a change to the make and model of baghouses previously permitted to be installed under Order of Approval No. 10482. Canceled and Replaced NOC 10482
10825	1/28/2016	6/18/2019	GENERALREGULATORYORDER Ash Grove Cement (Ash Grove) shall comply with emission limits pursuant to Consent Decree (CD) Civil Action Case No. 2:13-cv-02299-JTM-DJW. District of Kansas, entered on August 14, 2013, as incorporated into this Order.
11436	11/14/2017	6/18/2019	One MB America model BF 120.4 S2 crusher bucket rated at 65 yd^3/hr for crushing of kiln refractory brick, kiln coating (clinker), and raw mill rejects (oversize limestone or gypsum), and finish mill (oversize clinker) rejects.
11436	11/14/2017	6/18/2019	One MB America model BF 120.4 S2 crusher bucket rated at 65 yd3/hr for crushing of kiln refractory brick, kiln coating (clinker), and raw mill rejects (oversize limestone or gypsum), and finish mill (oversize clinker) rejects.

NC #	Approval Date	Evaluation Date	Purpose
11681	4/8/2019	6/18/2019	Canceled and replaced NOC 7381. 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 NOC 7381 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-Limestone Transfer Tower, 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) (circa 1995);
11983	4/29/2022	3/24/2023	Selective Non-Catalytic Reduction (SNCR) for NO_X control from the cement kiln. Incorporate the 30-Day Rolling Average Emission Limit for NO_X required by 2013 Global Consent Decree (GCD) into Federally Enforceable Permit Limit [GCD Global Consent Decree Civil Action Case No. 2:13-cv-02299-JTM-DJW. District of Kansas, entered on August 14, 2013 and terminated April 30, 2020]. Upon issuance, this permit canceled and superseded NOC 11091, issued June 23, 2016.
12003	12/5/2025		Amend limit on tire derived fuel consumption to determined rate established in fuel monitoring plan. Cancels and supersedes NOC 5755.

6.2 Regulatory Orders Issued to the Facility

A regulatory order was issued as NOC 10825 to the facility on 1/28/2016 to implement the requirements of Consent Decree (CD) Civil Action Case No. 2:13-cv-02299-JTM-DJW, District of Kansas, entered on August 14, 2013. This included new emissions limits for NO_X and SO_2.

6.3 Prevention of Significant Deterioration

Prevention of Significant Deterioration (PSD) permits are issued by the Washington Department of Ecology for projects at large facilities that may significantly increase air pollutant emissions of criteria pollutants. The PSD application process requires the applicant to conduct engineering evaluations and computer modeling to demonstrate the proposed project will meet air quality standards and will not cause any significant deterioration to air quality, particularly in designated Class I Areas, such as National Parks and Wilderness Areas.

This permit incorporates PSD-90-03, Amendment 3, which was issued subsequent to the issuance of the original AOP.

6.4 Operating Permit Issuance and Renewal

The original Air Operating Permit was issued May 15, 2004. Significant Modification 1 was issued 5/17/07. Administrative Amendment 1 was issued 7/13/07. Administrative Amendment 2 was issued 12/2/10. Administrative Amendment 3 was issued 12/23/13. Administrative Amendment 4 was issued 6/13/18. Administrative Amendment 5 was issued 12/20/22. And, Significant Modification 2 was issued as a draft on 11/4/24 to incorporate the conditions of NOC 12003 that allows an increase in the percentage of tires used as a fuel in the kiln. Final issuance is pending.

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7 Compliance History

The Ash Grove facility is inspected roughly annually by the Puget Sound Clean Air Agency. Onsite inspections for Ash Grove for the past 10 years were conducted on the following dates:

- March 5, 2024
- September 26, 2023
- March 24, 2023
- December 17, 2021
- September 21, 2021 (virtual inspection due to Covid-19)
- June 25, 2021 (virtual inspection due toCovid-19)
- August 19, 2020 (virtual inspection due to Covid-19)
- June 18, 2019
- September 11, 2018
- August 8, 2017
- June 15, 2016
- September 10, 2015

Over the past nine years, there has been one odor complaint filed with the Puget Sound Clean Air Agency naming Ash Grove as a potential source of the odor. On April 18, 2022, a complainant reported smelling a strong chemical burning smell. There have also been 6 complaints of visible emissions and 2 complaints of dust/fallout during this same time period.

The Agency has issued 18 Notices of Violation to Ash Grove during the five years previous to this year of permit renewal issuance, as listed in Table 1, below. This table is current as of March 2025, when the table was prepared; instances of non-compliance after that date are not included.

Table 1. Notices of Violations

NOV No.	Issue Date	Violation Date	Facts Alleged
3-A001436	11/4/24	9/19/24	Ash Grove Cement Company exceeded the applicable emission limits for CO on 9/19/2024 from 16:00 to 23:59. The 8-hour oxygen corrected CO was 1,301 ppm, exceeding the limit of 1,045 ppm. CO mass was 664 lb/hour exceeding the limit of 538 lb/hour.

NOV No.	Issue Date	Violation Date	Facts Alleged
3-A001376	9/24/24	11/15/23	Ash Grove Cement Company failed to recover valid hourly monitoring data for at least 95% of the hours that the kiln was operated in November 2023. The O_2 analyzer failed calibration on 11/15/23 and 11/22/23. On 11/15/23 it was determined that the O_2 analyzer was beyond repair and was replaced with a rental unit on 11/18/23. The rental unit also failed calibration. This rented analyzer failed in a similar matter to the 11/15/23 event. These failures resulted in valid hourly monitoring being recovered for the O_2 corrected channels for only 79% of operating hours for the month.
2-A000153	4/24/24	4/23/24	Ash Grove Cement Company submitted their compliance test notification to the Agency on April 5, 2024 for the source test to be conducted on April 24, 2024. This notification period was only 19 days and does not comply with the 21 day notification period - PSCAA Reg I, Section 3.07(b)
3-A001055	12/4/2023	9/26/2023	Ash Grove Cement Company exceeded their 8-hour carbon monoxide concentration limit of 1,045 ppm for the 8-hour block average (8:00 AM to 3:59 PM) on September 26, 2023. The average carbon monoxide concentration for that period was 1,084.5 ppm corrected to 10% O2, 3.8% above the limit.
3-A000954	11/13/2023	6/1/2023	The company failed to recover valid hourly monitoring data for at least 95% of the hours that the Kiln was operated in May 2023. The company reported this in the CEMS report for the month. On May 25th, the O_2 analyzer failed a calibration, which was eventually corrected. This invalidated the O_2 data from 00:00 to 19:59 on May 25th. Subsequently, this resulted in valid hourly monitoring being recovered for the O_2 Corrected channels for only 94% of operating hours for the month. This would effect the validity of NO_X, SO_2, and CO data.
3-A000950	11/13/2023	1/4/2023	The company failed to recover valid hourly monitoring data for at least 95% of the hours that the equipment is operated during each calendar month. The company reported the deviation in the January 2023 CEMS report. The facility experienced an O_2 analyzer malfunction which prevented valid monitoring data to be recovered for the NO_X, CO and SO_2 emissions. The analyzer malfunction caused O_2 measurements to be invalid which is used to determine emissions. This would also effect the mass flow rate values. On January 4th, there were emissions recorded that averaged 23% opacity from 10:18 to 10:24.
3-A000519	6/2/2022	11/9/2020	As reported in the November 2020 CEMS report, the company caused or allowed NO_X emissions to exceed 650 ppm at 10% O_2 as a 24-hour rolling average on November 9th, 2020 at 13:00 hrs. The average during this period was 651.3 ppm. The exceedance was caused by a large hole (4 ft. by 8 ft.) on the baghouse fan ducting leading to the kiln stack.

NOV No.	Issue Date	Violation Date	Facts Alleged
3-A000363	10/27/2021	5/31/2021	The company failed to include the cause of the failure of the Stack Flow monitor to recover valid hourly monitoring data for at least 90% of the hours that the kiln operated for one day in the April 2021 CEMS report.
3-A000362	10/27/2021	7/1/2021	The company failed to recover valid hourly monitoring data for at least 95% of the hours that the kiln was operated during the calendar month of June 2021 (excluding periods of monitoring system downtime). During June 2021, monitoring data for SO_2 (Corrected), CO (Corrected), and NO_X (Corrected) were recovered for 89% of the hours the kiln operated due to a failure to restock the company's vendor-managed calibration gas inventory.
3-A000361	10/27/2021	10/1/2021	The company failed to include the daily oil consumption in gallons for each day of the month in the August 2021 monthly CEM report filed with the Agency. A complete report with the daily oil consumption was due to be filed with the Agency by 9/30/2021.
3-010111	4/23/2020	12/31/2020	As reported in the December 2019 CEM report: The O_2, CO and NO_X monitors were not in operation at least 95% of the reportable hours for the month of December 2019, as required by AOP Section II.B.2.ii, which references Regulation I, Section 12.03(b).
3-010105	4/14/2020	9/30/2019	As reported in the September 2019 CEM report, the continuous emission monitoring system (CEMS) for SO_2, CO and NO for the kiln main stack data recover of valid hourly monitoring data was less than 95%, as required under AOP Section II.B.2.ii.
3-010462	4/9/2020	1/31/2017	Notice of Violation (NOV) 3-010462 cancels and replaces NOV 3-009311. Ash Grove Cement failed to submit the COMS audit results in the December 2016 monthly CEMS report (E-Report 529). The COMS audit results were due to be submitted to the Agency within 30 days after the end of the month. However, the Agency considers the matter closed and will take no further enforcement action.
3-010112	4/9/2020	12/17/2019	Per the Dec. 2019 Monthly CEMS Report received 1/30/19, Ash Grove reported an opacity exceedance for three- six-minute periods on Dec. 17, 2019. Two periods were from 05:00 to 05:11 hours and one from 10:18 to 10:23 hours. The exceedances are a violation of AOP 11339 Section I.,1., EU-1.2, which requires compliance with Puget Sound Clean Air Agency Reg. I: 9.04(c)(2).
3-010110	4/9/2020	12/17/2019	Per the Dec. 2019 Monthly CEMS Report received 1/30/19, Ash Grove reported an opacity exceedance for three- six-minute periods on Dec. 17, 2019. Two periods were from 05:00 to 05:11 hours and one from 10:18 to 10:23 hours. The exceedances are a violation of AOP 11339 Section I.1. EU-1.2, which requires compliance with Puget Sound Clean Air Agency Reg. I: 9.04(c)(2).

NOV No.	Issue Date	Violation Date	Facts Alleged
3-010104	3/17/2020	6/10/2019	As reported in the June 2019 CEM report, Ash Grove exceeded the 8-hour CO mass limit of 538 pounds on June 10th between 16:00 hrs. and 23:59 hrs. The average was 568 pounds.
3-010103	3/6/2020	1/28/2020	Per the January 2020 Monthly CEMS Report received 2/26/20, Ash Grove reported an opacity exceedance for one six-minute period on January 28, 2020 from 3:36 PM to 3:41 PM. The exceedance is a violation of AOP 11339 Section I B.1. EU-1.2, which requires compliance with Puget Sound Clean Air Agency Reg. I: 9.04(c)(2).
3-010102	3/6/2020	1/13/2020	Per the January 2020 Monthly CEMS Report received 2/26/20, Ash Grove reported an exceedance of their 8-hour CO limit between 8AM and 4PM on January 13, 2020.

The facility is required to perform periodic stack testing and/or CEMS RATA's on the kiln exhaust stack for the following pollutants: NO_X, CO, SO_2, Hg, THC (organic HAP), dioxin and furan (D/F), and PM.

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8 Potential to Emit and Actual Emissions Inventory

Emission inventories are estimates of actual emissions from the facility developed by the permittee and submitted to the Agency annually. Emissions from this facility are primarily emitted from the main kiln stack and consist mainly of criteria pollutants (NO_X, SO_2, CO, VOC and PM), along with some hazardous air pollutants and toxic air contaminants. Table 2 below shows the actual emissions reported by the facility for the most recent five reporting years. Per PSCAA Regulation 1, Article 7.09, actual emissions of criteria pollutants less than 25 tons per year are not required to be reported.

These emissions show that this facility is considered "major" for both Operating Permit and PSD purposes.

Table 2. Pollutant Emission Inventory Summary (tons per year)

Year	CO	NO_2	SO_2	PM10	PM2.5	VOC	TAC	HAP
2023	813.88	783.48	54.72	15.96	9.87	5.08	63.54	13.80
2022	738.14	805.66	46.19	13.62	8.43	4.07	54.14	10.53
2021	927.31	1068.03	76.55	15.33	9.49	6.32	86.33	14.18
2020	906.80	1,120.79	64.79	14.31	8.86	2.36	71.88	2.36
2019	958.53	1,066.03	77.67	16.46	10.18	2.91	82.32	2.91

9 Compliance Assurance Monitoring, NSPS and NESHAP Applicability Review

9.1 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. If owners and operators of these facilities find that their control equipment is not working properly, the CAM rule requires them to

take action to correct any malfunctions and to report such instances to the appropriate enforcement agency, PSCAA in this case. Additionally, the CAM rule provides some enforcement tools that allow environmental agencies to require facilities to respond appropriately to the monitoring results to ensure pollution control operations are as effective as represented by the facility.

The CAM rule applies at major sources with emission units that have control devices and emissions that could exceed major source thresholds if the control device was not operated. In accordance with 40 CFR Part 64, any emission unit that meets all three of the following criteria, and is not exempt under the CAM rule, requires a CAM Plan:

- The unit is subject to an emission limitation or standard for the applicable regulated air pollutant. [40 CFR 64.2(a)(1)]
- The unit uses a control device to achieve compliance with any such emission limitation or standard. [40 CFR 64.2(a)(2)]
- The unit has potential pre-control device emissions of the applicable pollutant of at least 100% of the major source amount. [40 CFR 64.2(a)(3)].

The kiln is subject to post-1990 federal standards for PM emissions that are exempt from Part 64 due to inherent monitoring requirements from 40 CFR 63, Subpart LLL. However, the kiln is also subject to PM emissions limits from local regulatory rules and permits that are the same as the exempt limits, but which are not exempt from part 64 monitoring requirements. Therefore, the cement kiln at Ash Grove is subject to the Compliance Assurance Monitoring (CAM) requirements of 40 CFR 64 for the controlled emissions of particulate matter.

The remaining pieces of equipment with controlled emissions at this facility are exempt from CAM due to having continuous emissions monitoring systems (CEMS), pre-controlled emissions less than the Title V applicability level, or have control devices that meet the definition of inherent process equipment. Table 3 summarizes the CAM applicability for the remaining controlled equipment.

Table 3. CAM Applicability Summary

Equipment/Pollutant	Reason for CAM Exemption
CAM requirements do not apply to the kiln for CO or NO_X	CAM applies to emission units that use a control device to achieve compliance with an applicable emission limitation or standard. 40 CFR 64.2(a)(2). The kiln does not rely on a control device to meet applicable requirements for CO or NO_X under typical fuel operations. The kiln is authorized to fire coal and is equipped with SNCR which can be used if needed to reduce NO_X emissions while firing coal, but this controlled operation is exempt from CAM due to the use of a NO_X CEMS as the method of demonstrating compliance. Note: Coal has not been used as a fuel in almost 10 years and the company has no current plans to ever fire coal again.

Equipment/Pollutant	Reason for CAM Exemption
CAM requirements do not apply to the kiln for NO_X or SO_2	CAM exempts emission limitations or standards for which a Title V permit specifies a continuous compliance determination method. 40 CFR 64.2(b)(1)(vi). The kiln is equipped with CEMS for NO_X and SO_2, which are used as the continuous compliance method.
CAM requirements do not apply to the following emission units for any pollutant: #1 coal mill (41B.BF3) #2 coal mill (41B.BF4) #1 Finish Mill Sweep dust collector (515.BF1) #2 Finish Mill Sweep dust collector (525.BF1) #1 Finish Mill separator (515.BF2) #2 Finish Mill separator (525.BF2)	The CAM definition of "control device" (40 CFR 64.1) excludes "inherent process equipment," i.e. equipment whose principal function is to recover product or raw materials. The listed units have no controls for any pollutant except PM. As to PM, the dust collectors serving these units are "inherent process equipment" as that term is defined in 40 CFR 64.1 because they function principally to recover product or raw materials, and only secondarily as emission control devices.
CAM requirements do not apply to the following emission units for any pollutant: Transfer Towers 3/4 (311.BF2) Transfer Tower 5 (41A.BF2) Transfer Tower 8 (312.BF1) Transfer Tower 6 (311.BF5) Coal Silo (41A.BF3) Coal Feeder #1 (41B.BF1) Coal Feeder #2 (41B.BF2) 331 L.S./Clay/Bot.Ash Bins (311.BF4) 331 Steel & Silica Bins (313.BF1) Blend Silos W (411.BF1) Blend Silos E (317.BF1) Kiln Feed BLD (413.BF3) Sorbent System Dust Collector (413.BF2) PF Bin (41C.BF1) G-Cooler (419.BF1) Clinker Silo Top Dust Collectors (419.BF2, 419.BF3, 419.BF5, 419.BF6) Clinker Silo Bottom Dust Collectors (511.BF5, 511BF6, 511.BF9) Clinker Loadout Dust Collector (41G.BF1) Clinker Shed (511.BF8) Clinker Shed Elevator (511.BF1) GP2 Silo 19 (610.BF2) GP2 Transfer Bin (610.BF1) GP2 Silo 17 (610.BF3)	CAM applies to pollutant specific emission units with potential pre-control device emissions of the applicable pollutant equal to or greater than 100 tpy. The listed units have control devices only for PM, and a pre-control device PM potential to emit of less than 100 tpy.

Equipment/Pollutant	Reason for CAM Exemption
GP2 Rail Load (611.BF2) GP2 Truck Load (611.BF1) East Cement Dome (612.BF1) West Cement Dome (equip. no. not yet assigned) Apron Feeder (312.BF2) Coal Feeder (41A.BF1) Clinker Silo #3 Vib Bottom Feeder (511.BF2) Clinker Silo #1 Vib Feeder (511.BF3) Clinker Silo #5 Vib Feeder (511.BF4) Finish Mill FM#1 Nuisance (513.BF1) Finish Mill Bin Vent FM #1 (513.BF2) Finish Mill FM#2 Nuisance (523.BF1) Finish Mill Bin Vent FM #2 (523.BF2) Cement Dome Modco Pump (612.BF2)	

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9.2 40 CFR 60 - NSPS Applicability

As part of the renewal process, PSCAA reviewed federal New Source Performance Standards (NSPS) that might apply to this facility to determine applicability. PSCAA determined that the equipment at Ash Grove is subject to the following Subparts of 40 CFR 60:

- 40 CFR 60, Subpart A – General Requirements and 40 CFR 60, Subpart F - Standards of Performance for Portland Cement Plants for the following equipment: kiln, clinker cooler, raw mill system, raw mill dryer, raw material storage, clinker storage, finished product storage, conveyor transfer points, bagging and bulk loading and unloading systems, and the crusher bucket. The crusher bucket was determined to be subject to Subparts A and F with the issuance of Order of Approval No. 11436 because it is considered a component of the raw mill and a component of the finish mill when it operates in those areas.
- 40 CFR Subpart A – General Requirements and Subpart Y - Standards of Performance for Coal Preparation and Processing Plants for the following equipment: coal processing system.

The permit includes the applicable requirements for 40 CFR 60, Subparts A, F and Y.

9.3 40 CFR 63 - NESHAP Applicability

The Ash Grove Cement facility is an area source of HAP. As part of the renewal process, PSCAA reviewed federal National Emissions Standards for Hazardous Air Pollutants (NESHAPs) for area sources that might apply to this facility to determine applicability. PSCAA determined that Ash Grove is subject to the following Subparts of 40 CFR Part 63:

- 40 CFR 63, Subpart A – General Requirements and 40 CFR 63, Subpart LLL - National Emission Standards for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry for the following equipment: kiln and in-line coal mill, clinker cooler, raw mill system, finish mill system, raw material dryer, and conveyor transfer points. The raw material storage,

clinker storage, finished product storage, bagging, and bulk loading and unloading systems are not subject to Subpart LLL because this facility is not a major source of HAP.

- 40 CFR 63, Subpart A – General Requirements and 40 CFR 63, Subpart ZZZZ – National Emissions Standards for Hazardous Air pollutants for Reciprocating Internal Combustion Engines (RICE) for the Caterpillar emergency generator, model SR4, manufactured prior to 1992.

The permit includes the applicable requirements for 40 CFR 63, Subparts A, LLL and ZZZZ.

9.4 40 CFR 98 – Mandatory Greenhouse Gas Emissions Reporting

Pursuant to 40 CFR 98, Subpart H, Cement Production, Ash Grove is subject to annual greenhouse gas emissions reporting to EPA. 40 CFR 98 does not meet the definition of an applicable requirement for inclusion into Title V air operating permits (AOP) issued by this Agency; therefore, it is not included in this renewed permit. However, the Washington Department of Ecology requires annual greenhouse gas emissions reporting to their office, as specified in WAC 173-441. This requirement is contained in the permit in Specific Condition **6.21.**

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10 Explanation of Applicable Requirements Tables, Compliance Methods and Brief Descriptions of Changes Since Previous Issuance.

10.1 Changes to the AOP During the Renewal Process:

As is required by Title V of the Clean Air Act Amendments of 1990, this renewed Title V AOP, which will be effective for the next five years, completely replaces the previous AOP issued to this facility on May 15, 2004. Upon the effective date of issuance of this AOP, the prior AOP and all associated Administrative Changes will become invalid.

Due to the passage of time since the prior permit was issued, nearly all the generally applicable requirements have been updated through the issuance of this permit to reflect the current versions of the Agency, State, and Federal rules. The permittee should treat this permit as a “new” permit rather than simply as a “renewed” permit. Some of the major changes are discussed below.

10.2 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: Insignificant Emission Units and Activities

10.3 Emission Unit Summary Table:

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

Brief Description	PSCAA ID
Rotary Cement Kiln with In-Line Raw Mill and Coal Mills	EU-1
Coal Processing, Storage and Transfer Facilities	EU-2
Material Handling Activities	EU-3
Finish Mill System	EU-4
Two Cement Domes	EU-5
Bulk Bag Loading Station	EU-6
Clinker Storage Shed	EU-7
Emergency Generator	EU-8

10.4 Applicable Requirements:

The permit only lists the requirements that PSCAA has determined to be within the scope of the definition of "applicable requirements" under the operating permit program. Ash Grove is legally responsible for complying with all applicable requirements of the operating permit as well as other requirements that do not fit the definition of "applicable requirements" found in Chapter 173-401 Washington Administrative Code (WAC).

Applicable requirements (from rules, regulations, Notices of Construction, etc.) that are not ongoing are not included in the permit because they are not in effect during the term of the permit and are considered obsolete.

10.5 Sections 1 and 2 Reformatted:

Sections 1 and 2 were 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.

Both Sections 1 and 2 of the permit have applicable requirements set up in tables. Section 1 contains the requirements that apply facility-wide to all the emission units regulated by this permit. These requirements also apply to emission units identified in Section 2 of the permit. If the compliance method for any requirement in Section 1 is more extensive for a specific emission unit, that requirement is repeated in Section 2 of the permit with the additional monitoring, maintenance and recordkeeping requirements.

The tables list the citation for the "applicable requirement" and the effective date in the second column. In some cases, the effective dates of the "Federally Enforceable" requirement and the "*State Only*" requirement are different because either the state (or local authority) has not submitted the regulation to the Environmental Protection Agency (EPA) for approval into the State Implementation Plan (SIP), or the state (or local authority) has submitted it and the EPA has not yet approved it. "*State Only*" effective dates are in italicized font and shall be understood to include the Washington Department of Ecology and PSCAA. When the EPA does approve the new requirement into the Agency's SIP, the old requirement will automatically be replaced and superseded by the new requirement. The new requirement will be enforceable by the EPA as well

as PSCAA from the date that it is adopted into the Agency's SIP, and the old requirement will no longer be an applicable requirement.

The requirement tables in Sections 1 and 2 also contain a brief description/summary of the applicable requirement. In the event of conflict or omission between the information contained in the brief description and the actual statute or regulation cited, the requirements and language of the actual statute or regulation cited shall govern. For more information regarding any of the requirements cited in the second column, refer to the actual requirements cited.

The "Compliance Method" listed in the tables refers to permit conditions below the tables that include monitoring, recordkeeping and reporting obligations the permittee must conduct to comply with the permit. Following the monitoring method is an enforceable requirement of this permit.

The "Reference Test Method" listed in the requirements table is the test method to be used when a source test is required to determine compliance. In some cases where the applicable requirement does not cite a test method, one has been added. If a reference test method is not listed with the requirement, this means a test method is not applicable to the requirement. Reference Test Methods included in the permit are listed in Section 7 of the permit and include the applicable averaging period.

A new condition was added for each emission unit shown in Section 2 that has an active Order of Approval to include Condition 1 from each of the Orders. This condition states (in general), "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." This condition was added into the permit to make it clear that the facility is always required to install and establish only that which was approved by the Order of Approval. Any changes to anything that was included in the Notice of Construction and/or Order of Approval would need to go through the New Source Review process.

10.6 Compliance Methods:

As noted above, compliance methods listed in the applicable requirements tables are in permit conditions listed below the tables. The compliance methods include monitoring, recordkeeping and reporting obligations specific to the requirement that will be used by the permittee in determining if they are in continuous or intermittent compliance. In some cases where the applicable requirement has little or no ongoing monitoring requirements, monitoring has been added. This is called "gap-filling" and is authorized under WAC 173-401-615(1)(b).

10.7 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]"

10.8 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 Specific Condition **5.31** of the permit entitled "Federal Enforceability" identifying which rules are state-only enforceable and which are also federally enforceable.

10.9 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 2004. 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:

a. 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.

b. All applicable requirements contained in Orders of Approval issued after the issuance of the previous AOP have been added in this renewed AOP.

c. Federal rules were added that apply to the facility as it exists at the time of permit issuance.

d. 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.

1. Compliance methods contained in conditions 1.17 through 1.25 use the gap filling 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.

2. The compliance methods for the Coal Processing, Storage, and Transfer Facilities, EU2, include PM and opacity tests in Specific Conditions 2.133 & 2.134 to demonstrate compliance with the emissions limits imposed by 40 CFR 60, Subpart Y - Standards of Performance for Coal Preparation Plants. Subpart Y only requires an initial demonstration of compliance. Specific Condition 2.135 was added as gap filling to ensure on-going periodic compliance with the federal emissions limit. Opacity tests are required annually in years that coal is processed at the facility. PM tests are required at least once prior to renewal if coal is processed during the term of the permit.

3. The compliance methods for the Finish Mill Systems, EU4, include a PM test in Specific Condition 2.174 for the two baghouses connected to the finish mill grinding system. The Authorization of Approval (NOC 5276) that imposed the PM limit did not specify a periodic test frequency. Gap filling was used to add language to Specific Condition 2.174 to require a PM test once during the term of the permit as a condition of permit renewal.

10.10 Additional Formatting Changes:

Most of the formatting throughout the permit has been revised to freshen the look and feel of the permit to reflect the current permitting style that better reflects the structure of the federal, state and local regulations. A notable change is that where the previous permitting style utilized many tables to list the specific limiting conditions by including portions of the applicable regulatory text within the cells of the tables, the current permitting style includes fewer tables and places the applicable language of each regulation in full sentence form within individual specific conditions. This is especially true for the unit-specific compliance requirements. This change has been made with the intention of making the applicable requirements easier to read and understand. The current permitting style also better utilizes the available word processing tools to provide auto-numbered conditions allowing for the inclusion of interactive navigational hyperlinks and cross-references throughout the permit. When viewing the permit electronically, any text that displays as blue or blue with an underline is likely a hyperlink that will take the reader to the referenced location simply by clicking on the link. In addition, within specific conditions, cross-referenced specific condition numbers that are shown in bold text are also clickable shortcuts to the referenced condition. The renewed permit also contains a navigational Table of Contents that jumps the reader to the desired location with a click of the mouse. A hyper-link to return to the Table of Contents can be found at the end of each Subsection within the permit.

It should also be noted that when viewing this permit in an electronic format, after clicking on any of the many links, one may then return to the previous location by simultaneously pressing the “Alt” + “Left Arrow” keys.

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11 General Facility-wide Emission Limits and Requirements

11.1 Common Stacks (Condition 1.1)

WAC 173-400-040(1)(b) establishes general requirements for emissions units that share a common stack.

Changes to the AOP during the Renewal Process: This general requirement has been added as Condition 1.1.

11.2 RACT Requirement (Condition 1.2)

PSCAA Regulation I, Section 3.04 establishes reasonably available control technology (RACT) requirements. There is no monitoring required. Specific Condition 6.19 of the permit specifies that in accordance with WAC 173-401-605(3), emission standards and other requirements contained in rules or regulatory orders in effect at the time of this operating permit renewal shall be considered RACT for purposes of permit renewal.

Changes to the AOP during the Renewal Process: WAC 173-400-040(1)(c), General Standards for Maximum Emissions – General Requirements, was replaced by PSCAA Regulation I, Section 3.04, Reasonably Available Control Technology, in the 4/22/20 approval of the SIP. This condition has been updated to list PSCAA Regulation I, Section 3.04 as the enforceable requirement.

11.3 Opacity Standards (Condition 1.3)

PSCAA Regulation I, Section 9.03, Emission of Air Contaminant: Visual Standard, prohibits more than 20 percent opacity for more than three minutes in an hour and applies to all stationary sources. The compliance method is included in Specific Condition 1.17 and requires monthly inspections for visible emissions from all emission points at the facility during each month that the facility operates. The source must take corrective action or use the reference test method, Ecology Method 9A, to determine opacity if any visible emissions are noted. Based on a review of the facility activities, including compliance evaluations, the basis for monthly monitoring is still valid and the permit renewal retains the same monitoring requirements.

Changes to the AOP during the Renewal Process: The monitoring method and frequency for the opacity monitoring have not changed, but the recordkeeping requirements have been included in the compliance method and language has been added to make it clear that failure to implement one of the response actions must be reported as a deviation.

The 9/20/93 version of WAC 173-400-040(1) was previously listed as an enforceable requirement for opacity standards. Changes to the state regulation caused WAC 173-400-040(1) to be renumbered as WAC 173-400-040(2). In the most recent SIP approved 4/22/2020, EPA has identified the 5/1/04 version of PSCAA Reg. I, Section 9.03 as applicable in the Agency's jurisdiction and replaces the WAC visual emission standard at 173-400-040(2). WAC 173-400-040(1) was removed from the list of enforceable requirements.

11.4 PM Standards (Condition 1.4)

PSCAA Regulation I, Section 9.09, Particulate Matter Emission Standards, limits particulate emissions to 0.05 grain per dry standard cubic foot (gr/dscf) from equipment used in a manufacturing process. The monitoring method in the AOP is based on the assumption that particulate emissions less than 0.05 gr/dscf usually do not generally result in visible emissions over 20 percent opacity. Therefore, the permit requires the same monitoring method at the same frequency as the opacity requirements in Condition 1.2. The emission units that are general process units are unlikely to generate particulate matter emissions above this grain loading standard if operating as permitted.

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Changes in the AOP Renewal: The monitoring method and frequency still include the opacity monitoring from the previous permit, but an additional requirement was added, Specific Condition 5.11 Investigations. This condition allows the Agency or the Department of Ecology to require a test to determine whether the emission units are complying with the standard.

In addition, the recordkeeping requirements have been included in the compliance method. Language has been added to make it clear that failure to implement any one of the response actions must be reported as a deviation.

WAC 173-400-060, Emission Standards for General Process Units, was replaced by PSCAA Regulation I, Section 9.09 in the 4/22/20 approval of the SIP, so WAC 173-400-060 has been removed as an enforceable requirement.

11.5 Fugitive Emissions (Conditions 1.5 through 1.7)

PSCAA Regulation I, Section 9.15, Fugitive Dust Control Measures, and WAC 173-400-040(3) & (4)(a), General Standards for Maximum Emissions – Fugitive Dust, require reasonable precautions to minimize or prevent fugitive emissions. PSCAA's rule also describes specific examples of reasonable precautions. Quarterly facility-wide inspections and complaint response are sufficient to monitor for changes that would cause fugitive emissions or unexpected buildup of dust.

Changes in the AOP Renewal: The monitoring method and frequency have not changed, but the language has been updated to reflect the updated format. For facility-wide inspections, the permittee is required to examine/inspect the same elements as is currently required although the previous AOP references prohibited activities under Section III and activities requiring additional approval under Section IV and those conditions are now described as the general applicable requirements at the facility to reflect the updated formatting of the AOP.

For both the facility-wide inspections and complaint response, recordkeeping requirements have been included in the compliance methods and language has been added to make it clear failure to implement one of the response actions must be reported as a deviation. Specifically, Specific Condition 1.17 has been updated to remove reference to Report of Problems Not Corrected Within 24 hours (previously in Section V.Q.4 of the prior AOP, removed in this renewal) and to clarify the options for either initiating corrective action or shutting down the unit/activity until repaired/corrected. Condition 1.17 updated language for categories of complaints from "fugitive dust emissions" to "any emissions from fallout" and from "complaints regarding other applicable requirements" to "other emissions" for clarity.

The 9/20/93 version of WAC 173-400-040(8), General Standards for Maximum Emissions – Fugitive Dust Sources, was previously listed as an enforceable requirement for fugitive dust emissions standards. Changes to the state regulation caused WAC 173-400-040(8) to be renumbered as WAC 173-400-040(9). WAC 173-400-040(9)(a) was replaced by PSCAA Regulation I, Section 9.15 in the 4/22/20 approval of the SIP, so the 9/20/93 version of WAC 173-400-040(8) has been removed as an enforceable requirement.

11.6 SO_2 and HCl Standards (Conditions 1.8 & 1.9)

The following general standards and requirements apply to all current and future emissions units/activities at the facility. These requirements have been added into the facility-wide conditions to ensure that they are brought to the attention of the regulated source.

PSCAA Regulation I, Section 9.07, Sulfur Dioxide Emission Standard, limits sulfur dioxide emissions to 1,000 ppmvd (corrected to 7% oxygen for fuel burning equipment). This requirement has been added as Condition 1.8.

PSCAA Regulation I, Section 9.10(a), Hydrochloric Acid Emission Standard, limits hydrochloric acid emissions to 100 ppm (dry), 1-hour average corrected to 7% O_2 for combustion sources. This requirement is included in the permit as Specific Condition 1.9. While this limit applies to the entire facility, the kiln is the only known source of HCl at Ash Grove. The kiln is subject to the emission limits and testing of 40 CFR 63, Subpart LLL. The NESHAPS applicability testing of the main stack demonstrated the HCl concentration is less than 5 ppm. If operations changed at the kiln which could increase the observed HCl concentrations or emission rates, Ash Grove will face the major

source threshold trigger for additional NESHAP affected unit coverage well before the HCl limit of 100 ppm is ever reached. Therefore, there is no requirement for monitoring other than required by the NESHAPS.

11.7 Other Standards (Conditions 1.10 through 1.14)

PSCAA Regulation I, Section 9.11, Emission of Air Contaminant: Detriment to Person or Property, and WAC 173-400-040(5), General Standards for Maximum Emissions – Odors, are similar requirements that address emissions that may be environmentally detrimental or cause a nuisance. The monitoring method is based on responding to complaints and quarterly general inspections of the facility to identify any emissions that are likely to be injurious to human health, plant or animal life, or property, or that unreasonably interfere with enjoyment of life and property. Receiving complaints does not necessarily mean the permittee is in violation of this requirement, but the permittee has a responsibility to investigate complaints and take corrective action if necessary. See Specific Condition 1.10.

The Agency has determined that the as-needed complaint response and the weekly facility-wide inspections required in Specific Condition 1.19 of the permit are sufficient to monitor for changes that would cause nuisance emissions.

Changes in the AOP Renewal: The requirements in WAC 173-400-040(3), General Standards for Maximum Emissions – Fallout, is a state-only requirement and is not federally enforceable as it regulates emissions which EPA does not regulate. The rule specifies that the permittee shall not deposit particulate matter beyond the property boundary in sufficient quantity to interfere unreasonably with the use and enjoyment of property have been included as a separate requirement. The monitoring method and frequency have not changed, but the language has been updated to reflect the updated format. See Specific Condition 1.11.

For both the facility-wide inspections and complaint response, recordkeeping requirements have been included in the compliance methods and language has been added to make it clear that failure to implement one of the response actions must be reported as a deviation. Specifically, Specific Condition 1.20 has also been updated to remove reference to Report of Problems Not Corrected Within 24 hours (previously in Section V.Q.4 of the prior AOP, removed in this renewal) and to clarify the options for either initiating corrective action or shutting down the unit/activity until repaired/corrected. Specific Condition 1.20 updated language for categories of complaints from “fugitive dust emissions” to “any emissions from fallout” and from “complaints regarding other applicable requirements” to “other emissions” for clarity.

The 9/20/93 version of WAC 173-400-040(5) was previously listed as an enforceable requirement for nuisance standards. Changes to the state regulation caused WAC 173-400-040(5) to be renumbered as WAC 173-400-040(6). WAC 173-400-040(6) was replaced by PSCAA Regulation I, Section 9.11(a) in the 4/22/20 approval of the SIP, so the 9/20/93 version of WAC 173-400-040(5) has been removed as an enforceable requirement.

PSCAA Regulation I, Section 6.03, New Source Review, makes it unlawful for any person to cause or allow the establishment of a new source, or the replacement or substantial alteration of control equipment installed on an existing source, unless a "Notice of Construction application" has been filed and an "Order of Approval" has been issued by the Agency. This requirement has been added as Condition 1.13.

PSCAA Regulation I, Section 6.10, Work Done Without an Approval, states that: Where work for which an Order of Approval is required is commenced or performed prior to making application and receiving approval, the Control Officer may conduct an investigation as part of the Notice of Construction review. In such a case, an investigation fee, in addition to the fees of Section 6.04, shall be assessed in an amount equal to 3 times the fees of Section 6.04. Payment of the fees does not relieve any person from the requirement to comply with the regulations nor from any

penalties for failure to comply. This requirement has been added as Condition 1.14.

11.8 Maintain Equipment in Good Working Order (Condition 1.15)

PSCAA Regulation I, Section 9.20(b), Maintenance of Equipment, requires the permittee to maintain equipment or control equipment not subject to Section 9.20(a) in good working order. Section 9.20(a) applies to sources that received a Notice of Construction Order of Approval under PSCAA Regulation I, Article 6. Since it applies to specific emission units, Section 9.20(a) requirements are included in Section 2 of the permit.

Changes in the AOP Renewal: The monitoring method has been revised to refer to facility-wide monitoring and the facility O&M Plan requirements. The facility-wide inspections provide monitoring of the general effectiveness of the permittee's O&M Plan. This general monitoring and compliance with the O&M Plan provides sufficient monitoring criteria to certify that the equipment has been maintained in good working order. However, PSCAA reserves the right to evaluate the maintenance of each piece of equipment to determine if it has been maintained in good working order.

Since RCW 70.94.152(7) applies to equipment that received a Notice of Construction Order of Approval, references to this requirement were removed from Section 1 of the permit and added to Section 2 of the permit.

11.9 O&M Plan (Condition 1.16)

In accordance with PSCAA Regulation I, Section 7.09(b), General Reporting Requirements for Operating Permits – Operation and Maintenance Plan, Franz Weller is required to develop and implement an O&M Plan to assure continuous compliance with PSCAA Regulations I, II, and III. The requirement specifies that the Plan shall reflect good industrial practice, but does not define how to determine good industrial practice. To clarify the requirement, PSCAA added that, in most instances, following the manufacturer's operations manual or equipment operational schedule, minimizing emissions until the repairs can be completed, and taking measures to prevent recurrence of the problem may be considered good industrial practice. This language is consistent with the Ecology requirement in WAC 173-400-101(4). PSCAA also added language establishing criteria for determining if good industrial practice is being used. These include, but are not limited to, monitoring results, opacity observations, review of operations and maintenance procedures, and inspections of the emission unit or equipment. PSCAA added this wording in response to Washington State court decision, Longview Fibre Co. v. DOE, 89 Wn. App. 627 (1998), which held that similar wording was not vague and gave sufficient notice of the prohibited conduct.

As described in Condition 5.5, the permittee must report to PSCAA all deviations, including any instances where it failed to promptly repair any defective equipment. In addition, the permittee has the right to claim certain problems were a result of an emergency (Condition 5.14) or unavoidable (Conditions 5.15 – 5.17).

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Changes in the AOP Renewal: The specific requirements for the O&M Plan in the Agency's Regulation 1, section 7.09(b) have been explicitly included in the permit at EPA's request as new condition 1.23. This new condition was added to the compliance method for conditions 1.15 and 1.16.

Following these requirements demonstrates that the permittee has properly implemented the O&M Plan, but it does not prohibit PSCAA or EPA from taking any necessary enforcement action to address violations of the underlying applicable requirements after proper investigation.

11.10 Other Changes in the AOP Renewal

RCW 70.94.040 has been deleted from facility-wide applicable requirements. The provisions of RCW 70.94 RCW (now codified at RCW 70A.45), or the ordinances, resolutions, rules or regulations adopted thereunder are included in the permit as applicable requirements.

12 Emission Unit Specific Applicable Requirements

Section 2 contains requirements that apply to the individual specific emission units at the facility. Due to the passage of time since the previous issuance of this permit, Section 2 of the permit is very different from the previous version of the permit. Any comparison to the previous permit to determine the differences would not be a recommended use of any reviewer's time. To fully understand the extent to which this facility is regulated, the permit itself must be thoroughly reviewed.

It should be noted that the previous version of the permit referenced the federal regulations to which the emissions units involved in the manufacture of Portland Cement were subject, but did not necessarily include the applicable text of those regulations. This renewed AOP now includes the full text of the applicable requirements from the federal regulations that apply to individual emissions units at the facility, including: 40 CFR 60, Subpart F – Standards of Performance for Portland Cement Plants; 40 CFR 60, Subpart Y – Standards of Performance for Coal Preparation and Processing Plants; and, 40 CFR 63, Subpart LLL – National Emissions Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry. This includes emissions limits, compliance requirements, recordkeeping requirements, and reporting requirements.

These specifically applicable federal requirements are included in addition to all of the specifically applicable requirements contained in the many Notice of Construction Orders of Approval previously issued to the facility to authorize their construction and on-going operation.

The renewed permit also contains a new emissions unit (EU8) in Section 2.H. to impose the federal requirements for existing reciprocating internal combustion engine (RICE)-driven emergency generators found in 40 CFR 63, Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.

Because the federal Subparts also reference applicable portions of the General Provisions that individual emissions units must also comply with, 40 CFR 60, Subpart A – General Provisions and 40 CFR 63, Subpart A - General Provisions have been attached to the renewed permit as applicable and enforceable requirements.

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13 Standard Terms and Conditions

Some of the requirements that are more general in nature are included in Section 3, Standard Terms and Conditions. This section also contains the standard terms and conditions specifically listed in WAC 173-401-620. These terms have been updated to reflect the most recent rules and permit language.

Changes in the AOP Renewal:

The previous AOP organized the requirements under Standard Terms and Conditions in Section V Standard Terms and Conditions. These terms are now located in Section 3 of the renewal.

14 General Permitting Requirements

Section 4 of the permit includes the requirements for renewing, revoking, reopening, amending, and modifying the operating permit. It also includes the new source review requirements, both minor NSR and Prevention of Significant Deterioration requirements. This section has been edited to more accurately reflect the Air Operating Permit regulations.

Changes in the AOP Renewal:

The previous AOP set a timeline for submittal of a renewal application no later than 12 months prior to the expiration of the AOP and included that PSCAA would send a renewal application no later than 18 months prior to the expiration of the permit. The updated Permit Renewal Condition 4.1 requires that the permittee submit a complete Title V permit renewal application to PSCAA no less than 180 days prior to the expiration of the permit. This update was made to reflect the minimum timeline for renewal application submittal in WAC 173-401-500(3)(d) and WAC 173-401-710. The WAC 173-401-710 requirement that the permitting authority send a permit application to each source at least six months before a complete application is due applies to PSCAA and not to the permittee and has been removed from the AOP.

The previous AOP outlined the procedure for processing an administrative amendment. As these requirements apply to PSCAA and not to the permittee, the procedure has been removed from this renewal.

This renewal updated the requirements for New Source Review under PSCAA Regulation I Section 6 to include the New Source Notification requirements of PSCAA Regulation I Section 6.03(b) as well as the Notice of Completion requirements under PSCAA Regulation I Section 6.09, as these applicable requirements were omitted in the previous AOP.

This renewal added the requirements to comply with the Prevention of Significant Deterioration (PSD) program as this applicable requirement was omitted in the previous AOP.

Several requirements located in Section V of the previous permit have been moved to Section 4 in this renewal given that the requirements relate specifically to permitting.

15 General Compliance Requirements

General compliance requirements are included in Section 5 of the permit. These include certification and reporting requirements, requirements associated with inspections and investigations, and compliance testing requirements. Actions required for an affirmative defense for emergencies or excess emissions are also included in this section. Finally, this section provides a table summarizing the effective date of the regulations in the permit at the time of permit issuance. Regulations that are approved into the Washington State Implementation Plan (SIP) are federally enforceable. In some cases, there are two versions of the regulation because the newer version has not been adopted into the SIP. In this case, the older version of the regulation would be federally enforceable and the current rule would only be enforceable by the Agency (or State). The SIP is updated on a somewhat regular basis and what is contained in the SIP can change over time.

Changes in the AOP Renewal:

Data recovery requirements were previously listed in Section V.P of the AOP and are now listed in Specific Condition 5.9. In the previous AOP there were four types of monthly monitoring which were excepted from the 100% data recovery requirement: monitoring of opacity, fallout and odor bearing contaminant monitoring, baking process and steam generating units, and fabric filter inspections, all of which were allowed to have 9 out of 10 records required. In this renewal these exceptions are removed as the frequency for the facility-wide inspections allows for corrections to missed monitoring to occur within a month-long window. Language was also added to clarify that data do not need to be collected during any period that the monitored equipment does not operate. In addition, language was added requiring that the deviation reports required by Specific Condition 5.5 include an explanation of each instance in which the permittee failed to meet the data recovery requirements of this condition for any monitored process or parameter and any instances of reconstructing lost data.

Specific Condition 5.3 Compliance Certification, Specific Condition 5.4 Semiannual Report, and Specific Condition 5.5 Deviation Report were each updated from the previous AOP to include the email address for submission of annual compliance certifications electronically. Likewise Specific Condition 5.8 was added to include the email address for electronic submittal of all other compliance reports.

Specific Condition 5.31 Federal Enforceability was updated to reflect the newest approval of the Agency's State Implementation Plan. Additional language was added to the introductory paragraph for clarity and completeness.

16 Generally Applicable Requirements

Some of the requirements that are generally applicable are included in Section 6 of the permit. This includes record retention, asbestos requirements, open burning requirements, stratospheric ozone and climate protection requirements, chemical accident prevention provisions in 40 CFR Part 68, concealment and masking, tampering, RACT requirements, annual emission reporting requirements, greenhouse gas reporting requirements and non-road engine notification requirements.

17 Test Methods and Averaging Periods

The test methods and averaging times listed in Section 7 of the air operating permit are general in nature and are to be used if no other methods are specifically listed at a given requirement.

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18 Insignificant Emission Units and Activities

Section 8 of the permit addresses insignificant emission units and activities. In accordance with WAC 173-401-530(1), determination of an emission unit or activity as insignificant does not exempt the unit or activity from any applicable requirement.

An emission unit or activity is insignificant based on one or more of the criteria identified in WAC 173-401-530. This includes categorical exemption, exemption based on emissions being below emission thresholds in WAC 173-401-530(4), or exemption based on size or production rate. Activities that generate only fugitive emissions which are subject to no applicable requirement other than generally applicable requirements can also be classified as insignificant. Categorically exempt units or activities do not need to be listed in the permit application, but all others do.

Monitoring requirements for insignificant emission units are detailed in Specific Condition 1.22 of the permit. In essence, the Permittee will be required to use good industrial practices to maintain insignificant emission units, and to promptly repair defective equipment or shut down the unit until defective equipment can be repaired. The Permittee will not have to keep records of maintenance of insignificant emission units except when such equipment is inspected and a problem requiring prompt repair is discovered during a quarterly plant-wide inspection.

19 Public Comments and Responses During Renewal Process

<include discussion after public comment period>

20 EPA Comment Period

<include discussion after EPA review>

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