Statement of Basis for the Air Operating Permit - *Proposed*

Lehigh Northwest Cement Company

Bellingham, Washington

April 28, 2022

northwest Clean Air agency

Serving Island, Skagit & Whatcom Counties

PERMIT INFORMATION

LEHIGH NORTHWEST CEMENT COMPANY
BELLINGHAM DISTRIBUTION TERMINAL
741 Marine Drive, Bellingham, WA 98225

SIC: 3241
NAICS: 327310
EPA AFS: 53-073-01007

NWCAA ID: 1007-V-W

Responsible Corporate Official

Kent Stuehmer
Vice President
Cement Operations Region Canada
7777 Ross Road
Delta, BC V4K 3S6
(604) 952-5616

Corporate Inspection Contact

David Parsons
Plant Manager
Lehigh Northwest Cement Company
741 Marine Drive
Bellingham, WA 98225
(360) 733-6720

Northwest Clean Air Agency
1600 South Second Street
Mount Vernon, WA 98273-5202
(360) 428-1617

Prepared by
Shannon Logan, P.G.
Air Quality Scientist
(360) 428-1617

Air Operating Permit Number:	**Issuance Date:**
022R2	Month Day, Year
Permit Modifications	**Modification Date:**
N/A	N/A
Supersedes Permit Number:	**Expiration Date:**
022R1	Month Day, Year + 5
Modification Application Date:	**Renewal Application Due:**
July 27, 2021	Month Day, Year + 4

TABLE OF CONTENTS

TABLES

FIGURES

1 INTRODUCTION

Lehigh Northwest Cement Company (Lehigh) owns and operates a Portland cement manufacturing facility located at 741 Marine Drive in Bellingham, Washington. The facility is subject to federal regulations because it is defined in the rules as a "Portland Cement Plant" (40 CFR 60.61(a)) and requires a Title V permit per 60 CFR 63.1340(d), which require a Title V permit for both "major" and "area" sources. The "major" source criteria are having the potential to emit 100 tons per year or more of any criteria pollutant, or the potential to emit 10 tons per year or more of any listed hazardous air pollutant, or 25 or more tons of any combination of hazardous air pollutants. In 2020, Lehigh reported annual emissions of 7.1 tons PM_{10}; HAP emissions are assumed to be 1% of PM. The emission units at the facility emit negligibly small amounts of NOx, CO, SO2, and VOC. Emission of all air pollutants are well below major source levels. Therefore, the facility is classified as an "area" source.

The purpose of this Statement of Basis is to set forth the legal and factual evidence for the conditions in the Lehigh AOP #022R2 and to provide background information for permit review by interested parties. This Statement of Basis is not a legally enforceable document, in accordance with WAC 173-401-700(8).

1.1 AOP History

Lehigh is required under Title 40 Part 63, Section 63.1340(d) to apply for and obtain a Title V air operating permit. The facility became subject to the regulation on September 9, 2010. On February 9, 2011, Lehigh received a letter from the NWCAA requiring a Title V Air Permit.

The first operating permit for Lehigh, AOP #022, was issued on July 12, 2012. The first permit renewal was issued on July 17, 2017. Lehigh applied for a second permit renewal on July 27, 2021.

1.2 Changes Made During the Second Renewal

The following changes have been made to the Lehigh AOP during the second renewal:

- Regulatory citations in the permit were revised to reflect new or modified regulations and updated revision/promulgation dates.
- Formatting throughout the entire permit has been updated to current NWCAA standards.
- Contact names and information for Lehigh and the NWCAA were updated as appropriate. In addition, the Permit Information page reflects the updated permit number and dates for the permit renewal. Note that the renewal application is due a year in advance of the permit expiration date.
- AOP Section 2 (Standard Terms and Conditions) has been replaced with the latest NWCAA standard version, containing any new or modified regulations and updated reference dates.

- AOP Section 3 (Standard Terms and Conditions for NSPS and NESHAP) has been replaced with the latest NWCAA standard version of applicable requirements, containing any new or modified regulations and updated reference dates.
- The Statement of Basis content and layout were revised to standardize the documents issued for Lehigh. Information was revised to correct for current operation and some text has been rephrased to add clarification.
- The emission unit names were revised for consistency between the permitting and inspection documents.
- Inapplicable 40 CFR 63 Subpart LLL requirements for the storage area and conveyance systems were removed from Section 5. Per 40 CFR 63.1340, these requirements don't apply at Lehigh because the facility is an area source for HAPs, not a major source.

2 FACILITY DESCRIPTION

2.1 General Facility Description

The Lehigh facility is located at 741 Marine Drive in Bellingham, Washington (Figure 2.1). The facility has a nominal production capacity of approximately 357,000 tons (324,000 metric tons) Portland cement per year. The plant operates by blending clinker, gypsum, and limestone and grinding the material to the required specification. Fly ash is also added, if necessary, after the grinding operation.

Clinker is imported from offsite cement kilns; the original kiln was demolished in 2003. The clinker is delivered by truck and is stockpiled in an enclosed shed where a front-end loader moves the clinker to a conveyor. A blower and baghouse provide a slight negative pressure in the shed to reduce fugitive emissions from the clinker unloading and loading. Gypsum and limestone are similarly delivered, stored, and loaded onto conveyor systems.

The raw materials, clinker, gypsum, and limestone are conveyed to finish mills (Finish Mill #3 and Finish Mill #4). The mills turn using steel balls of various sizes to crush and grind the raw materials. Each mill has two sections, the primary mill, and the secondary mill with dust collection systems to control PM.

After grinding, fly ash can be added to the finished product at the end of the finish mill and before the bucket elevators, depending on the type of cement that is being produced. The ground cement/fly ash mixture is conveyed via enclosed conveyor to separators. Finish Mill #3 uses a mechanical style separator which consists of a rotating arm to separate the fine material from the coarse material. Finish Mill #4 uses an air separator to separate the fine and coarse material. The fine material is conveyed via enclosed conveyor to the storage silos, while the coarse material is conveyed via enclosed conveyor to the front end of the finish mills for further grinding.

Finish Mill #3 uses the same dust collector to control emissions from the mill and the mechanical separator. Finish Mill #4 uses a dust collector to control emissions from the mill and a separate dust collector to control emissions from the air separator.

The finished product is stored in silos until it is loaded in trucks or rail cars. All storage, conveyor, and loading operations are controlled by dust collectors.

A site map showing the layout of the Lehigh facility is provided in Figure 2-2. A process flow diagram of the operations provided by the facility is detailed in Figure 2-3.

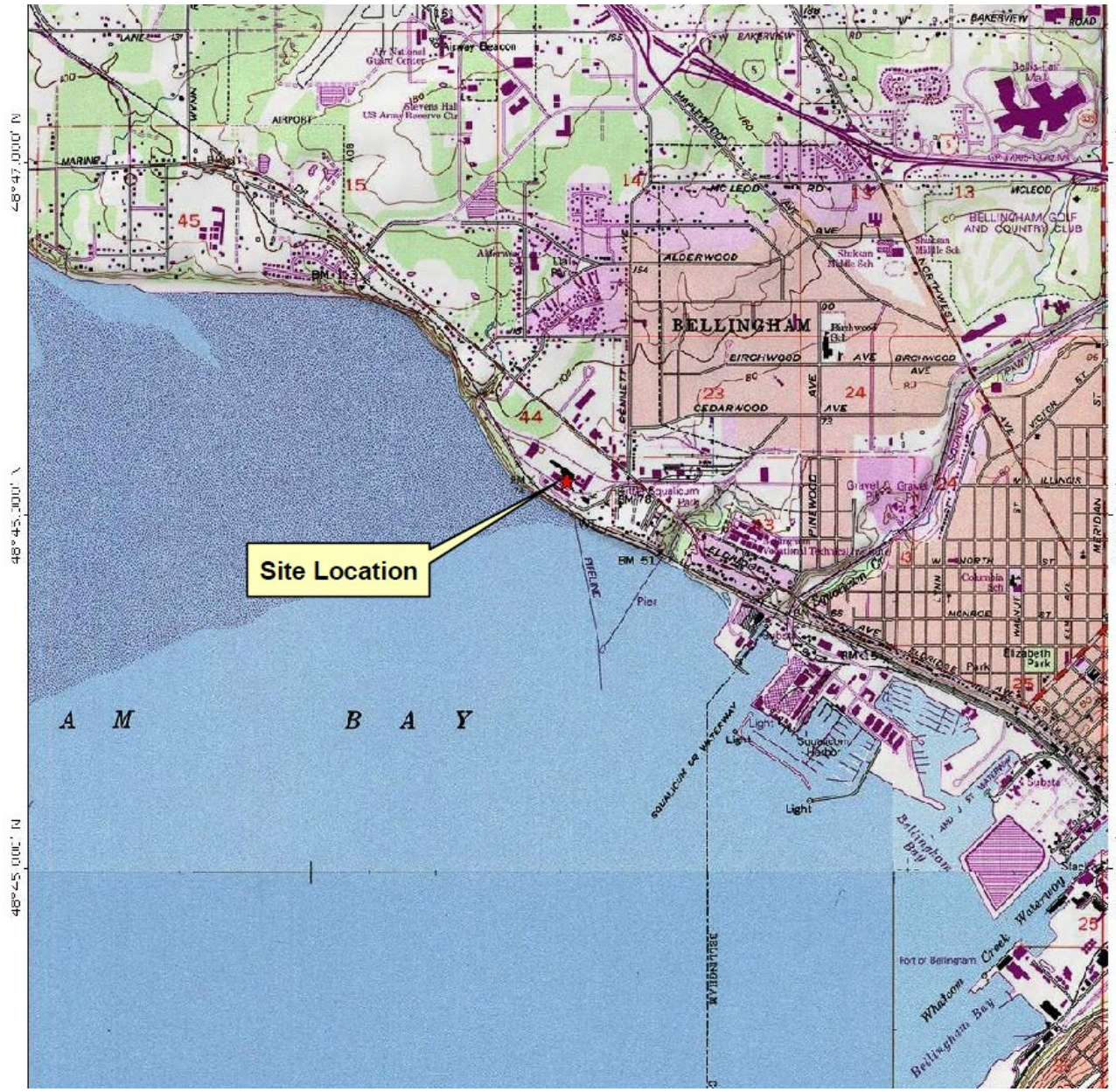

Figure 2-1: Site Location

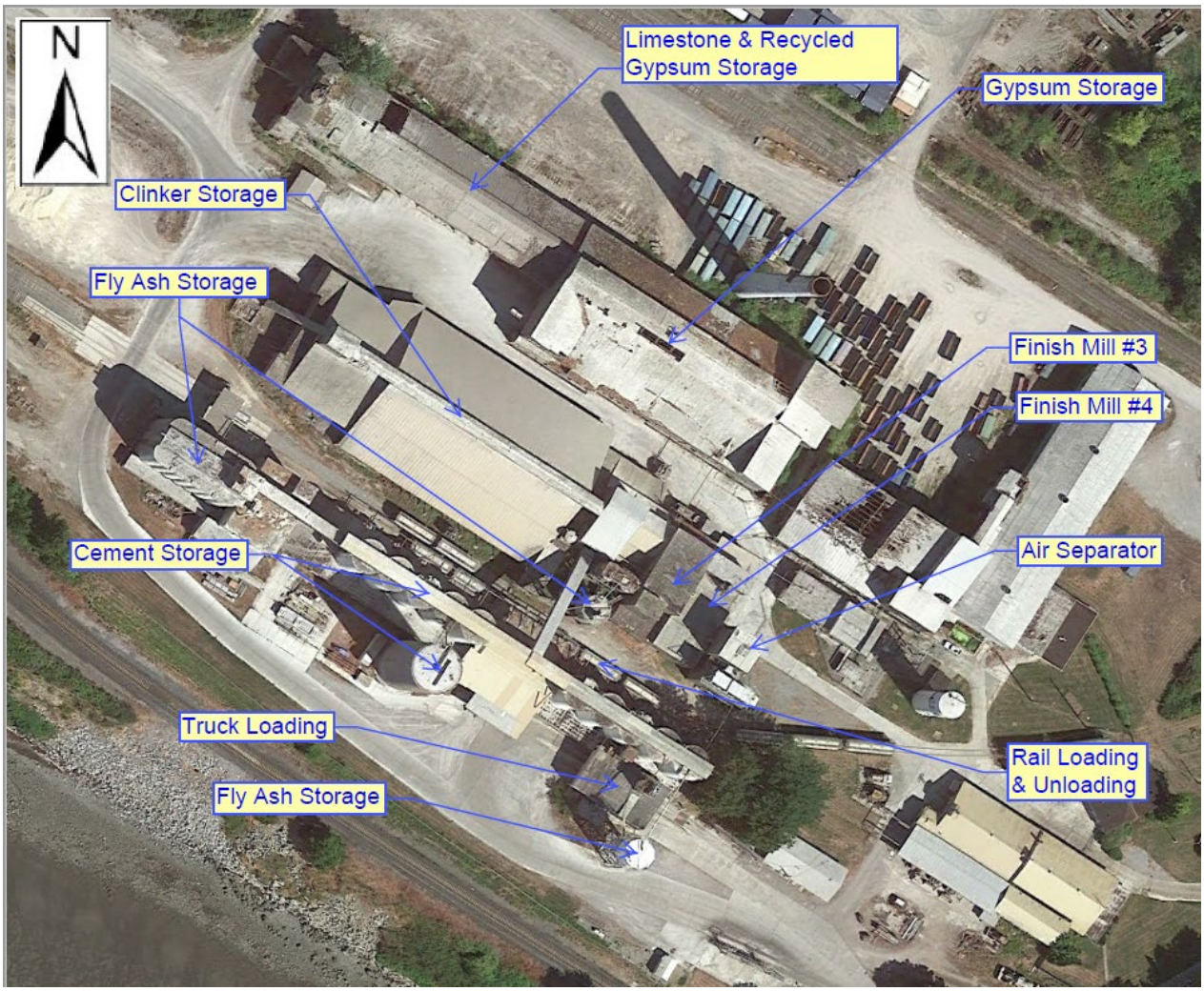

Figure 2-2: Facility Layout

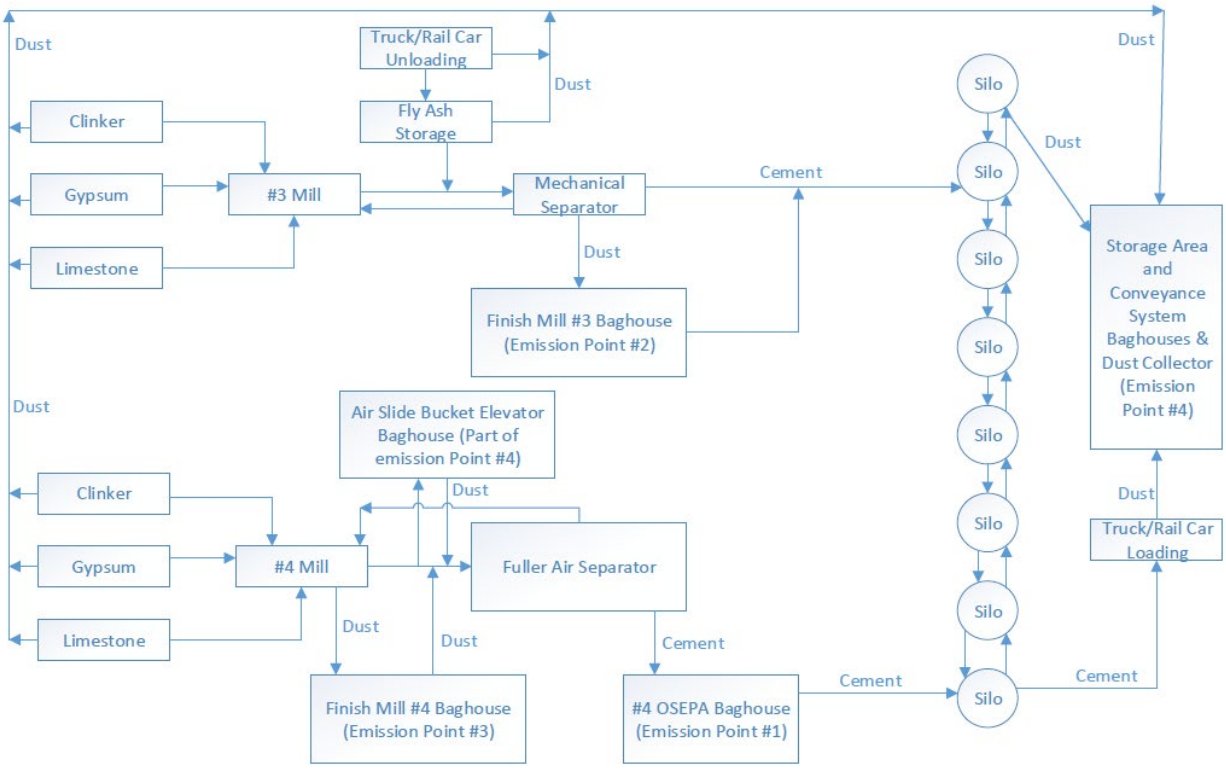

Figure 2-3: Process Flow Diagram

2.2 Emission Unit Description

The Lehigh facility has four emissions points, listed in Table 2-1 below and outlined here:

Emissions Point #1: Emissions Point #1 consists of the Fuller air separator and OSEPA baghouse, which was constructed in 1996 under OAC 587. The air separator, installed at the exit of the finish mill, uses air to size the finished cement particles. Estimated PM_{10} emissions in 2020 were 3 tons.

Emissions Point #2: Emissions Point #2 consists of the Finish Mill #3 baghouse. This baghouse controls emissions from both the finish mill and the mechanical separator, constructed in 1953. Estimated PM_{10} emissions in 2020 were 0.34 tons.

Emissions Point #3: Emissions Point #3 consists of the Finish Mill #4 baghouse. This baghouse controls emissions from the finish mill, which was constructed in 1958. Estimated PM_{10} emissions in 2020 were 0.77 tons.

Emissions Point #4: Emissions Point #4 consists of the storage area and conveyance system baghouses and dust collectors. These systems are combined into one emissions point because they are not subject to 40 CFR 63 Subpart LLL, as they are not at a major source. Estimated PM_{10} emissions in 2020 were 2.9 tons. This emission point includes the following systems:

- Two baghouses at the clinker conveyor system and clinker storage shed. The baghouse for the clinker drag conveyor is currently out of service.
- One dust collector (#0001) for the eight fly ash silos, permitted under OAC 931.
- One baghouse on the finish mill fly ash tank.
- One dust collector for the rail unloading.
- One baghouse for fly ash silo 25.
- One baghouse for the air slides and bucket elevator at Finish Mill #4.
- Two baghouses for the cement silos (#1-10), permitted under OAC 1251.
- One baghouse at the transfer pump and the loading area.
- One dust collector (#0002) for the buff tank at the storage area, permitted under OAC 931.
- One dust collector for rail car loading.
- One baghouse for the truck loading area.

Table 2-1 Significant Emission Units at Lehigh

Emission Point	Process Description	Control Device
1	Finish Mill #4 Fuller air separator	Dust Collector
2	Finish Mill #3	Baghouse
3	Finish Mill #4	Baghouse
4	Storage Area and Conveyance System	
	• Clinker conveyor system and storage	Baghouses
	• Fly ash Silos 11-18, railcar unloading	Dust Collector #0001
	• Finish Mill fly ash tank	Baghouse
	• Railcar unloading	Dust Collector
	• Fly ash silo 25	Baghouse
	• Air slide/bucket elevator	Baghouse
	• Silos #1-5	Camfil Baghouse
	• Silos #6-10	Camfil Baghouse
	• Transfer Pump	Baghouse
	• Buff Tank	Dust Collector #0002
	• Railcar Loading	Dust Collector
	• Truck Loading	Baghouse

2.3 Emissions Inventory and Potential to Emit

Lehigh is subject to the requirements of the Clean Air (CAA) Title V program

because it is considered a "Portland Cement Plant"; and because the potential to emit is less than the "major" source thresholds, it is classified as an "area" source. Table 2-2 below shows the past five years emissions at the facility as reported in the annual emissions inventory submitted to Washington State Department of Ecology (Ecology).

Table 2-2 Lehigh Emissions Inventory, tons per year

tpy	2016	2017	2018	2019	2020
PM	6	7	5	6	8
PM_{10}	5	6	4	5	7
$PM_{2.5}$	2	2	2	2	2
The emission units at the facility emit insignificant amounts of NO_X, CO, SO_2, and VOC.					

In accordance with the EPA Q&A Manual for the Portland cement NESHAP (as cited in the February 9, 2011, letter to Lehigh from the NWCAA) an assumption of 1% Hazardous Air Pollutants is conservatively used to determine metal HAPs at Portland cement facilities. This estimates HAP emissions from 2020 (the year with the highest reported PM emissions) of 0.08 tons. This is below the major source threshold of 10 tons of a single HAP or 25 tons combined HAPs.

Lehigh calculates emissions using a PM emission factor for baghouses equal to 0.01 gr/acfm, then applying a baghouse fan capacity and the hours of operation. Using emission factors from AP 42, Vol. I, 5th Ed., Appendix B.2, Table B.2.2, Category 4, (9/90), PM_{10} is assumed to be 85% of PM and $PM_{2.5}$ 30% of total PM.

The 2020 production was reported by Lehigh to be 75,405 tons of cement. The production capacity for the Lehigh plant is 357,000 tons per year. Potential emissions for PM are then calculated to be (357,000/75,405) x 8 = 38 tpy, 32 tons per year of PM_{10} (85% of PM) and 11 tons per year, of $PM_{2.5}$ (30% of PM).

Lehigh doesn't operate any combustion devices beyond those used for comfort heating or hot water and doesn't operate any significant VOC sources. In addition, Lehigh does not have emergency generators on-site.

2.4 Compliance History

Violations are resolved through a combination of penalty assessments and corrective actions taken by the source. In most cases a summary of corrective actions is submitted to the NWCAA as a written response to the violation. Additional information about each violation can be obtained upon request to the NWCAA.NWCAA hasn't issued any violations to Lehigh since 2005.

2.5 Compliance Reports

The Lehigh AOP requires semiannual and annual reports to be submitted to the NWCAA as part of the facility's ongoing compliance demonstration. Semiannual

reports provide for the certification by the responsible corporate official of the truth, accuracy, and completeness of reports submitted during the previous six-month period. With the annual compliance certification, the responsible corporate official also certifies compliance with all applicable requirements in the AOP term by term, noting the method with which compliance is determined, and whether the facility was fully or intermittently in compliance with each term. All semiannual and annual reports for the past 5 years have been submitted on time and Lehigh reported continuous compliance

2.6 NWCAA Regulatory Orders

No regulatory orders have been issued for Lehigh.

2.7 NWCAA Orders of Approval to Construct

Lehigh has three Orders of Approval to Construct (OACs):

OAC 587: OAC 587 was issued on April 25, 1996, for construction and operation of a 200,000 ton per year air separator with baghouse, to be located at the exit of Finish Mill #4. The OAC was modified in 2011, OAC 587a, to remove a requirement that stated that the air separator and fabric filter were subject to Subpart OOO of 40 CFR 60. Subpart OOO applies to nonmetallic mineral processing plants, which includes rock crushers, but not portland cement plants. The issuance of the original OAC in 1996 for modification of the finish mill, triggered applicability of 40 CFR 60 Subpart F. The NESHAP 40 CFR 63 Subpart LLL is applicable to finish mills at major and area sources.

OAC 931: OAC 931 was issued on December 12, 2005, for replacement of two dust collectors with new pulse-jet fabric filtration dust collectors. Dust Collector #0001 is used to control particulate emissions when unloading fly ash from rail cars. Dust Collector #0002 is used to control particulate emissions when loading trucks with fly ash or cement. 40 CFR 63 Subpart LLL is not applicable to conveyance systems at area sources. This was not a modification of the loading/unloading system, just baghouse (control device) replacement with a control device that's at least (or more) as efficient as the previous baghouse. So, didn't trigger 40 CFR 60 Subpart F.

OAC 1251: OAC 1251 was issued on September 9, 2016, for replacement of two baghouses on the silos, installed in 1959. There are two rows of five silos at the facility, and each row of five silos has a baghouse to control the cement dust that is created by the silos emptying and refilling during operation. Similar to OAC 931, 40 CFR 63 Subpart LLL is not applicable to finish product storage at area sources. This was not a modification of the storage silos, just baghouse (control device) replacement with a control device that's at least (or more) as efficient as the previous baghouse. So, didn't trigger 40 CFR 60 Subpart F.

3 BASIS OF REGULATION APPLICABILITY

3.1 New Source Performance Standards (NSPS)

40 CFR 60 Subpart F – Standards of Performance for Portland Cement Plants applies to Finish Mill #4 because it is an affected facility that was modified after August 17, 1971, through installation of the Fuller air separator (§60.60(b)). The only emission limit from the NSPS that applies to the baghouses controlling PM from the finish mill and air separator is an opacity limit of 10% (§60.62(c)). The monitoring methods in §60.64(b)(3) references requirements in 40 CFR 63 Subpart LLL (63.1350(f)).

Because Subpart F applies, the general provisions of the NSPS (40 CFR 60 Subpart A) also apply. The applicable provisions of Subpart A are included in Section 3 of the permit.

40 CFR 60 Subpart F doesn't apply to Finish Mill #3 because it was constructed before August 17, 1971 and hasn't triggered modification under 40 CFR 60.60(b).

3.2 National Emission Standards for Hazardous Air Pollutants (NESHAP)

40 CFR Part 63 Subpart LLL- National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry applies to the finish mills at Lehigh because they are affected facilities. The provisions cover finish mills at new and existing Portland cement plants, both major and area sources. Hazardous air pollutants are released during operations of most of the equipment at a Portland cement plant, including kilns, clinker coolers, raw mills, raw material dryers, storage bins, open clinker piles, and bagging and bulk loading facilities. Because Lehigh is an area source and not a major source the subpart does not apply to the storage areas or conveyors.

As with NSPS Subpart A - General Provisions, because Subpart LLL applies to the finish mills, the general provisions of the NESHAP, Subpart A, apply as well. These provisions are also included in Section 3 of the permit.

3.3 Compliance Assurance Monitoring (CAM)

The requirements of Compliance Assurance Monitoring are contained in 40 CFR 64 and apply to pollutant-specific emissions units at a major source that is required to obtain a part 70 or 71 permit, provided the unit satisfies all criteria as delineated in 40 CFR 64.2(a)(1)-(3). In particular, 40 CFR 64.2(a) stipulates that "…the requirements of this part shall apply to a pollutant-specific emissions unit at a major source…" Lehigh is an area, not a major, source; therefore, Lehigh is not subject to the CAM rule.

3.4 Chemical Accident Prevention Provisions

The goal of 40 CFR 68, and the risk management program it requires, is to prevent accidental release of substances that can cause serious harm to the public and the

environment from short-term exposures and to mitigate the severity of releases that do occur. If a tank, drum, container, pipe, or other process at a facility contains any of the extremely hazardous toxic and flammable substances listed in Table 1 to 40 CFR 68.130 in an amount above the "threshold quantity" specified for that substance, the facility operator is required to develop and implement a risk management program.

According to Lehigh's permit renewal application, the facility has not made any changes that would include the substances in the threshold quantities listed in Table 1 to 40 CFR 68.130; and therefore, it is not subject to the requirements of 40 CFR 98.

3.5 New Source Review (NSR)

3.5.1 Basic Information

New Source Review requires stationary sources of air pollution to acquire permits before they begin construction. NSR is also referred to as construction permitting or preconstruction permitting.

There are three types of NSR permits. A source may have to acquire one or more of these permits:

- Prevention of Significant Deterioration (PSD) permits, which are required for new major sources or a major source making a major modification in an attainment[1] area;
- Nonattainment NSR permits, which are required for new major sources or major sources making a major modification in a nonattainment area; and
- Minor source NSR permits, which are required for sources that emit pollutants below the major source threshold but above the minor source threshold. It is generally the case that a major new or modified source will also require minor NSR permitting that covers a different subset of pollutants.

3.5.2 What are Permits?

Permits are legal documents that the source must follow. Permits specify what emission limits must not be exceeded and how the source is to demonstrate compliance with the set limits. Permits may contain conditions to ensure that the source is built according to the permit application upon which the permitting agency relies for air impact analyses. For example, the permit may specify a stack height that was used by the permitting agency to determine compliance with air pollutant limits. Some limits in the permit may be specified at the request of the source to avoid being subject to other requirements. For example, the source may take limits in a minor NSR permit to keep the source out of PSD. To assure that sources follow

[1] An attainment area means a geographic area designated by EPA at 40 CFR 81 as having attained the National Ambient Air Quality Standard for a given criteria pollutant (Reference: WAC 173-400-030 (9)).

permit requirements, permits also contain monitoring, recordkeeping, and reporting (MR&R) requirements.

3.5.3 Who Issues the Permits?

In Washington State, most NSR permits are issued by Ecology or local air pollution control agencies. The EPA issues the permit in some cases. Ecology and local air pollution control agencies have their own permit programs that are approved by EPA in the State Implementation Plan (SIP). In general, in the NWCAA jurisdiction, which encompasses Island, Skagit, and Whatcom Counties, Ecology issues major NSR permits (PSD permits) and NWCAA issues minor NSR permits (Orders of Approval to Construct, or OACs).

3.5.4 Prevention of Significant Deterioration (PSD)

Before a major source can be constructed or modified in an area that meets all the health-based ambient air requirements (i.e., in an attainment area), the owner or operator must demonstrate that the project will not cause or contribute to violations of any ambient air quality standard or air quality increment. Also, the owner or operator must demonstrate that the project will not cause significant deterioration in nearby Class I Areas (parks and wilderness areas).

As discussed in Section 1, Lehigh qualifies as a minor source. The PSD program would only apply if Lehigh undertook a project that made it a major source.

3.5.5 Minor NSR

New or modified sources of air pollution that emit air pollution above de minimis levels are required to obtain a permit from the NWCAA before beginning construction. Permits are referred to as Orders of Approval to Construct (OACs) and contain a wide range of local, state, and federal requirements to minimize air pollution impacts on the environment. The type of activity, the size of the operation, and the kinds of pollutants emitted determine permit conditions.

3.6 Greenhouse Gas (GHG) Regulation

3.6.1 40 CFR 98, Federal Mandatory Greenhouse Gas Emission Inventory Regulation

The requirements for the mandatory greenhouse gas reporting are contained in 40 CFR 98. In order for a facility to be subject to 40 CFR 98, it must meet the requirements of either 1, 2, or 3 below:

1. A facility that contains any source category that is listed in Table A–3 of 40 CFR 98 Subpart A.
2. A facility that contains any source category that is listed in Table A–4 of 40 CFR 98 Subpart A that emits 25,000 metric tons CO_2e or more per year in combined emissions from stationary fuel combustion units.
3. A facility that has stationary fuel combustion units with an aggregate maximum rated heat input of 30 MMBtu/hr or greater, and the facility emits 25,000 metric tons CO_2e or more per year in combined emissions from all stationary fuel combustion sources.

Lehigh does not contain any source category that is listed in tables A-3 or A-4 to subpart A to 40 CFR 98[2], and has no fuel combustion sources with an aggregate maximum rated heat input of 30 MMBtu/hr.

As a result, Lehigh is not subject to the requirements of 40 CFR 98.

It should be noted that 40 CFR 98 falls outside the scope of the state and federal air operating permit rules, so this air operating permit could not contain any terms or conditions directly enforcing that regulation even if it did apply.

3.6.2 WAC Chapter 173-441, Reporting of Emissions of Greenhouse Gases

Chapter 173-441 WAC, "Reporting of Emissions of Greenhouse Gases", is a mandatory greenhouse gas (GHG) reporting rule for:

- Suppliers that supply applicable fuels sold in Washington State of which the complete combustion or oxidation would result in at least 10,000 metric tons of carbon dioxide annually; or
- Any listed facility that emits at least 10,000 metric tons of CO_2-equivalents (CO_2e) of greenhouse gases annually in the state.

Chapter 173-441 WAC was adopted by Ecology on December 1, 2010 and became effective on January 1, 2011. Per WAC 173-441-120 Table 120-1 is applicable to Lehigh as a Cement Production facility; however, Lehigh is not required to report under WAC Chapter 173-441-030 because the facility does not emit 10,000 metric tons or more of CO_2e per year.

Chapter 173-441 WAC is patterned after 40 CFR 98, described above in Section 3.6.1, using most of the same definitions, calculating methods and formulas as in 40 CFR 98. The applicability threshold is set at 10,000 metric tons CO_2e, rather than 25,000 metric tons. Any facility that is subject to Chapter 173-441 WAC is required to report greenhouse gas emissions into the federal e-GGRT online reporting system, whether that facility is subject to the federal regulation or not.

3.6.3 WAC Chapter 173-442, Clean Air Rule (CAR)

This rule establishes GHG emissions standards starting in 2017 for certain stationary sources, petroleum product producers and importers and natural gas distributors. The rule applies if the three-year average for GHG beginning in 2012 is more than 100,000 metric tons CO2e per year. Lehigh does not have any combustion emission units and does not emit GHGs to the levels needed for WAC 172-442 applicability.

[2] Subpart H of 40 CFR 98 does not apply to Lehigh, because Lehigh does not have any of the applicable equipment, including kilns, inline kiln/raw mills, or alkali bypasses.

4 GENERAL PERMIT ASSUMPTIONS

4.1 Permit Content

The permit contains standard terms; generally applicable conditions for the type of facility permitted; and specifically applicable conditions. Applicable requirements that were satisfied by a single past action on the part of the source are not included in the permit but are discussed in the Statement of Basis. Regulations that require action by a regulatory agency, but not of the regulated source, are not included as permit conditions.

4.1.1 OAC Conditions

The AOP also contains conditions from applicable OACs (in this case, OAC 587a, OAC 931, and OAC 1251 as discussed in Section 2.7). Condition 1 of OAC 587a stipulates that "The project shall be constructed and operated in accordance with the information submitted in the Notice of Construction and Application for Approval." This condition does not impose any ongoing requirement on the source, and as a result, this condition has not been included in the AOP.

4.2 One Time Requirements

Pursuant to 40 CFR 63.9(b)(2), initial notification that facility is subject to 40 CFR 63 Subpart LLL is required. The air operating permit application submitted on September 8, 2011, fulfills that requirement.

OAC 1251 Condition 5 required an initial source test on one of the two Camfil baghouses controlling emissions at the finish silos. The source test was required to be conducted within 90 days of startup. The source test was completed on January 7, 2019, and submitted to NWCAA on March 18, 2019 fulfilling the one-time OAC requirement.

4.3 Federal Enforceability

Federally enforceable requirements are terms and conditions required under the Federal Clean Air Act or under any of its applicable requirements such as NESHAP. Local and state regulations may become federally enforceable by formal approval and incorporation into the State Implementation Plan (SIP) or through other delegation mechanisms. Federally enforceable requirements are enforceable by the EPA and citizens of the United States. All applicable requirements in the permit including Standard Terms and Conditions, Generally Applicable Requirements, and Specifically Applicable Requirements are federally enforceable unless identified in the permit as enforceable only by the state and labeled as "state only".

Chapter 173-401 WAC is not federally enforceable, although the requirements of this regulation are based on federal requirements for the air operating permit program. Upon issuance of the permit, the terms based on Chapter 173-401 WAC will become federally enforceable for the source.

Most rules and requirements are followed by a date in parentheses. Two different versions (identified by the date) of the same regulatory citation may apply to the

source if federal approval/delegation lags behind changes made to the Washington Administrative Code (WAC) or the NWCAA Regulation. The date associated with a WAC regulation denotes the "State Effective Date" of the regulation. For SIP-approved WAC regulations (identified by the absence of the "state only" designation), the date represents the "State Effective Date" of the regulation version that was SIP-approved. For NWCAA regulations, the date represents the most recent Board of Directors adoption date, which is identified as the "Passed" or "Amended" date in the NWCAA Regulation. For SIP-approved NWCAA regulations (also identified by the absence of the "state only" designation), the parenthetical date represents the "Passed" or "Amended" date of the regulation version that was SIP-approved. The date associated with an OAC permit represents the latest revision date of that order. For a federal rule, the date is the rule's most recent promulgation date.

4.4 Gap filling and Sufficiency Monitoring

Title V of the Federal Clean Air Act is the basis for 40 CFR Part 70, which is the basis for the State of Washington air operating permit regulation, Chapter 173-401 WAC. Title V requires that all air pollution regulations applicable to the source be called out in the air operating permit for that source. Title V also requires that each applicable regulation be accompanied by a federally enforceable means of "reasonably assuring continuous compliance". 40 CFR Part 70 and WAC 173-401-615 all contain a "gap-filling" provision to address situations where no monitoring is present. 40 CFR Part 70.6(c)(1) and WAC 173-401-630(1) contain authority to address situations where monitoring exists but is deemed to be insufficient. NWCAA relied upon these authorities to add monitoring where needed to the air operating permit (AOP).

Many cases where monitoring needed to be added were older regulations and permits. For example, NWCAA used its gap-filling authority to add monitoring for the 20% visible emission standard, NWCAA 451.1. The term "Directly Enforceable" is included in each AOP term where NWCAA added gap-filling.

Table 4-4: Gap-filling under WAC 173-401-615

AOP Term	Description	Monitoring
4.1	Required Monitoring Reports	Reporting periods identified
4.2	Operation & Maintenance	Monitor, keep records and reports
4.3 – 4.11	Nuisance (contaminants, odors, PM, fugitives)	Log complaints, investigate and take corrective action
4.12 – 4.17, 5.1.1, 5.1.2, 5.1.5	Visible Emissions	Conduct visual observations
5.1.9	Minimize Emissions	Keep records
5.3.1	Opacity	Monitor and corrective action
5.4.9	Recordkeeping	Recordkeeping

There were also some limited cases where monitoring did exist but was found to be insufficient. NWCAA used its sufficiency monitoring authority (WAC 173-401-630(1)) to add monitoring in those cases. "Directly Enforceable" is included in the AOP term when NWCAA used its authority to supplement insufficient monitoring.

Table 4-5: Sufficiency Monitoring under WAC 173-401-630(1)

AOP Term	Description	Monitoring
5.1.6	Monitor Operations	Weekly monitoring, recordkeeping and reporting
5.1.10	Recordkeeping	Maintain records
5.2.1, 5.3.1	Opacity	Maintain records
5.2.2, 5.2.3, 5.3.2	Operation & Maintenance Plan	Maintain records
5.2.5, 5.3.5	Records of Compliance	Maintain records
5.3.3	Minimize Emissions	Monitor, keep records and reports

4.5 Future Requirements

Applicable requirements promulgated with future effective compliance dates may be included as applicable requirements in the permit. Some requirements that are not applicable until triggered by an action, such as the requirement to file an application prior to constructing a new source, are addressed within the standard terms and conditions section of the permit.

There are presently no pending applications to construct or modify Lehigh in such a way as to trigger New Source Review. Lehigh has certified in the permit renewal application that the facility will meet any future applicable requirements on a timely basis.

4.6 Compliance Options

Lehigh did not request emissions trading provisions or specify more than one operating scenario in the air operating permit application; therefore, the permit does not address these options as allowed under WAC 173-401-650.

5 PERMIT ELEMENTS AND BASIS FOR TERMS AND CONDITIONS

5.1 Permit Organization

The Lehigh AOP is divided into the following sections:

Permit Information

Attest

Table of Contents

Section 1 Emission Unit Identification

Section 2 Standard Terms and Conditions

Section 3 Standard Terms and Conditions for NSPS and NESHAP

Section 4 Generally Applicable Requirements

Section 5 Specifically Applicable Requirements

Section 6 Inapplicable Requirements

5.2 Permit Information and Attest

5.2.1 Permit Information

The Permit Information page identifies the source and provides general information relevant to the permit such as the facility address, the responsible corporate official, the permit issuance date and the permit expiration date, and the agency personnel responsible for permit preparation, review, and issuance.

5.2.2 Attest

The Attest page provides authorization for the source to operate under the terms and conditions contained in the permit.

5.3 Section 1 Emission Unit Identification

The Emission Unit Identification section lists emission units and air pollution control methods at Lehigh.

5.4 Section 2 Standard Terms and Conditions

The Standard Terms and Conditions section of the AOP (Section 2) specifies administrative requirements or prohibitions with no ongoing compliance monitoring requirements. The legal authority for the Standard Terms and Conditions is provided in the citations in Section 2 of the AOP. The description of the regulation in each of these conditions (with the exception of those labeled "Directly enforceable under WAC 173-401-615(1)(b) & (c), 10/17/02") is sometimes a paraphrase of the actual regulatory requirement. Where there is a difference between the actual requirement and the paraphrased description, the cited regulatory requirement takes precedence. In an effort to make the section more

readable, the terms and conditions have been grouped by function. In some cases, similar requirements at the state and local authority level have been grouped together.

Several requirements that would not be applicable until triggered have also been included in Section 2 of the AOP. An example of one such requirement is the requirement for a source to submit an application for new source review.

5.5 Section 3 Standard Terms and Conditions for NSPS and NESHAP

Section 3 of the AOP includes the standard terms and conditions that are contained in Subpart A of 40 CFR 60 (NSPS) as well as Subpart A of 40 CFR 63 (NESHAP). Such standard terms and conditions are administrative, notifications, and/or other requirements that typically have no ongoing compliance monitoring requirements.

5.6 Sections 4 and 5: Generally and Specifically Applicable Requirements

Requirements that limit emissions and broadly apply to all sources within the jurisdiction of the NWCAA are identified in Section 4 - Generally Applicable Requirements. Requirements that limit emissions and apply specifically to emission units at Lehigh are identified in Section 5 - Specifically Applicable Requirements. The first column contains the term number followed by the pollutant type. The second column identifies the regulatory citation. The third column provides a brief description of the applicable requirements for informational purposes and is not itself enforceable. The fourth column identifies monitoring, recordkeeping, and reporting requirements.

Many generally applicable requirements do not specify test and/or monitoring methods within the text of the regulation or statute. Since WAC 173-401-615 requires that the permit require monitoring and recordkeeping adequate to demonstrate compliance with requirements, legally enforceable site-specific monitoring methods were established as discussed in Section 4.4 above. The underlying authority for these citations comes from WAC 173-401-615(1) for gapfilling (where no monitoring existed) and WAC 173-401-630(1) for sufficiency monitoring (where existing monitoring was deemed to be insufficient).

The following discussion of permit terms provides some information on how the facility demonstrates compliance with these terms.

5.6.1 Section 4 Generally Applicable Requirements

5.6.1.1 Fugitive Emission Standards

Lehigh conducts activities that typically generate fugitive emissions such as storage or transport of solid materials. Permit conditions require the facility to respond to and correct nuisance emissions as soon as possible. If emissions cannot be corrected within four hours, Lehigh must stop all activities contributing to the problem until repairs can be made. Lehigh will provide assurance of compliance with these requirements in the annual compliance certification and by maintaining a log of nuisance complaints and associated repairs and mitigation actions.

5.6.1.2 Opacity Standard

The generally applicable opacity requirement limits any source at the facility to 20% opacity according to Ecology Method 9A. Lehigh will be required to visually inspect particulate emission points monthly for visible emissions while the subject emission unit is in operation. If any visible emissions are detected, Lehigh must follow one of three options: take action so that visible emissions are eliminated within 24 hours, shut down the unit until repairs eliminate visible emissions, or take daily visible emissions readings until visible emissions are eliminated. It should be noted that compliance with the MR&R of this permit term does not relieve Lehigh from the responsibility to maintain continuous compliance with all applicable opacity standards nor from the resulting liabilities for failure to comply.

5.6.1.3 Particulate Matter Standards

The process emission points that emit particulate matter at Lehigh are controlled by baghouses. Under normal operating conditions, there should be little to no visible emissions from baghouses because such control devices have a highly efficient rate of particulate removal. For this reason, the MR&R condition for PM was expanded to include AOP terms 4.7 - 4.11.

5.6.2 Section 5 Specifically Applicable Requirements

This section lists applicable requirements that apply uniquely to a process unit or to a specific category of process units. Typically, these requirements originate from an Order of Approval to Construct issued by NWCAA or from a federal regulation.

6 INSIGNIFICANT EMISSION UNITS AND INAPPLICABLE REQUIREMENTS

6.1 Insignificant Emission Units

Washington Administrative Code 173-401-640(2) allows a determination regarding the applicability of requirements with which the source must comply. Section 6 of the permit lists requirements deemed inapplicable based on the applicability of the cited regulation. It is stated in the AOP that the permit shield applies to the specific, listed inapplicable requirements.

Categorically exempt insignificant emissions units listed in WAC 173-401-532 are present at Lehigh. These categorically exempt emissions units normally have extremely low emissions and are considered insignificant by regulation and not of sufficient importance to list in the permit. Other emission units or activities generate only fugitive emissions for which there are no specifically applicable requirements. These activities are categorized as insignificant by Chapter 173-401-530(1)(d) WAC. Categorically insignificant and fugitive emission units and activities are listed below.

Table 6-1 Insignificant Emission Units

Insignificant emission units	Basis for designation
Lubricating oils storage tanks	WAC 173-401-532(3)
Storage tanks, reservoirs and pumping and handling equipment of any size, limited to soaps, lubricants, hydraulic fluid, vegetable oil, grease, animal fat, aqueous salt solutions or other materials and processes using appropriate lids and covers where there is no generation of objectionable odor or airborne particulate matter.	WAC 173-401-532(4)
Storage of solid material, dust free handling	WAC 173-401-532(6)
Vents from room, buildings and enclosures that contain permitted emission units or activities from which local ventilation, controls and separate exhaust are provided.	WAC 173-401-532(9)
Internal combustion engines for propelling or powering a vehicle.	WAC 173-401-532(10)
Plant upkeep including routine housekeeping, preparation for and painting of structures or equipment, retarring roofs, applying insulation to buildings in accordance with applicable environmental and health and safety requirements and paving or stripping parking lots.	WAC 173-401-532(33)
Cleaning and sweeping of streets and paved surfaces.	WAC 173-401-532(35)
General vehicle maintenance including vehicle exhaust from repair facilities.	WAC 173-401-532(45)
Comfort air conditioning or air cooling systems, not used to remove air contaminants from specific equipment.	WAC 173-401-532(46)
Natural and forced air vents and stacks for bathroom/toilet facilities.	WAC 173-401-532(48)
Office activities.	WAC 173-401-532(49)
Fuel and exhaust emissions from vehicles in parking lots.	WAC 173-401-532(54)
Sample gathering, preparation and management.	WAC 173-401-532(73)

Insignificant emission units	Basis for designation
Solid waste (as defined in the Washington Administrative Code) containers.	WAC 173-401-532(79)
Totally enclosed conveyors.	WAC 173-401-532(86)
Air compressors, pneumatically operated equipment, systems and hand tools.	WAC 173-401-532(88)
Non-PCB oil filled circuit breakers, oil filled transformers and other equipment that is analogous to, but not considered to be, a tank.	WAC 173-401-532(118)

6.2 Inapplicable Requirements

Chapter 173-401-640 WAC requires the permitting authority to issue a determination regarding the applicability of requirements with which the source must comply. Table 6 in the permit lists requirements deemed inapplicable to the emission units identified in Table 1-1 in the permit and provides the basis for each determination.

7 PUBLIC DOCKET

Copies of this permit and technical support documents are available online at https://www.nwcleanairwa.gov/ and at the following location:

Northwest Clean Air Agency
1600 South Second Street
Mount Vernon, WA 98273

8 PUBLIC COMMENT PERIOD AND EPA REVIEW

A 30-day public comment period ran from Month Day, Year to Month Day, Year. Notice was posted on the Washington Department of Ecology's Permit Register, as well as the NWCAA website. Copies of the draft permit and statement of basis were available on NWCAA's website and at NOWCAA's office during the comment period. NWCAA received no comments on the AOP draft.

Following the public comment period, NWCAA submitted a proposed version of the AOP and SOB of EPA, Region 10. NWCAA received notice that EPA was not planning to review the AOP, with the supporting SOB, on Month Day, Year.

9 DEFINITIONS AND ACRONYMS

Definitions are assumed to be those found in the underlying regulation. A short list of definitions applicable to this document is included here.

An "applicable requirement" is a provision, standard, condition, or requirement in any of the listed regulations or statutes as it applies to an emission unit or facility at a stationary source.

"Ecology" means the Washington State Department of Ecology.

An "emission unit" is any part or activity of a stationary source that emits or has the potential to emit any regulated air pollutant.

A "permit" means for the purposes of the air operating permit program an air operating permit issued pursuant to Title V of the 1990 Federal Clean Air Act.

"State" means for the purposes of the air operating permit program NWCAA or the Washington State Department of Ecology.

The following is a list of acronyms and abbreviations used in the Air Operating Permit and/or Statement of Basis:

ASIL	Acceptable source impact level
ASTM	American Society for Testing and Materials
BACT	Best Available Control Technology
CAM	Compliance Assurance Monitoring (40 CFR 64)
CEM	Continuous emission monitor
CEMS	Continuous emission monitoring system
CFR	Code of Federal Regulations
CO	Carbon monoxide
dsfc	Dry standard cubic foot
EPA	The United States Environmental Protection Agency
FCAA	Federal Clean Air Act
gr	grains (there are 7,000 grains in one pound)
ISO	International Organization for Standardization
MMBtu	Million British thermal units (units of energy)
MMBtu/hr	Million British thermal units per hour (units of power)

MR&R	Monitoring, recordkeeping and reporting requirements
NESHAP	National Emission Standards for Hazardous Air Pollutants
NOC	Notice of Construction
NO_X	Oxides of nitrogen
NSR	New Source Review
NWCAA	Northwest Clean Air Agency
O_2	Oxygen
OAC	Order of Approval to Construct
PM	Particulate matter
PM_{10}	Particulate matter less than 10 microns in diameter
ppmdv	parts per million on a dry, volumetric basis
PSD	Prevention of Significant Deterioration (federally required program for pre-construction review of sources)
QA/QC	Quality assurance/quality control
RCW	Revised Code of Washington
scf	standard cubic feet
SIP	State Implementation Plan
SO_2	Sulfur dioxide
STP	Standard Temperature and Pressure: 20° C (68° F) and 760 mm Hg (29.92 in. Hg) per NWCAA Regulation (e.g. applies to fuel sulfur limit) 288 K (15° C, 59° F) and 101.3 kPa (1 atmosphere) per ISO (e.g. applies to natural gas volume measurement)
VE	Visible emissions
VOC	Volatile Organic Compound
WAC	Washington Administrative Code