

ORDER OF APPROVAL
NOTICE OF CONSTRUCTION 23NOC1603
ISSUED to Frontier Construction Supply, LLC on
SEP 13 2023

This Order of Approval (“Order”) is issued in accordance with Olympic Region Clean Air Agency (“ORCAA”) Rule 6.1 and the Washington State Implementation Plan under 40 CFR part 52.2470(c), Table 6.

Conditional approval to establish a concrete batching plant located at 81 NE Peninsula BLVD, in Belfair (“Approved Location”), for operation solely as described in the associated Notice of Construction (“NOC”) application 23NOC1603, is hereby GRANTED to Frontier Construction Supply, LLC (“Applicant”), subject to the Conditions of Approval listed below.

This Order and the Conditions of Approval herein remain in effect for the life of the Approved Equipment as used at the Approved Location and shall be binding on Applicant, current owners and operators of the equipment, and Applicant’s heirs, successors and assigns unless amended or superseded by a subsequent Order issued by ORCAA or unless the equipment is permanently shut down. The Applicant must notify any subsequent owner, operator, heirs, successor or assigns of this Order and the Conditions of Approval herein.

Conditions of Approval established in this Order shall be enforceable in addition to any applicable state, local and federal regulations, or standards in existence now or in the future. Compliance with the conditions of this Order do not relieve the Applicant or any owner or operator from compliance with ORCAA Regulations, chapter 70A.15 of the Revised Code of Washington, or any other emissions control requirements, nor from any penalties for failure to comply with the same. Applicant may appeal this Order to the Pollution Control Hearings Board (“PCHB”) by filing a written appeal with the PCHB and serving a copy upon ORCAA within thirty (30) days of receipt of this Order.

This Order is GRANTED, subject to the following Conditions of Approval:

1. **Approved Equipment.** The concrete batching plant as described in Notice of Construction application No. 23NOC1603 and the associated Final Determination is approved for construction and operation subject to conditions in this Order of Approval.
[Regulatory Basis: ORCAA 6.1(a); ORCAA 6.1.2(l); 40 CFR part 52.2470(c), Table 6]
2. **Preapproval Required.** Prior approval by ORCAA may be required for the following as specified in ORCAA Rule 6.1:
 - a. Construction, installation, or establishment of any stationary source;
 - b. Modification to any existing stationary source;

- c. Replacement or substantial alteration of emission control technology installed on an existing stationary source; or,
- d. Deviations from the approved plans, drawings, data, and specifications of the stationary sources listed in Table 1.

Table 1 Stationary sources located at Frontier’s Concrete Batching Plant

Equipment	Air Pollution Control	Capacity & Production Limits
Con-E-Co BatchMaster 12 Concrete Batching Plant	Con-E-Co 14-23 Baghouse <ul style="list-style-type: none"> • Control Efficiency - 99.9% 	Cumulative annual production must not exceed 270,000 cubic yards of concrete per year.
Cement Silo	Con-E-Co 5250 CFM Central Dust Collector Baghouse	
Second Silo	<ul style="list-style-type: none"> • Control Efficiency - 99.99% 	

[Regulatory Basis: ORCAA 6.1(a); ORCAA 6.1.2(l); WAC 173-400-110(2); WAC 173-400-111(10)]

3. BACT Limits

- a) **Filter Efficiency.** The 5250 CFM Central Dust Collector baghouse filters must have an effective filtration rating of at least 99.99%. The Con-E-Co 14-23 baghouse filters must have an effective filtration rating of at least 99.9%. Published filter efficiency data provided by filter vendors or laboratories may be used to demonstrate compliance with this requirement.
- b) **Plant Opacity Limit:** Visible emissions from all potential points of emission from the Plant must not exceed 10% opacity as measured in accordance with 40 CFR Part 60 Appendix A Method 9.
- c) **Production Limit.** Total cumulative concrete produced by the Plant is limited to 270,000 cubic yards per year unless prior approval is granted by ORCAA.

[Regulatory Basis: ORCAA Rule 6.1.4(a)(2); WAC 173-400-113(2); WAC 173-460-040(3)]

4. Operation and Maintenance Requirements: The following is required:

- a) Displaced air from transfer of cement to the cement silo or silo #2 must be controlled by an operable dust collector system.
- b) The owner or operator must develop and implement a written plan addressing how they will prevent overfilling the cement silo. An operable high level indicator alarm or other monitoring system may be installed to meet this requirement.
- c) The weigh hopper must be enclosed and vented through a baghouse.
- d) Emissions from truck mixer charging must be contained and vented through a baghouse.
- e) Any baghouse must be equipped with a differential pressure gauge that measures pressure-drop between the inlet and outlet of the baghouse.

- f) Observe the emission point from the silos' dust collector for a minimum of 30 seconds each time a silo is being filled. If any visual opacity is observed, the owner or operator will cease filling operations until the system is repaired.
 - g) Use water spray systems as needed to prevent visible fugitive dust from sand and aggregate handling systems.
 - h) Inspect any water suppression systems weekly when the system is operating to verify water flows properly to discharge spray nozzles.
 - i) The Plant may operate provided all dust control systems are fully functional. Visible fugitive emissions remaining airborne beyond the perimeter of the Plant, or visible emissions from any vent or stack will be used as an indication the dust collection systems are not fully functional.
 - j) If visible emissions are identified per Condition 4(i), the owner or operator must inspect the baghouses and dust filters, and initiate repairs as soon as possible.
 - k) Take appropriate actions and measures to prevent the track out of dirt and debris onto paved roadways.
 - l) Clean paved access roads of debris when necessary to prevent fugitive dust from vehicle traffic.
 - m) Apply water spray to prevent fugitive dust on haul roads during dry conditions.
 - n) Adopt, post, and enforce a plant-wide 5 mph speed limit.
- [Regulatory Basis: ORCAA Rule 6.1.4(a)(2); ORCAA Rule 4.3(g); 40 CFR part 52.2470(c), Table 6]

5. **Required Records:** The following records must be maintained and made available to ORCAA upon request:

- a) Results, date, time, and description of any corrective actions taken as a result of visible emissions observed under Condition 4(i).
- b) Running log of dust collection system maintenance.

[Regulatory Basis: ORCAA 8.11; 40 CFR part 52.2470(c), Table 6]

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9/12/2023

PREPARED BY: Aaron Manley, Engineer II

Date

Mark V. Goodin

9/13/23

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Date





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NEW SOURCE FINAL DETERMINATION to APPROVE:

Concrete Batch Plant

Frontier Construction Supply, LLC

23NOC1603

August 15, 2023

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NOTICE OF CONSTRUCTION FINAL DETERMINATION TO APPROVE

Olympic Region Clean Air Agency

Issued to:	Frontier Construction Supply, LLC	County:	45 - Mason
Location:	81 NE Peninsula BLVD Belfair, WA 98528	Source:	204
Application #:	23NOC1603	RC:	5
Prepared on:	August 15, 2023	File:	652

1. Summary

Frontier Construction Supply, LLC (Frontier) seeks pre-approval from Olympic Region Clean Air Agency (ORCAA) to establish a concrete batch plant at 81 NE Peninsula BLVD, Belfair, Washington. Establishing a concrete batch plant is considered establishing a new stationary source of particulate and toxic air pollutants, triggering the requirement to obtain a Notice of Construction (NOC) permit through the Olympic Region Clean Air Agency (ORCAA). ORCAA staff reviewed Frontier's proposal and concluded it may be conditionally approved. Recommended conditions of approval are detailed in Section 16 of this Final Determination report.

2. Regulatory Background

Pursuant to the Washington Clean Air Act under chapter 70A.15 of the Revised Code of Washington, ORCAA's Rule 6.1 and the Washington State Implementation Plan under 40 CFR part 52.2470(c), Table 6¹ require New Source Review (NSR) for new stationary sources of air pollution (referred to as new sources) in ORCAA's jurisdiction. NSR is also required prior to installing, replacing, or substantially altering any air pollution control technology. NSR generally refers to the process of evaluating air quality impacts and the likelihood of compliance with applicable air regulations and standards. NSR and approval of an air permit by ORCAA is required prior to commencing construction or modification of any new source or prior to installing, replacing, or substantially altering air pollution control technology. The goal of NSR is to assure compliance with applicable air regulations and standards, including equipment performance standards and ambient air quality standards.

¹ A State Implementation Plan (SIP) is a collection of regulations and documents used by a state, territory, or local air district to implement, maintain, and enforce the National Ambient Air Quality Standards, or NAAQS, and to fulfill other requirements of the federal Clean Air Act. The Clean Air Act requires the EPA to review and approve all SIPs. ORCAA's SIP was last approved by EPA in 1995.

NSR is initiated by a project proponent submitting an air permit application referred to as Notice of Construction (NOC) application², which provides ORCAA information on the proposed project of sufficient detail to characterize air impacts. NOC applications are posted on ORCAA's website and may undergo a public notice and comment period if requested by the public or if emissions increases trigger an automatic public notice. Approval of a NOC in an attainment or unclassifiable area³ is contingent on verifying a proposed project meets the following criteria from ORCAA's Rule 6.1 and the Washington State Implementation Plan under 40 CFR part 52.2470(c), Table 6:

1. **Performance Standards** - The new stationary source will likely comply with applicable air-performance standards such as federal new source performance standards (NSPS), national emission standards for hazardous air pollutants (NESHAPs), or any performance standards adopted under chapter 70A.15 RCW;
2. **BACT** - The new stationary source will employ "Best Available Control Technology" (BACT) to control all air pollutants emitted;
3. **RACT** - Replaced or substantially altered air pollution control technology meets the standard of "Reasonably Available Control Technology" (RACT) as defined in ORCAA Rule 1.4;
4. **Ambient Air Quality** - Emissions from the new stationary source will not cause or contribute to a violation of any ambient air quality standard;
5. **Federal Air Permitting Requirements** - The new stationary source secures all applicable federal air permits that may apply; and,
6. **Air Toxics** - If there are increases in toxic air pollutant (TAP) emissions, the requirements of Washington's Controls for New Sources of Toxic Air Pollutants under Chapter 173-460 WAC are met.

In this case, Frontier is proposing to establish a new concrete batching plant at their facility located in Belfair, Washington. Concrete batching plants emit particulate matter air pollution and have the potential to emit certain Toxic Air Pollutants (TAP) such as, but not limited, to arsenic, beryllium, cadmium, hexavalent chromium, lead compounds, and nickel. Concrete batching plants are regulated "Stationary Sources" of air pollution. Proposed new concrete batching plants in ORCAA's jurisdiction are subject to NSR and approval through a NOC.

3. Facility Background

² There are two categories of NOC applications: Notice of Construction (NOC) and Notice of Construction Revision (NOR). NOCs are required for new or modified sources, new control technology, replacing an existing stationary source or control technology, and substantially altering control technology. NORs are required when an owner or operator requests a revision to an existing air permit issued by ORCAA.

³ Unclassified area or "attainment area" means an area that has not otherwise been designated by EPA as nonattainment with ambient air quality standards for a particular regulated pollutant. Attainment area means any geographic area in which levels of a given criteria air pollutant (e.g., ozone, carbon monoxide, PM10, PM2.5, and nitrogen dioxide) meet the health-based National Ambient Air Quality Standards (NAAQS) for that pollutant. An area may be an attainment area for one pollutant and a nonattainment area for others.

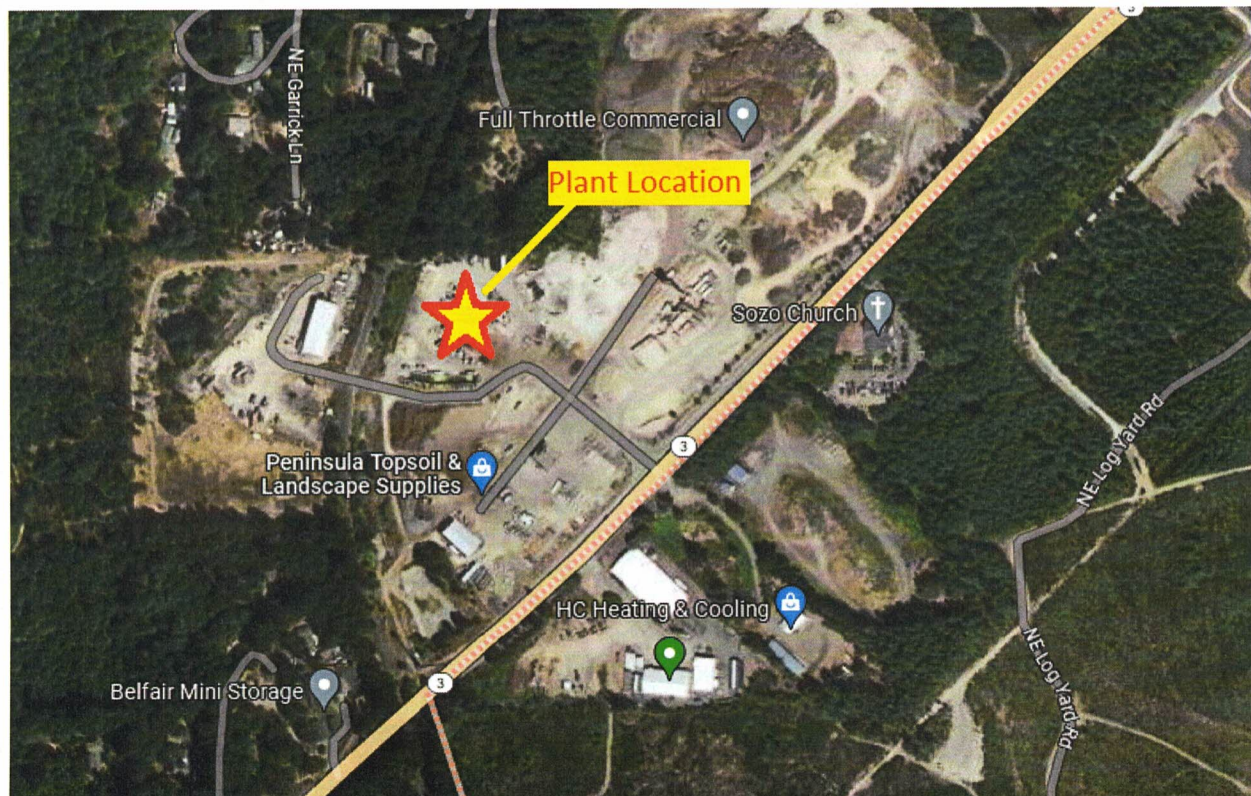
Frontier is leasing approximately 4.89 acres as the facility boundary for the concrete batching plant operation. The proposed location is currently vacant of any ORCAA-regulated activities. There was at least one previous concrete batching plant operation at this location, but no such activities have taken place at this location since approximately 2016. Frontier is therefore establishing a new concrete batching plant at the location and making use of the existing infrastructure including the stormwater collection and disposal system, hot/cold water delivery system, electric system, concrete apron parking areas, ready-mix truck washout system and ponds, and on-site septic disposal system.

Since the site has been dormant/shut down for several years and there are no applicable existing ORCAA permits at the facility. The current permitting action will be the only active or effective ORCAA permit upon its issuance.

4. Facility Description

The facility will be located adjacent to an existing granite asphalt plant operated by different ownership. There was a previous concrete batching operation at the facility, but it shut down in approximately 2016 and the concrete batching plant equipment was removed. There are no existing emission units at the facility. The current permitting action will permit the only active equipment at the location.

Figure 4.1: Facility Location



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** Annotated by ORCAA Staff

Figure 4.2: Site Map



* Imagery ©2023 Airbus, CNES/Airbus, Maxar Technologies, U.S. Geological Survey, Map data ©2023

** Annotated by ORCAA Staff

5. Project Description

Equipment

Frontier is installing a Con-E-Co Batchmaster 12 (Batchmaster) concrete batching plant to produce 'truck mixed' or 'transit mixed' concrete by combining cement powder, additives, and sand/gravel aggregates with water for loading into 'ready-mix' or 'transit' trucks. The plant will be powered by grid electricity. A propane-fired boiler will provide hot water for the process and is planned to be rated below ORCAA's five (5) MMBtu/hr permitting threshold.

Frontier will store sand (fine aggregate) and coarse aggregates at the facility in three-sided bays. Frontier will have a cement silo dedicated to storing cement powder and a second silo for storing extra cement powder and fly ash or other additives. The silo loading operations and truck charging operations will be filtered by a central baghouse. Truck charging operations emissions will also be mitigated by shrouding. The Batchmaster will have its own dedicated baghouse to filter emissions during batching operations.

Process

Prior to mixing, cement powder and additives (such as fly ash) are loaded pneumatically to their respective silos and aggregates are stored in their three-sided bays/bins. When needed, the aggregates will be loaded from their three-sided storage bins into the Batchmaster’s respective batching hoppers by front end loaders. The aggregates are weighed to the concrete mixture’s proportional specifications and dropped onto a conveyor belt, and conveyed up to the mixing hopper. The cement powder, any additives, and water are added to the mixing hopper. The completed concrete mixture is charged to the mixing truck, completing the on-site process. The wet concrete mixture is then continuously mixed by the truck as it travels to the job site to pour the final product.

Controls

Dust emissions generated during silo loading and truck charging operations will be controlled by the Con-E-Co 5250 CFM Central Dust Collector Baghouse rated at 99.99% effective removal efficiency. Dust emissions from concrete batch mixing operations will be controlled by the Con-E-Co 14-23 cement batcher vent baghouse rated at 99.9% effective removal efficiency. Other dust control measures employed include use of rubber seals to reduce gaps between the batcher discharge chute and the truck mixer opening and use of a shroud. Dust emissions generated by sand and aggregate storage and handling will be controlled by water spray application as needed.

Specifications

New project-related equipment includes:

Table 5.1 : Concrete Batching Plant Equipment

Equipment	Air Pollution Control	Capacity & Production Limits
Con-E-Co BatchMaster 12 Concrete Batching Plant	<p>Con-E-Co 14-23 Baghouse</p> <ul style="list-style-type: none"> • 14 polyester filter bags with 4.5-inch diameter and 16-inch length • Passive exhaust • Cleaned by reverse air • Control Efficiency - 99.9% 	<ul style="list-style-type: none"> • Capacity – 200 yards³/hr • Production Limit – 270,000 cubic yards/year
Cement Silo	<p>Con-E-Co 5250 CFM Central Dust Collector Baghouse</p> <ul style="list-style-type: none"> • 15 spun bound polyester cartridge filter bags with 8-inch diameter and 39-inch length • Air to Cloth Ratio – 6.67 ACFM/ft² • 15 HP Blower • Cleaned by Pulse Jet • Control Efficiency - 99.99% 	
Second Silo		
Roads	Site and access roads approximately 87% paved; remainder graded to direct storm water into storm drains and kept wet with water trucks as necessary to minimize dust.	

6. Emission Increases

Emission estimates for the new concrete batching plant were calculated by ORCAA using emission factors from Section 11.12 of EPA's Fifth Edition, Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources (EPA, AP-42, June 2006). Emission estimates are summarized in Table 6.1. Emissions calculation spreadsheets included in the attachments provide details on all emissions factors and assumptions used to estimate air pollutant emissions.

Emissions were calculated based on maximum plant capacity 24 hours a day and an as-reviewed annual production limit of 270,000 cubic yards. Emissions were estimated for the following emissions points:

- Aggregate and sand delivery to ground storage
- Aggregate and sand transfer to conveyor
- Aggregate and sand transfer to elevated storage
- Cement and cement supplement delivery to silos
- Weigh hopper loading
- Mixer loading (truck mix)

Table 6.1. Emission Increases (Project Emissions)

Pollutant	Classification (Criteria ^a /HAP ^b /TAP ^c)	Emission Rate (lb/hr)	Emission Rate (lb/day)	Emission Rate (tons/yr)
PM (Total Particulate)	Criteria	7.17	172	4.84
PM ₁₀ (Total Particulate) (<= 10 µm)	Criteria	3.40	81.6	2.29
PM _{2.5} (Fine Particulate (<=2.5 µm))	Criteria	0.43	10.3	0.29
Pollutant	Classification (Criteria ^a /HAP ^b /TAP ^c)	Emission Rate (lb/hr)	Emission Rate (lb/day)	Emission Rate (lbs/yr)
Arsenic & Inorganic Arsenic Compounds, NOS	HAP/TAP	8.81E-06	0.00021	0.012
Beryllium & Compounds, NOS	HAP/TAP	3.76E-07	0.000009	0.0005
Cadmium & Compounds, NOS	HAP/TAP	3.15E-08	0.00000076	0.000043
Chromium (total)	HAP	1.28E-05	0.00031	0.017
Chromium (VI) & Compounds, NOS	HAP/TAP	2.30E-07	0.000006	0.00031
Lead & Compounds, NOS	Criteria/HAP/TAP	4.68E-06	0.00011	0.006
Manganese & Compounds	HAP/TAP	1.14E-04	0.0027	0.154
Nickel & Compounds, NOS	HAP/TAP	1.85E-05	0.0004	0.025
Phosphorous	HAP/TAP	5.37E-05	0.0013	0.07
Selenium & Selenium Compounds (other than hydrogen selenide)	HAP/TAP	3.58E-07	0.000009	0.0005
Toxic Air Pollutants (total TAP)	TAP/HAP	2.00E-04	0.0048	0.27
Hazardous Air Pollutants (total HAP)	HAP	2.13E-04	0.0051	0.29

^a EPA has established national ambient air quality standards (NAAQS) for six of the most common air pollutants—carbon monoxide, lead, ground-level ozone, particulate matter, nitrogen dioxide, and sulfur dioxide—known as “criteria” air pollutants (or simply “criteria pollutants”).

^b HAP means Hazardous Air Pollutant. Hazardous Air Pollutants are those known to cause cancer and other serious health impacts and are regulated under the federal Clean Air Act.

^c TAP means any toxic air pollutant regulated in Washington and listed in WAC 173-460-150.

7. Administrative Requirements for NOC Applications

NOC applications are subject to filing fees according to ORCAA Rule 3.3(b) and may incur additional NOC processing fees at an hourly rate according to ORCAA Rule 3.3(c). Applicable NOC filing fees for Frontier’s NOC application were paid prior to ORCAA commencing processing of the application. Additional NOC processing fees may apply and will be determined and assessed prior to issuing a Final Determination and the Approval Order (a.k.a.: Air Permit).

NOC applications are subject to a 15-day public notice and an opportunity to request a 30-day public comment period and opportunity for a public hearing. Public notice of Frontier’s NOC application was posted on ORCAA’s website on July 12, 2023. The time period for filing comments on the application and requests for a public comment period expired on July 27, 2023. There were no comments from the public.

8. SEPA Review

The State Environmental Policy Act (SEPA) under Chapter 197-11 WAC is intended to provide information to agencies, applicants, and the public to encourage the development of environmentally sound proposals. The goal of SEPA is to assure that significant impacts are mitigated.

Mason County issued a SEPA Determination of Non-Significance (DNS) number 202303218 on July 5, 2023.

9. Criteria for Approval

ORCAA’s Rule 6.1 and the Washington State Implementation Plan under 40 CFR part 52.2470(c), Table 6, establish the following general criteria for approving new stationary sources and modifications to existing stationary sources of air pollution in ORCAA’s region:

1. **Performance Standards** - Any new stationary source or modification will likely comply with applicable air-performance standards such as the federal new source performance standards (NSPS), national emission standards for hazardous air pollutants (NESHAPs), and any performance standards adopted under chapter 70A.15 RCW;
2. **BACT** - The new or modified stationary source is controlled to a level that meets the standard of “Best Available Control Technology” (BACT);
3. **Ambient Air Quality** – Any increase in air emissions will not cause or contribute to violation of any ambient air quality standard;
4. **Federal Air Permitting Requirements** – All applicable federal air permits, if required, are secured;
5. **Washington Air Toxics Regulations** - If there are increases in toxic air pollutant (TAP) emissions, the requirements of Washington’s Controls for New Sources of Toxic Air Pollutants under Chapter 173-460 WAC are met; and,

6. **Public Outreach** – Public notice and comment requirements in ORCAA’s regulations and the Washington State Implementation Plan under 40 CFR part 52.2470(c), Table 6 are met.

The following sections provide more detail on each criterion.

10. Applicable Performance Standards (Summary)

ORCAA’s Rule 6.1.4(a)(1) and the Washington State Implementation Plan under 40 CFR part 52.2470(c), Table 6, require a finding that any new or modified stationary source will likely comply with applicable state, federal and local performance standards for air emissions including emission standards adopted under chapter 70A.15 RCW, emissions standard of ORCAA, and federal emission standards including New Source Performance Standards (NSPS), National Emission Standards for Hazardous Air Pollutants (NESHAP), and National Emission Standards for Hazardous Air Pollutants for Source Categories (MACT standards). The performance standards in Table 10.1 were determined applicable to the proposed concrete batching plant. There are no known performance standards determined relevant to the proposed concrete batching plant, but inapplicable. A comprehensive list of applicable performance standards that apply to all stationary sources of air pollution located at the facility, as well as general air regulations and standards that apply, are included in the Appendix.

Table 10.1: Applicable Performance Standards specific to the proposed Concrete Batching Plant

Title Citation	Brief Description (Consult rule/regulation for specific requirements)	Discussion/ Determination
<i>General Standards for Maximum Visual Emissions</i> WAC 173-400-040(2) ORCAA Rule 8.2(a)	Prohibits emissions with opacity of greater than 20% for more than three (3) minutes in any one hour.	Applies to concrete batching plant.
<i>Control Equipment Maintenance and Repair</i>	ORCAA Rule 8.8 requires that all air contaminant sources keep any process and/or air pollution control equipment in good operating condition and repair.	Applies to all emissions units
<i>Emissions Detrimental to Persons or Property</i> WAC 173-400-040(6) & ORCAA 7.6	Prohibits emissions of any air contaminant from any source that are detrimental to persons or property.	Applies to all emissions units and fugitive sources
<i>Fallout Prohibition</i> WAC 173-400-040(3) & ORCAA 8.3(e)	Prohibits particulate emissions from any source to be deposited, beyond the property under direct control of the owner or operator of the source, in sufficient quantity to interfere unreasonably with the use and enjoyment	Applies to all emissions units and fugitive sources

Title Citation	Brief Description (Consult rule/regulation for specific requirements)	Discussion/Determination
	of the property upon which the material was deposited.	

11. Best Available Control Technology (BACT)

ORCAA Rule 6.1.4(a)(2) and the Washington State Implementation Plan under 40 CFR part 52.2470(c), Table 6, require the finding that a new source or modification to an existing source of air pollution in an attainment or unclassifiable area will employ best available control technology for all pollutants (BACT) not previously emitted or whose emissions would increase as a result of the new source or modification.

New sources of air pollution and modifications to existing sources of air pollution are required to use BACT to control all pollutants not previously emitted, or those for which emissions would increase as a result of the new source or modification. BACT is defined in WAC 173-400-030 as, *“an emission limitation based on the maximum degree of reduction for each air pollutant subject to regulation under chapter 70A.15 RCW emitted from or which results from any new or modified stationary source, which the permitting authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through application of production processes and available methods, systems, and techniques, including fuel cleaning, clean fuels, or treatment or innovative fuel combustion techniques for control of each pollutant.”*

Consistent with similar project determinations, ORCAA staff determined a plant-wide opacity limit of 10% and the use of baghouses and filters with an effective control efficiency of at least 99.9% to control dust emissions from the concrete batching operations and at least 99.99% for silo filling and truck charging operations meets BACT for this project.

12. Ambient Impact Analysis (Criteria Pollutants)

ORCAA’s Rule 6.1.4(a)(3) and the Washington State Implementation Plan under 40 CFR part 52.2470(c), Table 6, require emissions from any new stationary source or modification not delay the attainment date of an area not in attainment, nor cause or contribute to a violation of any Ambient Air Quality Standard (AAQS). ORCAA’s current Dispersion Modeling Guidance (2009) recommends this approval criteria be demonstrated using dispersion modeling techniques when Potential to Emit (PTE) of any pollutant with an ambient standard is above ORCAA’s adopted significant emission level for the pollutant. Any pollutant with a PTE below its significant emission level can be considered insignificant with respect to maintaining the AAQs.

The potential to emit for all criteria pollutants are below their respective significant emissions levels ORCAA has adopted for identifying sources with insignificant impacts. Therefore, an ambient air quality analysis is not required and it can be concluded emissions are sufficiently low and will not cause or contribute to a violation of any ambient air quality standard.

13. Ambient Impact Analysis (Toxic Air Pollutants)

Washington’s regulation titled Controls for New Sources of Toxic Air Pollutants (Air Toxics Rule) under Chapter 173-460 of the Washington Administrative Code applies to new stationary sources of Toxic Air Pollutants (TAP), including modifications to existing emissions units that increase TAP. The purpose of the Air Toxics Rule is to, “... maintain such levels of air quality as will protect human health and safety.” The TAPs covered under the Air Toxics Rule include carcinogens and non-carcinogens. TAP emissions increases for determining applicability are the increases attributable to the new or modified emissions unit - Decreases from existing emissions units are not allowed to be subtracted from project-attributable TAP increases when determining applicability. Also, the Air Toxics Rule provides that review of modifications are limited to the emission unit or units proposed to be modified and the TAPs whose emissions would increase as a result of the modification.

The Air Toxics Rule has two independent requirements for new sources and modifications that increase TAP emissions above de-minimis levels:

- 1) **tBACT:** The new or modified emission units must use Best Available Control Technology to control TAP emissions (WAC 173-460-040(3)(a)).
- 2) **Ambient Impact:** The NOC application must demonstrate that any increase in TAP from the new or modified emission units are sufficiently low to protect human health and safety from potential carcinogenic and/or other toxic effects (WAC 173-460-070).

tBACT

The tBACT requirement applies to any new or modified emission units that triggers the Air Toxics Rule (results in a TAP increase above de-minimis levels), regardless of facility-wide or “net” TAP emissions. The term tBACT means Best Available Control Technology, as that term is defined in WAC 173-400-030, but applied to control of TAP (see BACT definition in Section 11).

Table 13.1: tBACT

EU	Proposed tBACT Limits	tBACT Limits Met Through
<p style="text-align: center;">EU1 Concrete Batching Plant</p>	<ul style="list-style-type: none"> ▪ Cement Silo, Silo 2, and Truck charging central baghouse: 99.99% control efficiency ▪ Batchmaster-12 Dust collection system and baghouse: 99.9% control efficiency 	<ul style="list-style-type: none"> ▪ Monitoring filters for overloading and potential failure ▪ Good housekeeping and water spray as needed to prevent visible fugitive dust

ORCAA staff determined Frontier’s proposed project control technology meets or is more effective than presumed tBACT for all pollutants.

Ambient Impact Review

The Air Toxics Rule provides a multi-tiered, screening approach under WAC 173-460-080 to assess health impacts and demonstrate compliance with the ambient impact requirement under WAC 173-460-070, which is that TAP increases must be sufficiently low to protect human health and safety from potential carcinogenic and/or other toxic effects.

The “First Tier Review” (Tier 1 Review) is a two-step process. First, the emissions increase of each TAP is compared to its unique Small Quantity Emission Rate (SQER). SQERs are listed for each TAP under WAC 173-460-150. An SQER is the level of emissions of a TAP below which dispersion modeling is not required to demonstrate compliance with the ambient impact requirement. TAP emissions increases used in this first step must be based on the maximum potential to emit considering control or reduction in emissions achievable using the air pollution control technology or methods proposed to meet the tBACT requirement. Any TAP with an increase below its SQER can be presumed to be in compliance with the ambient impact requirement. If this is the outcome, further analysis is not required for that TAP. However, TAPs with emissions increases above their SQER must undergo the second step of the Tier 1 Review.

The second step of the Tier 1 Review requires evaluating TAP impacts against Acceptable Source Impact Levels (ASIL) and is referred to as an ASIL Analysis. An ASIL is the adopted health-based concentration for a TAP below which can be presumed as meeting the ambient impact requirement of WAC 173-460-070. ASILs are provided for each TAP under WAC 173-460-150. An ASIL analysis typically involves using an ambient air dispersion model to estimate ambient concentrations resulting from TAP emissions increases and considering air dispersion and local meteorological characteristics of the source. If the modeled impact of the increase in emissions of a TAP does not exceed its corresponding ASIL, the ambient impact requirement of WAC 173-460-070 may be considered met and the First Tier Review is completed for that TAP.

Emissions rates used to support an ASIL Analysis must be based on the maximum potential to emit considering control or reduction in emissions achievable using the air pollution control technology or methods proposed to meet the tBACT requirement. In addition, the Air Toxics Rule allows TAP reductions from existing emission units not subject to review to be subtracted or “netted out” from TAP increases, provided the reductions are included in the approval order as enforceable voluntary emission limits and meet all the requirements of WAC 173-460-071. These requirements include:

- (1) The voluntary emissions reductions must be enforceable through a regulatory order issued by the air permitting agency.
- (2) The approval order enforcing the voluntary emissions reductions must include monitoring, recordkeeping, and reporting requirements sufficient to ensure the reductions are maintained.
- (3) The agency’s preliminary determination to approve the voluntary emissions reductions are subject to a 30-day public notice and comment period and opportunity for a public hearing.

For pollutants with ambient concentrations found to be greater than their ASIL, a “Second Tier Review” (Tier 2 Review) by the Washington Department of Ecology (Ecology) is required. An application for a Tier 2 Review by Ecology is referred to a Tier 2 petition. Tier 2 petitions must include a Health Impacts Assessment (HRA) and estimated ambient TAP impacts based on

refined air dispersion modeling. Ecology will not act on a Tier 2 petition unless a written preliminary determination on the NOC application for the new or modified TAP source and a draft approval order have been completed by the local agency with jurisdiction. Ecology’s review and approval of a Tier 2 petition is contingent on a finding that TAP impacts meet the ambient impact requirement of WAC 173-460-070 that increases in TAP emissions are sufficiently low to protect human health and safety from potential carcinogenic and/or other toxic effects. If Ecology recommends denial of a Tier 2 petition, the permitting authority may not approve the project. The applicant then has the option of submitting a petition for a “Third Tier Review” (Tier 3 Review) by Ecology and a request for a risk management decision.

ORCAA staff compared PTE emissions of project-specific TAP to their associated SQER values. The results are provided in Table 13.2 below. All TAP will be emitted below their associated SQER, demonstrating the project will comply with the substantive requirements of Chapter 173-460 WAC.

Table 13.2: Tier I TAP Analysis

Pollutant	SQER		PTE Estimates			SQER Review	Model Results	Tier I Review
			Annual Rate	Daily Rate	Hourly Rate			
	lbs/ 24-hr	Lbs/ year	lbs/yr	lbs/ 24-hr	lbs/ hour	pass/model	µg/m ³	pass/fail
Arsenic & Inorganic Arsenic Compounds, NOS	-	0.049	0.012	0.00021	8.81E-06	pass	-	pass
Beryllium & Compounds, NOS	-	0.068	0.0005	0.000009	3.76E-07	pass	-	pass
Cadmium & Compounds, NOS	-	0.039	0.000043	0.00000076	3.15E-08	pass	-	pass
Chromium (VI) & Compounds, NOS	-	0.00065	0.00031	0.0000006	2.30E-07	pass	-	pass
Lead & Compounds, NOS	-	14	0.006	0.00011	4.68E-06	pass	-	pass
Manganese & Compounds	0.022	-	0.154	0.0027	1.14E-04	pass	-	pass
Nickel & Compounds, NOS	-	0.62	0.025	0.0004	1.85E-05	pass	-	pass
Phosphorous	1.5	-	0.07	0.0013	5.37E-05	pass	-	pass
Selenium & Selenium Compounds (other than hydrogen selenide)	1.5	-	0.0005	0.0000009	3.58E-07	pass	-	pass

14. Requirements for Major Stationary Sources and Major Modifications to Major Stationary Sources

Projects that are major stationary sources and major modifications to major stationary sources as defined in 40 CFR 52.21(b) may be subject to permitting requirements under WAC 173-400-700 through 173-400-860.

Frontier's facility is not a "Major Stationary Source" as defined in 40 CFR 52.21(b) and not subject to the permitting program required by WAC 173-400-700 through WAC 173-400-860. Therefore, these permitting requirements do not apply.

15. Title V Air Operating Permit (AOP) Implications

The State of Washington program pursuant to Title V of the federal Clean Air Act is governed under Chapter 173-401 WAC, the Washington Air Operating Permit Program. Chapter 173-401 WAC requires existing major stationary sources to operate in compliance with an approved Air Operating Permit (AOP). Major stationary sources are those stationary sources with a potential to emit which is greater than 100 tons per year of any criteria pollutant, greater than 10 tons per year of any hazardous air pollutants (HAP), or greater than 25 tons per year of any combination of HAP.

Frontier's facility is not a "Major Source" under the Title V program and is not subject to the requirement to operate under an AOP.

16. Conditions of Approval

The following conditions of approval were determined necessary for assuring compliance with applicable air regulations and standards and protecting air quality. Recommended conditions of approval will become effective once the Approval Order is issued:

1. **Approved Equipment.** The concrete batching plant as described in Notice of Construction application No. 23NOC1603 and the associated Final Determination is approved for construction and operation subject to conditions in this Order of Approval.
[Regulatory Basis: ORCAA 6.1(a); ORCAA 6.1.2(l); 40 CFR part 52.2470(c), Table 6]
2. **Preapproval Required.** Prior approval by ORCAA may be required for the following as specified in ORCAA Rule 6.1:
 - a. Construction, installation, or establishment of any stationary source;
 - b. Modification to any existing stationary source;
 - c. Replacement or substantial alteration of emission control technology installed on an existing stationary source; or,
 - d. Deviations from the approved plans, drawings, data, and specifications of the stationary sources listed in Table 1.

Table 1 Stationary sources located at Frontier’s Concrete Batching Plant

Equipment	Air Pollution Control	Capacity & Production Limits
Con-E-Co BatchMaster 12 Concrete Batching Plant	Con-E-Co 14-23 Baghouse <ul style="list-style-type: none"> Control Efficiency - 99.9% 	Cumulative annual production must not exceed 270,000 cubic yards of concrete per year.
Cement Silo	Con-E-Co 5250 CFM Central Dust Collector Baghouse	
Second Silo	<ul style="list-style-type: none"> Control Efficiency - 99.99% 	

[Regulatory Basis: ORCAA 6.1(a); ORCAA 6.1.2(l); WAC 173-400-110(2); WAC 173-400-111(10)]

3. BACT Limits

- a) **Filter Efficiency.** The 5250 CFM Central Dust Collector baghouse filters must have an effective filtration rating of at least 99.99%. The Con-E-Co 14-23 baghouse filters must have an effective filtration rating of at least 99.9%. Published filter efficiency data provided by filter vendors or laboratories may be used to demonstrate compliance with this requirement.
- b) **Plant Opacity Limit:** Visible emissions from all potential points of emission from the Plant must not exceed 10% opacity as measured in accordance with 40 CFR Part 60 Appendix A Method 9.
- c) **Production Limit.** Total cumulative concrete produced by the Plant is limited to 270,000 cubic yards per year unless prior approval is granted by ORCAA.

[Regulatory Basis: ORCAA Rule 6.1.4(a)(2); WAC 173-400-113(2); WAC 173-460-040(3)]

4. Operation and Maintenance Requirements: The following is required:

- a) Displaced air from transfer of cement to the cement silo or silo #2 must be controlled by an operable dust collector system.
- b) The owner or operator must develop and implement a written plan addressing how they will prevent overfilling the cement silo. An operable high level indicator alarm or other monitoring system may be installed to meet this requirement.
- c) The weigh hopper must be enclosed and vented through a baghouse.
- d) Emissions from truck mixer charging must be contained and vented through a baghouse.
- e) Any baghouse must be equipped with a differential pressure gauge that measures pressure-drop between the inlet and outlet of the baghouse.
- f) Observe the emission point from the silos’ dust collector for a minimum of 30 seconds each time a silo is being filled. If any visual opacity is observed, the owner or operator will cease filling operations until the system is repaired.
- g) Use water spray systems as needed to prevent visible fugitive dust from sand and aggregate handling systems.
- h) Inspect any water suppression systems weekly when the system is operating to verify water flows properly to discharge spray nozzles.

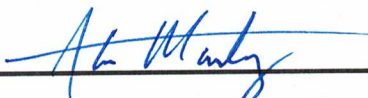
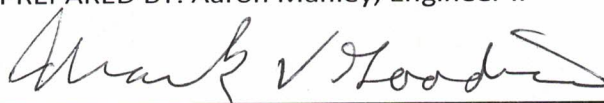
- i) The Plant may operate provided all dust control systems are fully functional. Visible fugitive emissions remaining airborne beyond the perimeter of the Plant, or visible emissions from any vent or stack will be used as an indication the dust collection systems are not fully functional.
- j) If visible emissions are identified per Condition 4(i), the owner or operator must inspect the baghouses and dust filters, and initiate repairs as soon as possible.
- k) Take appropriate actions and measures to prevent the track out of dirt and debris onto paved roadways.
- l) Clean paved access roads of debris when necessary to prevent fugitive dust from vehicle traffic.
- m) Apply water spray to prevent fugitive dust on haul roads during dry conditions.
- n) Adopt, post, and enforce a plant-wide 5 mph speed limit.
[Regulatory Basis: ORCAA Rule 6.1.4(a)(2); ORCAA Rule 4.3(g); 40 CFR part 52.2470(c), Table 6]

5. **Required Records:** The following records must be maintained and made available to ORCAA upon request:
- a) Results, date, time, and description of any corrective actions taken as a result of visible emissions observed under Condition 4(i).
 - b) Running log of dust collection system maintenance.
- [Regulatory Basis: ORCAA 8.11; 40 CFR part 52.2470(c), Table 6]

17. Final Determination to Approve

This Final Determination documents ORCAA staff’s determinations with respect to the applicable criteria of approval in ORCAA Rule 6.1 and the Washington State Implementation Plan under 40 CFR part 52.2470(c), Table 6. ORCAA staff recommends approval of Frontier’s proposed concrete batching plant, provided the conditions identified in Section 16 of this Final Determination are implemented through an enforceable Order of Approval (AKA: Air Permit). Emissions calculations, modeling summary and other data supporting this Final Determination are provided as attachments.

~ end of section ~

 PREPARED BY: Aaron Manley, Engineer II	9/12/2023 Date
 REVIEWED BY: Mark Goodin, PE	9/13/23 Date

Attachments

Applicable Performance Standards that apply to Frontier

Title Citation	Brief Description (Consult rule/regulation for specific requirements)	Applies to
Registration ORCAA Regulation 4	Requires facilities that are minor sources of emissions to register annually with ORCAA and pay annual registration fees.	Frontier will continue to be a minor source requiring registration.
Annual Registration Fees ORCAA Rule 3.1	Requires payment of annual registration fees to ORCAA based in part on air pollutants emitted during the previous year.	Frontier is required to register and pay annual registration fees.
Initial Notification ORCAA Rule 4.3(a)&(b); 4.3(f)	Requires facilities subject to registration to register by submitting an initial notification with the information in ORCAA Rule 4.3(b) within 30 days from: 1) Commencement of operation of any new or recommissioned stationary source; 2) Change in ownership of existing registered stationary source. The notification must be signed by the owner or operator or by the agent appointed by the owner.	
Administrative Change Notification ORCAA Rule 4.3(e); 4.3(f)	Requires facilities to notify ORCAA of any changes to administrative information within 30 days from the change taking place including, but not limited to, contact names, address, phone numbers, and permanent shut down or decommissioning of a stationary source. The notification must be signed by the owner or operator or by the agent appointed by the owner.	
Annual and/or Periodic Reports ORCAA Rule 4.3(c)&(d); 4.3(f)	Requires stationary sources to submit reports with information directly related to the registration program when requested by the Agency within 30 days of receipt of the request. The submittal must be signed by the owner or operator or by the agent appointed by the owner.	
Interference or Obstruction ORCAA Rule 7.1	Prohibits willfully interfering with or obstructing the Executive Director or any Agency employee in performing any lawful duty.	Applies generally to all air pollution sources
False or Misleading Statements ORCAA Rule 7.2	Prohibits any person from willfully making a false or misleading statement to the Board or its representative as to any matter within the jurisdiction of the Board.	Applies generally to all air pollution sources
Unlawful Reproduction or Alteration of Documents ORCAA Rule 7.3	Prohibits reproducing or altering, or causing to be reproduced or altered, any order, registration certificate or other paper issued by the Agency if the purpose of such reproduction or alteration is to evade or violate any provision of these Regulations or any other law.	Applies generally to all air pollution sources
Display of Orders and Certificates ORCAA Rule 7.4	Any order or registration certificate required to be obtained by these Regulations shall be available on the premises designated on the order or certificate. In the event that the Agency requires	The Approval Order issued in conjunction with this NOC approval must be retained on site.

Attachments

Title Citation	Brief Description (Consult rule/regulation for specific requirements)	Applies to
	order or registration certificate to be displayed, it shall be posted. No person shall mutilate, obstruct, or remove any order or registration certificate unless authorized to do so by the Board or the Executive Director.	
General Requirements WAC 173-400-040(1)(c) ORCAA Rule 8.3	All emissions units are required to use reasonably available control technology (RACT).	Applies generally to all air pollution sources.
Visible Emissions WAC 173-400-040(2) ORCAA Rule 8.2(a)	Prohibits emissions with opacity of greater than 20% for more than three (3) minutes in any one hour.	Applies generally to all air pollution sources
Sulfur Dioxide WAC 173-400-040(7)	No person shall cause or allow the emission from any emissions unit in excess of one thousand ppm of sulfur dioxide on a dry basis, corrected to seven percent oxygen for combustion sources, and based on the average of any period of sixty consecutive minutes.	Applies generally to facilities that emit Sulfur Dioxide.
Control Equipment Maintenance and Repair ORCAA Rule 8.8	ORCAA Rule 8.8 requires that all air contaminant sources keep any process and/or air pollution control equipment in good operating condition and repair.	Applies generally to all air pollution control devices.
Fallout WAC 173-400-040(3) ORCAA Rule 8.3(e)	Prohibits particulate emissions from any source to be deposited, beyond the property under direct control of the owner or operator of the source, in sufficient quantity to interfere unreasonably with the use and enjoyment of the property upon which the material was deposited.	Applies generally to all air pollution sources.
Fugitive Emissions WAC 173-400-040(4)(a) ORCAA Rule 8.3(c)	The owner or operator of any emissions unit engaging in materials handling, construction, demolition, or other operation which is a source of fugitive emission shall take reasonable precautions to prevent the release of air contaminants from the operation.	Applies generally to any activity that results in fugitive emissions.
Odor WAC 173-400-040(5) ORCAA Rule 8.5	ORCAA Rule 8.5 contains general requirements for controlling odors and a general prohibition of odors that unreasonably interfere with the use or enjoyment of a person's property.	Applies generally to all air pollution sources.
Emissions Detrimental to Persons or Property WAC 173-400-040(6) ORCAA Rule 7.6	Prohibits causing or allowing the emission of any air contaminant from any source if it is detrimental to the health, safety, or welfare of any person, or causes damage to property or business.	Applies generally to all air pollution sources
Concealment and Masking WAC 173-400-040(8) ORCAA Rule 7.5	Prohibits installation or use of any device or means to conceal or mask emissions of an air contaminant, which causes detriment to health, safety, or welfare of any person, or causes damage to property or business.	Applies generally to all air pollution sources
Fugitive Dust WAC 173-400-040(9)	The owner or operator of a source or activity that generates fugitive dust must take reasonable precautions to prevent that fugitive dust from	Applies to any activity that results in fugitive dust.

Attachments

Title Citation	Brief Description (Consult rule/regulation for specific requirements)	Applies to
	becoming airborne and must maintain and operate the source to minimize emissions.	
Excess Emissions Provisions WAC 173-400-107; WAC 173-400-108 ORCAA 8.7	Requires excess emissions be reported to the Agency as soon as possible and within 24 hours and establishes criteria qualifying excess emissions as unavoidable.	Applies generally to all air pollution sources
Record Keeping and Reporting. ORCAA Rule 8.11	Requires the following: 1. Maintenance of records on the nature and amounts of emissions and other related information as deemed necessary by ORCAA; 2. Reporting of emissions to ORCAA upon request.	Required of all facilities registered with ORCAA.
Particulate Standards for Process units ORCAA Rule 8.3(a) WAC 173-400-060	Prohibits emissions from any process unit in excess of 0.1 grain/dscf. EPA test methods from 40 CFR Appendix A shall be used should demonstration of compliance be required.	Applies to generally to all stationary process units that exhaust to the atmosphere.

Attachments

EMISSIONS CALCULATIONS

Legend

Assumed
Design Specification
Parameter/Constant

PM2.5/PM Ratio Calculation^f
Truck Mix Loading in Lbs/Yard

PM	PM2.5	PM2.5/PM
0.0037	0.0002	0.06

Specifications/Assumptions		hrs/day
Daily hours	24	hrs/day
Annual hours	1350	hrs/yr
Maximum Hourly Production	200	yd ³ /hr
Maximum Daily Production (yd/day)	4800	yds/day
Maximum Annual Production (yd/yr)	270,000	yd ³ /yr
Wet Materials per Yard (lbs-wet/yd) ^h	4,024	lbs-wet/yd
Maximum Annual Production (ton-wet/yr)	543,240	ton-wet/yr
Dry Materials per Yard (lbs-dry/yd) ^h	3,857	lbs-dry/yd
Maximum Annual Production (ton-dry/yr)	520,695	ton-dry/yr
Max Input Dry (tons-dry/yd) ^h	386	ton-dry/hr

Criteria Pollutants

Particulate emission points	Emission Factors (lbs/yard)		Emission Rates (lbs/hr)		Daily Emissions (lbs/day) ^b		Annual Emissions (tons/yr) ^c					
	PM	PM ₁₀	PTE PM _{2.5} ^e	PTE PM	PTE PM _{2.5}	PTE PM ₁₀	PTE PM _{2.5}	PTE PM ₁₀	PTE PM _{2.5}			
Aggregate delivery to ground storage ^a	6.40E-03	3.10E-03	3.84E-04	1.28E+00	6.20E-01	14.88	7.68E-02	30.72	1.84			
Sand delivery to ground storage ^a	1.50E-03	7.00E-04	9.00E-05	3.00E-01	1.40E-01	3.36	1.80E-02	7.20	0.43			
Aggregate transfer to conveyor ^a	6.40E-03	3.10E-03	3.84E-04	1.28E+00	6.20E-01	14.88	7.68E-02	30.72	1.84			
Sand transfer to conveyor ^a	1.50E-03	7.00E-04	9.00E-05	3.00E-01	1.40E-01	3.36	1.80E-02	7.20	0.43			
Aggregate transfer to elevated storage ^a	6.40E-03	3.10E-03	3.84E-04	1.28E+00	6.20E-01	14.88	7.68E-02	30.72	1.84			
Sand transfer to elevated storage ^a	1.50E-03	7.00E-04	9.00E-05	3.00E-01	1.40E-01	3.36	1.80E-02	7.20	0.43			
Cement delivery to silo ^a	2.00E-04	1.00E-04	1.20E-05	4.00E-02	2.00E-02	0.48	2.40E-03	0.96	0.06			
Cement supplement delivery to silo ^a	3.00E-04	2.00E-04	1.80E-05	6.00E-02	4.00E-02	0.96	3.60E-03	1.44	0.09			
Weight hopper loading ^a	7.90E-03	3.80E-03	4.74E-04	1.58E+00	7.60E-01	18.24	9.48E-02	37.92	2.28			
Mixer loading (truck mix) ^a	3.73E-03	1.49E-03	2.24E-04	7.46E-01	2.99E-01	7.17	4.48E-02	17.92	1.07			
Vehicle traffic (paved) ^d	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00	0.00E+00	0.00	0.00			
Total				7.17	3.40	81.57	0.43	172.00	10.32	4.84	2.29	0.29

^aEmission factors are from AP-42 Fifth Edition Table 11.12-5 (6/06).

^bPTE(lbs/day)=(yards/day)*EF. Yards per day is based on the assumed schedule.

^cPTE(tons/yr)=(yards/yr)*EF. Yards per year are based on the assumed schedule.

^dEmissions due to vehicle traffic assumed negligible since dust control measures will be implemented.

^eMixer loading emissions factors are based on AP-42, Section 11.12, equation 11.12-1.

^fUsed to compute PM2.5 emissions factors from PM emissions factors from Table 11.12-5 in AP-42.

^hPM2.5 emission factors based on the ratio of PM2.5/PM derived from equation 11.12-1 in Section 11.2 of AP-42.

ⁱPer AP-42, Section 11.12 (June, 2006)

Attachments

Toxic Air Pollutants						
Pollutant	PTE (lb/hr) ^f	PTE (lb/dy)	PTE (lb/yr)	SQER (lb/ave)	Ave. Period	Model?
Arsenic ^{a,d}	8.81E-06	0.00021	0.012	0.049	annual	no
Beryllium ^{a,d}	3.76E-07	0.000009	0.0005	0.068	annual	no
Cadmium ^{a,d}	3.15E-08	0.00000076	0.000043	0.039	annual	no
Chromium ^d	1.28E-05	0.00031	0.017	Not a TAP	Not a TAP	Not a TAP
Chromium VI ^{a,d,e}	2.30E-07	0.000006	0.00031	0.0065	annual	no
Lead Compounds ^{a,d}	4.68E-06	0.00011	0.006	14	annual	no
Manganese ^{b,d}	1.14E-04	0.0027	0.154	0.022	24-hrs	no
Nickel ^{a,d}	1.85E-05	0.0004	0.025	0.620	annual	no
Phosphorus ^{a,d}	5.37E-05	0.0013	0.07	1.5	24-hrs	no
Selenium ^{a,d}	3.58E-07	0.000009	0.0005	1.5	24-hrs	no
Total HAPs/TAPs	2.13E-04	0.0051	0.29	N/A	N/A	N/A

^aToxic Air Pollutant as defined in Washington Administrative Code (WAC) 173-460 with annual average Acceptable Source Impact Levels (ASILs)

^bToxic Air Pollutant as defined in WAC 173-460 with 24-hour average ASILs

^cModeled Concentration=(PTE(lb/hr) @ averaging time of ASIL)*(Modeled Concentration @ averaging time of ASIL and 1lb/hr)

^dIndicates federally listed Hazardous Air Pollutant (HAP)

^e<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5923866/> Cr VI makes up 1.8% of cement Cr content

^fEmission factors assumed 98% efficiency. Batching rated 99.9% efficient. Central baghouse rated 99.99% efficient.

Arsenic	Filter Efficiency (%)		Cadmium	Filter Efficiency (%)
	EF	Filter Efficiency (%)		
Cement Silo Filling w/ Fabric Filter	4.24E-09	0.9999	Cement Silo Filling w/ Fabric Filter	0.00E+00
Cement Supplement Silo Filling w/ Fabric Filter	1.00E-06	0.9999	Cement Supplement Silo Filling w/ Fabric Filter	1.98E-10
Central Mix Batching w/ Fabric Filter	2.96E-07	0.9990	Central Mix Batching w/ Fabric Filter	7.10E-10
Truck Loading w/ Fabric Filter	6.02E-07	0.9999	Truck Loading w/ Fabric Filter	9.06E-09
Total Emission	2.28E-08		Total Emission	8.18E-11

Beryllium	Filter Efficiency (%)		Chromium	Filter Efficiency (%)
	EF	Filter Efficiency (%)		
Cement Silo Filling w/ Fabric Filter	4.86E-10	0.9999	Cement Silo Filling w/ Fabric Filter	2.90E-08
Cement Supplement Silo Filling w/ Fabric Filter	9.04E-08	0.9999	Cement Supplement Silo Filling w/ Fabric Filter	1.22E-06
Central Mix Batching w/ Fabric Filter	0	0.9990	Central Mix Batching w/ Fabric Filter	1.27E-07
Truck Loading w/ Fabric Filter	1.04E-07	0.9999	Truck Loading w/ Fabric Filter	4.10E-06
Total Emission	9.74E-10		Total Emission	3.31E-08

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Lead	EF	Filter Efficiency (%)
Cement Silo Filling w/ Fabric Filter	1.09E-08	0.9999
Cement Supplement Silo Filling w/ Fabric Filter	5.20E-07	0.9999
Central Mix Batching w/ Fabric Filter	3.66E-08	0.9990
Truck Loading w/ Fabric Filter	1.53E-06	0.9999
Total Emission	1.21E-08	

Nickel	EF	Filter Efficiency (%)
Cement Silo Filling w/ Fabric Filter	4.18E-08	0.9999
Cement Supplement Silo Filling w/ Fabric Filter	2.28E-06	0.9999
Central Mix Batching w/ Fabric Filter	2.48E-07	0.9990
Truck Loading w/ Fabric Filter	4.78E-06	0.9999
Total Emission	4.79E-08	

Manganese	EF	Filter Efficiency (%)
Cement Silo Filling w/ Fabric Filter	1.17E-07	0.9999
Cement Supplement Silo Filling w/ Fabric Filter	2.56E-07	0.9999
Central Mix Batching w/ Fabric Filter	3.78E-06	0.9990
Truck Loading w/ Fabric Filter	2.08E-05	0.9999
Total Emission	2.95E-07	

Phosphorus	EF	Filter Efficiency (%)
Cement Silo Filling w/ Fabric Filter	0.00E+00	0.9999
Cement Supplement Silo Filling w/ Fabric Filter	3.54E-06	0.9999
Central Mix Batching w/ Fabric Filter	1.20E-06	0.9990
Truck Loading w/ Fabric Filter	1.23E-05	0.9999
Total Emission	1.39E-07	

Selenium	EF	Filter Efficiency (%)
Cement Silo Filling w/ Fabric Filter	0.00E+00	0.9999
Cement Supplement Silo Filling w/ Fabric Filter	7.24E-08	0.9999
Central Mix Batching w/ Fabric Filter	0.00E+00	0.9990
Truck Loading w/ Fabric Filter	1.13E-07	0.9999
Total Emission	9.27E-10	

Emission factor from AP-42 Table 11.12-6 in units of lb on pollutant per ton dry material loaded

OLYMPIA REGION CLEAN AIR AGENCY

2940 Limited Lane NW - Olympia, Washington 98502 - 360-539-7610 – Fax 360-491-6308

FORM 1- NOTICE OF CONSTRUCTION

TO CONSTRUCT - INSTALL - ESTABLISH OR MODIFY AN AIR CONTAMINANT SOURCE

Form 1 Instructions:

1. Please complete all the fields below. **This NOC application is considered incomplete until signed.**
2. If the application contains any confidential business information, please complete a Request of Confidentiality of Records (www.orcaa.org).
3. Duty to Correction Application: An applicant has the duty to supplement or correct an application. Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application must, upon becoming aware of such failure or incorrect submittal, promptly submit supplementary factors or corrected information.

Business Name: FRONTIER CONSTRUCTION SUPPLY, INC	For ORCAA use only File No: 652 County No: 45 Source No: 204 Application No: 23NOC1603
Mailing Address: 11012 CANYON RD E, SUITE 8-390, PUYALLUP, WA 98373	Date Received: <div style="color: red; font-weight: bold; font-size: 1.2em;">Received</div> <div style="color: red; font-weight: bold; font-size: 1.2em;">JUL 05 2023</div> <div style="color: red; font-weight: bold; font-size: 1.2em;">ORCAA</div>
Physical Address of Project or New Source: 81 NE PENINSULA BLVD, BELFAIR, WA 98528	
Billing Address: 11012 CANYON RD E, SUITE 8-390, PUYALLUP, WA	
Project or Equipment to be installed/established: CONCRETE BATCH PLANT	
Anticipated startup date: <u>08</u> / <u>01</u> / <u>2023</u> Is facility currently registered with ORCAA? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
This project must meet the requirements of the State Environmental Policy Act (SEPA) before ORCAA can issue final approval. Indicate the SEPA compliance option: <input type="checkbox"/> SEPA was satisfied by _____ (government agency) on ___/___/___ (date) - Include a copy of the SEPA determination <input checked="" type="checkbox"/> SEPA threshold determination by <u>MASON COUNTY</u> (government agency) is pending - Include a copy of the environmental checklist <input type="checkbox"/> ORCAA is the only government agency requiring a permit - Include ORCAA Environmental Checklist <input type="checkbox"/> This project is exempt from SEPA per _____ (WAC citation).	
Name of Owner of Business: DAN JENSEN	Agency Use Only
Title: GOVERNOR	CONDITIONALLY APPROVED FOR CONSTRUCTION ONLY IN ACCORDANCE WITH RCW 70A.15, WAC 173-400 ORCAA REGULATIONS (SEE ATTACHED ADDENDUM FOR CONDITIONS OF APPROVAL) <div style="color: blue; font-weight: bold; font-size: 1.2em;">9/13/2023</div> DATE: _____ ORCAA
Email: <u>jensenrdan@gmail.com</u> Phone: <u>256-686-0281</u>	
Authorized Representative for Application (if different than owner): JEAN-PIERRE CHARPENTIER	
Title: SPECIAL PROJECTS MANAGER Email: <u>jeanc@gfsfc</u> Phone: <u>253-686-1936</u>	
I hereby certify that the information contained in this application is, to the best of my knowledge, complete and correct.	
Signature of Owner or Authorized Representative: (sign in Blue Ink) 	DATE: _____ ORCAA
Date: _____	
IMPORTANT: Do not send via email or other electronic means. ORCAA must receive Original, hardcopy, signed application and payment prior to processing application.	