Public Notice

DEQ Requests Comments on EP Minerals' Proposed Air Quality Permit

DEQ invites the public to submit written comments on the conditions of EP Minerals, LLC's proposed air quality permit, known officially as a Title V Operating Permit.

Summary

The proposed permit is a renewal for an existing facility. The current permit was issued on Aug. 30, 2012 and scheduled to expire on Aug. 1, 2017. A complete and timely renewal application was submitted by the permittee, so the existing permit will remain in effect until this renewal is issued.

How do I participate?

To submit your comments for the public record, send them by mail, fax or email:

Nancy Swofford, Permit Coordinator
DEQ Eastern Region – Bend Office
475 NE Bellevue Dr., Suite 110
Bend, OR 97701
Fax: 541-388-8283
Email: Nancy Swofford

Written comments are due by 5 p.m., **Friday, Sept. 22, 2017**

About the facility

This is a renewal of a Title V Permit for EP Minerals, LLC located at 2630 Graham Blvd., in Vale, Oregon.

EP Minerals is a diatomaceous earth processing plant. Raw ore is trucked in from the mine and is crushed, milled and classified. Soda ash is then added to the ore and the mixture is fed into a kiln for calcining. The calcined material is then crushed and classified into various filter aid products.

What air pollutants would the permit regulate?

This permit regulates emissions of the pollutants listed in the table at the end of this document.

How does DEQ determine permit requirements?

DEQ evaluates types and amounts of pollutants at the facility's location, and determines permit requirements according to state and federal regulations.

How does DEQ monitor compliance with the permit requirements?

This permit would require the facility to monitor pollutants using federally-approved monitoring practices and standards.

Formulas to calculate emissions are contained in the permit. The permittee is required to calculate facility-wide emissions and submit an emissions report semi-annually. Onsite inspections will be conducted to assure compliance with emission limitations.

What happens after the public comment period ends?

DEQ will consider and provide responses to all comments received at the close of the comment period. The Department will hold a public hearing if requested by 10 or more individuals or one person representing a group of 10 or more individuals. In addition to soliciting public comments, DEQ is also communicating with groups and individuals to determine whether the proposed facility would cause disproportionate impacts to any particular group of people. DEQ is committed to the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income. DEQ may modify provisions in the proposed permit, but the permit writers can only modify conditions of the permit in accordance with the rules and statutes under the authority of DEQ. Participation in the rulemaking or the legislative process is the only way to change the rules or statutes. Ultimately, if a facility meets all legal requirements, DEQ will issue the facility's air quality permit.

Where can I get more information?

Find out more and view the draft documents online at DEQ's "Active Public Notices" page or contact Nancy Swofford, Permit Coordinator:
Phone: 541-633-2021 or 866-863-6668
Fax: 541-388-8283
Email: Nancy Swofford

View the draft permit and related documents in person at the Emma Humphrey Library at 150 A St. E in Vale or at the DEQ office in Pendleton. For a review appointment, call Bobbi DeMauro at 541-278-4614.

State of Oregon
Department of Environmental Quality

Eastern Region
Air Quality Program
475 NE Bellevue Dr., #110
Bend, OR 97701
Phone: 541-388-6146
866-863-6668
Fax: 541-388-8283
Contact: Walt West,
Permit Writer

www.oregon.gov/DEQ

Search for "EP Minerals, Air Permit, Air Quality, Vale"

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Please include your full name and mailing address so that we can remove you from our print mailing list.

Date Issued: 8/18/17
By: Nancy Swofford
Permit Number: 23-0032

Accessibility information
Documents can be provided upon request in an alternate format for individuals with disabilities or in a language other than English for people with limited English skills. To request a document in another format or language, call DEQ in Portland at 503-229-5696, or toll-free in Oregon at 1-800-452-4011, ext. 5696; or email deqinfo@deq.state.or.us.

Emissions Limits

Criteria Pollutants and Greenhouse Gases: Table 1 below presents maximum allowable emissions of criteria pollutants and greenhouse gases for the facility. The current emission limit reflects maximum emissions the facility can emit under the existing permit. The proposed emission limit reflects maximum emissions the facility would be able to emit under the proposed permit. Typically, a facility's actual emissions are less than maximum limits established in a permit; however, actual emissions can increase up to the permitted limit.

Table 1

Criteria Pollutant	Current Limit (tons/yr)	Proposed Limit (tons/yr)
Particulate matter	62	62
Small particulate matter	62	62
Fine particulate matter	62	62
Carbon monoxide	195	195
Nitrogen oxides	78	78
Sulfur dioxide	344	344
Volatile organic compounds	39	39
Greenhouse Gases	94,912	97,987

For more information about criteria pollutants, go to EPA's "Criteria Air Pollutants" page.

Hazardous Air Pollutants: This facility does not have the potential to be a major source of hazardous air pollutants. EPA has determined that these types of businesses do not warrant such regulation. The primary source of hazardous air pollutants are generated from incomplete combustion of natural gas or recycled oil usage at this facility. EP Minerals, LLC has a potential maximum hazardous air pollutants emissions of 1.01 tons per year including 0.96 tons per year of Hexane.

Table 2

Hazardous Air Pollutants	Potential Emissions (tons/yr)
Hexane	0.96
Formaldehyde	0.04
Various Other HAPs	0.01
Total HAPs	**1.01**

For more information about hazardous air pollutants, go to:
Health Effects Notebook for Hazardous Air Pollutants.

State of Oregon Department of Environmental Quality

OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY
OREGON TITLE V OPERATING PERMIT

Eastern Region
475 NE Bellevue Dr., Suite 110
Bend, OR 97701
Telephone: 541-388-6146

Issued in accordance with the provisions of ORS 468A.040
and based on the land use compatibility findings included in the permit record.

ISSUED TO:

EP Minerals, LLC
9785 Gateway Dr., Suite 1000
Reno, NV 89521

INFORMATION RELIED UPON:

Application Number: 28670
Received: 5/31/2016

PLANT SITE LOCATION:

2630 Graham Blvd.
Vale, OR 97918

LAND USE COMPATIBILITY STATEMENT:

Issued by: Malheur County
Dated: 5/16/1984

ISSUED BY THE DEPARTMENT OF ENVIRONMENTAL QUALITY

Mark W. Bailey, Eastern Region Air Quality Manager

Date

Nature of Business	SIC	NAICS
Source installed after 1971 not listed which would emit 10 or more tons per year of any air contaminants if operated uncontrolled	1499	212319

RESPONSIBLE OFFICIAL

Title: Plant Manager

FACILITY CONTACT PERSON

Title: Plant Manager, 541-473-3285 x13104
EHS Manager, 541-473-3285 x13126

Phone: 541-473-3285

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LIST OF ABBREVIATIONS THAT MAY BE USED IN THIS PERMIT

ACDP	Air Contaminant Discharge Permit
Act	Federal Clean Air Act
ASTM	American Society of Testing and Materials
Btu	British thermal unit
CFR	Code of Federal Regulations
CO	Carbon Monoxide
CO_2e	Carbon Dioxide Equivalent
CPMS	Continuous Parameter Monitoring System
DEQ	Department of Environmental Quality
dscf	dry standard cubic feet
EF	Emission Factor
EPA	US Environmental Protection Agency
EU	Emissions Unit
FCAA	Federal Clean Air Act
FSA	Fuel Sampling and Analysis
GHG	Greenhouse Gas
gr/dscf	grain per dry standard cubic feet (1 pound = 7000 grains)
HAP	Hazardous Air Pollutant as defined by OAR 340-244-0040
HCFC	Halogenated Chloro-Fluoro-Carbons
ID	Identification Number or Label
I&M	Inspection and Maintenance
NA	Not Applicable
NO_x	Nitrogen Oxides
O2	Oxygen
OAR	Oregon Administrative Rules
ODEQ	Oregon Department of Environmental Quality
ORS	Oregon Revised Statutes
O&M	Operation and Maintenance
Pb	Lead
PCD	Pollution Control Device
PM	Particulate Matter
PM_{10}	Particulate Matter less than 10 microns in size
$PM_{2.5}$	Particulate Matter less than 2.5 microns in size
ppm	parts per million
PSEL	Plant Site Emission Limit
psia	pounds per square inch, actual
SERP	Source Emissions Reduction Plan
SO_2	Sulfur Dioxide
ST	Source Test
VE	Visible Emissions
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compounds

PERMITTED ACTIVITIES

1. Until such time as this permit expires or is modified or revoked, the permittee is allowed to discharge air contaminants from those processes and activities directly related to or associated with air contaminant source(s) in accordance with the requirements, limitations and conditions of this permit. [OAR 340-218-0010 and 340-218-0120(2)]

2. All conditions in this permit are federally enforceable, meaning that they are enforceable by DEQ, EPA and citizens under the Clean Air Act, except Conditions 5, 6, 33, G5 and G9 (OAR 340-248-0005 through 340-248-0180) are only enforceable by the state. [OAR 340-218-0060]

EMISSIONS UNIT (EU) AND POLLUTION CONTROL DEVICE (PCD) IDENTIFICATION

3. The emissions units regulated by this permit are the following: [OAR 340-218-0040(3)]

Emissions Unit Description	EU ID	Device Description/Device ID	Pollution Control Devices	
			Description	PCD ID
Kilns	E1	Dryer 1/Calciner 1	Baghouse	1-25
	E2	Dryer 2/Calciner 2	Baghouse	2-25
Nonmetallic Mineral Processing	E3	Raw Ore Dump/Primary Crusher	Baghouse	1-8
		Fluid Bed Dryer #1	Baghouse	1-7C
		Fluid Bed Dryer #2	Baghouse	2-7C
		Main Product Bin - Unit 1 & Unit 1 Packer	Baghouse	1-51A
		Main Product Bin for Kiln Unit 2	Baghouse	2-51A
		Unit 1 Packer & Bagger	Baghouse	1-84
		Unit 1 Packer & Bagger	Baghouse	2-84
		Unit 1 and 2 Packer & Bagger	Baghouse	3-84
		Packer & Bagger Unit 2 (one stack for 2-56C and 2-56D)	Baghouse	2-56
		Unit 1 & 2 Surge Bins (previously 1-26)	Baghouse	1-27E
		Unit 1 & 2 Surge Bins (previously 2-26)	Baghouse	2-27E
		Refeed System (refeed into 1-27A & 2-27A)	Baghouse	1-21H
		Pallet Cleaning Booth	Baghouse	PCB
		Waste Storage Bin(s)	Baghouse	1-33A
			Baghouse	1-33B
	E4	Unit 1 Bins (2)	Baghouse	1-7B
		Unit 2 Bins (2)	Baghouse	2-7B
Miscellaneous Processing Sources	E5	Unit 1 Finish End Classification Cyclone	Baghouse	1-70
		Unit 2 Finish End Classification Cyclone	Baghouse	2-70
	E6	Soda Ash Bin - Unit 1	Baghouse	1-18A
		Soda Ash Bin - Unit 2	Baghouse	2-18A
Ore Waste Recycle	E7	ACM Mill Units 1 & 2	Baghouse	408
Oil Storage (NSPS Subpart Kb)	E10	Oil Storage Tank 2-90	None	NA
	E11	Oil Storage Tank 2-91		NA
Fine Filler Circuit	E12	Surge Bin F105/FF102 and Classifier Cyclone F112/FF108	Baghouse	FF119
BT & CB Storage Silos	E13	BT Silo Bin Vent	Baghouse	2-90
		CB Silo Bin Vent	Baghouse	2-94
Aggregate Insignificant	AI	PM/PM_{10} & $PM_{2.5}$ from unpaved roads, material handling fugitives, raw material storage	None	NA

EMISSION LIMITS AND STANDARDS

The following tables and conditions contain the applicable requirements along with the testing, monitoring and recordkeeping requirements for the emissions units to which those requirements apply.

Summary of Facility Wide Emission Limits and Standards

Applicable Requirement	Condition Number	Pollutant/ Parameter	Limit/Standard	Monitoring Requirement	Monitoring Condition
340-208-0210(2)	4	Fugitive emissions	Minimize	Fugitive Dust Control Plan	4
				Visible emissions observations	32
340-208-0300	5	Air contaminants	Not cause a nuisance	Complaint investigation	33
340-208-0450	6	PM >250µ	No observable deposition off site	Complaint investigation	33
340-228-0110(1)	8.a	ASTM Grade 1 distillate fuel oil	≤0.3% Sulfur by weight	Vendor certificate or periodic laboratory analysis of composite samples	36
340-228-0110(2)	8.b	ASTM Grade 2 distillate fuel oil and used oil	≤0.5% Sulfur by weight	Vendor certificate or periodic laboratory analysis of composite samples	36
340-228-0100	8.c	Residual oil	≤1.75% Sulfur by weight	Vendor certificate or periodic laboratory analysis of composite samples	36
340-228-130	8.d	Recycled oil	≤0.5% Sulfur by weight	Vendor certificate or periodic laboratory analysis of composite samples	36
40 CFR Part 68	7	Risk management	Risk management plan	NA	7
40 CFR Part 279.60	8.d	Recycled oil constituents	Quarterly sampling	Periodic laboratory analysis of composite samples	37

4. The permittee must not allow or permit any materials to be handled, transported or stored; or a building, its appurtenances, or a road to be used, constructed, altered, repaired or demolished; or any equipment to be operated, without taking reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions include, but are not limited to the following: [OAR 340-208-0210(1) and (2)]

   4.a. Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land;
   4.b. Application of water or other suitable chemicals on unpaved roads, materials stockpiles and other surfaces which can create airborne dusts;
   4.c. Full or partial enclosure of materials stockpiles in cases where application of water or other suitable chemicals are not sufficient to prevent particulate matter from becoming airborne;
   4.d. Installation and use of hoods, fans and fabric filters to enclose and vent the handling of dusty materials;
   4.e. Adequate containment during sandblasting or other similar operations; and
   4.f. Covering, at all times when in motion, open bodied trucks transporting materials likely to become airborne.

Nuisance Conditions

5. Applicable Requirement: The permittee must not cause or allow air contaminants from any source to cause a nuisance. Nuisance conditions will be verified by DEQ personnel. [OAR 340-208-0300] This condition is enforceable only by the State.

6. Applicable Requirement: The permittee must not cause or permit the deposition of any particulate matter larger than 250 microns in size at sufficient duration or quantity, as to create an observable deposition upon the real property of another person. [OAR 340-208-0450] This condition is enforceable only by the State.

Accidental Release Prevention

7. Should this stationary source become subject to the accidental release prevention regulations in 40 CFR Part 68, then the permittee must submit a risk management plan (RMP) by the date specified in 40 CFR 68.10 and comply with the plan and all other applicable Part 68 requirements. [40 CFR Part 68]

Fuels

8. The permittee must not burn any fuel other than natural gas, propane, butane, ASTM grade fuel oils, or on-specification used oil. Fuel oils must not contain more than:

8.a. 0.3% sulfur by weight for ASTM Grade 1 distillate oil; [OAR 340-228-0110(1)]
8.b. 0.5% sulfur by weight for ASTM Grade 2 distillate oil; [OAR 340-228-0110(2)]
8.c. 1.75% sulfur by weight for residual oil; [OAR 340-228-0100]
8.d. The permittee is allowed to use on-specification used oil that contains no more than 0.5% sulfur by weight. The permittee must obtain analyses from the marketer or, if generated on site, have the used oil analyzed, so that it can be demonstrated that the used oil does not exceed the used oil specifications contained in 40 CFR Part 279.11, Table 1, as follows:

Compound	Maximum Concentration (ppm)
Arsenic	5
Antimony	2
Cadmium	2
Chromium	10
Lead	50
Total Halogens	1,000
PCBs	2

8.e. Recycled oil is permitted to be burned at the facility provided it is not hazardous waste in accordance with OAR 340 Divisions 100 through 120. [40 CFR Part 279.60]:

Emissions Unit Specific Emission Limits and Standards:

EU ID	Applicable Requirement	Condition Number	Pollutant/ Parameter	Limit/ Standard	Monitoring Requirements	
					Method	Condition
Kilns (E1, E2)	340-208-0110(2) & (4)	9	Opacity	20% opacity, 6-minute block average	Periodic VE observation	38
Kilns (E2)	40 CFR Part 60.732(b)	10		10% opacity		
Kilns (E1, E2)	340-228-0210(2)(b)(A)	12	PM (Total)/PM_{10} & $PM_{2.5}$ Filterable PM Baghouse ΔP	0.10 gr/dscf	Parametric monitoring, inspection & maintenance	41
Kilns (E2)	40 CFR Part 60.732(a)			0.040 gr/dscf		
Kilns (E1, E2)	340-226-0210(2)(b)(A)			2-10 in.H_2O (allowable range)		
Kilns (E1)	ACDP #23-0007 Conditions #13, 14 & 15 PSD/BACT Limit	18	NO_x	6.6 lbs/hr	Monitoring	42
Kilns (E2)				7.1 lbs/hr		
Kilns (E1)		19	CO	19.7 lbs/hr		
Kilns (E2)				21.4 lbs/hr		
Kilns (E1, E2)		20	SO_2	5.6 lbs/ton	Continuous emission monitoring	28, 39 & 40
Fluid Bed Dryers (E3)	40 CFR Part 60.732(b)	10	Opacity	10% opacity	Source Test	34 & 26
	40 CFR Part 60.732(a)	14	Filterable PM PM (Total) /PM_{10} & $PM_{2.5}$	0.025 gr/dscf		
	340-228-0210(2)(c)			0.10 gr/dscf		
Nonmetallic Mineral Processing (E3, E4)	340-208-0210(2) & (4)	9	Opacity	20% opacity, 6-minute block average	Periodic VE observation	32 & 35
	40 CFR Part 60.672(e)(2)	11		7 % opacity		
	340-226-0210(2)(b)(A)	15 & 16	PM (Total) /PM_{10} & $PM_{2.5}$	0.10 gr/dscf	Source Test, Parametric monitoring, inspection & maintenance	26 & 41
	340-226-0210(2)(c)					
	40 CFR Part 60.672(e)(2) Table 2			0.022 gr/dscf		
				0.014 gr/dscf		
Misc. Processing Source (E5, E6)	340-208-0210(2) & (4)	9	Opacity	20% opacity, 6-minute block average	Periodic VE observation	32 & 35
		11		7 % opacity		
	340-226-0210(2)(b)(A)	17	PM (Total)/PM_{10} & $PM_{2.5}$	0.10 gr/dscf	Parametric monitoring, inspection & maintenance	41
	340-226-0210(1)(c)					
Ore Waste Recycle, Fine Filler Circuit, and Storage Silos (E7, E12, & E13)	340-208-0110(2) & (4)	9	Opacity	20% opacity, 6-minute block average	Periodic VE observation	26 & 35
	40 CFR Part 60.672(e)(2)	11		7 % opacity		
	340-226-0210(2)(b)(A)	15 &16	PM (Total) /PM_{10} & $PM_{2.5}$ Filterable PM	0.10 gr/dscf	Source testing Parametric monitoring, inspection & maintenance	26 & 41
	340-226-0210(2)(c)					
	40 CFR Part 60.672(e)(2) Table 2			0.022 gr/dscf		
				0.014 gr/dscf		
Oil Storage Tanks (E10, E11)	40 CFR Part 60.116b(b)	21	VOC	Storage vessel dimension	Recordkeeping	21

9. The permittee shall not cause or allow the emissions of any air contaminant into the atmosphere in accordance with the applicable rule provided in OAR 340-208-0110(2) & (4) from emission units Kilns (E1, E2), Nonmetallic Mineral Processing (E3, E4), Miscellaneous Processing Sources (E5, E6), Ore Waste Recycle (E7), Fine Filler Circuit (E12), and Storage Silos (E13) for either a period or periods aggregating more than three minutes in any one hour or on a six minute average as measured by EPA Method 9 which is equal to or greater than 20% opacity, excluding uncombined water. [OAR 340-208-0110(2) & (4)]

10. No emissions shall be discharged into the atmosphere from the Kiln of emission unit E2 or the Fluid Bed Dryers of emission unit E3 greater than 10% opacity based on a six-minute average. [40 CFR Part 60.732(b)]

11. No emissions shall be discharged into the atmosphere from emission units; Nonmetallic Mineral Processing (E3, E4), Miscellaneous Process Sources (E5, E6), Ore Recycling, (E7), Fine Filler Circuit (E12), and Storage Silos (E13) greater than 7% opacity based on a six-minute average. [40 CFR Part 60.672(e)(2) & 60.672(f) Table 2]

12. The permittee shall not cause or allow emissions of particulate matter in excess of the following limits for the emission units Kilns (E1, E2) in accordance with:

    12.a. For E1 and E2: The applicable 0.10 grains per dry standard cubic foot (Total Particulate Matter). [OAR 340-226-0210(2)(b)(A)]
    12.b. For E2 only: 0.040 grains per dry standard cubic foot (Filterable Particulate Matter). [40 CFR Part 60.732(a)]

13. The permittee shall send a notification of the date construction is commenced postmarked no later than 30 days after such date for each new process and pollution control device listed below. In addition, the permittee shall send a notification of the actual date of initial startup for each process and control device commenced postmarked within 15 days after such date.

    13.a. The new Fluid Bed Dryers (#1 and #2) their corresponding baghouses (1-7C and 2-7C) of emission unit E3;
    13.b. Each new baghouse (1-33A, 1-33B, 2-51A, 3-84 and 1-21H) of emission unit E3; and,
    13.c. The new BT & CB Storage Silos and their corresponding baghouses (2-90 and 2-94) of emission unit E13.

14. The permittee shall not cause or allow emissions of particulate matter in excess of the following limits for the Fluid Bed Dryers of emission unit E3 in accordance with:

    14.a. The applicable 0.10 grains per dry standard cubic foot (Total Particulate Matter). [OAR 340-226-0210(2)(c)]
    14.b. 0.025 grains per dry standard cubic foot (Filterable Particulate Matter). [40 CFR Part 60.732(a)]

15. The permittee shall not cause or allow the emissions of particulate matter in excess of the following limits for emission units, except for those identified in Conditions 14 and 16, in Nonmetallic Mineral Processing (E3, E4) Ore Waste Recycle (E7), and Fine Filler Circuit (E12):

    15.a. The applicable 0.10 grains per dry standard cubic foot (Total Particulate Matter). [OAR 340-226-0210(2)(c)]
    15.b. 0.022 grains per dry standard cubic foot (Filterable Particulate Matter). [40 CFR Part 60.672(e)(2) Table 2]

16. The permittee shall not cause or allow the emissions of particulate matter in excess of the following limits for (1-27E, 2-27E, PCB, 1-33A, 1-33B, 2-51A, 3-84 and 1-21H) of emission unit E3 and baghouses (2-90 and 2-94) for BT & CB Storage Silos of emission unit E13 in accordance with:

    16.a. The applicable 0.10 grains per dry standard cubic foot (Total Particulate Matter). [OAR 340-226-0210(2)(b)(A)]
    16.b. 0.014 grains per dry standard cubic foot (Filterable Particulate Matter). [40 CFR Part 60.672(e)(2) Table 2]

17. The permittee shall not cause or allow the emissions of total particulate matter in excess of 0.10 grains per dry standard cubic foot for the emission units Miscellaneous Processing Sources (E5, E6) in accordance with the applicable rule provided in OAR 340-226-0210(2)(b)(A) and (2)(c). [OAR 340-226-0210(2)(b) & (2)(c)]

18. The permittee shall not cause or allow the emissions of oxides of nitrogen (NO_x) in excess of the following limits: [ACDP #23-0007 Condition 13]

    18.a. 6.6 lbs/hr for E1 averaged over a 3-hour period.
    18.b. 7.1 lbs/hr for E2 averaged over a 3-hour period.

19. The permittee shall not cause or allow the emissions of carbon monoxide (CO) in excess of the following limits: [ACDP #23-0007 Condition 14]

    19.a. 19.7 lbs/hr for E1 averaged over a 3-hour period.
    19.b. 21.4 lbs/hr for E2 averaged over a 3-hour period.

20. The permittee shall not cause or allow SO_2 emissions from the Kilns (E1, E2) to exceed 5.6 lbs/ton of product produced for each calendar day based on a 28-day SO_2 hourly emission block average. [ACDP #23-0007 Condition 15]

21. The permittee shall keep readily accessible records showing the dimension of the Oil Storage Tanks (E10, E11) and an analysis showing the capacity of the Oil Storage Tanks. [40 CFR Part 60.116b(b)]

Insignificant Activities Emission Limits and Standards

22. DEQ acknowledges that insignificant emissions units (IEUs) identified by rule as either categorically insignificant activities or aggregate insignificant emissions as defined in OAR 340-200-0020 exist at facilities required to obtain an Oregon Title V Operating Permit. IEUs must comply with all applicable requirements. In general, the requirements that could apply to IEUs are incorporated as follows:

    22.a. OAR 340-208-0110 (20% opacity)
    22.b. OAR 340-226-0210 (0.10 gr/dscf for non-fugitive, non-fuel burning equipment)
    22.c. OAR 340-226-0310 (process weight limit for non-fugitive, non-fuel burning process equipment)
    22.d. OAR 340-228-0210 (0.10 gr/dscf corrected to 12% CO_2 or 50% excess air for fuel burning equipment)

Unless otherwise specified in this permit or an applicable requirement, DEQ is not requiring any testing, monitoring, recordkeeping or reporting for the applicable emissions limits and standards that apply to IEUs. However, if testing were performed for compliance purposes, the permittee would be required to use the test methods identified in the definitions of “opacity” and “particulate matter” in OAR 340-200-0020 and perform the testing in accordance with DEQ’s Source Sampling Manual.

PLANT SITE EMISSION LIMITS

23. The plant site emissions (tons/year) must not exceed the following limits for any 12 consecutive calendar month period: [OAR 340-222-0040 through OAR 340-222-0043]

PM	PM_{10}	$PM_{2.5}$	SO_2	NO_x	CO	VOC	GHG (CO_2e)
62	62	62	344	78	195	39	97,987

EMISSION FEES

24. Emission fees will be based on the Plant Site Emission Limits, unless the permittee elects to report actual emissions for one or more permitted processes/pollutants. If the permittee reports actual emissions for one or more permitted processes/pollutants, the permitted emissions for the remaining permitted processes/pollutants will be based on OAR 340-220-0090.

TESTING REQUIREMENTS

25. Unless otherwise specified in this permit, the permittee must conduct all testing in accordance with DEQ's Source Sampling Manual. [OAR 340-212-0120] [40 CFR §60.8]

25.a. Unless otherwise specified by a state or federal regulation, the permittee must submit a source test plan to DEQ at least 30 days prior to the date of the test. The test plan must be prepared in accordance with the Source Sampling Manual and address any planned variations or alternatives to prescribed test methods. The permittee should be aware that if significant variations are requested, it may require more than 30 days for DEQ to grant approval and may require EPA approval in addition to approval by DEQ.

25.b. Only regular operating staff may adjust the processes or emission control device parameters during a compliance source test and within two (2) hours prior to the tests. Any operating adjustments made during a compliance source test, which are a result of consultation during the tests with source testing personnel, equipment vendors or consultants, may render the source test invalid.

25.c. Unless otherwise specified by permit condition or DEQ approved source test plan, all compliance source tests must be performed as follows:

25.c.i. At least 90% of the design capacity for new or modified equipment;

25.c.ii. At least 90% of the maximum operating rate for existing equipment; or

25.c.iii. At 90 to 110% of the normal maximum operating rate for existing equipment. For purposes of this permit, the normal maximum operating rate is defined as the 90th percentile of the average hourly operating rates during a 12 month period immediately preceding the source test. Data supporting the normal maximum operating rate must be included with the source test report.

25.d. Each source test must consist of at least three (3) test runs and the emissions results must be reported as the arithmetic average of all valid test runs. If for reasons beyond the control of the permittee a test run is invalid, DEQ may accept two (2) test runs for demonstrating compliance with the emission limit or standard.

25.e. Source test reports prepared in accordance with DEQ's Source Sampling Manual must be submitted to DEQ within 60 days of completing any required source test, unless a different time period is approved in the source test plan submitted prior to the source test.

26. The permittee shall demonstrate compliance with the PM emission limits in Conditions 11, 14 and 15 in accordance with 40 CFR §60.675, §60.736 and §60.8 when the following sources are constructed and begin operation:

EU E3: Fluid Bed Dryers (1-7C and 2-7C);
EU E3: New Baghouses (1-33A, 1-33B, 2-51A, 3-84 and 1-21H); and,
EU E13: BT & CB Storage Silos baghouses (2-90, 2-94)
Testing shall be performed as follows:

26.a. The initial test must be conducted within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility.

26.b. The permittee shall provide the DEQ at least 30 days prior notice of any performance test, to afford the DEQ the opportunity to have an observer present.

26.c. EPA Method 5 or Method 17 shall be used to determine particulate matter concentration as follows:

26.c.i. For EPA Method 5, if the gas stream being sampled is at ambient temperature, the sampling probe and filter may be operated without heaters. If the gas stream is above ambient temperature, the sampling probe and filter may be operated at a temperature high enough, but no higher than 121˚C (250˚F), to prevent water condensation on the filter;

26.c.ii. Each performance shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard. For the purpose of determining compliance with an applicable standard, the arithmetic means of results of three runs shall apply;

26.c.iii. The sample volume shall be at least 1.70 dscm (60 dscf).

26.d. EPA Method 9 and the procedures in 60.11 shall be used to determine opacity as follows:

26.d.i. The minimum total time observations shall be 3-hours (thirty 6-minute averages);

26.d.ii. The minimum distance between the observer and the emission source shall be 4.57 meters (15 feet).

26.e. During each test run, the permittee shall record the following information:

26.e.i. Emissions unit and monitoring point identification;

26.e.ii. Emission results in pounds per hour and pounds per unit production;

26.e.iii. Process parameters during the test (e.g. material throughput, amounts of fuels, heat input, etc.); and

26.e.iv. Control device operating parameters.

27. The permittee must conduct the following emission factor verification test on the fluid bed dryers:

EU ID	Pollutant	Test Method	Fuel	Test Schedule
Fluid Bed Dryers (E3)	SO_2	EPA Method 6c	Natural Gas	12/31/2021[a.]

a. Testing is to be completed by the above date.

27.a. The results will be used for emission factor verification with Condition 42.c.

27.b. The permittee shall submit a summary of all emission factor verification tests to the Department within 60 days of any test. The summary shall include the following information:

27.b.i. Emissions unit and monitoring point identification;

27.b.ii. Emission results in pounds per MMscf and pounds per ton of DE production;

27.b.iii. Process parameters during the test (e.g. material throughput, amounts of fuels, heat input, etc.); and

27.b.iv. Control device operating parameters.

28. The permittee shall conduct the following compliance tests:

EU ID	Parameter	Test Method	Fuel	Minimum Frequency
Kilns (E1, E2)	Relative Accuracy - SO_2 CEM	Performance Specification 2; EPA Method 6c	Natural Gas or Oil	Annual
	Relative Accuracy – Flow Rate CEM	Performance Specification 6; EPA Methods 1-4	Natural Gas or Oil	Annual

28.a. The permittee shall submit a summary of all compliance tests to the Department within 60 days of completion of the testing. The summary shall include the following information:
- 28.a.i. Emissions unit and monitoring point identification;
- 28.a.ii. The Relative Accuracy results shall be reported in percent relative accuracy. Emission data shall be reported in pounds per hour and pounds per ton, production;
- 28.a.iii. Process parameters during the test (e.g. material throughput, type and rates of fuel used, heat input, etc.);
- 28.a.iv. Control device operating parameters; and,
- 28.a.v. For each test event, the permittee shall document the higher heating value of the recycled oil, Btu/gallon.

MONITORING REQUIREMENTS

The monitoring conditions in this section are based on OAR 340-218-0050(3)(a); unless otherwise specified.

General Monitoring Requirements

29. The permittee must not knowingly render inaccurate any required monitoring device or method. [OAR 340-218-0050(3)(a)(E)]

30. Methods used to determine actual emissions for fee purposes must also be used for compliance determination and can be no less rigorous than the requirements of OAR 340-218-0080. [OAR 340-218-0050(3)(a)(F)]

31. Monitoring requirements must commence on the date of permit issuance unless otherwise specified in the permit or an applicable requirement. [OAR 340-218-0050(3)(a)(G)]

Facility-Wide Monitoring

32. At least once each month for a minimum period of 30 minutes, the permittee must visually survey the plant for any sources of excess fugitive emissions. For the purpose of this survey, excess fugitive emissions are considered to be any visible emissions that leave the plant site boundaries. The person conducting the observation does not have to be EPA Method 9 certified. However, the individual should be familiar with the procedures of EPA Method 9, including using the proper location to observe visible emissions. If sources of visible emissions are identified, the permittee must:

- 32.a. Immediately take corrective action to minimize the fugitive emissions, including but not limited to those actions identified in Condition 4; and
- 32.b. Conduct another survey within 24 hours.

33. The permittee shall provide the Eastern Region Office of the Department with written notification within five days of all nuisance complaints received by the permittee during the operation of the facility, and shall

maintain a log of each complaint. Documentation shall include date of contact, time of observed nuisance condition, description of nuisance condition, location of receptor, status of plant operation during the observed period, and time of response to complainant. A plant representative shall immediately investigate the condition following the receipt of the nuisance complaint and a plant representative shall provide a response to the complainant within 24 hours, if possible. This condition is only enforceable by the state. [OAR 340-218-0050(3)(a)]

Emissions Unit Specific Monitoring

34. The permittee must conduct visible emissions monitoring for the Fluid Bed Dryers (Nos: 1& 2) of emission unit E3 using the following methods and monitoring schedule: [40 CFR §60.734(b)]

Emission Unit	Method	Frequency
Fluid Bed Dryers (E3)	EPA Method 9	3 Times Daily

34.a. If the observer is unable to conduct EPA Method 9 due to visual interference caused by other visible emissions sources (e.g. fugitive emissions during high wind conditions) or due to weather conditions such as fog, heavy rain or snow, the observer shall note such conditions on the data observation sheet and make at least three attempts to conduct the surveys or tests at approximately 2 hour intervals. If no observations are made for that day, the observer shall continue to attempt to conduct the visible emissions observations daily until a valid observation is possible.

34.b. If any EPA Method 9 test shows a violation of the applicable limits, the permittee shall:

34.b.i. Take corrective action to remedy the violation within 30 minutes; and

34.b.ii. Perform daily tests until at least 5 consecutive hours show emissions below the limits. After the 5-hour period, the test frequency shall resume as specified above.

34.c. The permittee shall record in a log-book the date and time of the surveys, the results of the surveys, and the corrective action, if performed.

35. At least once each month for a minimum period of 30 minutes, the permittee must visually survey the plant for any sources of excess emissions. For emission units E3 (excluding the Fluid Bed Dryers), E4, E7, E12 and E13 excess emissions are considered to be visible emissions in excess of 7% opacity. For the Kiln of emission unit E2 and the Fluid Bed Dryers of emission unit E3, excess emissions are considered to be visible emissions in excess of 10% opacity. For all other emission units, excess emissions are considered to be visible emissions equal to or greater than 20% opacity. The person conducting these observations must be EPA Method 9 certified. If sources of visible emissions are identified, the permittee must: [OAR 340-218-0050(3)(a)]

35.a. Immediately take corrective action to minimize emissions; and

35.b. Conduct an EPA Method 9 on the identified emission unit within 24 hours.

36. The permittee must monitor the sulfur content of each shipment of fuel oil received by: [OAR 340-218-0050(3)(a)]

36.a. Obtaining a certification of sulfur content from each vendor for each shipment of fuel received;

36.b. Analyzing or having analyzed by a contract laboratory a representative sample taken by the permittee from each shipment of fuel received; or

36.c. Secure a MSDS from the fuel supplier and a certification stating that the supplier will provide only fuel oil that meets the specifications in Condition 8.

37. The permittee must sample and analyze the recycled oil on a quarterly basis. Samples may be taken from the storage tanks or from the feed line. The analysis must identify the concentration of arsenic, cadmium, lead, polychlorinated-biphenols, sulfur, and total halogens in the fuel. Results must be submitted to the Department with the annual report.

38. The permittee must conduct visible emissions monitoring of emission units E1 and E2 using the following methods and monitoring schedule:

Emission Unit	Method	Frequency
Kiln (E2)	EPA Method 9	3 Times Daily
Kiln (E1)	EPA Method 9 or EPA Method 22	Weekly

38.a. For emissions unit E1, each EPA Method 9 test shall be a minimum of 6 minutes long unless any one reading is greater than the emissions limit for the emissions unit, then the observation period shall be 60 minutes or until a violation of the applicable limit in Condition 9 has been documented, whichever period is shorter.

38.b. Visible emissions testing, using EPA Method 9 test, may be waived for Kiln (E1) provided all of the following conditions are met:

38.b.i. The permittee shall conduct a six (6) minute visible emission survey of each emissions unit using EPA Method 22; and

38.b.ii. Visible emissions, excluding condensed water vapor, from an individual monitoring point are not detected more than 5% (18 seconds) of the survey time.

38.b.iii. If visible emissions are detected for more than 5% (18 seconds) of the survey time, EPA Method 9 shall be conducted on that monitoring point within 24 hours.

38.c. If the observer is unable to conduct EPA Method 9 or EPA Method 22 due to visual interference caused by other visible emissions sources (e.g. fugitive emissions during high wind conditions) or due to weather conditions such as fog, heavy rain or snow, the observer shall note such conditions on the data observation sheet and make at least three attempts to conduct the surveys or tests at approximately 2 hour intervals. If no observations are made for that day, the observer shall continue to attempt to conduct the visible emissions observations daily until a valid observation is possible.

38.d. If any EPA Method 9 test shows a violation of the applicable limits, the permittee shall:

38.d.i. Take corrective action to remedy the violation within 30 minutes; and

38.d.ii. Perform hourly tests until at least 5 consecutive hours show emissions below the limits. After the 5-hour period, the test frequency shall resume as specified above.

38.e. The permittee shall record in a log-book the date and time of the surveys, the results of the surveys, and the corrective action, if performed.

39. The permittee shall monitor the operation of the Kilns (E1, E2) by certifying, operating, maintaining and recording the output of a SO_2 CEMS (consisting of a SO_2 pollutant concentration monitor and a flow monitor) with automated data acquisition and handling system (DAHS) for measuring and recording SO_2 concentration (ppm), mass emission rate (lb SO_2/hr) and 28 day SO_2 hourly emission block average, (lb SO_2/hr), discharged to the atmosphere in accordance with Department's Continuous Monitoring Manual dated January 1992.

39.a. The SO_2 mass emissions rate in pounds per hour for each stack shall be calculated as follows:

$$M_{SO2i} = C_{SO2} \times FR \times 64 \times 1.55 \times 10^{-7}$$

Where:

M_{SO2i} = Hourly mass of SO_2 emissions for each operating hour, lb SO_2/hr

C_{SO2} = SO_2 concentration, ppmvw

FR = Specific stack gas flow rate, wet standard ft^3/min

64 = Molecular weight of SO_2, lbs/lbs-mole

1.55×10^{-7} = Unit conversion , (lb-mole x min)/(hr x ft^3 x ppm)

39.b. The average SO_2 mass emissions rate in pounds per hour shall be calculated as follows:

M_{SO2} = $(M_{SO2i} + M_{SO2i}\ i + M_{SO2}iii + etc)/i$

Where:

M_{SO2} = 28 day SO_2 hourly emission block average, lb SO_2/hr
M_{SO2i} = Hourly mass of SO_2 emissions for each operating hour, lb SO_2/hr
i = Number of operating hours in 28 day block

39.c. The mass emissions rate in pounds per ton of diatomaceous earth shall be calculated as follows:

M_{Value} = $(M_{SO2} * i)/DE$

Where:

M_{Value} = kilns SO_2 emissions, lb/ton DE
M_{SO2} = 28 day SO_2 hourly emission block average, lb SO_2/hr
i = Number of operating hours in 28-day block
DE = Diatomaceous Earth Production for 28 day period, dry tons

39.d. Every 28 days the permittee shall compare the measured mass SO_2 emissions rate in pounds per ton of diatomaceous earth (M_{value}) to the limit (M_{Limit}). If M_{Value} is less than M_{Limit} the permittee is in compliance with Condition 20.

M_{Value} < M_{Limit}

Where:

M_{Value} = Measured Plant-wide SO_2 emissions, lb/ton DE
M_{Limit} = 5.6 lbs/ton

40. At all times the CEMS is inoperable for a period of more than 24 hours the permittee shall document ore type and typical emissions from the specific ore type. For continuous measurements, the data is considered complete when at least 75% of the possible observations in an hour and 90 percent of the daily or monthly hourly averages are present and valid. If the permittee determines that the CEMS will not meet the completeness requirement, then the permittee shall monitor the SO_2 emission rate at the a facility using a mass balance based on the sulfur analysis and throughput of ores, products and waste streams as shown below:

40.a. The permittee shall take a representative sample from the following locations for each shift of unit operation:
- 40.a.i. Fine ore samples (1-10, 1-10A, 2-10, 2-10A)
- 40.a.ii. Waste samples (1-16B, 2-16B)
- 40.a.iii. Kiln product samples (1-49, 2-49)

40.b. After collecting a representative sample the permittee shall prepare and analyze the sample as shown below:

40.b.i. Fine ore samples:
- 40.b.i.A. Crush as needed;
- 40.b.i.B. Split sample until about 200 grams remains;
- 40.b.i.C. Combine the 3 shift samples from each pan feeder into one daily composite sample per feeder;
- 40.b.i.D. Split sample again until 200 grams remains;
- 40.b.i.E. Dry 200 grams sample at about 200ºF for 12 hours or until dry (<1% moisture);
- 40.b.i.F. Split until sample is about 20 grams;
- 40.b.i.G. Mill by hand or with a laboratory mill to a fine powder and then blend the milled sample;

40.b.i.H. Analyze at least two aliquots from the daily 20 gram split for sulfur in the LECO analyzer or one sample by X-Ray Fluorescence (XRF);

40.b.i.I. If the LECO results do not agree within 3 sigma (±6% of the mean), run another aliquot.

40.b.ii. Waste samples:

40.b.ii.A. Split sample until about 200 grams remains;

40.b.ii.B. Combine the 3 shift samples from each unit into one daily composite sample per unit;

40.b.ii.C. Split sample again until 200 grams remains;

40.b.ii.D. Dry 200 grams sample at about 200ºF for 6 hours or until dry (<1% moisture);

40.b.ii.E. Split until sample is about 20 grams;

40.b.ii.F. Mill by hand or with a laboratory mill to a fine powder and then blend the milled sample;

40.b.ii.G. Analyze at least two aliquots from the daily 20 gram split for sulfur in the LECO analyzer or one sample by X-Ray Fluorescence (XRF);

40.b.ii.H. If the LECO results do not agree within 3 sigma (±6% of the mean), run another aliquot.

40.b.iii. Kiln product samples:

40.b.iii.A. Split sample until about 100 grams remains;

40.b.iii.B. Combine the 3 shift samples from each unit into one daily composite sample per unit;

40.b.iii.C. Split sample again until 20 grams remains;

40.b.iii.D. Mill by hand or with a laboratory mill to a fine powder and then blend the milled sample;

40.b.iii.E. Analyze at least two aliquots from the daily 20 gram split for sulfur in the LECO analyzer or one sample by X-Ray Fluorescence (XRF);

40.b.iii.F. If the LECO results do not agree within 3 sigma (±6% of the mean), run another aliquot.

40.c. The permittee shall follow the quality control program as shown below:

40.c.i. LECO analyzer calibration and precision check at least once per day of operation.

40.c.ii. LECO - Independent sulfur standard run at least once per week, XRF – Independent outside lab sulfur standard (low, medium and high) run daily.

40.c.iii. Calibration of balance semi-annually.

40.c.iv. LECO - Independent sulfur analysis (separate calibrated analyzer) of six samples per quarter.

40.c.v. Truck scale calibration semi-annually.

40.d. The SO_2 mass emissions rate in pounds per day shall be calculated as follows:

$$M_{SO2i} = 2(PC_S - W_S - P_S)$$

Where:

M_{SO2i} = Mass of SO_2 emissions for each day, (lb SO_2/day)

PC_S = Mass flow rate of S in process charge, (lb S/day)

PC_S = MPC x CPC

W_S = Mass flow rate of S in process waste, (lb S/day)

W_S = MW x CW

P_S = Mass flow rate of S in product, (lb S/day)

P_S = MP x CP

MPC = Process charge rate, (lb/day)

MP = DE production rate, (lb DE/day)

MW = Waste mass rate, (lb waste/day)

CPC = Sulfur concentration in the process charge, (weight %)
CP = Sulfur concentration in the product, (weight %)
CW = Sulfur concentration in the waste, (weight %)

40.e. The average daily SO_2 mass emissions rate shall be calculated as follows:

M_{SO2} = $(M_{SO2i} + M_{SO2ii} + M_{SO2}iii + etc)/28$

Where:

M_{SO2} = 28 day SO_2 daily emission block average, lb SO_2/day
M_{SO2i} = Daily mass of SO_2 emissions for each operating day, lb SO_2/day

If M_{SO2i} is calculated to be less than zero then zero shall be substituted for the value calculated for that day.

41. The permittee shall maintain pressure drop monitoring devices on baghouses 1-25, 2-15, 1-7C, 2-7C, 1-27E, 2-27E, 1-21H, 1-8, 1-33A, 1-33B, 1-84, 2-84, 3-84, PCB, 2-56, 1-51A, 2-51A, 1-7B, 2-7B, 1-70, 2-70, 1-18A, 2-18A, 408, FF119, 2-90, 2-94 in accordance with the manufacturer's written instructions. [OAR 340-212-0200 through 0280]

41.a. For all baghouses other than 2-56, FF119, 1-27E, 2-27E, 1-70, and PCB, the permittee shall take corrective action if the pressure drop is less than 2.0 in. H_2O or greater than 10.0 in. H_2O other than during startup and shutdown. For baghouses 2-56, FF119, 1-27E, 2-27E, 1-70, and PCB, the permittee shall take corrective action if the pressure drop is less than 0.5 in. H_2O or greater than 10.0 in. H_2O other than during startup and shutdown.

41.b. Real time data shall be displayed continuously when the units are in operation. The permittee shall then monitor the pressure drop for each baghouse at least one time each day.

41.c. All excursions of the parametric action levels and the corrective action taken to return the control devices to highest and best practicable treatment and control shall be recorded in a maintenance log.

41.d. An exceedance of the parametric action level operating ranges is not necessarily a violation of the particulate matter emission standard.

41.e. At least once each calendar year, the baghouses shall be inspected for physical degradation that could affect the performance of the control device, including but not limited to any individual bags that are found to be blinded, missing or damaged to the extent that they are no longer effective. The permittee shall make all necessary repairs to the baghouses to ensure efficient operation. Inspection and repair activities should be included in a log.

42. The permittee shall monitor plant site emissions for comparison with the Plant Site Emission Limits established in Condition 23 of this permit by conducting monitoring in accordance with the following procedures, test methods and frequencies: [OAR 340-218-0050(3)]

42.a. The permittee shall maintain records of the following process parameters:

Emissions Unit	Process Parameter	Units	Frequency
Kilns (E1, E2)	Diatomaceous earth production rate	Tons	Daily, Annual
	Natural gas usage	MMscf	Monthly, Annual
	Recycled oil usage	Gallons	
Fluid Bed Dryers #1 and #2 (E3)	Natural gas usage	MMscf	
	Ore feed rate	Tons	Daily, Annual

Emissions Unit	Process Parameter	Units	Frequency
Nonmetallic Mineral Processing (E3, E4)	Diatomaceous earth production rate	Tons	Daily, Annual
	Dry ore feed rate		
	Dry waste rate		
Miscellaneous Processing Sources (E5, E6)	Diatomaceous earth production rate		
	Soda ash throughput		Monthly, Annual
Ore Waste Recycle (E7)	Dry ore recycle rate		
Fine Filler Circuit (E12)	Diatomaceous earth product		
BT & CB Storage Silos (E13)	Diatomaceous earth product		

42.b. The permittee shall calculate the 12-month rolling emissions for all pollutants, except greenhouse gases (GHG), using the following formula, the process parameter measurements identified in Condition 42.a, and the emission factors listed in Condition 42.c:

$E_1 = \sum[P_{eu} \times EF_{eu} \times 1 \text{ ton}/2{,}000 \text{ lbs}]$

Where:

E_1 = Pollutant emissions in tons/yr;
P_{eu} = Process parameter in units identified in Condition 42.a; and,
EF_{eu} = Emission factor identified for each emissions unit identified in Condition 42.c.

42.c. Emissions factors for calculating pollutant emissions (lb/throughput type):

Emission Source Description and PCD ID	Throughput Type [Units]	CO	PM	PM_{10}	$PM_{2.5}$	NO_X	SO_2	VOC
Kilns/Calciners (1-25)	Dry Product [TONS]	2.57	0.26	0.26	0.26	0.85	4.9	0.529
Kilns/Calciners (2-25)	Dry Product [TONS]	2.57	0.27	0.27	0.27	0.85	4.9	0.529
Fluid Bed Dryers # 1 & #2 (1-7C, 2-7C)	Natural Gas [MMscf]	84	----	----	----	100	1	5.5
Fluid Bed Dryers # 1 & #2 (1-7C, 2-7C)	Ore [TONS]		0.081	0.081	0.081			
Raw Ore Dump/Primary Crusher (1-8)	Ore [TONS]		0.011	0.011	0.011			
Waste Storage Bin (1-33A, 1-33B))	Waste Material [TONS]		0.091	0.091	0.091			
Main Product Bins Unit 1 (1-51A)	Dry Product [TONS]		0.014	0.014	0.014			
Main Product Bins Unit 2 (2-51A)	Dry Product [TONS]		0.027	0.027	0.027			
Unit 1 Packer and Bagger (1-84)	Dry Product [TONS]		0.080	0.080	0.080			
Unit 1 Packer and Bagger (2-84)	Dry Product [TONS]		0.068	0.068	0.068			
Packer & Bagger Unit 2 (2-56)	Dry Product [TONS]		0.002	0.002	0.002			
Unit 1 and 2 Packer and Bagger (3-84)	Dry Product [TONS]		0.047	0.047	0.047			
Unit 1 & 2 Surge Bins (1-27E, 2-27E)	Dry Product [TONS]		0.006	0.006	0.006			
Pallet Cleaning (PCB)	Dry Product [TONS]		0.013	0.013	0.013			
Refeed System (1-21H)	Dry Product [TONS]		0.016	0.016	0.016			
Unit Bins 1 & 2 (1-7B, 2-7B)	Dry Product [TONS]		0.009	0.009	0.009			
Unit 1 Finish End Classification (1-70)	Dry Product [TONS]		0.128	0.128	0.128			
Unit 2 Finish End Classification (2-70)	Dry Product [TONS]		0.133	0.133	0.133			
Soda Ash Bins Units 1 & 2 (1-18A, 2-18A)	Ash [TONS]		0.085	0.085	0.085			
ACM Mill (408)	Ore [TONS]		0.190	0.190	0.190			
Fine Filler Circuit (FF119)	Dry Product [TONS]		0.183	0.183	0.183			
Storage Silos BT & CB (2-90, 2-94)	Dry Product [TONS]		0.085	0.085	0.085			
Aggregate Insignificant (AI)	AI [LBS]	2000	2000	2000	2000	2000	2000	2000

42.d. Greenhouse Gas Registration and Reporting: The permittee must register and report greenhouse gas emissions with DEQ in accordance with OAR 340-215 using the following greenhouse reporting protocol. The greenhouse gas report must be certified by the Responsible Official consistent with OAR 340-218-0040(5).]

42.d.i. Calculate the greenhouse gas emissions from the combustion of fuels using the DEQ EZ-Filer program.

42.d.ii. Calculate the CO_2 emissions from the processing of DE ore in emissions unit E1 and E2 by multiplying the total DE production in tons by an emission factor of 0.2 tons of CO_2 per DE ton of production.

42.d.iii. Add the CO_2 emissions calculated in Condition 42.d.ii to the GHG emissions calculated in Condition 42.d.i to obtain the total GHG emissions as CO_2e.

RECORDKEEPING REQUIREMENTS

The recordkeeping conditions in this section are based on OAR 340-218-0050(3)(b); unless otherwise specified.

General Recordkeeping Requirements

43. The permittee must maintain the following general records of testing and monitoring required by this permit: [OAR 340-218-0050(b)(A)]

43.a. The date, place as defined in the permit, and time of sampling or measurements;
43.b. The date(s) analyses were performed;
43.c. The company or entity that performed the analyses;
43.d. The analytical techniques or methods used;
43.e. The results of such analyses;
43.f. The operating conditions as existing at the time of sampling or measurement; and
43.g. The records of quality assurance for continuous monitoring systems (including but not limited to quality control activities, audits, calibration drift checks).

44. Unless otherwise specified by permit condition, the permittee must make every effort to maintain 100 percent of the records required by the permit. If information is not obtained or recorded for legitimate reasons (e.g., the monitor or data acquisition system malfunctions due to a power outage), the missing record(s) will not be considered a permit deviation provided the amount of data lost does not exceed 10% of the averaging periods in a reporting period or 10% of the total operating hours in a reporting period, if no averaging time is specified. Upon discovering that a required record is missing, the permittee must document the reason for the missing record. In addition, any missing record that can be recovered from other available information will not be considered a missing record. [340-212-0160, OAR 340-214-0110, and 340-218-0050(3)(b)]

45. Recordkeeping requirements must commence on the date of permit issuance unless otherwise specified in the permit or an applicable requirement. [OAR 340-218-0050(3)(b)(C)]

46. Unless otherwise specified, the permittee must retain records of all required monitoring data and support information for a period of at least five (5) years from the date of the monitoring sample, measurement, report or application. Support information includes all calibration and maintenance records and all original strip-chart recordings (or other original data) for continuous monitoring instrumentation, and copies of all reports required by the permit. All existing records required by the previous Air Contaminant Discharge Permit or Oregon Title V Operating Permit must also be retained for five (5) years from the date of the monitoring sample, measurement, report or application. [OAR 340-218-0050(b)(B)]

Source Specific Recordkeeping Requirements

47. Source specific recordkeeping requirements:

47.a. The permittee shall maintain records of the fugitive emissions surveys, corrective actions (if necessary), and/or the results of any EPA Method 9 tests as required in Conditions 32, 35 and 38;
47.b. Nuisance complaints as required in Condition 33;
47.c. Mass balance data as required in Condition 40 or CEM emissions and operating parameters as required in Condition 39;
47.d. Baghouse pressure drop, inspection and maintenance history as required in Condition 41;
47.e. Production levels as required in Condition 42.a;
47.f. Emissions as calculated according to Condition 42.b;
47.g. Greenhouse gas emissions as calculated according to Condition 42.d.iii.

REPORTING REQUIREMENTS

The reporting conditions in this section are based on OAR 340-218-0050(3)(c); unless otherwise specified.

General Reporting Requirements

48. Excess Emissions Reporting: The permittee must report all excess emissions as follows. [OAR 340-214-0300 through 340-214-0360]

48.a. Immediately (within 1 hour of the event) notify the Department of an excess emission event by phone, e-mail or facsimile; and
48.b. Within 15 days of the excess emissions event, submit a written report that contains the following information: [OAR 340-214-0340(1)]
48.b.i. The date and time of the beginning of the excess emissions event and the duration or best estimate of the time until return to normal operation;
48.b.ii. The date and time the owner or operator notified the Department of the event;
48.b.iii. The equipment involved;
48.b.iv. Whether the event occurred during planned startup, planned shutdown, scheduled maintenance, or as a result of a breakdown, malfunction or emergency;
48.b.v. Steps taken to mitigate emissions and corrective action taken, including whether the approved procedures for a planned startup, shutdown or maintenance activity were followed;
48.b.vi. The magnitude and duration of each occurrence of excess emissions during the course of an event and the increase over normal rates or concentrations as determined by continuous monitoring or best estimate (supported by operating data and calculations);
48.b.vii. The final resolution of the cause of the excess emissions; and
48.b.viii. Where applicable, evidence supporting any claim that emissions in excess of technology-based limits were due to any emergency pursuant to OAR 340-214-0360.
48.c. The permittee must continue to maintain a log of all excess emissions in accordance with OAR 340-214-0340(3). However, the permittee is not required to submit the detailed log with the semi-annual and annual monitoring reports. The permittee is only required to submit a brief summary listing the date, time, and the affected emissions units for each excess emission that occurred during the reporting period. [OAR 340-218-0050(3)(c)]
48.d. In the event of any excess emissions which are of a nature that could endanger public health and occur during non-business hours, weekends or holidays, the permittee must immediately notify DEQ by calling the Oregon Emergency Response System (OERS). The current number is 1-800-452-0311.

48.e. If startups, shutdowns or scheduled maintenance may result in excess emissions, the permittee must submit startup, shutdown or scheduled maintenance procedures used to minimize excess emissions to DEQ for prior authorization, as required in OAR 340-214-0310 and 340-214-0320. New or modified procedures must be received by DEQ in writing at least 72 hours prior to the first occurrence of the excess emission event. The permittee must abide by the approved procedures and have a copy available at all times.

48.f. The permittee must notify DEQ of planned startup/shutdown or scheduled maintenance events.

49. Permit Deviations Reporting: The permittee must promptly report deviations from permit requirements that do not cause excess emissions, including those attributable to upset conditions, as defined in the permit, the probable cause of such deviations, and any corrective actions or preventative measures taken. "Prompt" means within 15 days of the deviation. Deviations that cause excess emissions, as specified in OAR 340-214-0300 through 340-214-0360 must be reported in accordance with Condition 48.

50. The permittee shall submit any required source test report within 60 days after the source test; unless otherwise approved in the source test plan. [OAR 340-218-0050(3)(c)(C) and 340-028-1100]

51. All required reports must be certified by a responsible official consistent with OAR 340-218-0040(5). [OAR 340-218-0050(3)(c)(D)]

52. Reporting requirements must commence on the date of permit issuance unless otherwise specified in the permit. [OAR 340-218-0050(3)(c)(E)]

Addresses of regulatory agencies are the following, unless otherwise instructed:

Submit all Notices and applications that do not include payment to the Permit Coordinator.

Submit all reports (annual reports, source test plans and reports, etc.) to DEQ's Eastern Region. If you know the name of the Air Quality staff member responsible for your permit, please include it.

DEQ - Eastern Region
475 NE Bellevue Dr., Suite 110
Bend, OR 97701
541-388-6146

Submit payments for invoices, applications to modify the permit, and any other payments to DEQ's Business Office:

DEQ
700 NE Multnomah St., Suite #600
Portland, OR 97232
503-229-5696

Submit all reports for EPA requirements to:

Clean Air Act Compliance Manager
US EPA Region 10, MS: OCE-101
1200 Sixth Ave., Suite 900
Seattle, WA 98101

Semi-Annual and Annual Reports

53. The permittee must submit three (3) copies of reports of any required monitoring at least every 6 months, completed on forms approved by DEQ. Six month periods are January 1 to June 30, and July 1 to December 31. One copy of the report must be submitted to the EPA and two copies to the DEQ regional office. All instances of deviations from permit requirements must be clearly identified in such reports: [OAR 340-218-0050(3)(c)(A) and 340-218-0080(6)(d)]

    53.a. The first semi-annual report is due on **July 30** and must include the semi-annual compliance certification; [OAR 340-218-0080]
    53.b. The annual report is due on **March 15** and must consist of the following:
        53.b.i. The emission fee report; [OAR 340-220-0100]
        53.b.ii. A summary of the excess emissions upset log; [OAR 340-214-0340]
        53.b.iii. The second semi-annual compliance certification; [OAR 340-218-0080]
        53.b.iv. A summary of any nuisance complaints not resolved within 10 days of receiving the complaint;
        53.b.v. Each 28-day block average calculated in accordance with Conditions 39 and 40;
        53.b.vi. Production levels as required in Condition 42.a;
        53.b.vii. Annual emissions as calculated according to Condition 42.b;
        53.b.viii. Results of quarterly oil analysis according to Condition 37; and,
        53.b.ix. Annual Greenhouse gas (GHG) emissions as calculated according to Condition 42.d.iii.

54. Other reporting requirements include the following:

    54.a. Source test plans/notifications prior to all required tests except EPA Method 9 tests;
    54.b. Emission factor verification test summaries 60 days after completing the test, unless otherwise approved by the Department.

55. The semi-annual compliance certification must include the following (provided that the identification of applicable information may cross-reference the permit or previous reports, as applicable): [OAR 340-218-0080(6)(c)]

    55.a. The identification of each term or condition of the permit that is the basis of the certification;
    55.b. The identification of the method(s) or other means used by the owner or operator for determining the compliance status with each term and condition during the certification period. Such methods and other means must include, at a minimum, the methods and means required under OAR 340-218-0050(3). *Note: Certification of compliance with the monitoring conditions in the permit is sufficient to meet this requirement, except when the permittee must certify compliance with new applicable requirements incorporated by reference into the permit. When certifying compliance with new applicable requirements that are incorporated by reference, the permittee must provide the information required by this condition.* If necessary, the owner or operator also must identify any other material information that must be included in the certification to comply with section 113(c)(2) of the FCAA, which prohibits knowingly making a false certification or omitting material information;
    55.c. The status of compliance with terms and conditions of the permit for the period covered by the certification, including whether compliance during the period was continuous or intermittent. The certification must be based on the method or means designated in Condition 55.b of this rule. The certification must identify each deviation and take it into account in the compliance certification. The certification must also identify as possible exceptions to compliance any periods during which compliance is required and in which an excursion or exceedance, as defined under OAR 340-200-0010, occurred; and
    55.d. Such other facts as DEQ may require to determine the compliance status of the source.

56. Notwithstanding any other provision contained in any applicable requirement, the owner or operator may use monitoring as required under OAR 340-218-0050(3) and incorporated into the permit, in addition to any specified compliance methods, for the purpose of submitting compliance certifications. [OAR 340-218-0080(6)(e)]

NON-APPLICABLE REQUIREMENTS

57. The following State and Federal air quality requirements are not applicable to this facility for the reasons stated. [OAR 340-218-0110]

Rule Citation	Summary	Reason for Not Being Applicable
NSPS 40 CFR 60 Subpart K	Storage Vessels for Petroleum Liquids	Storage vessels at facility were constructed after May 19, 1978.
NSPS 40 CFR 60 Subpart Ka	Storage Vessels for Petroleum Liquids	Storage vessels at facility were constructed after June 23, 1984.

GENERAL CONDITIONS

G1. General Provision

Terms not otherwise defined in this permit have the meaning assigned to such terms in the referenced regulation.

G2. Reference materials

Where referenced in this permit, the versions of the following materials are effective as of the dates noted unless otherwise specified in this permit:

a. Source Sampling Manual; January 23, 1992 - State Implementation Plan Volume 3, Appendix A4;
b. Continuous Monitoring Manual; January 23, 1992 - State Implementation Plan Volume 3, Appendix A6; and
c. All state and federal regulations as in effect on the date of issuance of this permit.

G3. Applicable Requirements [OAR 340-218-0010(3)(b)]

Oregon Title V Operating Permits do not replace requirements in Air Contaminant Discharge Permits (ACDP) issued to the source even if the ACDP(s) have expired. For a source operating under a Title V permit, requirements established in an earlier ACDP remain in effect notwithstanding expiration of the ACDP or Title V permit, unless a provision expires by its terms or unless a provision is modified or terminated following the procedures used to establish the requirement initially. Source specific requirements, including, but not limited to TACT, RACT, BACT, and LAER requirements, established in an ACDP must be incorporated into the Oregon Title V Operating Permit and any revisions to those requirements must follow the procedures used to establish the requirement initially.

G4. Compliance [OAR 340-218-0040(3)(n)(C), 340-218-0050(6), and 340-218-0080(4)]

a. The permittee must comply with all conditions of this permit. Any permit condition noncompliance constitutes a violation of the Federal Clean Air Act and/or state rules and is grounds for enforcement action; for permit termination, revocation and re-issuance, or modification; or for denial of a permit renewal application. Any noncompliance with a permit condition specifically designated as enforceable only by the state constitutes a violation of state

rules only and is grounds for enforcement action; for permit termination, revocation and re-issuance, or modification; or for denial of a permit renewal application.

b. Any schedule of compliance for applicable requirements with which the source is not in compliance at the time of permit issuance is supplemental to, and does not sanction noncompliance with the applicable requirements on which it is based.

c. For applicable requirements that will become effective during the permit term, the source must meet such requirements on a timely basis unless a more detailed schedule is expressly required by the applicable requirement.

G5. Masking Emissions

The permittee may not install or use any device or other means designed to mask the emission of an air contaminant that causes or is likely to cause detriment to health, safety, or welfare of any person or otherwise violate any other regulation or requirement. [OAR 340-208-0400] This condition is enforceable only by the State.

G6. Credible Evidence

Notwithstanding any other provisions contained in any applicable requirement, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any such applicable requirements. [OAR 340-214-0120]

G7. Certification [OAR 340-214-0110, 340-218-0040(5), 340-218-0050(3)(c)(D), and 340-218-0080(2)]

Any document submitted to DEQ or EPA pursuant to this permit must contain certification by a responsible official of truth, accuracy and completeness. All certifications must state that based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and, complete. The permittee must promptly, upon discovery, report to DEQ a material error or omission in these records, reports, plans, or other documents.

G8. Open Burning [OAR Chapter 340, Division 264]

The permittee is prohibited from conducting open burning, except as may be allowed by OAR 340-264-0020 through 340-264-0200.

G9. Asbestos [40 CFR Part 61, Subpart M (federally enforceable), OAR Chapter 340-248-0005 through 340-248-0180 (state-only enforceable) and 340-248-0205 through 340-248-0280]

The permittee must comply with OAR Chapter 340, Division 248, and 40 CFR Part 61, Subpart M when conducting any renovation or demolition activities at the facility.

G10. Stratospheric Ozone and Climate Protection [40 CFR 82 Subpart F, OAR 340-260-0040]

The permittee must comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, Recycling and Emissions Reduction.

G11. Permit Shield [OAR 340-218-0110]

a. Compliance with the conditions of the permit is deemed compliance with any applicable requirements as of the date of permit issuance provided that:

i. such applicable requirements are included and are specifically identified in the permit, or

ii. DEQ, in acting on the permit application or revision, determines in writing that other requirements specifically identified are not applicable to the source, and the permit includes the determination or a concise summary thereof.

b. Nothing in this rule or in any federal operating permit alters or affects the following:
   i. the provisions of ORS 468.115 (enforcement in cases of emergency) and ORS 468.035 (function of department);
   ii. the liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;
   iii. the applicable requirements of the national acid rain program, consistent with section 408(a) of the FCAA; or
   iv. the ability of DEQ to obtain information from a source pursuant to ORS 468.095 (investigatory authority, entry on premises, status of records).

c. Sources are not shielded from applicable requirements that are enacted during the permit term, unless such applicable requirements are incorporated into the permit by administrative amendment, as provided in OAR 340-218-0150(1)(h), significant permit modification, or reopening for cause by DEQ.

G12. Inspection and Entry [OAR 340-218-0080(3)]

Upon presentation of credentials and other documents as may be required by law, the permittee must allow DEQ, or an authorized representative (including an authorized contractor acting as a representative of the EPA Administrator), to perform the following:

a. Enter upon the permittee's premises where an Oregon Title V Operating Permit program source is located or emissions-related activity is conducted, or where records must be kept under the conditions of the permit;
b. Have access to and copy, at reasonable times, any records that must be kept under conditions of the permit;
c. Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
d. As authorized by the FCAA or state rules, sample or monitor, at reasonable times, substances or parameters, for the purposes of assuring compliance with the permit or applicable requirements.

G13. Fee Payment [OAR 340-220-0010, and 340-220-0030 through 340-220-0190]

The permittee must pay an annual base fee and an annual emission fee for particulates, sulfur dioxide, nitrogen oxides, and volatile organic compounds. The permittee must submit payment to the Department of Environmental Quality, Business Office, 811 SW 6th Avenue, Portland, OR 97204, within 30 days of the date DEQ mails the fee invoice or August 1 of the year following the calendar year for which emission fees are paid, whichever is later. Disputes must be submitted in writing to DEQ. Payment must be made regardless of the dispute. User-based fees will be charged for specific activities (e.g., computer modeling review, ambient monitoring review, etc.) requested by the permittee.

G14. Off-Permit Changes to the Source [OAR 340-218-0140(2)]

a. The permittee must monitor for, and record, any off-permit change to the source that:
   i. is not addressed or prohibited by the permit;
   ii. is not a Title I modification;
   iii. is not subject to any requirements under Title IV of the FCAA;
   iv. meets all applicable requirements;
   v. does not violate any existing permit term or condition; and
   vi. may result in emissions of regulated air pollutants subject to an applicable requirement but not otherwise regulated under this permit or may result in insignificant changes as defined in OAR 340-200-0020.
b. A contemporaneous notification, if required under OAR 340-218-0140(2)(b), must be submitted to DEQ and the EPA.

c. The permittee must keep a record describing off-permit changes made at the facility that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those off-permit changes.
d. The permit shield of condition G11 does not extend to off-permit changes.

G15. Section 502(b)(10) Changes to the Source [OAR 340-218-0140(3)]

a. The permittee must monitor for, and record, any section 502(b)(10) change to the source, which is defined as a change that would contravene an express permit term but would not:
   i. violate an applicable requirement;
   ii. contravene a federally enforceable permit term or condition that is a monitoring, recordkeeping, reporting, or compliance certification requirement; or
   iii. be a Title I modification.
b. A minimum 7-day advance notification must be submitted to DEQ and the EPA in accordance with OAR 340-218-0140(3)(b).
c. The permit shield of condition G11 does not extend to section 502(b)(10) changes.

G16. Administrative Amendment [OAR 340-218-0150]

Administrative amendments to this permit must be requested and granted in accordance with OAR 340-218-0150. The permittee must promptly submit an application for the following types of administrative amendments upon becoming aware of the need for one, but no later than 60 days of such event:

a. Legal change of the registered name of the company with the Corporations Division of the State of Oregon, or
b. Sale or exchange of the activity or facility.

G17. Minor Permit Modification [OAR 340-218-0170]

The permittee must submit an application for a minor permit modification in accordance with OAR 340-218-0170.

G18. Significant Permit Modification [OAR 340-218-0180]

The permittee must submit an application for a significant permit modification in accordance with OAR 340-218-0180

G19. Staying Permit Conditions [OAR 340-218-0050(6)(c)]

Notwithstanding conditions G16 and G17, the filing of a request by the permittee for a permit modification, revocation and re-issuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

G20. Construction/Operation Modification [OAR 340-218-0190]

The permittee must obtain approval from DEQ prior to construction or modification of any stationary source or air pollution control equipment in accordance with OAR 340-210-0200 through OAR 340-210-0250.

G21. New Source Review Modification [OAR 340-224-0010]

The permittee may not begin construction of a major source or a major modification of any stationary source without having received an air contaminant discharge permit (ACDP) from DEQ and having satisfied the requirements of OAR 340, Division 224.

G22. Need to Halt or Reduce Activity Not a Defense [OAR 340-218-0050(6)(b)]

The need to halt or reduce activity will not be a defense. It will not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

G23. Duty to Provide Information [OAR 340-218-0050(6)(e) and OAR 340-214-0110]

The permittee must furnish to DEQ, within a reasonable time, any information that DEQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit, or to determine compliance with the permit. Upon request, the permittee must also furnish to DEQ copies of records required to be retained by the permit or, for information claimed to be confidential, the permittee may furnish such records to DEQ along with a claim of confidentiality.

G24. Reopening for Cause [OAR 340-218-0050(6)(c) and 340-218-0200]

a. The permit may be modified, revoked, reopened and reissued, or terminated for cause as determined by DEQ.
b. A permit must be reopened and revised under any of the circumstances listed in OAR 340-218-0200(1)(a).
c. Proceedings to reopen and reissue a permit must follow the same procedures as apply to initial permit issuance and affect only those parts of the permit for which cause to reopen exists.

G25. Severability Clause [OAR 340-218-0050(5)]

Upon any administrative or judicial challenge, all the emission limits, specific and general conditions, monitoring, recordkeeping, and reporting requirements of this permit, except those being challenged, remain valid and must be complied with.

G26. Permit Renewal and Expiration [OAR 340-218-0040(1)(a)(D) and 340-218-0130]

a. This permit expires at the end of its term, unless a timely and complete renewal application is submitted as described below. Permit expiration terminates the permittee's right to operate.
b. Applications for renewal must be submitted at least 12 months before the expiration of this permit, unless DEQ requests an earlier submittal. If more than 12 months is required to process a permit renewal application, DEQ must provide no less than six (6) months for the owner or operator to prepare an application.
c. Provided the permittee submits a timely and complete renewal application, this permit will remain in effect until final action has been taken on the renewal application to issue or deny the permit.

G27. Permit Transference [OAR 340-218-0150(1)(d)]

The permit is not transferable to any person except as provided in OAR 340-218-0150(1)(d).

G28. Property Rights [OAR 340-200-0020 and 340-218-0050(6)(d)]

The permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations, except as provided in OAR 340-218-0110.

G29. Permit Availability [OAR 340-200-0020 and 340-218-0120(2)]

The permittee must have available at the facility at all times a copy of the Oregon Title V Operating Permit and must provide a copy of the permit to DEQ or an authorized representative upon request.

ALL INQUIRIES SHOULD BE DIRECTED TO:

Eastern Region – Bend Office
475 NE Bellevue Dr., Suite 110
Bend, OR 97701-7415
541-633-2021

State of Oregon Department of Environmental Quality

OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY
OREGON TITLE V OPERATING PERMIT
REVIEW REPORT

Eastern Region
475 NE Bellevue Dr., Suite 110
Bend, OR 97701-7415

Source Information:

SIC	1499
NAICS	212319

Public Notice Category	III

Compliance and Emissions Monitoring Requirements:

Unassigned emissions	No
Emission credits	No
Compliance schedule	No
Source test	60-180 days after startup

COMS	No
CEMS	Yes
PEMS	No
Ambient monitoring	No

Reporting Requirements

Annual report (due date)	3/15
Emission fee report (due date)	3/15
SACC (due date)	3/15 & 7/30
Quarterly report (due dates)	NA

Monthly report (due dates)	No
Excess emissions report	15 Days
Other reports (type)	RATA & GHG

Air Programs

NSPS (list subparts)	Kb, OOO, UUU
NESHAP (list subparts)	No
CAM	Yes
Regional Haze (RH)	No
Synthetic Minor (SM)	No
Part 68 Risk Management	No
CFC	No
RACT	No

TACT	No
Title V	Yes
ACDP (SIP)	No
Major HAP source	No
Federal major source	Yes
NSR	No
PSD	Yes
Acid Rain	No

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LIST OF ABBREVIATIONS USED IN THIS REVIEW REPORT

AQMA	Air Quality Management Area
ASTM	American Society of Testing and Materials
BDT	Bone Dry Ton
CEMS	Continuous Emissions Monitoring System
CFR	Code of Federal Regulations
CH_4	Methane (greenhouse gas)
CMS	Continuous Monitoring System
CO	Carbon Monoxide
CO_2e	Carbon Dioxide Equivalent
COMS	Continuous Opacity Monitoring System
DEQ	Oregon Department of Environmental Quality
dscf	dry standard cubic feet
EF	Emission Factor
EPA	United States Environmental Protection Agency
EU	Emissions Unit
FCAA	Federal Clean Air Act
GHG	Greenhouse Gas
gr/dscf	grains per dry standard cubic feet
HAP	Hazardous Air Pollutant
ID	Identification Code
I&M	Inspection and Maintenance
MB	Material Balance
Mlb	1000 Pounds
MM	Million
N_2O	Nitrous Oxide (greenhouse gas)
NA	Not Applicable
NESHAP	National Emission Standard for Hazardous Air Pollutants
NO_x	Oxides of Nitrogen
NSPS	New Source Performance Standard
NSR	New Source Review
O_2	Oxygen
OAR	Oregon Administrative Rules
ORS	Oregon Revised Statutes
O&M	Operation and Maintenance
Pb	Lead
PCD	Pollution Control Device
PEMS	Predictive Emissions Monitoring System
PM	Particulate Matter
PM_{10}	Particulate Matter less than 10 microns in size
$PM_{2.5}$	Particulate Matter less than 2.5 microns in size
PSD	Prevention of Significant Deterioration
PSEL	Plant Site Emission Limit
SO_2	Sulfur Dioxide
ST	Source Test
VE	Visible Emissions
VMT	Vehicle Mile Traveled
VOC	Volatile Organic Compound

INTRODUCTION

1. This is a renewal of the Oregon Title V Operating Permit 23-0032 issued to EP Minerals, LLC, in Vale, Oregon. The current permit was issued on August 30, 2012 and scheduled to expire on August 1, 2017. The current permit will remain in effect until the permit renewal is issued because an application for renewal was submitted on time.

2. In accordance with OAR 340-218-0120(1)(f), this review report is intended to provide the legal and factual basis for the draft permit conditions. In most cases, the legal basis for a permit condition is included in the permit by citing the applicable regulation. In addition, the factual basis for the requirement may be the same as the legal basis. However, when the regulation is not specific and only provides general requirements, this review report is used to provide a more thorough explanation of the factual basis for the draft permit conditions.

3. The following revisions have been made to the source since the last permit renewal:

Date of Approval	Application Number	Type of Change	Description
May 22, 2016	28646	Type 1 Construction Approval	Small baghouse installed and vented inside warehouse
July 14, 2015	28226	Minor Permit Modification	Changing from the two fluid-bed dryers per Kiln to one fluid-bed dryer per Kiln
March 12, 2015	28035	Significant Permit Modification	Adding two fluid-bed dryers per Kiln and other changes

4. The following changes have been made to the source since the last permit renewal:

New Permit Condition Number	Old Permit Condition Number	Description of Change	Reason for Change
1 - 11	1 -11	No changes	
12	12	Included kitchen sink rule updates	Rule changes TV Program Development
13	13	No changes	
14 - 17	14 -1 7	Included kitchen sink rule updates	Rule changes TV Program Development
18 - 21	18 - 21	No changes	
22	22	Included kitchen sink rule updates	Rule changes TV Program Development
23	23	Title V Program - GHG PSEL	Title V program/GHG Calculation
24 - 57	24 - 57	No changes	
G1 – G29	G1 – G29	General Condition- No Changes	NA

PERMITTEE IDENTIFICATION

5. EP Minerals operates a diatomaceous earth processing plant located at 2630 Graham Boulevard in Vale, Oregon. The facility was built in 1986.

FACILITY DESCRIPTION

6. The EP Minerals plant is a diatomaceous earth processing plant. Raw ore is trucked in from the mine and is crushed, milled and classified. Soda ash is then added to the ore and the mixture is fed into a kiln for calcining. The calcined material is then crushed and classified into various filter aid products.

EMISSIONS UNIT AND POLLUTION CONTROL DEVICE IDENTIFICATION

7. The emissions units, devices, activities and pollution control devices at the facility include the following:

Emissions Unit Description	EU ID	Device Description/Device ID	Pollution Control Devices	
			Description	PCD ID
Kilns	E1	Dryer 1/Calciner 1	Baghouse	1-25
	E2	Dryer 2/Calciner 2	Baghouse	2-25
Nonmetallic Mineral Processing	E3	Raw Ore Dump/Primary Crusher	Baghouse	1-8
		Fluid Bed Dryer #1	Baghouse	1-7C
		Fluid Bed Dryer #2	Baghouse	2-7C
		Main Product Bin - Unit 1 & Unit 1 Packer	Baghouse	1-51A
		Main Product Bin for Kiln Unit 2	Baghouse	2-51A
		Unit 1 Packer & Bagger	Baghouse	1-84
		Unit 1 Packer & Bagger	Baghouse	2-84
		Unit 1 and 2 Packer & Bagger	Baghouse	3-84
		Packer & Bagger Unit 2 (one stack for 2-56C and 2-56D)	Baghouse	2-56
		Unit 1 & 2 Surge Bins (previously 1-26)	Baghouse	1-27E
		Unit 1 & 2 Surge Bins (previously 2-26)	Baghouse	2-27E
		Refeed System (refeed into 1-27A & 2-27A)	Baghouse	1-21H
		Pallet Cleaning Booth	Baghouse	PCB
		Waste Storage Bin(s)	Baghouse	1-33A
			Baghouse	1-33B
	E4	Unit 1 Bins (2)	Baghouse	1-7B
		Unit 2 Bins (2)	Baghouse	2-7B
Miscellaneous Processing Sources	E5	Unit 1 Finish End Classification Cyclone	Baghouse	1-70
		Unit 2 Finish End Classification Cyclone	Baghouse	2-70
	E6	Soda Ash Bin - Unit 1	Baghouse	1-18A
		Soda Ash Bin - Unit 2	Baghouse	2-18A
Ore Waste Recycle	E7	ACM Mill Units 1 & 2	Baghouse	408
Oil Storage (NSPS Subpart Kb)	E10	Oil Storage Tank 2-90	None	NA
	E11	Oil Storage Tank 2-91		NA
Fine Filler Circuit	E12	Surge Bin F105/FF102 and Classifier Cyclone F112/FF108	Baghouse	FF119
BT & CB Storage Silos	E13	BT Silo Bin Vent	Baghouse	2-90
		CB Silo Bin Vent	Baghouse	2-94
Aggregate Insignificant	AI	PM/PM_{10} & $PM_{2.5}$ from unpaved roads, material handling fugitives, raw material storage	None	NA

7.a. Dryer/Calciner (E1 & E2):

The Unit #1 processing line consists of a crude ore dryer and a calcining kiln exhausting through a wet end classification cyclone all installed in 1986. The capacity of the system is 3,558,500 dry lbs/week of diatomaceous earth ore and soda ash. The dryer is manufactured by North American with a tangentially

fired natural gas burner or recycled oil rated at 20 MMBtu/hr. The kiln has a 40 MMBtu Coen burner. Particulate emissions are controlled by a Baumco model 2-5116-4.510P pulse-jet baghouse (1-25) installed in 1986. The design inlet gas flow rate of the baghouse is 32,550 acfm, the air to cloth ratio is 1.7:1 and the design pressure drop is <6" of water.

The Unit #2 processing line consists of a crude ore dryer and a calcining kiln exhausting through a wet end classification cyclone all installed in 1997. The capacity of the system is 3,558,500 dry lbs/week of diatomaceous earth ore and soda ash. The dryer is manufactured by North American with a tangentially fired low-NO_x natural gas burner or recycled oil rated at 20 MMBtu/hr. The kiln has a 45 MMBtu low-NO_x Coen burner. Particulate emissions are controlled by a Fabric Filters model 289-10 pulse-jet baghouse (2-25) installed in 1997. The design inlet gas flow rate of the baghouse is 34,000 acfm, the air to cloth ratio is 2.0:1 and the design pressure drop is <6" of water.

7.b. Nonmetallic Mineral Processing (E3 & E4):

Emission Unit E3 contains the following processes:

- Raw Ore Dump and Primary Crusher - Primary crusher, and associated ore dump, used for initial crushing of the raw diatomaceous earth ore. The Raw Ore Dump/Primary Crusher will continue to be controlled by the existing baghouse (1-8).
- Fluid Bed Dryers #1 and #2 are scheduled to be constructed in 2018. Each fluid bed dryer is designed to operate on natural gas at 20 MMBtu/hr. Ore is to be dried at 800^0F to remove 10% of water prior to the Kilns. Each fluid-bed dryer will be controlled by Mac Process air jet pulse baghouse, Model Number MAC RPT 532. Each baghouse will have a design inlet gas flow rate of 35,000 acfm and 20,000 dscfm with a 532 bags and a 3:1 air to cloth ration. The baghouses design achieve a 0.005 grains a 99% removal efficiency with a design pressure drop <6" of water.
- Main Product Bin, Units 1 & 2 - Two main product bins for storing milled and classified filter products. The existing baghouse controlling the Main Product Bin at Unit 1 will remain unchanged. A new baghouse (2-51A) will replace the baghouse at Main Product Bin for Unit 2. The new jet pulse baghouse for (2-51A) will be manufactured by Farr, Model Number GS6 with a 99.99 % efficiency rating. The Farr GS6 baghouse will have 6 bags with an air to cloth ratio of 2.56:1, a design inlet flow rate of 5,000 acfm, and a design pressure drop <6" of water.
- Packer and Bagger Units – The Packer and Bagger Unit 1 will continue to be controlled by two existing baghouses (1-84 and 2-84). The combined emissions from 2-56C and 2-56D from Packer and Bagger Unit 2 will continue to be control with the existing baghouse (2-56) installed in 1997. A new baghouse (3-84) will be added to this process to control particulate emissions from Unit 1 & 2 Packer and Bagger. The new jet pulse baghouse will be manufactured by Farr, Model Number GS20 with a 99.99 % efficiency rating. The Farr GS20 baghouse will have 20 bags with an air to cloth ratio of 2.31:1, a design inlet flow rate of 15,000 acfm, and a design pressure drop <6" of water.
- Unit 1 & 2 Surge Bins - On July 23, 2010, two 1575 scfm Torit Model Nos. DFO-2-4 pulse baghouses, 1-26 and 2-26, were installed to vent existing surge bins at 1-27A and 2-27A. The baghouses have been renamed 1-27E and 2-27E. These existing jet pulse baghouses have 6 bags each with an air to cloth ratio of 2:1 and a design pressure drop <6" of water. The surge bins were previously vented through baghouses 1-25 and 2-25. Separating the surge bin emissions was a process improvement that did not increase emissions.
- Refeed System – The emissions from the Refeed System are to be separated out and will be controlled with a dedicated baghouse. This new baghouse (1-21H) will be added to the Refeed System for the surge bins system. The new jet pulse baghouse will be manufactured by Farr, Model Number GS6 with a 99.99 % efficiency rating. The Farr GS6 baghouse will have 6 bags with an air to cloth ratio of 2.56:1, a design inlet flow rate of 5,000 acfm, and a design pressure drop <6" of water.
- The pallet cleaning booth is an enclosed booth that uses air nozzles to blow dust off pallets. The dust is then collected by baghouse (PCB). The baghouse is vented out the roof of the warehouse. The pallet cleaning area had previously vented through baghouse (2-84). Separating the pallet

cleaning booth was a process improvement that did not increase emissions. The pallet cleaning booth baghouse is manufactured by Farr, Model Number GS6 and has a 99.9 % efficiency rating. The baghouse has a design inlet flow rate of 4,000 dscfm, a design air-to cloth ratio of 2.05:1, with a designed pressure drop of <6" of water.

- Waste storage bins for storing the waste from both Units 1 & 2. The existing baghouse (1-33A) will be replaced with a new baghouse. A new second baghouse (1-33B) will be added. Each new baghouse will be placed at a waste storage bin. The new jet pulse baghouses will be manufactured by Farr, Model Number GS6 with a 99.99 % efficiency rating. The Farr GS6 baghouses will have 6 bags with an air to cloth ratio of 2.56:1, a design inlet flow rate of 5,000 acfm, and a design pressure drop <6" of water.

Emission Unit E4 contains the following processes:

- Two Unit 1 Bins - Two fine ore bins used to temporarily store crushed diatomaceous earth ore prior to processing in Unit 1. These two Unit 1 bins will continue to be controlled by the existing baghouse (1-7B).
- Two Unit 2 Bins - Two fine ore bins used to temporarily store crushed diatomaceous earth ore prior to processing in Unit 2. These two Unit 2 bins will continue to be controlled by the existing baghouse (2-7B).

7.c. Miscellaneous Processing Sources (E5 & E6):

Emission Unit E5 contains the following processes:

- Unit #1 Finish End Cyclone - Classification cyclones take the dried, calcined diatomaceous earth ore from the Dryer/Kiln into filter aid products. The Unit #1 Finish End Cyclone will continue to be controlled by the existing baghouse (1-70).
- Unit #2 Finish End Cyclone - Classification cyclones take the dried, calcined diatomaceous earth ore from the Dryer/Kiln into filter aid products. The Unit #2 Finish End Cyclone will continue to be controlled by the existing baghouse (2-70).

Emission Unit E6 contains the following processes:

- Unit 1 Soda Ash Bin - Soda ash bin is used to store soda ash for use in the Unit #1 calcining process. The Unit 1 Soda Ash Bin will continue to be controlled by the existing baghouse (1-18A).
- Unit 2 Soda Ash Bin - Soda ash bin is used to store soda ash for use in the Unit #2 calcining process. The Unit 2 Soda Ash Bin will continue to be controlled by the existing baghouse (2-18A).

7.d. Ore Waste Recycle - ACM Mill Units 1 & 2 (E7):

Emission Unit E7 contains the following process:

- The ACM Mill processes the waste directly from the waste bin separating true waste from good ore. The recovered ore stream is diverted to the Unit 1-22 and Unit 2-22 cyclones for recycling. The ACM Mill was installed in 2006.
- Particulate emissions continue to be controlled by a Carothers & Sons #110TR10HEIFS baghouse 107 (408), installed in 2006. The design inlet gas flow rate of the baghouse is 3,700 acfm.

7.e. Oil Storage (E10 & E11):

- Emission Units (E10 & E11) consist of two 35,000 gallon fixed roof oil storage tanks 2-90 and 2-91. The tanks were used to store recycled oil fuel that is used to power the operations at Kilns (E1) & (E2). The tank use is being modified to include storage of diesel for truck use at the facility. The tanks began construction in September 2005, and started operations on October 24, 2005.

7.f. Fine Filler Circuit - Surge Bins F105/FF102 (E12):

Emission Unit E12 contains the following processes:

- The Fine Filler Circuit is a classifier circuit that includes a surge bin (F105) which consistently feeds diatomaceous earth through a classifier. The process was installed in 2006. The circuit has a diatomaceous earth capacity throughput of 3.5 ton/hr. The fine filler circuit continues to be controlled by a Carothers & Sons Ltd., baghouse (FF119). The classifier (FF112) is a closed loop system that has no measureable emissions.

7.g. BT & CB Storage Silos (E13):

Unit E13 will include two new storage silos and baghouses. The CB storage and the BT silos are planned to be constructed in 2020. Each storage silo will be controlled by new air jet pulse baghouse (2-90, 2-94). The new pulse baghouses will be manufactured by Farr, Model Number GS4 with a 99.99 % efficiency rating. The Farr GS4 baghouses will have 4 bags with an air to cloth ratio of 1.92:1, a design inlet flow rate of 2,500 acfm, and a design pressure drop <4" of water.

7.h. Aggregate Insignificant (AI):

Aggregate Insignificant emission sources include $PM/PM_{10}/PM_{2.5}$ from unpaved roads, material handling fugitives, and raw material storage.

Particulate matter emissions are controlled by baghouses as shown in the table below:

Emission Unit	Device ID	Manufacturer	Construction Modification Date	Pressure Drop (inches water)	Process Description
E1	1-25	Baumco #2-5116-4.510P	1986	6”	Dryer/Calciner
E2	2-25	Fabric Filter #289-10	1997	6”	Dryer/Calciner
E3	1-8	Baumco #1517-4.510P	1986	6”	Raw Ore Dump
	1-7C	Carothers #121BR10	2015	6”	Fluid Bed Dryers #1
	2-7C	Carothers #121BR10	2015	6”	Fluid Bed Dryers #2
	1-51A	Baumco #BV 4.5-121-5	1986	6”	Main Product Bin Unit 1
	2-51A	FARR #GS6	2015	6”	Main Product Bin Unit 2
	1-27E	Torit # DFO-2-4	2010	6”	Surge Bin Unit 1
	2-27E	Torit # DFO-2-4	2010	6”	Surge Bin Unit 2
	1-84	Baumco #1617-4.510P	1986	6”	Packer & Bagger Unit 1
	2-84	Pulse Jet MAC #120RPT224 Style III	2001	6”	Packer & Bagger Unit 1
	3-84	FARR #GS20	2015	6”	Unit 1 and 2 Packer & Bagger
	2-56	Fabric Filter #12-5	1997	6”	Packer & Bagger Unit 2
	1-21H	FARR #GS6	2015		Refeed System (1-27A & 2-27A)
	PCB	FARR #GS6	2009	6”	Pallet Cleaning Booth
	1-33A	FARR #GS6	2015	6”	Waste Storage Bin
	1-33B	FARR #GS6	2015	6”	Waste Storage Bin
E4	1-7B	Baumco #BV 4.5-64-5	1986	6”	Two Temporary Storage Bins Unit 1
	2-7B	Fabric Filter #72-5	1997	6”	Two Temporary Storage Bins Unit 2
E5	1-70	Baumco #5415-4.510P	1986	6”	Classification Cyclone Finish End Unit 1
	2-70	Fabric Filter #144-R10	1997	6”	Classification Cyclone Finish End Unit 2
E6	1-18A	Baumco #BV 4.5-49-5	1986	6”	Soda Ash Bin Unit 1
	2-18A	Baumco #BV 4.5-49-5	1997	6”	Soda Ash Bin Unit 2

Emission Unit	Device ID	Manufacturer	Construction Modification Date	Pressure Drop (inches water)	Process Description
E7	408	Carothers & Sons # 110TR10HEIFS	2006	6”	ACM Mill Units 1 & 2
E12	F119	Carothers & Sons Ltd.	2006	6”	Fine Filler Circuit
E13	2-90	FARR #GS4	2015	4”	BT Storage Silo
	2-94	FARR #GS4	2015	4”	CT Storage Silo

Notes: There are no emission units 8 (E8) or 9 (E9). Emission units 10 and 11 (E10 & E11) and AI do not have pollution control devices.

8. Particulate emissions for the following baghouse units provided in the above table are to be controlled by high efficiency filters (0.005 grains/dscf). These include: Waste Storage Bin Baghouses (1-33A, 1-33B), Main Product Bin Baghouse (2-51A), Unit 1 and Unit 2 Packer and Bagger (3-84), Re-feed System (1-21H), BT and CB Storage Silos Baghouses (2-90 and 2-94).

9. Categorically Insignificant Activities include the following:

- Constituents of a chemical mixture present at less than 1% by weight of any chemical or compound regulated under OAR Chapter 340, Divisions 200 through 268, excluding Divisions 248 and 262, or less than 0.1% by weight of any carcinogen listed in the U.S. Department of Health and Human Service's Annual Report on Carcinogens when usage of the chemical mixture is less than 100,000 pounds/year
- Evaporative and tail pipe emissions from on-site motor vehicle operation
- Distillate oil, kerosene and gasoline fuel burning equipment rated at less than or equal to 0.4 million Btu/hr
- Natural gas and propane burning equipment rated at less than or equal to 2.0 million Btu/hr
- Office activities
- Janitorial activities
- Personal care activities
- Grounds keeping activities including, but not limited to building painting and road and parking lot maintenance
- Instrument calibration
- Maintenance and repair shop
- Automotive repair shops or storage garages
- Air cooling or ventilating equipment not designed to remove air contaminants generated by or released from associated equipment
- Refrigeration systems with less than 50 pounds of charge of ozone depleting substances regulated under Title VI, including pressure tanks used in refrigeration systems but excluding any combustion equipment associated with such systems
- Bench scale laboratory equipment and laboratory equipment used exclusively for chemical and physical analysis, including associated vacuum producing devices but excluding research and development facilities
- Temporary construction activities
- Warehouse activities
- Accidental fires
- Air vents from air compressors
- Air purification systems
- Continuous emissions monitoring vent lines
- Demineralized water tanks
- Pre-treatment of municipal water, including use of deionized water purification systems
- Electrical charging stations
- Fire brigade training
- Instrument air dryers and distribution

- Process raw water filtration systems
- Routine maintenance, repair and replacement such as anticipated activities most often associated with and performed during regularly scheduled equipment outages to maintain a plant and its equipment in good operating condition, including but not limited to steam cleaning, abrasive use and woodworking
- Electric motors
- Storage tanks, reservoirs, transfer and lubricating equipment used for ASTM grade distillate or residual fuels, lubricants and hydraulic fluids
- On-site storage tanks not subject to any New Source Performance Standards (NSPS), including underground storage tanks (UST), storing gasoline or diesel used exclusively for fueling of the facility's fleet of vehicles
- Natural gas, propane and liquefied petroleum gas (LPG) storage tanks and transfer equipment
- Pressurized tanks containing gaseous compounds
- Fire suppression and training
- Hazardous air pollutant emissions of fugitive dust from paved and unpaved roads except for those sources that have processes or activities that contribute to the deposition and entrainment of hazardous air pollutants from surface soils
- Health, safety and emergency response activities
- Emergency generators and pumps used only during loss of primary equipment or utility service due to circumstances beyond the reasonable control of the owner or operator, or to address a power emergency as determined by the Department
- Non-contact steam vents and leaks and safety and relief valves for boiler steam distribution systems
- Non-contact steam condensate flash tanks
- Non-contact steam vents on condensate receivers, deaerators and similar equipment
- Oil/water separators in effluent treatment systems
- Combustion source flame safety purging on startup

EMISSION LIMITS AND STANDARDS, TESTING, MONITORING AND RECORDKEEPING

10. A summary of the emission limits and standards along with the testing, monitoring and recordkeeping requirements is provided below.

11. **Facility Wide Requirements:** The Department revised the rules that address nuisances and fallout, making them applicable to all areas of the state. The following standards apply:

    11.a. OAR 340-208-0210(2) is a requirement to take reasonable precautions to minimize fugitive particulate emissions. OAR 340-208-0310 prohibits a source from causing a nuisance. OAR 340-208-0450 prohibits the deposition of particulate matter larger than 250 microns in size upon another person's property.

        11.a.i. Testing Requirements: By definition, it is not possible to perform source emission tests on fugitive emission sources. Therefore, the permit does not include any testing requirements or compliance test methods.

        11.a.ii. Monitoring requirements: Monitoring for these standards consists of maintaining a complaint log and resolving complaints.

12. **Kilns (E1 & E2):** Both units are subject to the 20% opacity limit in OAR 340-208-0210(2) & (4) and the 0.10 gr/dscf emission limit (OAR 340-226-0210(2)(b)(A)). Since unit E2 commenced construction after April 23, 1997 the applicable requirements under NSPS, Subpart UUU also apply – (Standards of Performance for Calciners and Dryers in Mineral Industries) - 40 CFR 60.732(b) (10% opacity) and 40 CFR 60.732(a) (0.040 gr/dscf). PSD/BACT limits for SO_2, NO_x and CO established in ACDP 23-0007 pursuant to the prevention of significant deterioration rules in OAR 340-224-0070(2) apply to both kilns.

12.a. Testing Requirements: These units have undergone the initial performance test as required in 40 CFR Part 60.8 of the NSPS, and additional testing for SO_2, NO_x and VOCs. Testing for PM using Oregon Method 5 will be required during the permit term to verify emission factors when recycled oil is used in the kilns. The front half of Oregon Method 5 will be used to determine compliance with applicable NSPS emission limits. Annual Relative Accuracy Testing is required for SO_2 to verify the mass balance or the Continuous Emission Monitoring System (CEMS) depending on the technique used for compliance monitoring.

12.b. Monitoring Requirements: Compliance Assurance Monitoring (CAM) rules are applied to the Kilns (E1 & E2) because the uncontrolled PM, SO_2, and CO emissions from these units are above the threshold. The CAM requirements are specified in the O&M plan. The O&M plan requires the permittee to monitor baghouse pressure drop and take corrective action if pressure drop is less than 2.0 in. H_2O or greater than 10.0 in. H_2O other than during startup and shutdown**.** Excess emissions from baghouses are typically caused by plugging, structural damage to the system (i.e., holes in the duct work or bag), or an improper size for the type and amount of material being handled. As such, a routine inspection program can be useful in preventing emissions. Therefore, the permittee is also required to inspect the baghouses at least once a year and perform any necessary maintenance. To monitor opacity the permittee is required to perform visible emissions monitoring of emissions unit E1 once a month using either EPA Method 9 or EPA Method 22. For emissions unit E2, the permittee is required to perform EPA Method 9 observations 3 times per day when in operation.

CO emissions will be monitored during periodic source testing. Both kilns SO_2 emissions will be monitored by installing, certifying, operating, maintaining and recording the output of a SO_2 (CEMS), consisting of a SO_2 pollutant concentration monitor and a flow monitor, with an automated DAHS for measuring and recording SO_2 concentration (ppm) and mass emission rate (lb/hr) discharged to the atmosphere in accordance with Department's Continuous Monitoring Manual dated January 1992. Compliance with the PSD/BACT SO_2 limit will be demonstrated by comparing the measured mass SO_2 emissions rate in pounds per ton of diatomaceous earth to the limit.

Nonmetallic Mineral Processing (E3 & E4): The new Fluid Bed Dryers #1 and #2 will be commencing construction after April 23, 1986. Therefore, the new Fluid Bed Dryers are subject to applicable requirements under NSPS, Subpart UUU – (Standards of Performance for Calciners and Dryers in Mineral Industries) - 40 CFR 60.732(a) (0.025 gr/dscf) and 40 CFR 60.732(b) (10% opacity). The permittee must notify EPA of the date that construction of the Fluid Bed Dryers commences and the date the equipment begins operations. These requirements are spelled out in Condition 13 of the permit. In addition, a source test must be performed in accordance with Conditions 26 and 27 of the permit. All other existing and new baghouse units in (E3) and (E4) are subject to the 20% opacity limit in OAR 340-208-0110(2); and the 0.10 gr/dscf emissions limit (OAR 340-226-0210(2)(c)); and, are subject to the requirements of NSPS, Subpart OOO (Standards of Performance for Nonmetallic Mineral Processing Plants). Those units that were installed after August 31, 1983, but before April 22, 2008, have been required to comply with - 40 CFR 60.670 and 40 CFR 60.672(e) Table 2 (0.022 gr/dscf) and (7 % opacity). New units that were and are to be installed after April 22, 2008, are required to comply with - 40 CFR 60.670 and 40 CFR 60.672(e) Table 2 (0.014 gr/dscf) and (7 % opacity). The permittee must notify DEQ and EPA of the date of construction of the new baghouses commences and the date the equipment begins operations. These requirements are spelled out in Condition 13 of the permit. In addition, a source test must be performed in accordance with Condition 26 of the permit.

12.c. Testing Requirements: Typically, baghouse emissions are less than the grain loading limits. As shown in the detail sheets, the emissions of the existing individual units are not expected to exceed 5 tons per year based on DEQ emission factors. According to the DEQ's monitoring guidance, the DEQ does not require source testing of equipment that emits less than 5 tons of particulate matter; unless there is a concern about the compliance status of the equipment. In this case, there is no evidence to suggest a compliance problem so the permittee is not being required to test the baghouses. However, the permit does identify the appropriate test method should testing be performed for compliance. The Fluid Bed Dryers #1 and #2, (1-7C and 2-7C, respectively) are to be tested as required by 40 CFR 60.732.

Baghouses (1-33A, 1-33B, 2-51A, 3-84 and 1-21H) are to be tested in accordance with 40 CFR 60.672(a) and/or 60.675(b).

12.d. Monitoring Requirements: Compliance Assurance Monitoring (CAM) rules are applied to the nonmetal mineral processing (E3 & E4) because the uncontrolled PM emissions from these units are above the threshold. The CAM requirements are specified in the O&M plan. The O&M plan requires the permittee to monitor baghouse pressure drop take corrective action if pressure drop is less than 2.0 in. H_2O or greater than 10.0 in. H_2O other than during startup and shutdown. For baghouses 2-56, FF119, 1-27E, 2-27E, 1-70, and PCB, the permittee will monitor baghouse pressure drop and take corrective action if pressure drop is less than 0.5 in. H_2O or greater than 10.0 in. H_2O. Excess emissions from baghouses are typically caused by plugging, structural damage to the system (i.e., holes in the duct work or bag), or an improper size for the type and amount of material being handled. As such, a routine inspection program can be useful in preventing emissions. Therefore, the permittee is also required to inspect the baghouses at least once a year and perform any necessary maintenance. To monitor opacity the permittee is required to perform visible emissions monitoring once a month using either EPA Method 9 or EPA Method 22. The permittee is required to perform EPA Method 9 observations 3 times per day on baghouses (1-7C and 2-7C) when in operation as required by 40 CFR 60.734(b). The new baghouses (1-33A, 1-33B, 2-51A, 3-84 and 1-21H) are to be monitored in compliance with 40 CFR 60.674(c) or (d).

13. **Miscellaneous Processing Sources (E5 & E6):** The existing baghouse units in (E5) and (E6) are subject to the 20% opacity limit in OAR 340-208-0210(2) & (4) and the 0.10 gr/dscf emissions limit (OAR 340-226-0210(2)(b)(A)); and, are subject to applicable requirements of NSPS, Subpart OOO (Standards of Performance for Nonmetallic Mineral Processing Plants). These units have been installed after August 31, 1983, but before April 22, 2008, and are required to comply with - 40 CFR 60.670 and 40 CFR 60.672(f) Table 2 (7 % opacity).

13.a. Testing Requirements: Typically, baghouse emissions are less than the grain loading limits. As shown in the detail sheets, the emissions of the individual units are not expected to exceed 5 tons per year based on engineering estimates. According to the Department's monitoring guidance, the Department does not require source testing of equipment that emits less than 5 tons of particulate matter; unless there is a concern about the compliance status of the equipment. In this case, there is no evidence to suggest a compliance problem so the permittee is not being required to test the baghouses. However, the permit does identify the appropriate test method should testing be performed for compliance purposes.

13.b. Monitoring Requirements: Compliance Assurance Monitoring (CAM) rules are applied to miscellaneous processing sources (E5 & E6) because the uncontrolled PM emissions from these units are above the threshold. The CAM requirements are specified in the O&M plan. The O&M plan requires the permittee to monitor baghouse pressure drop and take corrective action if pressure drop is less than 2.0 in. H_2O or greater than 10.0 in. H_2O other than during startup and shutdown. Excess emissions from baghouses are typically caused by plugging, structural damage to the system (i.e., holes in the duct work or bag), or an improper size for the type and amount of material being handled. As such, a routine inspection program can be useful in preventing emissions. Therefore, the permittee is also required to inspect the baghouses at least once a year and perform any necessary maintenance. To monitor opacity the permittee is required to visually survey the plant once a month using the procedures of EPA Method 9, including using the proper location to observe visible emissions.

14. **Ore Waste Recycle (E7):** The unit is subject to the 20% opacity limit in OAR 340-208-0110(2) and the 0.10 gr/dscf emissions limit (OAR 340-226-0210(2)(b)(A)). Since the unit was installed after August 31, 1983, it is also subject to the requirements of NSPS, Subpart OOO (Standards of Performance for Nonmetallic Mineral Processing Plants) - 40 CFR 60.672(e)(2) Table 2 (0.022 gr/dscf) and (7% opacity).

14.a. Testing Requirements: Typically, baghouse emissions are less than the grain loading limits. As shown in the detail sheets, the emissions of the individual units are not expected to exceed 5 tons per year based on source test data. According to the Department's monitoring guidance, the Department does not require source testing of equipment that emits less than 5 tons of particulate matter; unless there is a concern about the compliance status of the equipment. In this case, there is no evidence to suggest a

compliance problem so the permittee is not being required to test the baghouses. However, the permit does identify the appropriate test method should testing be performed for compliance purposes. Baghouse unit 408 was tested in March of 2007 and the results showed compliance with all applicable limits, including the NSPS Subpart OOO limits.

14.b. Monitoring Requirements: Compliance Assurance Monitoring (CAM) rules are applied to the ore waste recycling (E7) because the uncontrolled PM emissions from these units are above the threshold. The CAM requirements are specified in the O&M plan. The O&M plan requires the permittee to monitor baghouse pressure drop and take corrective action if pressure drop is less than 2.0 in. H_2O or greater than 10.0 in. H_2O other than during startup and shutdown**.** Excess emissions from the baghouse is typically caused by plugging, structural damage to the system (i.e., holes in the duct work or bag), or an improper size for the type and amount of material being handled. As such, a routine inspection program can be useful in preventing emissions. Therefore, the permittee is also required to inspect the baghouses at least once a year and perform any necessary maintenance. To monitor opacity the permittee is required to perform visible emissions monitoring once a month using EPA Method 22 or EPA Method 9.

15. **Oil Storage Facilities (E10 & E11):** Since the two units began construction in September 2005, and started operations on October 24, 2005, they are subject to the requirements of NSPS, Subpart Kb (Standards of Performance for Volatile Organic Liquid Storage Vessels) – 40 CFR 60.112b(a), that requires routine inspections, monitoring and recordkeeping.

16. **Fine Filler Circuit (E12):** The unit is subject to the 20% opacity limit in OAR 340-208-0110(2) & (4) and the 0.10 gr/dscf emissions limit (OAR 340-226-0210(2)(b)(A)). Since the unit was installed after August 31, 1983, it is also subject to the requirements of NSPS, Subpart OOO (Standards of Performance for Nonmetallic Mineral Processing Plants) - 40 CFR 60.672(e)(2) Table 2 (0.022 gr/dscf) and (7 % opacity).

16.a. Testing Requirements: Typically, baghouse emissions are less than the grain loading limits. As shown in the detail sheets, the emissions of the individual units are not expected to exceed 5 tons per year based on Department emission factors. According to the Department's monitoring guidance, the Department does not require source testing of equipment that emits less than 5 tons of particulate matter; unless there is a concern about the compliance status of the equipment. In this case, there is no evidence to suggest a compliance problem so the permittee is not being required to test the baghouses. However, the permit does identify the appropriate test method should testing be performed for compliance purposes. Baghouse unit FF119 was tested in December of 2007 and the results showed compliance with all applicable limits, including the NSPS Subpart OOO limits.

16.b. Monitoring Requirements: Compliance Assurance Monitoring (CAM) rules are applied to the Fine Filler Circuit (E12) because the uncontrolled PM emissions from these units are above the threshold. The CAM requirements are specified in the O&M plan. The O&M plan requires the permittee to monitor baghouse pressure drop and take corrective action if pressure drop is less than 0.5 in. H_2O or greater than 10.0 in. H_2O other than during startup and shutdown**.** Excess emissions from the baghouse is typically caused by plugging, structural damage to the system (i.e., holes in the duct work or bag), or an improper size for the type and amount of material being handled. As such, a routine inspection program can be useful in preventing emissions. Therefore, the permittee is also required to inspect the baghouses at least once a year and perform any necessary maintenance. To monitor opacity the permittee is required to perform visible emissions monitoring once a month using either EPA Method 9 or EPA Method 22.

17. **Storage Silos (E13):** The new BT & CT Storage Silos will be subject to the 20% opacity limit in OAR 340-208-0110(2) & (4) and the 0.10 gr/dscf emissions limit (OAR 340-226-0210(2)(c)). Since the BT & CB Storage Silos will be installed after August 31, 1983, they will also subject New Source Performance Standards in 40 CFR Part 60, Subpart OOO and are required to comply with - 40 CFR 60.670 and 40 CFR 60.672(e) Table 2 (0.014 gr/dscf) and (7 % opacity). The permittee must notify DEQ and EPA of the date that construction of the new storage silos commences and the date the equipment begins operations. These requirements are spelled out in Condition 13 of the permit. In addition, a source test must be performed in accordance with Condition 26 of the permit.

17.a. Testing Requirements: Typically, baghouse emissions are less than the grain loading limits. As shown in the detail sheets, the emissions of the individual units are not expected to exceed 5 tons per year based on engineering estimates. According to the Department's monitoring guidance, the Department does not require source testing of equipment that emits less than 5 tons of particulate matter; unless there is a concern about the compliance status of the equipment. In this case, there is no evidence to suggest a compliance problem so the permittee is not being required to test the baghouses. However, the permit does identify the appropriate test method should testing be performed for compliance purposes. The new baghouses (2-90 and 2-94) are to be tested in compliance with 40 CFR 60.672(a) and 60.675(b).

17.b. Monitoring Requirements: Compliance Assurance Monitoring (CAM) rules will apply to the storage silos (E13) because the uncontrolled PM emissions from these units are above the threshold. The CAM requirements are specified in the O&M plan. The O&M plan requires the permittee to monitor baghouse pressure drop and take corrective action if pressure drop is less than 0.5 in. H_2O or greater than 10.0 in. H_2O other than during startup and shutdown**.** Excess emissions from the baghouse is typically caused by plugging, structural damage to the system (i.e., holes in the duct work or bag), or an improper size for the type and amount of material being handled. As such, a routine inspection program can be useful in preventing emissions. Therefore, the permittee is also required to inspect the baghouses at least once a year and perform any necessary maintenance. To monitor opacity the permittee is required to perform visible emissions monitoring once a month using either EPA Method 9 or EPA Method 22. The new baghouses (2-90 and 2-94) are to be monitored in compliance with 40 CFR 60.674(c) or (d).

COMPLIANCE ASSURANCE MONITORING APPLICABILITY (CAM 40 CFR, PART 64)

18. CAM requirements were originally established in the Standard ACDP issued on May 23, 2003. As discussed above in Sections 12 through 17, the identified emission units are subject to CAM rules in 40 CFR Part 64 and OAR 340-212-0220 through 340-212-0280.

19. **Insignificant Emissions Units:** As identified earlier in this Review Report, this facility has insignificant emissions units (IEUs) that include categorically insignificant activities and aggregate insignificant emissions, as defined in OAR 340-200-0020. The standards that apply to IEUs are for opacity (20% limit) and particulate matter (0.10 gr/dscf limit). The Department does not consider it likely that IEUs at this facility could exceed an applicable emissions limit or standard because the IEUs are equipment or activities that do not have any emission controls (e.g., small space heaters) and do not typically have visible emissions. Since there are no controls, no visible emissions, and the emissions are less than one ton per year, the Department does not believe that monitoring, recordkeeping or reporting is necessary for assuring compliance with the standards. In addition, the insignificant emissions units at this facility are not subject to any NESHAP standards.

PLANT SITE EMISSION LIMITS

Pollutant	Baseline Emission Rate	Netting Basis		Plant Site Emission Limit (PSEL)		
		Previous	Proposed	Previous PSEL	Proposed PSEL	PSEL Increase
	(tons/yr)					
PM/ PM_{10}	0	53	53	62	62	0
$PM_{2.5}$	NA	54	54	62	62	0
SO_2	0	323	323	344	344	0
NO_x	0	61	61	78	78	0
CO	0	151	151	195	195	0
VOC	0	0	0	39	39	0
GHG (CO_2e)	54,377	52,111	54,377	94,912	97,987	3.075

19.a. The baseline emission rate is zero for all pollutants, except for greenhouse gases (GHG) because the facility was permitted after the baseline period (1977/1978) for those pollutants. [Definition of *baseline emission rate* is in OAR 340-222-0048]

19.b. For GHG, the baseline period was determined as January 2006 through December 2006. The baseline emission rate is being corrected based on additional testing information calculated from the RATA during the baseline period and the correction of the global warming potentials (GWP). The calculation of the baseline can be reviewed in the Emissions Detail Sheets of this Review Report. [Definition of *baseline emission rate* for GHGs is in OAR 340-222-0048(1)(b)]

19.c. The netting basis for $PM_{2.5}$ is based on the $PM_{2.5}$ fraction of the PM_{10} netting basis in effect on May 1, 2011 in accordance with OAR 340-222-0046(2)(b). For baghouse emissions the $PM_{2.5}$ is set at 100% of PM_{10} emissions. The Netting Basis for $PM_{2.5}$ was developed in accordance with OAR 340-222-0048(1)(b) using a one ton per year true–up in order to avoid exceedance of the significant emission rate under the previous PSEL in accordance with OAR 340-222-0041.

19.d. The emission basis developed with emission factors for the GHG baseline emission rate, existing netting basis, and PSELs are provided in the Emissions Detail Sheets of this Review Report.

20. There are no unassigned emissions.

SIGNIFICANT EMISSION RATE

21. An analysis of the proposed PSEL increases over the Netting Basis is shown in the following table.

Pollutant	SER	Requested Increase Over Previous Netting Basis	Increase Due to Utilizing Capacity that Existed in the Netting Basis	Increase Due to Physical Changes or Changes in Method of Operation
PM	25	9	9	0
PM_{10}	15	9	9	0
$PM_{2.5}$	10	8	8	0
SO_2	40	21	0	21
NO_x	40	17	0	17
CO	100	44	0	44
VOC	40	39	0	39
GHG (CO_2e)	75,000	43,610	43,610	0

21.a. The proposed facility was subject to the regulations concerning Prevention of Significant Deterioration (PSD) because the facility increased SO_2, NO_x, CO, PM, PM_{10} and $PM_{2.5}$ emissions over the SER and the facility is a federal major source for at least one of those pollutants. The PSD regulations require a Best Available Control Technology (BACT) analysis for any pollutant which has an increase in emissions that exceeds the significant emission rate. Besides a BACT analysis, the applicant was also required to conduct an air quality analysis to determine if the emissions would have impacts greater than the PSD increments or National Ambient Air Quality Standards (NAAQS). The BACT analysis and the air quality analysis were addressed in Air Contaminant Discharge Permit (ACDP) 23-0007. The air quality analysis demonstrated that the source's emissions would not have an adverse impact on ambient air quality. BACT emission limits were determined when ACDP 23-0007 was issued and they are applicable requirements that are included in the Title V permit.

21.b. The PSELs for all pollutants are not greater than the netting basis by more than the significant emission rate. Thus, no further air quality analysis is required and the PSELs are approved as established under this permit action. [OAR 340-222-0041(3)(a)]

HAZARDOUS AIR POLLUTANTS

22. According to the emissions estimates provided by EP Minerals, LLC, in the original Title V permit application and updated in this permit action, this facility is not a major source of hazardous air pollutants (HAPs) emissions. The total maximum combined HAP emissions could be as much as 1 ton/yr primarily as products of incomplete fuel combustion. This facility uses either natural gas or recycled oil for fuel. The potential HAPs when operating at the annual production capacity is provided in the Emission Detail Sheets. A major source is a facility that has the potential to emit more than 10 tons/year of any single HAP or 25 tons/year of combined HAPs. This source is not a major source of hazardous air pollutants.

ADDITIONAL REQUIREMENTS

NSPS APPLICABILITY

23. **New Source Performance Standards (NSPS - 40 CFR, Part 60):** Standards of Performance for Volatile Organic Liquid Storage Vessels, (NSPS - 40 CFR Part 60, Subpart Kb) is applicable for the two 35,000 gallon fixed roof diesel tanks (E10, E11), since the tanks were constructed after July 23, 1984 and are greater than 75 m^3 and hold liquids with a true vapor pressure between 27.6 kPa. and 76.6 kPa. The requirements that apply are as follows:

Rule Citation	Description	Applicability
60.110b	Affected sources	Two 35,000 gallon fuel tanks are subject to the NSPS because these tanks commenced construction on September 14, 2005, and began operations on October 24, 2005.
60.111b	Definitions	These are applicable, but do not establish any specific requirements.
60.112b	Standards for volatile organic compounds	60.112b (a) and (b) are applicable to each storage tank.
60.113b	Testing and procedures	Visual inspections are applicable for each tank.
60.114b	Alternative means of emission limitation	No written request to implement alternative means of emission limitation has been submitted. This is not applicable.
60.115b	Recordkeeping and reporting requirements	Maintaining records for controlling volatile organic compounds, including testing and procedures is required. This is applicable.
60.116	Monitoring of operations	Monitoring records must be maintained for at least two years.
60.117b	Delegation of authority	This is applicable but does not establish any specific requirements.

24. **New Source Performance Standards (NSPS - 40 CFR, Part 60):** The Standards and Performance for Calciner and Dryers in Mineral Industry, NSPS (40 CFR, Part 60, Subpart UUU) is applicable to Kiln (E2), and Fluid Bed Dryers #1 and #2 (E3). The requirements that apply are as follows:

Rule Citation	Description	Applicability
60.730	Affected sources	The Kiln (E2) is an affected source because it is a calciner and dryer and was constructed after April 23, 1986, so (a) and (c) are applicable. The future Fluid Bed Dryers #1, and #2, (E3) will be affected sources because they will be constructed after April 23, 1986. The kiln and fluid bed dryers are not subject to Subpart LL so (b) is not applicable.
60.731	Definitions	These are applicable, but do not establish any specific requirements.

Rule Citation	Description	Applicability
60.732	Standards for particulate matter	The kiln (E2) is subject to the emissions requirements in (a) and (b). The Fluid Bed Dryers #1, and #2, are subject to the emissions requirements in (a) and (b).
60.733	Reconstruction	This is applicable but does not establish any specific requirements.
60.734	Monitoring of emissions and operations	60.734(b) is followed in lieu of continuous opacity monitoring. The permittee records three 6-minute averages of the opacity of visible emissions each day of operation in accordance with Method 9. 60.743 (a) and (c) are not applicable.
60.735	Recordkeeping and reporting requirements	60.735(a) and (c) are applicable retention of records and reporting. There is no wet scrubber, so 60.735(b) is not applicable.
60.736	Test methods and procedures	60.736(a) and (b) are applicable test methods for particulate matter and opacity, respectively. There is no wet scrubber so 60.736(c) is not applicable.
60.737	Delegation of authority	This is applicable but does not establish any specific requirements.

25. **New Source Performance Standards (NSPS - 40 CFR, Part 60):** The Standards of Performance for Nonmetallic Mineral Processing Plants, NSPS (40 CFR, Part 60, Subpart OOO) is applicable to the processes included in emissions units (E3) & (E4); the miscellaneous processes (E5) & (E6), the ore waste recycle units in ACM Mills 1 & 2 (E7); the fine filler circuit for the surge bin and classifier cyclone unit (E12); and, the BT & CB storage silo emission unit (E13). The requirements that apply are as follows:

Rule Citation	Description	Applicability
60.670	Affected sources	The processes in E3, E4, E7, E12 and E13 are affected sources, because each process is an included activity in nonmetallic mineral processing and were constructed after August 31, 1983, so (a)(1) and (e) are applicable. Sections in (a)(2), (b), (c), (d) and (f) are not applicable to these process activities. The new baghouses 1-33A, 1-33B, 2-51A, 3-84, 1-21H in (E3) and the storage silos in (E13) will be affected upon construction and the operations begin.
60.671	Definitions	These are applicable, but do not establish any specific requirements.
60.672	Standards for particulate matter	The processes in E3, E4, E5, E6, E7, E9, E12 and E13 are subject to the emissions standards for particulate matter requirements in Table 2.
60.673	Reconstruction	This is applicable but does not establish any specific requirements for these processes.
60.674	Monitoring of operations	There are process activities that were constructed before and after April 22, 2008. The Table 2 PM limits and opacity readings limit of 7% opacity are applicable. There are no wet scrubbers or wet suppression systems used at the facility, so (a) and (b) are not applicable.
60.675	Test methods and procedures	This is applicable (approved test methods and procedures).
60.676	Reporting and recordkeeping	Reporting and recordkeeping is applicable to this facility.

NESHAPS/MACT APPLICABILITY

26. There are no sources at this facility for which NESHAPS/MACT standards have been promulgated. The facility is not a major source of hazardous air pollutant emissions.

RACT APPLICABILITY

27. The RACT rules are not applicable to this source because it is not in the Portland AQMA, Medford AQMA, or Salem SKATS.

TACT APPLICABILITY

28. Pursuant to OAR 340-226-0130(1)(a), the devices subject to NSPS Subparts Kb, OOO and UUU are exempt from applicability of the State's TACT rules.

GENERAL BACKGROUND INFORMATION

29. No other permits have been issued or are required for this facility by the Department.

30. This source is located in an area that is in attainment for all pollutants.

31. This source is located within 100 kilometers of the Strawberry Wilderness Scenic Area, a Class I Air Quality Protection Area.

COMPLIANCE HISTORY

32. The facility was inspected on the following dates during the last permit term:

Inspection Date	Results of Inspections	Department Actions
08/17/2016	In Compliance	No Action Necessary
08/26/2014	In Compliance	No Action Necessary
05/30/2012	In Compliance	No Action Necessary

33. There have been no documented violations since the permit issuance date of August 30, 2012.

SOURCE TEST RESULTS

E1- Furnace & Kiln		NG	NG	RO	NG	NG	NG	NG	Emission Factor
Pollutants	**Units**	**AUG-1988**	**May-2000**	**MAR-2006**	**MAR-2006**	**APR-2006**	**DEC-2012**	**DEC-2014**	**Avg.**
Oxides of Nitrogen	-lbs/hr	--	5.30	5.29	4.09	--			4.89-lbs/hr
	-lbs/M gal	--	--	40.3	--	--			40.3-lbs/M gal
Carbon Monoxide	-lbs/hr	--	7.9	7.18	9.05	--			8.04-lbs/hr
	-lbs/M gal	--	--	54.8	--	--			54.8-lbs/M gal
Particulate Emissions	-lbs/T DE	0.24	--	1.595 1/	--	0.121	0.102		0.15-lbs/T DE
	-lbs/M gal	--	--	94.3 1/	--	--			94.3-lbs/M gal
VOCs	-lbs/T DE	--	--	--	--	--	--	0.4268	0.43-lbs/T DE
	-lbs/M gal	--	--	--	--	--	--	--	-- lbs/M gal

E2- Furnace & Kiln		NG	NG	NG	RO	NG	NG	NG	NG	Emission Factor
Pollutants	**Units**	**AUG-1988**	**AUG-1998**	**May-2000**	**MAR-2006**	**MAR -2006**	**APR-2006**	**DEC-2012**	**DEC-2014**	**Avg.**
Oxides of Nitrogen	-lbs/hr	--	5.83	4.6	5.59	3.79	--			4.66-lbs/hr
	-lbs/M gal	--	--	40.3	48.2	--	--			40.3-lbs/M gal
Carbon Monoxide	-lbs/hr	--	--	17.35	7.86	8.65	--			11.29-lbs/hr
	-lbs/M gal	--	--	--	67.9	--	--			67.9-lbs/M gal

E2- Furnace & Kiln		NG	NG	NG	RO	NG	NG	NG	NG	Emission Factor
Pollutants	**Units**	**AUG-1988**	**AUG-1998**	**May-2000**	**MAR-2006**	**MAR -2006**	**APR-2006**	**DEC-2012**	**DEC-2014**	**Avg.**
Particulate Emissions	-lbs/T DE	0.24	0.074	--	0.125 1/	--	0.121	0.148		0.14-lbs/T DE
	-lbs/M gal	--	--	--	6.5 1/	--	--			6.5-lbs/M gal
VOCs	-lbs/T DE	--	--	--	--	--	--	--	0.0849	0.08-lbs/T DE
	-lbs/M gal	--	--	--	--	--	--	--	--	-- lbs/M gal

1/ The particulate matter data points from recycled oil used in Kilns E1 & E2 are considered questionable for emission factor verification and development. Re-testing using Oregon Method 5 will be needed for future analysis.
NG – Natural Gas
RO – Recycled Oil

E3 – (1-51A: main product bin); (1-8: raw ore dump); and (1-84: packer & bagger Unit 1)				
PARAMETER		**NOV-1986**	**OCT-2001**	**OCT-2001**
BAGHOUSE PCD ID		**1-51A**	**BH 1-8**	**BH 1-84**
Particulate Emissions	-lbs/hr	0.08	--	--
	-lbs/T DE	0.014	0.011	0.08

E7 ACM Mil - MAR-2007	
PARAMETER	**Emission Factor**
Particulate Emissions	<0.12-lbs/hr
	<0.190-lbs/ton

E12 Fine Filler Circuit - DEC-2007	
PARAMETER	**Emission Factor**
Particulate Emissions	<0.09-lbs/hr
	<0.183-lbs/ton

34. The permittee is required to conduct relative accuracy test audits (RATA) of the continuous emissions monitoring systems (CEMS) annually. The RATAs have been conducted and the CEMS have passed the RATA each year.

PUBLIC NOTICE

35. This permit will be placed on public notice from **Aug. 18, 2017** to **Sept. 22, 2017**. Comments may be submitted in writing during the comment period. DEQ will hold a public hearing if requested by 10 or more individuals or one person representing a group of 10 or more individuals. After the comment period and hearing, if requested, DEQ will review the comments and modify the permit as may be appropriate. A proposed permit will be sent to EPA for a 45 day review period. DEQ may request and EPA may agree to an expedited review of 5 days if there were no substantive or adverse comments during the comment period.

If EPA does not object in writing, any person may petition the EPA within 60 days after the expiration of EPA's 45-day review period to make such objection. Any such petition must be based only on objections to the permit that were raised with reasonable specificity during the public comment period provided for in OAR 340-218-0210, unless the petitioner demonstrates it was impracticable to raise such objections within such period, or unless the grounds for such objection arose after such period.

EMISSIONS DETAIL SHEETS

Proposed PSEL Calculation

PM/PM_{10} and $PM_{2.5}$ Emissions:

Emission Units	Baghouse ID No.	Material Usage, Fuel Consumption, Hours	EF	EF Units	EF Reference	Emissions (tons/yr)
E1	1-25	70,000 (tons DE/yr)	0.263	(lb/ton DE)	Engineer Estimate	9.21
E2	2-25	70,000 (tons DE/yr)	0.273			9.56
E3	1-7C & 2-7C	185,043 (tons Ore/yr)	0.081	(lb/ton Ore)		7.49
	1-33A, 1-33B	41,392 (tons waste/yr)	0.091		Engineer Estimate	1.88
	1-8,	185,043 (tons/yr)	0.011	(lb/ton)	S.T. OCT. 2001	1.02
	1-27E, 2-27E		0.006		Engineer Estimate	0.56
	1-51A,	70,000 (tons DE/yr)	0.014	(lb/ton DE)	S.T. NOV. 1986	0.49
	2-51A		0.027		Engineer Estimate	0.95
	1-84	115,000 (tons DE/yr)	0.080		S.T. OCT. 2001	4.60
	2-84	120,000 (tons DE/yr)	0.068		Engineer Estimate	4.08
	3-84	120,000 (tons DE/yr)	0.047			2.82
	2-56	120,000 (tons DE/yr)	0.002			0.12
	PCB	120,000 (tons DE/yr)	0.013			0.78
	1-21H	120,000 (tons DE/yr)	0.016			0.96
E4	1-7B, 2-7B	185,043 (tons Ore/yr)	0.009			0.83
E5	1-70	70,000 (tons DE/yr)	0.128			4.48
	2-70		0.133			4.66
E6	1-18A, 2-18A	15,000 (tons/yr)	0.085	(lb/ton soda)		0.64
E7	408	19,836 (tons/yr)	0.190	(lb/ton DE)	S.T. MAR. 2007	1.88
E12	FF119	36,522 (tons DE/yr)	0.183		S.T. DEC. 2007	3.34
E13	2-90, 2-94	22,000 (tons DE/yr)	0.085		Engineer Estimate	0.94
Aggregate Insignificant Emissions [1/]					Max. allowed	1.00
$PM/PM_{10}/PM_{2.5}$ Total [2/]						**62**

1/ Aggregate insignificant emissions include activities such as vehicle traffic at the facility. See application calculations.
2/ The $PM_{2.5}$ fraction of PM_{10} is one hundred percent for each baghouse (DEQ AQ-EF08).

SO_2 Emissions:

Emissions Unit	Material Production	EF[1/]	EF Units	EF Reference	Emissions (tons/yr)
E1	70,000 (tons DE/yr)	4.9	(lb/ton)	Engineer Estimate	171.5
E2	70,000 (tons DE/yr)	4.9			171.5
E3	336.8 (MMscf)	1.0	(lb/MMscf)	AP-42 Table 1.4-2	0.2
Aggregate Insignificant Emissions				Max. allowed	1
SO_2 Total					**344**

1/ An SO_2 emission limit of 5.6 lbs/ton - DE Production has been established for E1 and E2 in a previous PSD/BACT action. The permittee has requested to set the SO_2 emission factor to 4.9 lb-SO_2/DE ton. The reduction of the SO_2 emissions is a result of processing raw ore with lower sulfur content. The lowered SO_2 emission factor will be verified by monitoring the operation of the Kilns (E1, E2) and certifying, operating, maintaining and recording the output of a SO_2 Continuous Emission Monitoring System CEMS (consisting of a SO_2 pollutant concentration monitor and a flow monitor) with automated data acquisition and handling system (DAHS) for measuring and recording SO_2 concentration (ppm), mass emission rate (lb SO_2/hr) and the 28 day SO_2 hourly emission block average, (lb SO_2/hr), discharged to the atmosphere.

NO_x Emissions:

Emissions Unit	Hours of Operation	EF[1/]	EF Units	EF Reference	Emissions (tons/yr)
E1	8760 hrs/yr	6.6	(lb/hr)	PSD Limit	28.9
E2		7.06	(lb/hr)		30.9
E3	336.8 (MMscf)	100	(lb/MMscf)	AP-42 Table 1.4-1	16.8
Aggregate Insignificant Emissions				Max. allowed	1
NO_x Total					**78**

1/ The NO_x emissions are based on the established PSD/BACT hourly limits. An emission factor of 0.85 lb-NO_x/ton-DE Production has been calculated using the established 59.8 tons per year of NO_x from the hourly BACT limits and the total DE Production at E1 & E2 of 140,000 tons per year. See Permit Condition 18.

CO Emissions:

Emissions Unit	Hours of Operation	EF[1/]	EF Units	EF Reference	Emissions (tons/yr)
E1	8760 hrs/yr	19.7	(lb/hr)	PSD Limit	86.3
E2		21.4	(lb/hr)		93.7
E3	336.8 (MMscf)	84	(lb/MMscf)	AP-42 Table 1.4-1	14.1
Aggregate Insignificant Emissions				Max. allowed	1
CO Total					**195**

1/ The CO emissions are based on the previously established PSD/BACT hourly limits. An emission factor of 2.57 lb-CO/ton-DE Production has been calculated using the established 180 tons per year of CO from the hourly BACT limits and the total DE Production at E1 & E2 of 140,000 tons per year. See Permit Condition 19.

VOC Emissions:

Emissions Unit	Material Production	EF	EF Units	EF Reference	Emissions (tons/yr)
E1	70,000 (tons DE/yr)	0.529	(lb/ton DE)	Engineer Estimate & Source Test	18.5
E2	70,000 (tons DE/yr)	0.529	(lb/ton DE)		18.5
E3	336.8 (MMscf)	5.5	(lb/MMscf)	AP-42 Table 1.4-2	0.9
Aggregate Insignificant Emissions				Max. allowed	1
VOC Total					**39**

GHG Emissions:

Emissions Unit	GHG	Annual Rate	EF	EF Units	(CO_2e) (metric tons/yr)	(CO_2e) (short tons/yr)
E1 & E2	CO_2	DE Production (tons/yr)	0.22	(tons CO_2/tons-DE)	28,188	31,071
E1& E2	CO_2	Natural Gas 730 (MMscf)	60.08	(short tons CO_2e)	39,788	43,858
	CH_4		0.0283		19	21
	N_2O		0.0338		22	25
E1 & E2	CO_2	Recycled Oil 2,307,692 (gal/yr)	1.21E-02		25,331	27,923
	CH_4		1.21E-05		25	28
	N_2O		2.88E-05		60	66
E3	CO_2	Natural Gas 336.8 (MMscf)	60.08		18,357	20,235
	CH_4		0.0283		9	10
	N_2O		0.0338		10	11
Aggregate Insignificant Emissions					**2,500**	**2,756**
Total GHG Potential Emissions					**88,892**	**97,987**

PSEL Summary:

Pollutant	$PM/PM_{10}/PM_{2.5}$	SO_2	NO_x	CO	VOC	GHG CO_{2e}
	tons/year					
E1, E2 – Natural Gas	18.76	343	59.8	180.0	37.0	43,904
E1, E2 – DE Production						31,071
E1, E2 – Used Oil	23.54	88.4	30.9	34.6	38.1	28,017
E3, E4	26.58	0.2	16.8	14.1	0.9	20,256
E5, E6	9.77	Not emitted				
E7	1.88					
E12	3.34					
E13	0.94					
Aggregate Insignificant	1	1	1	1	1	2,756
Total	**62**	**344**	**78**	**195**	**39**	**97,987**

Hazardous Air Pollutants:

The HAPs calculations provided in the two tables below are based on the maximum combustion of natural gas and oil in each kiln using AP 42. The total HAP emissions calculated by the Department using AP 42 are at 1.22 tons/yr and are less than what was estimated by the company.

Table 1 - HAP Emissions from Natural Gas Combustion:

Fuel Type	Annual Fuel Usage	HAP	Emission Factor * (lb/MMscf)	HAP Emission (tons/yr)
Natural Gas	1,066.8 (MMscf)	2-Methylnaphthalene	2.40E-05	1.28E-05
		Benzene	2.10E-03	1.12E-03
		Dichlorobenzene	1.20E-03	6.40E-04
		Fluorene	2.80E-06	1.49E-06
		Formaldehyde	7.50E-02	4.00E-02
		Hexane	1.80E+00	9.60E-01
		Naphthalene	6.10E-04	3.25E-04
		Phenanathrene	1.70E-05	9.07E-06
		Pyrene	5.00E-06	2.67E-06
		Toluene	3.40E-03	1.81E-03
		Arsenic	2.00E-04	1.07E-04
		Cadmium	1.10E-03	5.87E-04
		Chromium	1.40E-03	7.47E-04
		Cobalt	8.40E-05	4.48E-05
		Manganese	3.80E-04	2.03E-04
		Mercury	2.60E-04	1.39E-04
		Nickel	2.10E-03	1.12E-03
Total HAPs (tons/yr):				**1.01**

* AP 42 – Table 1.4-3. Emission Factors for Speciated Organic Compounds from natural gas combustion, and AP 42 – Table 1.4-4. Emission Factors for Metals from natural gas combustion

Table 2 - HAP Emissions from Oil Combustion:

Fuel Type	Annual Fuel Usage	HAP	Emission Factor * (lb/Mgal)	HAP Emission (tons/yr)
Recycled Oil	3,000 (Mgal)	Benzene	6.67E-04	1.00E-03
		Ethylbenzene	6.36E-05	9.54E-05
		Formaldehyde	3.33E-02	5.00E-02
		Naphthalene	1.13E-03	1.70E-03
		1,1,1-Trichlorethane	2.36E-04	3.54E-04
		Toluene	6.20E-03	9.30E-03
		Xylene	1.33E-04	2.00E-04
		Antimony	5.25E-03	7.88E-03
		Arsenic	1.32E-03	1.98E-03
		Beryllium	2.78E-05	4.17E-05
		Cadmium	3.98E-04	5.97E-04
		Chromium	8.45E-04	1.27E-03
		Cobalt	6.02E-03	9.03E-03
		Lead	1.51E-03	2.27E-03
		Manganese	3.00E-03	4.50E-03
		Mercury	1.13E-04	1.70E-04
		Nickel	8.45E-02	1.27E-01
		Selenium	6.83E-04	1.02E-03
Total HAPs (tons/yr):				**0.22**

* AP-42 – Table 1.3-9. Emission Factors for Speciated Organic Compounds from Fuel Oil Combustion, and Table 1.3-11. Emission Factors for Metals from uncontrolled No. 5 Fuel Oil Combustion.

Greenhouse Gas (GHG) Emissions:

The table below summarizes the GHG emission calculations generated from ore processing using RATA results, along with corresponding natural gas (NG) and recycled oil (RO) used in the furnace and kilns. The GHG emissions from fuel combustion was subtracted from the RATA GHG emissions to development a CO_2e emission factor for diatomaceous earth (ore) production:

Unit 1 RATA									
Year	**Ore Rate of Production**	**RATA CO_{2e}**	**RATA CO_{2e}**	**RATA NG**	**RATA RO**	**NG - CO_{2e}**	**RO-CO_{2e}**	**Ore-CO_{2e}**	**CO_{2e}/Ore**
	(tons/hr)	**(lb/hr)**	**(tons/hr)**	**(scf/hr)**	**(gal/hr)**	**(tons/hr)**	**(tons/hr)**	**(tons/hr)**	**(tons/ton)**
2015	5.09	5443	2.72	10256	NA	0.61683	NA	2.10	0.41
2014	6.61	5380	2.69	7891	NA	0.47	NA	2.22	0.34
2013	6.61	5380	2.69	12327	NA	0.74	NA	1.95	0.29
2012	7.08	5436	2.72	33251	NA	2.00	NA	0.72	0.10
2011	4.94	5413	2.71	9944	NA	0.60	NA	2.11	0.43
2010	6.77	4317	2.16	7870	NA	0.47	NA	1.69	0.25
2009	6.11	4198	2.10	21303	NA	1.28	NA	0.82	0.13
2008	7.47	4941	2.47	24890	NA	1.50	NA	0.97	0.13
2006	7.06	6098	3.05	23646	56	1.42	0.68	0.95	0.13
2005	5.99	4575	2.29	19567	62	1.18	0.75	0.36	0.06

Unit 2 RATA									
	Ore Rate of Production	**RATA CO_{2e}**	**RATA CO_{2e}**	**RATA NG**	**RATA RO**	**NG - CO_{2e}**	**RO-CO_{2e}**	**Ore-CO_{2e}**	**CO_{2e}/Ore**
	(tons/hr)	**(lb/hr)**	**(tons/hr)**	**(scf/hr)**	**(gal/hr)**	**(tons/hr)**	**(tons/hr)**	**(tons/hr)**	**(tons/ton)**
2016	7.92	5182.2	2.59	9906	NA	0.60	NA	2.00	0.25
2015	7.15	5294.4	2.65	11415	NA	0.69	NA	1.96	0.27
2014	7.66	5473.4	2.74	11861	NA	0.71	NA	2.02	0.26
2013	7.66	5473.4	2.74	10575	NA	0.64	NA	2.10	0.27
2012	6.25	5435.7	2.72	26778	NA	1.61	NA	1.11	0.18
2011	7.66	5340	2.67	12415	NA	0.75	NA	1.92	0.25
2010	7.60	4693	2.35	12220	NA	0.73	NA	1.61	0.21
2009	7.89	4693	2.35	13588	NA	0.82	NA	1.53	0.19
2008	5.79	4662.9	2.33	16140	NA	0.97	NA	1.36	0.24
2006	7.49	5149.2	2.57	31999	NA	1.92	NA	0.65	0.09
2005	8.10	5703.3	2.85	4965	103.4	0.30	1.25	1.30	0.16

NA - not applicable because recycled oil was not used during the RATA.

Annual average short tons of CO_{2e} per ore tons production E1 & E2:	**0.22 CO_{2e} short tons/ore tons production**

Greenhouse Gas (GHG) Baseline Emissions:

The table below summarizes the calculated GHG emissions for fuel combustion using the Fuel Combustion Greenhouse Gas Calculator during the baseline period of 2000 - 2010. All GHG emission calculations are provided in short tons:

GHG Emissions From Fuels (CO_2e tons/yr)					
Year	Natural Gas (MMscf)	NG CO_2e (tons/yr)	Recycled Oil (Gal)	RO CO_2e (tons/yr)	Total CO_2e (tons/yr)
2010	467.3	28105	NA	NA	28105
2009	429.3	25819	NA	NA	25819
2008	461.2	27738	103724	1257	28995
2007	377.2	22686	616462	7470	30156
2006	364.2	21904	791657	9593	31497
2005	438.6	26379	126155	1529	27907
2004	430.1	25868	NA	NA	25868
2003	335.8	20196	NA	NA	20196
2002	354.8	21339	NA	NA	21339

NA - not applicable

The table below summarizes the annual diatomaceous earth (ore) production and the corresponding GHG emissions:

GHG Emissions From Diatomaceous Earth Production (CO_2e tons/yr)		
Year	Ore DE Production (tons/yr)	Total Short Tons CO_2e/yr
2010	99329	22045
2009	92027	20424
2008	105193	23346
2007	99574	22099
2006	103092	22880
2005	102389	22724
2004	101187	22457
2003	87169	19346
2002	86963	19300
2001	77783	17263
2000	84123	18670

The baseline year was calculated and evaluated in the table below by adding the GHG emissions from the diatomaceous earth (ore) production with the GHG emissions from the corresponding fuel combustion. The highest year of GHG emissions during the baseline period is 2006, at 54,377 CO_2e tons/yr.

Baseline GHG Emissions			
Year	**Ore CO_2**	**Fuel CO_2e**	**Total CO_2e**
	(short tons/yr)		
2010	22045	28105	50150
2009	20424	25819	46244
2008	23346	28995	52341
2007	22099	30156	52255
2006	*22880*	*31497*	*54377*
2005	22724	27907	50632
2004	22457	25868	48325
2003	19346	20196	39542
2002	19300	21339	40639
2001	17263	NA	17263
2000	18670	NA	18670
Use Year 2006 for GHG Baseline at 54,377 tons/yr			

NA - not available