State of Oregon
Department of
Environmental
Quality

OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR CONTAMINANT DISCHARGE PERMIT

Northwest Region
700 NE Multnomah St Ste 600
Portland OR 97232-4100
Telephone: (503) 229-5263

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:

Intel Corporation
5200 NE Elam Young Parkway
MS: RS5-115
Hillsboro, OR 97124

PLANT SITE LOCATION:

Aloha Campus
3585 SW 198th Avenue
Aloha, OR 97007

Gordon Moore Park at Ronler Acres Campus
2501 NE Century Boulevard
Hillsboro, OR 97124

INFORMATION RELIED UPON:

Primary Application No.: 034907
Received: 7/72023 Amended: 9/6/2023
Combined with Application No.: 034188
Received: 8/3/2022

LAND USE COMPATIBILITY STATEMENT:

Aloha Campus
Issued by: Washington County
Dated: 09/20/1991, 12/19/2014, 4/25/2023

Gordon Moore Park at Ronler Acres Campus
Issued by: City of Hillsboro
Dated: 12/19/2014, 4/25/2023

ISSUED BY THE DEPARTMENT OF ENVIRONMENTAL QUALITY

Joshua Alexander, Northwest Region Air Quality Manager

Date

Nature of Business: Semiconductor Manufacturing

SIC: 3674

RESPONSIBLE OFFICIALS

Title: Vice President,
Technology Development GM,
LTD Manufacturing

FACILITY CONTACT PERSON

Name: Wes Lund (primary)
Phone: 971-610-4009
Name: Ruth Glass (secondary)
Phone: 971-329-1494

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LIST OF ABBREVIATIONS THAT MAY BE USED IN THIS PERMIT

ACDP	Air Contaminant Discharge Permit
Act	Federal Clean Air Act
Annual	Calendar Year
ASTM	American Society of Testing and Materials
BACT	Best Available Control Technology
Btu	British thermal unit
CAM	Compliance Assurance Monitoring
CAO	Cleaner Air Oregon
CEMS	Continuous Emissions Monitoring System
CFC	Chlorofluorocarbons
CFR	Code of Federal Regulations
CO	Carbon Monoxide
COMS	Continuous Opacity Monitor
CPMS	Continuous parameter monitoring system
CPP	Climate Protection Program
DEQ	Department of Environmental Quality
dscf	Dry standard cubic feet
EAL	Emission action level
EF	Emission factor
EPA	US Environmental Protection Agency
EU	Emissions Unit
FAB or Fab	Semiconductor fabrication and support facilities
FCAA	Federal Clean Air Act
Fluorides	Inorganic fluoride compounds (as measured by EPA Method 13A or 13B), excluding hydrogen fluoride
FGR	Flue Gas Recirculation
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
HCl	Hydrogen chloride
HF	Hydrogen fluoride
ID	Identification number or label
I&M	Inspection and maintenance
IPCC	Intergovernmental Panel on Climate Change
NA or na	Not applicable
NAICS	North American Industry Classification System
NEHSAP	National Emissions Standards for Hazardous Air Pollutants
NO_x	Nitrogen oxides
NSPS	New Source Performance Standards
NSR	New Source Review
O_2	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
PEMS	Predictive/Parameter 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
POU	Point of use device
ppm	Parts per million
PSD	Prevention of Significant Deterioration
PSEL	Plant Site Emission Limit
PTE	Potential to Emit
psia	pounds per square inch, actual
RACT	Reasonably Available Control Technology
RCTO	Rotor concentrator thermal oxidizer
RICE	Reciprocating Internal Combustion Engine
SACC	Semiannual Compliance Certification
SER	Significant Emission Rate
SERP	Source emissions reduction plan
SIC	Standard Industrial Classification
SO_2	Sulfur dioxide
SSM	Startup, Shutdown and Malfunction
ST	Source test
TACT	Typically Achievable Control Technology
VE	Visible emissions
VMT	Vehicle miles traveled
VOC	Volatile organic compounds
WESP	Wet Electrostatic Precipitator

PERMITTED ACTIVITIES

1. This permit approves construction and operation of the permittee's facility as described in permit applications no. 034907, received on July 7, 2023 and amended on September 6, 2023; and application no. 034188, received on August 3, 2022. [OAR 340-218-0010, 340-218-0120(2)]

2. 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, 340-218-0120(2)]

3. The permittee must submit any necessary revisions to the Title V permit application not more than 120 days after the issuance date of this permit. [OAR 340-218-0010, 340-218-0120(2)]

4. All conditions in this permit are federally enforceable except conditions 6, 7, 8, 16, 17, 56, and 73.d, which are only enforceable by the state. [OAR 340-218-0060]

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

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

(RA) indicates Gordon Moore Park at Ronler Acres Campus, (A) indicates Aloha Campus

Emissions Unit ID	Device/ process	Emission point	Type of pollution control device
EU-Boilers	Boilers, natural gas-fired	Multiple boiler exhaust stacks, (RA) and (A)	Varies, low-NOx burners and FGR or Ultra Low NOx burners
EU-Heaters	Heaters, natural gas-fired	Multiple, (RA) and (A)	None
EU-TMXW	Ammonia wastewater treatment system	Multiple, (RA)	Thermal catalytic oxidation/reduction system
EU-RCTOs	Manufacturing processes and storage tanks that emit VOCs, natural gas-fired	Multiple, (RA) and (A)	RCTOs ***
EU-Wet Scrubbers*	Manufacturing processes and storage tanks controlled by wet scrubbers	Multiple, (RA) and (A)	Wet scrubbers ***
EU-VOCunc	VOC, uncontrolled	Multiple, (RA) and (A)	None
EU-RICE	Emergency generator and fire pump engines	Multiple, (RA) and (A)	Varies, DPFs
EU-Paved Roads**	Paved roads	(RA) and (A)	Periodic sweeping
EU-Cooling Towers**	Industrial cooling towers that do not use chromium based chemicals	Multiple, (RA) and (A)	Drift eliminators
EU-Other	Arsenic Specialty Filter (EXSP) and Lime Silos	Multiple, (RA)	Varies, HEPA filter and filters

* EU-Wet Scrubbers includes only wet acid gas scrubbers (EXSC), wet ammonia gas scrubbers (EXAM) and process specific support systems scrubbers (PSSS).
** Paved Roads and Cooling Towers are categorically insignificant activities.
*** A number of RCTOs and wet scrubbers are equipped with wet electrostatic precipitators (WESPs). The WESPs are not a unique EU grouping, but rather are add-on equipment to existing pollution control devices.

A full listing of the emissions units is found in the detail sheets associated with this permit.

EMISSION LIMITS AND STANDARDS - FACILITY-WIDE

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.

Facility Wide Requirements

EU ID	Applicable Requirement	Condition Number	Pollutant/ Parameter	Limit/ Standard	Monitoring Requirements	
					Method	Condition
Facility wide	340-208-0300	6	Nuisance	no nuisance	Recordkeeping	8
Facility wide	340-208-0450	7	PM >250μ	no fallout	Recordkeeping	8
Facility wide	40 CFR Part 68	9	Risk management	Risk management plan	n/a	n/a
Facility wide	340-208-0210(2)	10	Fugitive VE	minimize	n/a	n/a
Facility wide	340-208-0110(3)(a)	11	Opacity	20% (6 min block average)	Recordkeeping	14, 15
Facility wide	340-226-0210(1)(b)	12	PM/PM_{10}	see condition 12	Recordkeeping	14, 15
Facility wide	340-228-0210(1)	13	PM/PM_{10}	see condition 13	Recordkeeping	14, 15
Facility wide	Conditional preapproval	18	--	see condition 18	n/a	n/a
Facility wide	New control device notification	19	--	see condition 19	n/a	n/a

Nuisance Conditions

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

7. Applicable Requirement The permittee must not cause or permit the emission 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.]

8. Monitoring and Recordkeeping Requirement: The permittee must maintain a log of each complaint received by the permittee in person, in writing, by telephone or through other means that specifically refer to air pollution or odor concerns associated with and during the operation of the permitted facility. Documentation must include date of contact, time and description of observed pollution or odor condition, location of receptor, status of plant operation during the observed period, and time of response to complainant. A plant representative must immediately investigate the condition following the receipt of the nuisance complaint and a plant representative must provide a response to the complainant within 24 hours, if possible. [OAR 340-218-0050(3)(a)] [This condition is only enforceable by the state.]

Accidental Release Prevention

9. Applicable Requirement The permittee must maintain a risk management plan (RMP) and comply with the plan and all other applicable Part 68 requirements. [40 CFR Part 68].

Visible Emissions (VE)/Opacity and Particulate Matter

10. Applicable Requirement The permittee must not cause 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 may include, but not be limited to the following: [OAR 340-208-0210(1)]

    10.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;

    10.b. Application of water or other suitable chemicals on unpaved roads, materials stockpiles, and other surfaces which can create airborne dusts;

    10.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;

    10.d. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials;

    10.e. Adequate containment during sandblasting or other similar operations;

    10.f. Covering, at all times when in motion, open bodied trucks transporting materials likely to become airborne;

    10.g. The prompt removal from paved streets of earth or other material that does or may become airborne.

11. Applicable Requirement The permittee may not emit or allow to be emitted any visible emissions that equal or exceed an average of 20 percent opacity: [OAR 340-208-0110(3)(a) and (2)]

    11.a. This condition applies to sources other than wood-fired boilers, installed, constructed, or modified on or after June 1, 1970.

    11.b. The visible emissions standards in this condition are based on the average of 24 consecutive observations recorded at 15-second intervals, or more frequently as allowed below, which comprise a six-minute block. Six-minute blocks need not be consecutive in time and in no case may two blocks overlap. For each set of 24 observations, the six-minute block average is calculated by summing the opacity of the 24 observations and dividing the sum by 24. Six-minute block averages are measured by:

        11.b.i. EPA Method 9;

        11.b.ii. A continuous opacity monitoring system (COMS) installed and operated in accordance with the DEQ Continuous Monitoring Manual or 40 C.F.R. part 60 [NOTE: DEQ manual is published with OAR 340-200-0035]; or

        11.b.iii. An alternative monitoring method approved by DEQ that is equivalent to EPA Method 9.

12. Applicable Requirement The permittee may not cause, suffer, allow, or permit particulate matter emissions from any non-fuel-burning equipment in excess of the following limits: [OAR 340-226-0210(2)(b) and (c)]

    12.a. For non-fuel burning equipment installed, constructed or modified on or after April 16, 2015, 0.10 grains per dry standard cubic foot;

    12.b. For non-fuel burning equipment installed, constructed or modified on or after June 1, 1970 but prior to April 16, 2015, 0.14 grains per dry standard cubic foot.

    "Non-fuel burning equipment" means all equipment that burns fuel except boilers.

13. Applicable Requirement The permittee may not cause, suffer, allow, or permit particulate matter emissions from any fuel burning equipment in excess of the following limits: [OAR 340-228-0210(2)(b)(B) and (c)]

    13.a. For fuel burning equipment installed, constructed, or modified on or after April 16, 2015, 0.10 grains per dry standard cubic foot; and

    13.b. For all fuel burning equipment installed, constructed or modified on or after June 1, 1970, but prior to April 16, 2015, 0.14 grains per dry standard cubic foot.

    13.c. For fuel burning equipment that burns fuels other than wood, the emissions results must be corrected to 50% excess air.

    "Fuel burning equipment" means boilers.

14. Monitoring Condition In lieu of visible emissions and particulate matter monitoring of all equipment that combusts natural gas, the permittee must maintain the records required by conditions 24 (boiler fuel monitoring) and 32 (RCTO fuel monitoring). [OAR 340-218-0050(3)]

15. Monitoring Condition In lieu of visible emissions and particulate matter monitoring of all exhaust points other than boilers and RCTOs, the permittee must maintain the records required by conditions 78 through 89. [OAR 340-218-0050(3)]

16. Applicable Requirement The permittee must comply with the applicable requirements of OAR 340 Division 245, Cleaner Air Oregon (CAO). [OAR 340, Division 245] [This condition is enforceable only by the State.]

    16.a. CAO is administered as a separate program, and there are no monitoring or recordkeeping requirements in this permit pertaining to CAO at this time.

    16.b. Permit conditions pertaining to CAO may be added in the future.

17. Applicable Requirement The permittee must comply with the applicable requirements of OAR 340 Division 271, Climate Protection Program (CPP). [OAR 340, Division 271] [This condition is enforceable only by the State.]

    17.a. CPP is administered as a separate program, and there are no monitoring or recordkeeping requirements in this permit pertaining to CPP at this time.

    17.b. Permit conditions pertaining to CPP may be added in the future.

CONDITIONAL PREAPPROVAL ALLOWANCE FOR OPERATIONAL FLEXIBILITY

18. The permittee is pre-approved to make physical changes, additions, relocations of equipment, or process modifications to the manufacturing processes and support operations without prior notification to DEQ, provided the following conditions are met. Any proposed change not meeting the criteria of this condition must be made in accordance with the requirements of Condition 20.

18.a. Such changes do not result in an emission increase which exceeds one or more of the permitted PSELs. Emission increases resulting from changes approved under this condition must be offset by unused capacity within the relevant PSEL(s). This may be accomplished using emission reduction offsets achieved through a documented pollution prevention project that demonstrates permanent emission reductions in an amount compatible with the respective emission increase.

18.b. Such changes must not violate or contradict any expressed permit condition within this permit.

18.c. No new Fab facility may be added under this pre-approval condition.

18.d. The physical changes and changes in method of operation approved under this condition must not involve changes to an existing Pollution Control Device (PCD) that would not be considered normal maintenance, cause a degradation in the performance, or result in the addition of a new PCD.

18.e. The physical changes and/or changes in method of operation approved under this condition must not reduce the capture efficiency of any PCD.

18.f. The permittee must re-evaluate the presumed pollutant capture efficiency (expressed as a decimal) on each occurrence of an equipment modification or addition that could potentially affect the capture efficiency used for compliance emission calculations referenced by condition 78 (PSEL compliance calculations).

18.g. The physical changes and changes in method of operation approved under this condition must not involve the installation and/or startup of a new boiler or co-generation unit with an input BTU rating of $\geq$ 10 million BTUs per hour.

18.h. The physical changes and changes in method of operation approved under this condition must not involve the utilization of an existing or new power generator for the purpose of producing non-emergency power.

18.i. Any new emitting activities and any physical changes or changes in the method of operation of existing emitting activities must be compatible with, subject to, and comply with, the compliance monitoring and recordkeeping requirements specified in this permit.

New Control Device Notification Requirements

19. Applicable Requirement The permittee must notify DEQ in accordance with Condition 20 of this permit and must receive DEQ approval prior to commencing installation of any emission control device other than those identified in the permit application referenced on the cover page of this permit.

20. Applicable Requirement 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 340-210-0205 through OAR 340-210- 0250, unless such construction or modification is preapproved under Condition 18. [OAR 340-210-0205 through OAR 340-210- 0250]

EU-BOILERS

EU ID	Applicable Requirement	Condition Number	Pollutant/ Parameter	Limit/ Standard	Monitoring Requirements	
					Method	Condition
EU-Boilers >2.0 MMBtu/hr	BACT	21	NOx, CO	See condition 21	Source test	22
EU-Boilers >2.0 MMBtu/hr	BACT	21	VOC, PM_{10}, $PM_{2.5}$, GHG	See condition 21	Recordkeeping	24
EU-Boilers >2.0 MMBtu/hr	40 CFR Part 60, Subpart Dc	23	n/a	No requirements	Recordkeeping	24
EU-Boilers >2.0 MMBtu/hr	OAR 340-226-0120	25	n/a	Periodic tune-up's	Recordkeeping	26
EU-Boilers <2.0 MMBtu/hr	BACT	27	Fuel usage	n/a	Recordkeeping	28

BACT Requirements

21. Applicable Requirement The permittee must meet the following limits, operating requirements or equipment specifications for the listed equipment: [BACT, app. no. 034907, rec'd 7/7/2023, OAR 340-224-0070]

21.a. Summary of BACT for Boilers >2.0 MMBtu/hr:
Table copied from the permit application 034907 received 7/7/2023, Appendix C BACT Analysis Report, Table 4-15
Summary of Proposed BACT for Boilers (>2.0 MMBtu/hr)

EU Boiler Equipment Tag	Year Installed	NOx BACT	CO BACT	VOC BACT	PM10 BACT	PM2.5 BACT	CO2 (GHG) BACT
F20-BLR115-5-200	Planned	0.011 lb/MMBtu	0.037 lb/MMBtu	Good Combustion Practices	Good Combustion Practices	Good Combustion Practices	Design and Operational Efficiency
A4-BLR117-3-30	Planned	0.011 lb/MMBtu	0.037 lb/MMBtu	"	"	"	"
RA4-BLR117-4-30	Planned	0.011 lb/MMBtu	0.037 lb/MMBtu	"	"	"	"
LR-115-6-210	Planned	0.011 lb/MMBtu	0.037 lb/MMBtu	"	"	"	"
RP1-BLR115-1-210	2016	0.011 lb/MMBtu	0.037 lb/MMBtu	"	"	"	"
RP1-BLR115-4-210	Planned	0.011 lb/MMBtu	0.037 lb/MMBtu	"	"	"	"
CUB4-BLR115-7-10	New Addition	0.011 lb/MMBtu	0.037 lb/MMBtu	"	"	"	"
RAC5-BLR115-1	2021	0.011 lb/MMBtu	0.037 lb/MMBtu	"	"	"	"
RAC5-BLR115-2	2022	0.011 lb/MMBtu	0.037 lb/MMBtu	"	"	"	"
RAC5-BLR115-3	2021	0.011 lb/MMBtu	0.037 lb/MMBtu	"	"	"	"
RAC5-BLR115-4	2022	0.011 lb/MMBtu	0.037 lb/MMBtu	"	"	"	"
RAC5-BLR115-5	2022	0.011 lb/MMBtu	0.037 lb/MMBtu	"	"	"	"
RAC5-BLR115-6	2022	0.011 lb/MMBtu	0.037 lb/MMBtu	"	"	"	"
RAC5-BLR115-7	Planned	0.011 lb/MMBtu	0.037 lb/MMBtu	"	"	"	"
RAC5-BLR115-8	Planned	0.011 lb/MMBtu	0.037 lb/MMBtu	"	"	"	"
N2-BLR117-1A-30	2021	0.011 lb/MMBtu	0.037 lb/MMBtu	"	"	"	"
N2-BLR117-1B-30	2021	0.011 lb/MMBtu	0.037 lb/MMBtu	"	"	"	"
F20-BLR115-4-200	2013	--	--	"	"	"	"
CUB2-BLR115-5-210	2012	--	--	"	"	"	"
CUB2-BLR115-6-210	2015	--	--	"	"	"	"
CUB4-BLR115-1-10	2013	--	--	"	"	"	"
CUB4-BLR115-2-10	2013	--	--	"	"	"	"
CUB4-BLR115-3-10	2013	--	--	"	"	"	"
CUB4-BLR115-4-10	2013	--	--	"	"	"	"
CUB4-BLR115-5-10	2011	--	--	"	"	"	"
CUB4-BLR115-6-10	2011	--	--	"	"	"	"
F15-BLR28-1-2	2014	--	--	"	"	"	"
F15-BLR28-1-3	2014	--	--	"	"	"	"
F15-BLR28-1-1	2014	--	--	"	"	--	"
BLR-115-4-210	2008	--	--	"	"	--	--
BLR-115-5-210	2009	--	--	"	"	--	--
RP1-BLR115-2-210	2003	--	--	"	"	--	--
RP1-BLR115-3-210	2003	--	--	"	"	--	--

RA2-BLR115-1-300	1998	--	--	"	"	--	--
RA2-BLR115-2-300	1998	--	--	"	"	--	--
F20-BLR115-1-200*	1995	0.011 lb/MMBtu	--	"	"	--	--
F20-BLR115-2-200*	1995	0.011 lb/MMBtu	--	"	"	--	--
F20-BLR115-3-200*	1995	0.011 lb/MMBtu	--	"	"	--	--
CUB2-BLR115-1-210*	1998	0.011 lb/MMBtu	--	"	"	--	--
CUB2-BLR115-2-210*	1998	0.011 lb/MMBtu	--	"	"	--	--
CUB2-BLR115-3-210*	1998	0.011 lb/MMBtu	--	"	"	--	--
CUB2-BLR115-4-210*	2000	0.011 lb/MMBtu	--	"	"	--	--
BLR-115-1-210*	2001	0.011 lb/MMBtu	--	"	"	--	--
BLR-115-2-210*	2001	0.011 lb/MMBtu	--	"	"	--	--
BLR-115-3-210*	2001	0.011 lb/MMBtu	--	"	"	--	--

Notes: Details about each piece of equipment are listed in the PSEL Detail Sheets and identified by the Equipment Tag.
** Boilers that have pre-project BACT limits for NOx but are not subject to current (7/7/2023) BACT analysis.*
(--) Indicates selected boiler does not meet BACT applicability for the specific pollutant
(") Indicates "ditto"

21.b. Emission limits do not apply during periods of startup, shutdown or malfunction, but the permittee must minimize the time spent in any of these conditions.

Boiler Testing for BACT Compliance

22. Monitoring Requirement The permittee must conduct source testing of the boilers identified in condition 21 for compliance with the limits in condition 21 as specified in this condition.

22.a. Within 2 years of the issuance date of this permit, boilers must be tested in accordance with this condition;

22.a.i. Test at least one boiler from each group of identical boilers that were installed in or after 2015 and are subject to NOx or CO BACT as identified in condition 21, except as provided in condition 22.a.ii;

22.a.ii. Any boiler group that was tested in or after 2021 and the test showed compliance with the BACT limits in condition 21 does not have to be tested; and

22.a.iii. The boilers must be tested for NOx and CO.

22.a.iv. For fuel burning equipment that burns fuels other than wood, the emissions results must be corrected to 50% excess air.

22.b. Testing must be conducted in accordance with condition 90.

22.c. Recordkeeping Requirement The permittee must keep records of all test results.

NSPS Subpart Dc

23. Applicable Requirement The permittee must comply with all applicable provisions and standards of 40 CFR Part 60, Subpart Dc for all Steam Generating Units (as defined in 40 CFR 60.41c) that meet the specifications in 23.a [40 CFR Part 60, Subpart Dc]

    23.a. This condition applies to each Steam Generating Unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/h)) or less, but greater than or equal to 2.9 MW (10 MMBtu/h).

    23.b. All affected Steam Generating Units must be limited to the combustion of natural gas, propane or butane fuels exclusively.

    23.c. All affected Steam Generating Units associated with this permit are fired exclusively with the fuels identified in condition 23.b and as such, there are no applicable emission standards or testing or reporting requirements that these Steam Generating Units are subject to under this Subpart.

24. Monitoring/Recordkeeping Requirement The permittee must monitor and keep records of the amount and type of fuel used each month in each Steam Generating Unit or group of Steam Generating Units subject to condition 23. [40 CFR 60.48c(g)(2)]

Boiler Tune-Ups

25. Applicable Requirement The permittee must have the boilers listed in condition 21.a tuned up no less frequently than the frequency recommended by the boiler manufacturer. [OAR 340-226-0120]

26. Monitoring Requirement The permittee must keep records of each boiler tune up and make them available to DEQ staff upon request.

27. Applicable Requirement The permittee must meet the following limits, operating requirements or equipment specifications for the listed equipment: [BACT, application no. 034907, received 7/7/2023]

27.a. Summary of BACT for Boilers ≤2.0 MMBtu/hr:

Table copied from the permit application 034907 received 7/7/2023, Appendix C BACT Analysis Report, Table 4-16
Summary of Proposed BACT for Boilers (≤2.0 MMBtu/hr)

EU Boiler Equipment Tag	Year Installed	NOx BACT	CO BACT	VOC BACT	PM/PM_{10} BACT	$PM_{2.5}$ BACT	CO_2 (GHG) BACT
RS4-BLR115-1	Planned	0.011 lb/MMBtu	0.037 lb/MMBtu	Good Combustion Practices	Good Combustion Practices	Good Combustion Practices	Design and Operational Energy Efficiency
RS4-BLR115-2	Planned	0.011 lb/MMBtu	0.037 lb/MMBtu				
RS4-BLR115-3	Planned	0.011 lb/MMBtu	0.037 lb/MMBtu				
RS6-BLR115-1	Planned	0.011 lb/MMBtu	0.037 lb/MMBtu				
RS6-BLR115-2	Planned	0.011 lb/MMBtu	0.037 lb/MMBtu				
RS6-BLR115-3	Planned	0.011 lb/MMBtu	0.037 lb/MMBtu				
RA4-BLR117-1-30	2021	0.011 lb/MMBtu	0.037 lb/MMBtu				
F15-HW35-3	2016	0.011 lb/MMBtu	0.037 lb/MMBtu				
F15-HW35-4	2016	0.011 lb/MMBtu	0.037 lb/MMBtu				
RA4-BLR152-2-30	2014	-	-				
RA4-BLR152-1-30	2014	-	-				
RA4-BLR117-2-30	2014	-	-				
RA1-MECH-B01	2010	-	-				
RA1-MECH-B02	1995	-	-				

Notes: Details about each piece of equipment are listed in the PSEL Detail Sheets and identified by the Equipment Tag.

27.b. Emission limits do not apply during periods of startup, shutdown or malfunction, but the permittee must minimize the time spent in any of these conditions.

28. Monitoring/Recordkeeping Requirement The permittee must monitor and keep records of the type and amount of fuel used each month in each boiler or group of boilers subject to condition 27.

EU-HEATERS

EU ID	Applicable Requirement	Condition Number	Pollutant/ Parameter	Limit/ Standard	Monitoring Requirements	
					Method	Condition
EU-Heaters	BACT	29	PM_{10}, $PM_{2.5}$, CO, VOC, NOx, GHG	See condition 29	Recordkeeping	30

BACT Requirements

29. Applicable Requirement The permittee must meet the following limits, operating requirements or equipment specifications for the listed equipment: [BACT, application no. 034907, received 7/7/2023]

29.a. Summary of BACT for Heaters:

Table copied from the permit application 034907 received 7/7/2023, Appendix C BACT Analysis Report, Table 5-4 Summary of Proposed BACT for Heaters

Heater Equipment Tag			Pollutant	Selected BACT
HER3_01	HELT4_06	HER3_02	PM_{10}	Good Combustion Practices
HELT4_07	HER3_03	HELT4_08		
HER3_04	HELT4_09	HER3_05		
HELT4_10	HER3_06	HELT4_11	$PM_{2.5}$	Good Combustion Practices
HER3_07	HELT4_12	HER3_08		
HELT4_13	HERS4_01	HELT4_14	CO	Good Combustion Practices
HERS2_15	HERS4_02	HELT4_15		
HERS2_16	HERS4_03	HELT4_16	VOC	Good Combustion Practices
HERA1_01	HERS4_04	HELT4_17		
HERA1_02	HERS4_05	HELT4_18	NOx	Good Combustion Practices
HEC4_01	HERS4_06	HELT4_19		
HEPB1_01	HERS4_07	HELT4_20		
HEC5_01	HERS4_08	HELT4_21	CO_2 (GHG)	Design and Operational Energy Efficiency
HERA5_01	HERS4_09	HELT4_22		
HERA5_02	HERS4_10	HELT4_23		
HERA5_03	HERS4_11	HELT4_24		
HERA6_01	HERS4_12	HEAL_01		
HERA6_02	HERS5_01	HEAL_02		
HERA6_03	HERS5_02	HEAL_03		
HEPB1_02	HERS5_03	HEAL_04		
HEC5_02	HERS5_04	HEAL_05		
HEMA_01	HERS5_05	HEAL_06		
HEAL_07	HERS5_06	HERS2_01		
HEAL_08	HERS5_07	HERS2_02		
HELT4_01	HERS5_08	HERS2_03		
HELT4_02	HERS5_09	HERS2_04		
HELT4_03	HERS6_01	HERS2_05		
HELT4_04	HERS6_02	HERS2_06		
HELT4_05	HERS6_03	HERS2_07		
HERS6_04	HERS2_08	HERS6_05		
HERS2_09	HERS6_06	HERS2_10		
HERS6_07	HERS2_11	HERS6_08		
HERS2_12	HERS6_09	HERS2_13		
HERS6_10	HERS2_14	HERS6_11		

Notes: Details about each piece of equipment are listed in the PSEL Detail Sheets and identified by the Equipment Tag.

30. Monitoring Requirement The permittee must monitor and keep records of the amount and type of fuel used each month in each heater or group of heaters subject to condition 29.

EU-RCTOS

EU ID	Applicable Requirement	Condition Number	Pollutant/ Parameter	Limit/ Standard	Monitoring Requirements	
					Method	Condition
EU-RCTOs	BACT	31	NOx, CO	See condition 31	Recordkeeping	32, 41
EU-RCTOs	BACT	31	PM_{10}, $PM_{2.5}$, GHG, Fluorides	See condition 31	Recordkeeping	32
EU-RCTOs	VOC BACT	33	VOC	95% DRE	Source test	41
EU-RCTOs	OAR 340-226-0120	34, 36	RCTO Operation	See conditions 34 and 36	Various	32, 35, 37, 38
EU-RCTOs	Seal Gap Monitoring				Recordkeeping	40

BACT Requirements

31. Applicable Requirement The permittee must meet the following limits, operating requirements or equipment specifications for the listed equipment: [BACT, application no. 034907, received 7/7/2023]

31.a. Summary of NOx and CO BACT for RCTOs:

Table copied from the permit application 034907 received 7/7/2023, Appendix C BACT Analysis Report, Table 6-17 Summary of Proposed BACT for RCTOs

RCTO Group Set	Selected NOx BACT	Selected CO BACT
D1B-VOC-138-4-120 D1B-VOC-138-5-120	0.78 lb-NOx/hr	0.54 lb-CO/hr
F20-VOC138-1-100 * F20-VOC138-2-100 * F20-VOC138-3-100	0.2 lb-NOx/hr	0.14 lb-CO/hr
F15-VOC-138-3-10 F15-VOC-138-4-10 F15-VOC-138-5-10	0.2 lb-NOx/hr	0.14 lb-CO/hr
D1C-VOC-138-1-120* D1C-VOC-138-2-120* D1C-VOC-138-3-120 *	0.2 lb-NOx/hr	1.51 lb-CO/hr
VOC-138-1-120 * VOC-138-2-120 * VOC-138-3-120 * VOC-138-4-120 *	0.2 lb-NOx/hr	1.12 lb-CO/hr
VOC-138-5-120 VOC-138-6-120	0.78 lb-NOx/hr	0.54 lb-CO/hr
F15-VOC-138-1-10 * F15-VOC-138-2-10 *	0.2 lb-NOx/hr	1.86 lb-CO/hr

RCTO Group Set	Selected NOx BACT	Selected CO BACT
D1XM1-VOC138-1-20 D1XM1-VOC138-2-20 D1XM1-VOC138-3-20 D1XM1-VOC138-4-20	0.34 lb-NOx/hr	0.24 lb-CO/hr
D1XM1-VOC138-5-20 D1XM1-VOC138-6-20 D1XM1-VOC138-7-20 D1XM1-VOC138-8-20 D1XM2-VOC138-1-20 D1XM2-VOC138-2-20 D1XM2-VOC138-3-20 D1XM2-VOC138-4-20 D1XM2-VOC138-5-20 D1XM3-VOC138-1-20 D1XM3-VOC138-2-20 D1XM3-VOC138-3-20 D1XM3-VOC138-4-20 D1XM3-VOC138-5-20	0.78 lb-NOx/hr	0.54 lb-CO/hr

**RCTOs that have pre-project BACT limits for NOx and CO but are not subject to current application (received 7/7/2023) BACT analysis.*

31.b. Each emissions limit is averaged over the set of RCTOs and the number and duration of the stack test runs.

31.c. Emission limits do not apply during periods of startup, shutdown or malfunction, but the permittee must minimize the time spent in any of these conditions.

31.d. Summary of PM_{10}, $PM_{2.5}$, VOC, GHG and Fluorides BACT for RCTOs

Table copied from the permit application 034907 received 7/7/2023, Appendix C BACT Analysis Report, Table 6-16 Summary of Proposed BACT for RCTOs

RCTO Equipment Tag	Pollutant	Selected BACT
D1B-VOC-138-4-120 D1B-VOC-138-5-120 F20-VOC138-1-100 F20-VOC138-2-100 F20-VOC138-3-100 F15-VOC-138-5-10 F15-VOC138-3-10 F15-VOC-138-4-10 D1C-VOC-138-1-120 D1C-VOC-138-2-120 D1C-VOC-138-3-120 VOC-138-1-120 VOC-138-2-120 VOC-138-3-120 VOC-138-4-120 F15-VOC-138-1-10 F15-VOC-138-2-10 D1XM1-VOC138-1-20 D1XM1-VOC138-2-20 D1XM1-VOC138-3-20 D1XM1-VOC138-4-20 D1XM2-VOC138-1-20 D1XM2-VOC138-2-20 D1XM2-VOC138-3-20 D1XM2-VOC138-4-20 D1XM2-VOC138-5-20 D1XM1-VOC138-5-20 D1XM1-VOC138-6-20 D1XM1-VOC138-7-20 D1XM1-VOC138-8-20 D1XM3-VOC138-1-20 D1XM3-VOC138-2-20 D1XM3-VOC138-3-20 D1XM3-VOC138-4-20 D1XM3-VOC138-5-20	PM_{10}	Good Combustion Practices
	$PM_{2.5}$	Good Combustion Practices
	Fluorides	Maintain good work practices in operation of the Fab Plants for BACT including maintaining the RCTO per best management practices
	VOC	See condition 33
	GHG	Design and operational energy efficiency

32. Monitoring/Recordkeeping Requirement The permittee must monitor and keep records of the amount of natural gas used each month in each RCTO or group of RCTOs.

RCTO VOC BACT

33. Applicable Requirement Each RCTO group controlling VOC emissions from Fab production operations must be operated in a manner such that it achieves a minimum VOC destruction/removal efficiency (DRE) of at least 95% by weight when its inlet VOC concentration (measured as propane) is 90 ppm or greater. If/when the inlet VOC concentration falls below 90 ppm, the outlet concentration must not exceed 10 ppm. [OAR 340-224-0070(2) BACT, NSR/PSD application 034907 7/7/2023]

Note: This permit condition previously established a TACT limit under OAR 340-226-0130. This limit was proposed as BACT in the permit application 034907 received 7/7/2023. The limit is unchanged but now applies to all RCTOs as BACT. TACT does not apply to an Emissions Unit that is subject to BACT per OAR 340-226-0130(1)(a).

33.a. Emission limits do not apply during periods of startup, shutdown or malfunction, but the permittee must minimize the time spent in any of these conditions.

Rotor Concentrator Thermal Oxidizer (RCTO) Operations

34. Applicable Requirement For all Fab operations that are served by a VOC abatement system, the abatement system must be operated whenever production is occurring in the Fab processes served by the abatement system. The abatement system must be operated in accordance with this condition. [OAR 340-226-0120]

34.a. When operation of the VOC abatement system is required, the VOC abatement system must be operated without bypassing the VOC abatement system.

34.b. For the purpose of this condition, bypassing means to emit all or part of the exhaust stream directly to atmosphere without treatment by the abatement system.

34.c. Bypassing is not a violation of this condition provided that:

34.c.i. Bypassing is the result of a malfunction; and

34.c.ii. The permittee takes all reasonable steps to end the period of bypassing as quickly as possible and minimize emissions to the extent possible without endangering equipment or worker safety.

34.d. Within 15 days of any period of bypassing that lasted more than 60 minutes, submit a written report that contains the following information: [OAR 340-214-0340(1)]

34.d.i. The date and time of the beginning of bypassing and the duration or best estimate of the time until bypassing will cease;

34.d.ii. The equipment involved;

34.d.iii. The reason for bypassing;

34.d.iv. Steps taken to mitigate emissions and corrective action taken, including whether the approved procedures for a planned startup, shutdown, or maintenance activity were followed;

34.d.v. The magnitude and duration of the increase over normal emission rates or concentrations as determined by continuous monitoring or best estimate (supported by operating data and calculations);

34.d.vi. 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.

35. Monitoring/Recordkeeping Requirement The permittee must maintain records for each VOC abatement system of each period of bypassing, including:

35.a. The date and time of the beginning of bypassing and the duration or best estimate of the time until bypassing will cease;

35.b. The equipment involved;

35.c. The reason for bypassing;

35.d. Steps taken to mitigate emissions and corrective action taken, including whether the approved procedures for a planned startup, shutdown, or maintenance activity were followed;

35.e. The magnitude and duration of the increase over normal emission rates or concentrations as determined by continuous monitoring or best estimate (supported by operating data and calculations);

35.f. Where applicable, evidence supporting any claim that emissions in excess of technology-based limits were due to an emergency pursuant to OAR 340-214-0360; and

35.g. The estimated emissions attributable to the bypass, which must be added to the total monthly emissions for purposes of demonstrating compliance with PSELs.

36. Applicable Requirement The permittee must observe the following conditions pertaining to the operation of its rotor concentrator thermal oxidizer(s) [RCTO(s)]: [OAR 340-226-0120]

36.a. Each RCTO must meet the following requirements:

36.a.i. Each RCTO must provide at least a 0.5 second retention time, unless an alternate retention time has been demonstrated and approved by DEQ as being equal or more effective;

36.a.ii. Each RCTO must be operated with a minimum temperature set-point of 1375°F, unless an alternate minimum set-point has been demonstrated and approved by DEQ as being equal or more effective and able to comply with the applicable limits in condition 31

Emission Action Level (EAL)

36.b. The emission action level (EAL) for each RCTO is 25°F below the set point.

36.b.i. If the monitored hourly block average operating temperature in the combustion zone of any RCTO is at or below the EAL, the permittee must take expeditious action to return the combustion zone operating temperature to the EAL or more.

36.b.ii. The combustion zone operating temperature falling below the EAL is not a violation of this permit condition; however, it is a violation of this permit condition if the permittee fails to expeditiously take action to correct the operating temperature.

36.c. The regenerator EAL is the regenerator air temperature of each rotor concentrator thermal oxidizer and must be maintained at or above the designated range in the manufacturer's design specifications unless an alternative value is demonstrated and approved by DEQ.

36.c.i. If the monitored hourly block average regenerator air temperature for any RCTO should fall below the 36.b regenerator EAL, the permittee must take expeditious action to return the regenerator air temperature to the EAL or more.

36.c.ii. The regenerator air temperature falling below the EAL is not a violation of this permit condition; however, it is a violation of the permit condition if the permittee fails to expeditiously take action to return to the correct regenerator air temperature range.

Rotor Concentrator Thermal Oxidizer (RCTO) Monitoring

37. Monitoring Requirement The permittee must monitor the following for each RCTO:

37.a. The following must be monitored for each RCTO whenever it is operating:

37.a.i. The temperature in the combustion zone of each RCTO must be continuously monitored and reduced to an hourly average (one hour block average); and

37.a.ii. The regenerator air temperature of each RCTO must be continuously monitored.

37.a.iii. For the purpose of this condition, “continuously monitored” means that measurements are taken at a frequency of not less than once every 15 minutes.

37.b. Recordkeeping Requirement The permittee must maintain the following records:

37.b.i. Hourly block average temperature in the combustion zone of each RCTO;

37.b.ii. The hourly block average regenerator air temperature of each RCTO;

37.b.iii. Quality assurance activities for continuous temperature monitoring systems (such as quality control activities, audits, and calibration;

37.b.iv. All excess emissions with dates and times, recorded in an Excess Emissions and Upset log;

37.b.v. All upsets or breakdowns of emission control equipment with dates and times, recorded in an Excess Emissions and Upset log;

37.b.vi. Actions taken to restore emission control equipment to normal operation, recorded in an Excess Emissions and Upset log; and

37.b.vii. Records of major maintenance performed on air pollution control equipment.

37.c. Definitions: [OAR 340-200-0020]
"Excess emissions" means emissions in excess of a permit limit or any applicable air quality rule.
"Upset" or "Breakdown" means any failure or malfunction of any pollution control equipment or operating equipment that may cause excess emissions.

Note: Excess emissions must be reported in accordance with condition 98.

RCTO WESP

Notes:

- "RCTO WESP" means RCTOs that exhaust to an emissions control system where a WESP is used. RCTO WESP does not include RCTOs that exhaust to an emissions control system where a wet scrubber or wet scrubber system comes before a WESP (see Wet scrubber WESP).
- "Wet scrubber WESP" means any emission control system where a wet scrubber comes before a WESP.

38. The permittee must comply with the following conditions pertaining to the operation of the RCTO WESPs:

38.a. Voltage data must be monitored on a continuous basis for each WESP when in operation. 15-minute block averages of voltage must be recorded for each RCTO WESP.

38.b. Downtime is considered to be when one of the following scenarios is met at the same time that the WESP's associated RCTO is online and receiving process exhaust, taking into consideration which scenario is applicable:

38.b.i. the WESP is offline,

38.b.ii. the 15-minute block average voltage is less than 33 kV for Beltran RCTP WESPs,

38.b.iii. the 15-minute block average voltage is less than the value established in the most recent source test for the unit or a similar unit, or

38.b.iv. the block average voltage is less than the minimum voltage guaranteed by the manufacturer to maintain the established removal efficiency noted in condition 85.g.

38.c. For future non-Beltran RCTO WESPs, the voltage downtime indicator must be established within six months of beginning operation of the unit(s) to be based on the first 120 days of operating data. The downtime indicator value must be one of the following, as appropriate:

38.c.i. Equivalent to 15 kV less than the mean for the individual or manufacturer-group of RCTO WESPs,

38.c.ii. The value established in the most recent valid source test for the unit or a similar unit, or

38.c.iii. The minimum voltage guaranteed by the manufacturer to maintain established removal efficiency.

38.d. Voltage readings of less than the minimum required voltage in condition 38.b. and 38.c, downtime indicator value, and associated downtime are not a violation of this permit, but rather are to be utilized for purposes of emissions calculations.

38.d.i. Recordkeeping Requirement The permittee must maintain the following records:

38.d.ii. 15-minute block average voltage of each WESP;

38.d.iii. Quality assurance for the transformer rectifier set ("TR set") including an annual zero voltage check;

38.d.iv. Individual WESP downtime for each calendar month and the operational status of associated RCTO;

38.d.v. It is not a violation of this permit to operate an RCTO without the associated WESP. However, during any period when a WESP is not operating but the associated RCTO is operating, the permittee may not apply the removal efficiency in Condition 85.g or 85.h when calculating emissions.

VOLUNTARY NOX ABATEMENT SYSTEM

39. Monitoring. Testing and Recordkeeping Requirement: During operation of the voluntary NOx Abatement System at the D1X Mod 2 Anguil RCTO group, the permittee must monitor, test, and keep records of the following:

39.a. The permittee must maintain records of ozone injection status (on or off) and ozone volumetric injection rates (liters/minute); monitoring frequency will be established in 39.b.v.

39.b. The permittee must maintain the following records:

39.b.i. The permittee must maintain BACT on the RCTO system for NOx and CO regardless of ozone injection through the NOx abatement system or direct to stack.

39.b.ii. The permittee must track which RCTOs are routed to the NOx abatement system in a one hour block average period or another frequency submitted in the monitoring plan in condition 39.b.v and approved by DEQ.

39.b.iii. The permittee must establish an average Ozone injection rate per RCTO routed to the NOx abatement system; and

39.b.iv. The permittee must maintain records of periodic Ozone concentration at the outlet of the NOx abatement system prior to entering the EXSC system;

39.b.v. The permittee must provide a final monitoring and recordkeeping plan to be approved by DEQ prior to final implementation;

39.b.v.1. The plan must include appropriate operating parameters and monitoring to ensure continuous NOx reduction with the abatement system.

39.b.v.2. Operating parameters outside of what is specified in the plan are not a violation of this permit, but rather are to be utilized for purposes of emission inventory calculations for PSEL compliance.

39.c. The permittee may utilize the tested and DEQ-approved NOx emission factors during any time that the NOx abatement system is in operation per the following:

39.c.i. NOx emission factors will be determined from ODEQ-approved stack testing results based on D1X Mod2 RCTO configuration at the time of testing.

39.c.ii. NOx abatement system must be continuously monitored during any hour when the NOx abatement system emission factors are used for purposes of emission inventory calculations.

39.c.iii. Applicable NOx emission factors may be applied based on RCTO configuration and NOx abatement system uptime in accordance with BACT requirements and calculated NOx emissions per condition 85.b.

39.c.iv. It is not a violation of this permit to operate a D1X Mod 2 RCTOs without the NOx abatement system. However, during any period when the NOx abatement system is not online and the associated D1X Mod 2 RCTOs are operating, the permittee must use D1X Mod 2 EXVO system BACT emission factors as established in most recent BACT compliance demonstration when calculating emissions.

39.d. The permittee must conduct a source test of the NOx Abatement System D1X Mod2 Anguil RCTOs in accordance with condition 90, and as specified below:

39.d.i. Within 90 days of ozone generator operation, one or more of the four (4) RCTOs must be tested for CO, NOx and VOC.

39.d.ii. Exhaust gas CO & NOx concentrations must be sampled in two separate source test states.

39.d.iii. The first source test must be conducted with each RCTO exhaust stream not receiving ozone injection. [test state A].

39.d.iv. The second source test must be conducted with all available RCTO exhaust streams receiving ozone injection to establish an abated NOx emission rate. [test state B]; and when and where possible all RCTOs must be tested when connected to develop a group average emission factor to be applied when any RCTO is routed to the NOx abatement system.

39.e. DEQ may approve an alternate testing deadline from those established in this condition if the permittee provides adequate justification for the extension.

39.f. The temperature set-point of the RCTO throughout the test must be equal to the temperature set-point specified in condition 36.a.ii, unless the test protocol intent is to establish a different set-point.

39.g. Source testing must be performed in accordance with condition 88, except that in lieu of the requirements in condition 90.c, the tests must be performed while the production equipment that exhausts to each RCTO system is operating at 80 percent or more of the average production rate during the two months preceding the source test.

39.h. Recordkeeping Requirement: For each source test the following parameters must be monitored and recorded:

39.h.i. The daily production rate during the test as a percentage of the average production rate during the two months preceding the source test;

39.h.ii. Combustion temperature of the abatement unit during the test;

39.h.iii. Natural gas consumption rate in ft3/hr or MMBtu/hr during the test;

39.h.iv. Regenerator air temperature during the test; and

39.h.v. Other facility/process operating parameters identified prior to the test.

39.h.vi. The following need not be submitted to DEQ but must be retained at the site for agency review:

39.h.vi.1. The average production rate during the two months preceding the source test; and
39.h.vi.2. The daily production rate during the test.

Rotor Concentrator Thermal Oxidizer (RCTO) Seal Gap Monitoring

40. Monitoring Requirement The permittee must monitor the seal gap tolerance of each zeolite rotor concentrator wheel for each “in service” RCTO annually, with no more than 13 months between tests.

40.a. Recordkeeping Requirement The permittee must maintain records of the seal gap of each zeolite rotor concentrator wheel monitored as above.

RCTO Testing

41. Monitoring Requirement The permittee must conduct source tests of the RCTOs as specified below:

41.a. Existing RCTOs must be tested at least once every two calendar years, starting the following calendar year after permit issuance. (For Example: If the permit is issued in 2024, all existing RCTOs would need to be tested by the end of calendar year 2026 and not less than every two calendar years thereafter).

41.b. A newly operational RCTO, as defined below, must be tested no later than the calendar year following the calendar year in which the RCTO became operational, and not less than every two calendar years thereafter. For the purpose of this condition:

41.b.i. "Newly operational RCTO" means an RCTO that has been put into regular service for the first time since the issuance date of this permit, and

41.b.ii. "Regular service" means the RCTO is in regular use to treat a VOC exhaust stream and excludes the shakedown/testing period prior to being put into regular use.

41.c. Source testing must be for CO, NOx and VOC. Exhaust gas VOC concentrations must be sampled before and after the control device (both exhaust stacks must be sampled) to demonstrate the system's VOC destruction/removal efficiency (DRE).

41.d. DEQ may approve an alternate testing deadline from those established in this condition if the permittee provides adequate justification for the extension.

41.e. The temperature set-point of the RCTO throughout the test must be equal to the temperature set-point specified in condition 36.a.ii, unless the test protocol identifies the intent to establish a different set-point.

41.f. Test results for VOC must be reported as propane, unless an alternate test method is approved that is capable of measuring the actual mass of VOC.

41.g. Source testing must be performed in accordance with condition 90, except that in lieu of the requirements in condition 90.c, the tests must be performed while the production equipment that exhausts to each RCTO system is operating at 80 percent or more of the average production rate during the two months preceding the source test.

41.h. Recordkeeping Requirement For each source test the following parameters must be monitored and recorded:

41.h.i. The daily production rate during the test as a percentage of the average production rate during the two months preceding the source test;

41.h.ii. RCTO Combustion zone temperature of the abatement unit during the test;

41.h.iii. Natural gas consumption rate in ft^3/hr or MMBtu/hr during the test;

41.h.iv. Regenerator air temperature during the test;

41.h.v. WESP operating voltage (15 minute block averages) if applicable; and

41.h.vi. Other facility/process operating parameters identified prior to the test.

41.h.vii. The following need not be submitted to DEQ but must be retained at the site for agency review:

41.h.vii.1. The average production rate during the two months preceding the source test; and

41.h.vii.2. The daily production rate during the test.

EU-TMXW

EU ID	Applicable Requirement	Condition Number	Pollutant/ Parameter	Limit/ Standard	Monitoring Requirements	
					Method	Condition
EU-TMXW	BACT	42	NOx, CO, $PM_{10,}$ $PM_{2.5}$, VOC, GHG	See condition 42	Source test and Recordkeeping	43 and 44

42. Applicable Requirement The permittee must meet the following limits, operating requirements or equipment specifications for the listed equipment: [BACT, application no. 034907, received 7/7/2023]

42.a. Summary of BACT for TMXWs

Table copied from the permit application 034907 received 7/7/2023, Appendix C BACT Analysis Report, Table 7-8 Summary of Proposed BACT for TMXW

TMXW Equipment Tag	Pollutant	Selected BACT
CUB3-OX293-0-70 PUB1A-OX293-0-70 PUB1B-OX293-0-70 PUB1C-OX293-0-70 PUB1D-OX293-0-70 PUB1E-OX293-0-70 PUB1F-OX293-0-70 CUB2-OX293-0-70	PM_{10}	Good Combustion Practices
	$PM_{2.5}$	Good Combustion Practices
	CO	0.03 lb/MMBtu
	VOC	Good Combustion Practices
	NOx	0.34 lb/hr
	GHG	Design and Operational Energy Efficiency
CUB3-OX293B-0-70 *	NOx	0.34 lb/hr

* This unit does not utilize natural gas (electric burner); it is subject to NOx BACT but not PM_{10}, $PM_{2.5}$, CO, VOC, or GHG BACT

Notes: Details about each piece of equipment are listed in the PSEL Detail Sheets and identified by the Equipment Tag.

42.b. Emission limits do not apply during periods of startup, shutdown or malfunction, but the permittee must minimize the time spent in any of these conditions.

TMXW Testing for BACT Compliance

43. Monitoring Requirement The permittee must conduct source testing of the TMXW abatement devices identified in condition 42 for compliance with the limits in condition 42 as specified in this condition.

43.a. Not later than December 31, 2025, CUB3-OX293B-0-70 must be tested for NOx; and

43.b. Not later than December 31, 2025 and not later than every five calendar years thereafter, one of the following TMXW abatement devices must be tested for NOx and CO:

43.b.i. PUB1A-OX293-0-70,

43.b.ii. PUB1B-OX293-0-70,

43.b.iii. PUB1C-OX293-0-70,

43.b.iv. PUB1D-OX293-0-70,

43.b.v. PUB1E-OX293-0-70,

43.b.vi. PUB1F-OX293-0-70,

43.b.vii. CUB2-OX293-0-70, or

43.b.viii. CUB3-OX293-0-70.

43.c. Testing must be conducted in accordance with condition 90.

43.d. For the testing required not later than December 31, 2025, any TMXW abatement devices that were tested in or after 2021 do not have to be tested, provided the testing was approved by DEQ and returned results that show compliance with the limits in condition 42.

43.e. Recordkeeping Requirement The permittee must keep records of all test results.

44. Monitoring/Recordkeeping Requirement The permittee must monitor and keep records of the following for each TMXW device or group of devices:

44.a. Monthly amount of natural gas used; and

44.b. Monthly amount of ammonia-containing compounds processed and treated in the TMXW system.

EU-WET SCRUBBERS

EU ID	Applicable Requirement	Condition Number	Pollutant/ Parameter	Limit/ Standard	Monitoring Requirements	
					Method	Condition
EU-Wet scrubbers-EXSC	BACT	45	NOx, CO, PM_{10}, $PM_{2.5}$, VOC, Fluorides, GHG	See condition 45	Recordkeeping, Source Test	46, 47
EU-Wet scrubbers-EXSC	OAR 340-226-0120	48	O&M	No bypassing	Recordkeeping	49
EU-Wet scrubbers-EXSC	OAR 340-226-0120	50	O&M, EAL	See condition 50	Recordkeeping	51
EU-Wet scrubbers	OAR 340-226-0120	--	WESP Operation	See condition 52	Recordkeeping	52
EU-Wet scrubbers-EXAM	OAR 340-226-0120	--	O&M	See condition 53	Recordkeeping	53
EU-Wet scrubbers-PSSS	OAR 340-226-0120	--	O&M	See condition 54	Recordkeeping	54

Note: There are three categories of wet scrubbers, described below:

Category	**Purpose**	**Subject to BACT?**	**Emissions regulated under this permit**	**Permit requirements**
EXSC, process acid gas wet scrubbers Some EXSC wet scrubbers are equipped with WESPs	Abate acid gas emissions from production tools	Yes	PM, PM_{10}, $PM_{2.5}$ from wet scrubber drift emissions and PM, PM_{10}, $PM_{2.5}$, NOx, CO, VOC, Fluorides, GHG and HAPs from process emissions	BACT, O&M, EAL and WESP requirements, reporting for PSELs
EXAM, process ammonia wet scrubbers	Abate ammonia emissions from production tools	Yes	PM, PM_{10}, $PM_{2.5}$ only from wet scrubber drift emissions	Emissions reporting for PSELs only
PSSS, process safety system wet scrubbers	Ventilate gas storage cabinets and similar areas to protect employees in the event of leaks	Yes	PM, PM_{10}, $PM_{2.5}$ only from wet scrubber drift emissions	Emissions reporting for PSELs only

BACT Requirements

45. Applicable Requirement The permittee must meet the following limits, operating requirements or equipment specifications for the listed equipment: [BACT, application no. 034907, received 7/7/2023]

45.a. Summary of BACT for EXAM Wet Scrubbers

Table copied from the permit application 034907 received 7/7/2023, Appendix C BACT Analysis Report, Table 8-24 Summary of Proposed BACT for Wet Scrubbers

EXAM Wet Scrubber Equipment Tag		Pollutant	Selected BACT
D1C-SC142-3-100 D1C-SC142-4-100 D1C-SC142-5-100 RB1-SC-142-1-100 RB1-SC-142-2-100 RB1-SC-142-3-100 RP1-SC142-1-100 SC-142-1-100 SC-142-2-100 SC-142-3-100 SC-142-4-100 SC-142-5-100	D1XM3-SC142-4-00 D1XM4-SC142-1-00 D1XM4-SC142-2-00	CO	Maintain good work practices in operation of the Fab Plants for BACT including maintaining the wet scrubbers per best management practices
		NOx	
		Fluorides	
		$PM_{2.5}$	
		PM_{10}	
		VOC	
SC142-21-100 SC142-22-100 SC142-23-100 SC142-24-100 SC142-25-100 D1X-SC142-1-11 D1X-SC142-2-11 D1X-SC142-3-11 D1X-SC142-4-11 D1X-SC142-5-00 D1XM2-SC142-1-00 D1XM2-SC142-2-00 D1XM2-SC142-3-00 D1XM2-SC142-4-00 D1XM3-SC142-1-00 D1XM3-SC142-2-00 D1XM3-SC142-3-00		GHG	Use of NF3 cleans and process chemical use optimization

Notes: Details about each piece of equipment are listed in the PSEL Detail Sheets and identified by the Equipment Tag.

45.b. Summary of BACT for EXSC Wet Scrubbers

Table copied from the permit application 034907 received 7/7/2023, Appendix C BACT Analysis Report, Table 8-24 Summary of Proposed BACT for Wet Scrubbers

EXSC Wet Scrubber Equipment Tag		Pollutant	Selected BACT
F20-SC133-1-111 F20-SC133-2-111 F20-SC133-3-111 D1A-SC133-1-00 D1A-SC133-2-00 D1C-SC133-1-100 D1C-SC133-2-100 D1C-SC133-3-100 D1C-SC133-4-100 RB1-SC-133-1-100 RB1-SC-133-2-100 RB1-SC-133-8-100 RB1-SC-133-4-100 RB1-SC-133-6-100 RB1-SC-133-7-100 RA4-SC133-1 RA4-SC133-2 RP1-SC133-1-100 RP1-SC133-2-100 RP1-SC133-3-100 SC-133-1-100 SC-133-2-100 SC-133-3-100 SC-133-4-100 SC-133-5-100 SC-133-6-100	D1X-SC133-1-00 D1X-SC133-2-00 D1X-SC133-3-00 D1X-SC133-4-00 D1X-SC133-5-00 D1XM2-SC133-2-00 D1XM2-SC133-3-00 D1XM2-SC133-4-00 D1XM2-SC133-5-00 D1XM3-SC133-1-00 D1XM3-SC133-2-00 D1XM3-SC133-3-00 D1XM3-SC133-4-00 D1XM3-SC133-5-00 D1XM4-SC133-1-00 D1XM4-SC133-2-00 D1XM4-SC133-3-00 MSB-SC133-1 MSB-SC133-2 MSB-SC133-3 F15-SC7-1-1 F15-SC7-1-2 F15-SC7-1-3 F15-SC7-1-4 F15-SC7-1-5 F15-SC7-1-6	CO	Maintain good work practices in operation of the Fab Plants for BACT including maintaining the wet scrubbers per best management practices
		NOx	
		Fluorides	
		$PM_{2.5}$	
		PM_{10}	
		VOC	
		GHG	Use of NF3 cleans and process chemical use optimization

Notes: Details about each piece of equipment are listed in the PSEL Detail Sheets and identified by the Equipment Tag.

45.c. Summary of BACT for PSSS Wet Scrubbers

Table copied from the permit application 034907 received 7/7/2023, Appendix C BACT Analysis Report, Table 8-22 Summary of Proposed BACT for Wet Scrubbers

PSSS Wet Scrubber ID Tag	PM_{10}	$PM_{2.5}$
F20-SC-134-1-100	Maintain good work practices in operation of the Fab Plants for BACT including maintaining the wet scrubbers per best management practices	--
D1C-SC134-1-100		--
D1C-SC134-2-100		--
SC-134-1-100		--
SC-134-2-100		--
SC-134-3-100		--
D1C-SC133-1-200		--
RP1-SC134-1-100		--
SC-133-1-200		--
D1X-SC134-1-00		Maintain good work practices in operation of the Fab Plants for BACT including maintaining the wet scrubbers per best management practices
D1X-SC134-2-00		
D1X-SC134-3-00		
D1X-SC134-4-00		
D1XM2-SC134-1-00		
D1XM2-SC134-2-00		
D1XM2-SC134-3-00		
D1XM2-SC134-4-00		
D1XM3-SC134-1-00		
D1XM3-SC134-2-00		
D1XM3-SC134-3-00		
D1XM3-SC134-4-00		
D1XM4-SC134-1-00		
D1XM4-SC134-2-00		
PUB1-SC133-1-00		
PUB1-SC133-2-00		
F15-SC7-1-12		--
F15-SC7-1-7		--
F15-SC7-2-7		"

Notes: Details about each piece of equipment are listed in the PSEL Detail Sheets and identified by the Equipment Tag.
(--) Indicates selected boiler does not meet BACT applicability for the specific pollutant
(") Indicates "ditto"

Wet scrubber Testing Requirements

46. Monitoring Requirement The permittee must conduct source tests of EXSC acid gas wet scrubbers and EXAM ammonia wet scrubbers as specified below:

46.a. Existing EXSC and EXAM wet scrubber exhaust systems must be tested once every calendar year, starting the following calendar year after permit issuance. (For Example: If the permit is issued in 2024, all existing EXSC and EXAM wet scrubbers would need to be tested by the end of calendar year 2025 and not less than every calendar year thereafter)..

46.b. A newly operational EXSC or EXAM Wet scrubber, as defined below, must be tested no later than the calendar year following the calendar year in which the EXSC or EXAM Wet scrubber became operational. For the purpose of this condition:

46.b.i. "newly operational Wet scrubber" means a Wet scrubber that has been put into regular service for the first time since the issuance date of this permit, and

46.b.ii. "regular service" means the Wet scrubber is in regular use to treat a process exhaust stream, and excludes the shakedown/testing period prior to being put into regular use.

46.c. For each wet scrubber or group of wet scrubbers:

46.c.i. EXSC Wet scrubbers must be tested for exhaust gas concentrations of Fluorides, HF, HCl, NOx and CO.

46.c.ii. EXAM Wet scrubbers must be tested for exhaust gas concentrations of NOx and CO.

46.c.iii. EXAM Wet scrubbers must be tested for exhaust gas concentrations of Fluorides and HF at least once before the expiration date of the permit.

46.c.iv. Testing may be of each individual operating wet scrubber exhaust before the exhaust is combined with other wet scrubber exhausts, or

46.c.v. If multiple wet scrubbers discharge to the atmosphere through a single exhaust stack, the single exhaust stack may be tested and all operating wet scrubbers that exhaust through that stack will be considered to be tested. Similarly, if multiple wet scrubbers discharge to the atmosphere through shared exhaust stacks, the shared exhaust stacks may be tested and the group of wet scrubbers that exhaust through the stacks will be considered to be tested.

46.d. DEQ may approve an alternate testing deadline from those established in this condition if the permittee provides adequate justification for the extension.

46.e. Wet scrubbers must be operated within their normal wet scrubber solution pH and recirculation flow rate operating ranges.

46.f. Test results for Fluorides, which do not include HF, must be reported as F, and results for HF must be reported as HF.

46.g. Source testing must be performed in accordance with condition 90, except that in lieu of the requirements in condition 90.c, the tests must be performed while the production equipment that exhausts to each wet scrubber system is operating at 80 percent or more of the average production rate during the two months preceding the source test.

46.h. Recordkeeping Requirement For each source test the following parameters must be monitored and recorded:

46.h.i. The daily production rate during the test as a percentage of the average production rate during the two months preceding the source test;

46.h.ii. Wet scrubber operating parameters including wet scrubber solution pH and recirculation flow rate, and WESP voltages if applicable; and

46.h.iii. Other facility/process operating parameters identified prior to the test.

46.h.iv. The following need not be submitted to DEQ but must be retained at the site for agency review:

46.h.iv.1. The average production rate during the two months preceding the source test; and

46.h.iv.2. The daily production rate during the test.

47. Monitoring Requirement The permittee must inspect an EXSC wet scrubber any time maintenance is performed on that wet scrubber as required in this condition:

47.a. After any maintenance is performed on an EXSC wet scrubber and before the wet scrubber is returned to service, the wet scrubber must be inspected to ensure that the wet scrubber control system is properly configured for normal operation.

47.b. A checklist must be completed each time an inspection required by this condition is performed, and must include the date and time of the inspection.

47.c. Recordkeeping Requirement The permittee must maintain copies of each checklist and make them available to DEQ staff when requested.

EXSC Wet scrubber Operation and Maintenance

48. Applicable Requirement For all Fab operations that are served by an EXSC wet scrubber abatement system, the abatement system must be operated whenever production is occurring in the Fab processes served by the abatement system. The abatement system must be operated in accordance with this condition. [OAR 340-226-0120]

48.a. When operation of the EXSC wet scrubber abatement system is required, the wet scrubber abatement system must be operated without bypassing the wet scrubber abatement system.

48.b. For the purpose of this condition, bypassing means to emit all or part of the exhaust stream directly to atmosphere without treatment by the abatement system.

48.c. Bypassing is not a violation of this condition provided that:

48.c.i. Bypassing is the result of a malfunction; and

48.c.ii. The permittee takes all reasonable steps to end the period of bypassing as quickly as possible.

48.d. Within 15 days of any period of bypassing that lasted more than 60 minutes, submit a written report that contains the following information: [OAR 340-214-0340(1)]

48.e. The date and time of the beginning of bypassing and the duration or best estimate of the time until bypassing will cease;

48.e.i. The equipment involved;

48.e.ii. The reason for bypassing;

48.e.iii. 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.e.iv. The magnitude and duration of the increase over normal emission rates or concentrations as determined by continuous monitoring or best estimate (supported by operating data and calculations);

48.e.v. 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.

49. Monitoring/Recordkeeping Requirement The permittee must maintain records for each EXSC wet scrubber abatement system of each period of bypassing, including:

49.a. The date and time of the beginning of bypassing and the duration or best estimate of the time until bypassing will cease;

49.b. The equipment involved;

49.c. The reason for bypassing;

49.d. Steps taken to mitigate emissions and corrective action taken, including whether the approved procedures for a planned startup, shutdown, or maintenance activity were followed;

49.e. The magnitude and duration of the increase over normal emission rates or concentrations as determined by continuous monitoring or best estimate (supported by operating data and calculations);

49.f. 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;

49.g. The estimated emissions attributable to the bypass, which must be added to the total monthly emissions for purposes of demonstrating compliance with PSELSs.

50. Applicable Requirement The permittee must observe the following wet scrubber operation and maintenance requirements for all EXSC wet scrubbers treating acid gas exhaust from process equipment: [OAR 340-226-0120]

50.a. Each EXSC wet scrubber must be operated with a minimum wet scrubber solution pH set point of 7.0, unless an alternate minimum wet scrubber solution pH set point has been demonstrated and approved by DEQ as being equal or more effective;

Emission Action Level (EAL)

50.b. The emission action level (EAL) for each EXSC wet scrubber is 1.0 pH unit below the wet scrubber solution set point.

50.b.i. If the monitored hourly average operating pH of any wet scrubber is at or below the EAL, the permittee must take expeditious action to return the operating pH to the EAL or higher.

50.b.ii. The wet scrubber solution pH falling to or below the EAL is not a violation of this permit condition; however, it is a violation of this permit condition if the permittee fails to expeditiously take action to correct the operating pH.

EXSC Wet scrubber Monitoring

51. Monitoring Requirement The permittee must monitor the following for each EXSC wet scrubber:

51.a. All periods of operation or non-operation. The monitoring required in condition 51.b may be used to show operation and non-operation.

51.b. The following must be monitored for each wet scrubber whenever it is operating:

51.b.i. The wet scrubber solution pH of each EXSC wet scrubber treating acid gas exhaust from process equipment must be continuously monitored and reduced to one hour block averages; and

51.b.ii. The wet scrubber recirculation flow rate must be continuously monitored.

51.c. Recordkeeping Requirement The permittee must maintain the following records for each EXSC wet scrubber:

51.c.i. Wet scrubber solution hourly block pH averages;

51.c.ii. Wet scrubber solution recirculation flow rate, either continuous as monitored, or reduced to hourly block averages;

51.c.iii. The wet scrubber solution pH set point;

51.c.iv. pH sensor maintenance, including calibration and other QA activities;

51.c.v. Dates and times the wet scrubber solution pH falls below the EAL in condition 50.b;

51.c.vi. All excess emissions, recorded in an Excess Emissions and Upset log;

51.c.vii. All upsets or breakdowns of emission control equipment, recorded in an Excess Emissions and Upset log;

51.c.viii. Actions taken to restore emission control equipment to normal operation, recorded in an Excess Emissions and Upset log; and

51.c.ix. Records of major maintenance performed on air pollution control equipment.

51.d. Definitions: [OAR 340-200-0020]

51.d.i. "Excess emissions" means emissions in excess of a permit limit or any applicable air quality rule.

51.d.ii. "Upset" or "Breakdown" means any failure or malfunction of any pollution control equipment or operating equipment that may cause excess emissions.

Note: Excess emissions must be reported in accordance with condition 98.

Wet scrubber WESPs

Notes:

- "RCTO WESP" means RCTOs that exhaust to an emissions control system where a WESP is used. RCTO WESP does not include RCTOs that exhaust to an emissions control system where a wet scrubber or wet scrubber system comes before a WESP (see Wet scrubber WESP).
- "Wet scrubber WESP" means any emission control system where a wet scrubber comes before a WESP.

52. Monitoring Requirement The permittee must comply with the following conditions pertaining to the operation of the Wet scrubber WESPs:

52.a. Voltage data must be monitored on a continuous basis for each Wet scrubber WESP when in operation. 15-minute block averages of voltage must be recorded for each Wet scrubber WESP.

52.b. Downtime is considered to be when one of the following scenarios is met while the associated Wet scrubber is online and receiving process exhaust, taking into consideration which scenario is applicable:

52.b.i. the WESP is offline,

52.b.ii. when the 15-minute block average voltage is less than 23 kV for Beltran- manufactured Wet Scrubber WESPs or less than 30 kV for Lundberg- manufactured Wet Scrubber WESPs

52.b.iii. the 15-minute block average voltage is less than the value established in the most recent source test for the unit or a similar unit, or

52.b.iv. the block average voltage is less than the minimum voltage guaranteed by the manufacturer to maintain the established removal efficiency.

52.c. For future non-Beltran or non-Lundberg Wet Scrubber WESPs, the voltage downtime indicator must be established within six months of beginning operation of the unit(s) to be based on the first 120 days of operating data. The downtime indicator value must be one of the following, as appropriate:

52.c.i. Equivalent to 15 kV less than the mean for the individual or manufacturer-group of Wet Scrubber WESPs, or

52.c.ii. The minimum voltage guaranteed by the manufacturer to maintain established removal efficiency.

52.d. Voltage readings of less than the minimum required voltage in condition 50.b or 50.c, downtime indicator value and associated downtime are not a violation of this permit, but rather are to be utilized for purposes of emission inventory calculations for PSEL compliance.

52.e. If the permittee installs non-Beltran or non-Lundberg Wet scrubber WESPs, the voltage downtime indicator must be based on the first 120 days of operating data and established within six months of commencing operation of the unit(s). The downtime indicator value must be equivalent to 15 kV less than the mean voltage for the individual or manufacturer-group of Wet scrubber WESPs.

52.f. Recordkeeping Requirement The permittee must maintain the following records:

52.f.i. 15-minute block average voltage of each Wet Scrubber WESP;

52.f.ii. Quality assurance for the transformer rectifier set ("TR set") including an annual zero voltage check;

52.f.iii. Individual Wet Scrubber WESP downtime for each calendar month and the operational status of associated Wet scrubber;

52.f.iv. It is not a violation of this permit to operate a Wet scrubber without the associated WESP. However, during any period when a WESP is not meeting the minimum required voltage, but the associated Wet scrubber is operating and receiving process exhaust, the permittee may not apply the removal efficiency in Condition 84.a and 84.b when calculating emissions.

EXAM Scrubber Monitoring

53. Monitoring/Recordkeeping Requirement The permittee must keep records of all major maintenance performed on the EXAM systems and make the records available to DEQ staff when requested.

PSSS Scrubber Monitoring

54. Monitoring/Recordkeeping Requirement The permittee must keep records of all major maintenance performed on the PSSS systems and make the records available to DEQ staff when requested.

EU-RICE

EU ID	Applicable Requirement	Condition Number	Pollutant/ Parameter	Limit/ Standard	Monitoring Requirements	
					Method	Condition
EU-RICE	BACT	55	CO, NOx, PM_{10}, $PM_{2.5}$, VOC, GHG	See condition 55	Recordkeeping	60
EU-RICE	Voluntary	56	PM_{10}, $PM_{2.5}$	Limit M&R operation on AQ advisory days	Recordkeeping	60
EU-RICE	Voluntary	57	See condition 57	Limit M&R operation	Recordkeeping	60
EU-RICE	40 CFR Part 63, Subpart ZZZZ	58	Operation and Maintenance	See condition 58	Recordkeeping	60
EU-RICE	40 CFR Part 60, Subpart IIII	59	Operation and Maintenance	See condition 59	Recordkeeping	60, 61
EU-RICE	--	--	Variable Load EFs		Recordkeeping	61

55. Applicable Requirement The permittee must meet the following limits, operating requirements or equipment specifications for the listed equipment: [BACT, application no. 034907, received 7/7/2023]

55.a. Summary of BACT for EU-RICE - Existing Diesel-Fired Emergency Generators Installed Before 2010

Table copied from the permit application 034907 received 7/7/2023, Appendix C BACT Analysis Report, Table 9-9, Summary of Proposed BACT for Existing Diesel-Fired Emergency Generators Installed Before 2010

RICE Equipment Tag		**Pollutant**	**BACT**
RA1-ELEC-CPS-GEN01 RA1-ELEC-CPS-GEN02 RA1-ELEC-CPS-GEN03 RA1-ELEC-CPS-GEN04 D1C-CPS-GEN01 D1C-CPS-GEN02 D1C-CPS-GEN03 D1C-EPS-GEN01 D1C-EPS-GEN02 RB1-EPS-GEN01 RP1-EPS-GEN01	EPS-GEN01 EPS-GEN02 EPS-GEN03 EPS-GEN04 EPS-GEN05 EPS-GEN06 RS4-ELEC-EG-4-1 RS6-ELEC-EG-6-1 F15-EG01 F15-EG02 F15-EG03 F15.5-EG01 F15.5-EG02 F20-CPS-1 MAX-EGEN	PM_{10}	Operation Per Manufacturer Specifications
		$PM_{2.5}$	Operation Per Manufacturer Specifications
		CO	Operation Per Manufacturer Specifications
		VOC	Operation Per Manufacturer Specifications
		NOx	Operation Per Manufacturer Specifications
		CO_2 (GHG)	Design and Operational Design Efficiency

Notes: Details about each piece of equipment are listed in the PSEL Detail Sheets and identified by the Equipment Tag.

55.b. Summary of BACT for EU-RICE - Existing, Planned and New Additional Diesel-Fired Emergency Generators Installed In or After 2010

Table copied from the permit application 034907 received 7/7/2023, Appendix C BACT Analysis Report, Table 9-10, Summary of Proposed BACT for Existing, Planned and New Additional Diesel-Fired Emergency Generators Installed On or After 2010

RICE Equipment Tag		Pollutant	Selected BACT
RP1-GEN-2 D1D-GEN-7 RS6-GEN-2 D1X-GEN-1A D1X-GEN-1B D1X-GEN-1C D1X-GEN-2A D1X-GEN-2B D1X-GEN-2C D1X-GEN-3A D1X-GEN-3B D1X-GEN-3C D1X-GEN-4A D1X-GEN-4B D1X-GEN-4C D1X-GEN-5A D1X-GEN-5B D1X-GEN-5C D1X-GEN-6A D1X-GEN-6B D1X-GEN-6C D1X-GEN-7A D1X-GEN-7B D1X-GEN-7C D1X2-GEN-6A D1X2-GEN-6B D1X2-GEN-6C D1X2-GEN-7A D1X2-GEN-7B D1X2-GEN-7C	D1X2-GEN-1A D1X2-GEN-1B D1X2-GEN-1C D1X2-GEN-2A D1X2-GEN-2B D1X2-GEN-2C D1X2-GEN-3A D1X2-GEN-3B D1X2-GEN-3C D1X2-GEN-4A D1X2-GEN-4B D1X2-GEN-4C D1X2-GEN-5A D1X2-GEN-5B D1X2-GEN-5C F20-EPS-1 F20-EPS-2 N2-GEN-1A IWW-GEN-1 IWW-GEN-2 IWW-PS-1 H2-GEN-1 D1A-GEN-1 D1A-GEN-2 D1A-GEN-3 D1A-GEN-4 D1A-GEN-5 D1A-GEN-6 D1A-GEN-7 D1A-GEN-8	PM_{10}	Operation Per Manufacturer Specifications
		$PM_{2.5}$	Operation Per Manufacturer Specifications
		CO	3.25 g/hp-hr
		VOC	Operation Per Manufacturer Specifications
		NOx	6.0 g/hp-hr
		CO_2 (GHG)	Design and Operational Energy Efficiency

Notes: Details about each piece of equipment are listed in the PSEL Detail Sheets and identified by the Equipment Tag.

55.c. Summary of BACT for EU-RICE – Fire Pump Engines

Table copied from the permit application 034907 received 7/7/2023, Appendix C BACT Analysis Report, Table 10-1, Summary of Proposed BACT for Fire Pump Engines

RICE Equipment Tag	Pollutant	Emissions Limits
PH #1 PH #2 PH #3 PH #4	PM_{10}	Operation Per Manufacturer Specifications
	$PM_{2.5}$	Operation Per Manufacturer Specifications
	CO	3.25 g/hp-hr
	VOC	Operation Per Manufacturer Specifications
	NOx	6.0 g/hp-hr
	CO_2 (GHG)	Design and Operational Energy Efficiency

Notes: Details about each piece of equipment are listed in the PSEL Detail Sheets and identified by the Equipment Tag.

Note 1 Emission limits do not apply during periods of startup, shutdown or malfunction, but the permittee must minimize the time spent in any of these conditions.

56. Applicable Requirement The permittee must limit the operation of emergency RICE, excluding Fire Water Pump engines for maintenance checks and readiness (M&R) testing as specified in this condition. [Voluntary condition] [This condition is enforceable only by the State.]

56.a. This condition applies only to M&R testing; this condition does not limit the use of emergency stationary RICE in emergency situations, which includes curtailment and imminent curtailment. If the permittee operates any emergency stationary RICE, including Fire Water Pump engines, for emergency purposes, the permittee must notify DEQ using the Emergency Engine Operation Notification (EEO) Form, R1009: https://www.oregon.gov/deq/FilterPermitsDocs/R1009.pdf; or on a form or by a method approved by DEQ.

56.b. For the purpose of this permit condition, the following terms apply:

56.b.i. "Advisory" means an announcement by DEQ, the City of Hillsboro or Washington County advising that activities that emit $PM_{2.5}$ and/or smoke should be curtailed. Such activities include but are not limited to burning wood for home heating or open burning of yard debris.

56.b.ii. "Advisory day" means the day that an advisory applies to.

56.c. On days when an air quality advisory is received for $PM_{2.5}$ and/or smoke that follows a day with no advisory:

56.c.i. If the advisory is received by the Facility Contact at email **cs.or.td.air.compliance.team@intel.com** before 6:00 am of the advisory day, the permittee may not operate any RICE, excluding Fire Water Pump engines, for M&R testing on the advisory day.

56.d. For advisories given on a day that follows an advisory day:

56.d.i. Second consecutive advisory day: the permittee may not operate any emergency RICE, excluding fire water pump engines, for M&R testing.

56.d.ii. Third, fourth, etc. consecutive advisory day: the permittee will refrain from operating emergency RICE for M&R testing if the M&R testing schedule allows; however, if M&R testing must be conducted, no more than 5 emergency RICE may be tested on a single day, and only one RICE may be operated at a time for M&R testing. Fire water Pump engines are allowed to operate for M&R testing if scheduled during an advisory.

56.d.iii. If advisories continue beyond five consecutive days, the permittee may request, and DEQ may approve, M&R testing of more than 5 RICE per day. Fire water Pump engines are allowed to operate for M&R testing if scheduled during an advisory.

56.d.iii.1. A request to test more than 5 RICE per day must include a description of the reasonable measures the permittee will take to minimize $PM_{2.5}$ emissions.

56.d.iii.2. If the permittee submits a written request to test under this provision and DEQ does not respond, the request shall be deemed approved 2 business days after the request was submitted.

56.e. Following one or more days with advisories, the permittee may resume normal M&R testing on the first day with no advisory; however, the permittee will make an effort to ensure that there have been no advisories issued before resuming normal M&R testing.

57. Applicable Requirement The permittee must operate all emergency stationary reciprocating internal combustion engines (RICE) in accordance with the requirements below: [40 CFR 63.6640(f)]

57.a. The permittee must maintain records of when each emergency stationary RICE is operated, and the reasons for operation, as required by Condition 60.

57.b. There is no time limit on the use of emergency stationary RICE in emergency situations.

57.c. Operation of emergency stationary RICE for the purpose of maintenance checks and readiness testing (M&R testing) must be limited as follows: [See Note 1, below]

57.c.i. for M&R testing, each emergency generator RICE may be operated for no more than 25 hours per year; [BACT, see Note 2, below]

57.c.ii. for M&R testing, each fire pump RICE may be operated for no more than 50 hours per year; [BACT, see Note 3, below]

57.c.iii. for M&R testing, a maximum of 10 emergency generator RICE may be operated in any single day at the Ronler Acres Campus; and

57.c.iv. for M&R testing, emergency generator and fire pump RICE may only be operated during daytime between the hours of 8am to 6pm.

Note 1: Condition 57.c. is in lieu of the maintenance and readiness testing limit of 100 hours per year specified in 40 CFR 63.6640(f). Condition 57.c may not be revised without first reviewing the air quality analysis, and if necessary conducting an air quality analysis to demonstrate that the change will continue to be protective of the short-term $PM_{2.5}$ ambient air quality standard. [OAR 340-226-0120(1)]

Note 2: Condition 57.c.i. is a BACT limit.
History: Original BACT determination, 30 hr/yr, Amendment to Major NSR permit 34-2681-ST-01 application no. 28014, application received 12/31/2014, amended 5/19/2015.
Revised to 25 hr/yr, Permit 34-2681-ST-01, application no. 034907, received 7/7/2023 amended 9/6/2023.

Note 3: Condition 57.c.ii. is a BACT limit.
History: BACT determination, Amendment to Major NSR permit 34-2681-ST-01 application no. 28014, application received 12/31/2014, amendment received 5/19/2015.

58. Applicable Requirement Starting no later than October 19, 2013, any stationary spark ignition (SI) RICE are subject to the following management practices, or Starting no later than May 3, 2013, any stationary compression ignition (CI) RICE are subject to the following management practices: [40 CFR Part 63 Subpart ZZZZ]

58.a. The permittee must install a non-resettable hour meter if one is not already installed;

58.b. Change the oil and filter every 500 hours of operation or annually, whichever comes first, unless an oil analysis program is performed as described in 40 CFR 63.6625(i) and (j);

58.c. For Compression Ignition RICE, inspect the air cleaner every 1,000 hours of operation or annually, whichever comes first; or

58.d. For Spark Ignition RICE inspect the spark plugs every 1,000 hours of operation or annually, whichever comes first, and replace as necessary;

58.e. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary;

58.f. Operate and maintain the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or

58.g. Develop and follow a maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions; and

58.h. If it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in 58.b through 58.g because the emergency engine(s) is operating during an emergency, the management practice can be delayed until the emergency is over. The management practice should be performed as soon as practicable after the emergency has ended.

59. The permittee must comply with the following requirements of 40 CFR Part 60 Subpart IIII-Standards of Performance for Stationary Compression Ignition (CI) Internal Combustion Engines (ICE) for all Emergency CI RICE that commence construction, modification or reconstruction after the dates specified in 40 CFR Part 60.4200(a). The following conditions state the NSPS requirements. If more stringent requirements are imposed elsewhere in this permit (e.g., BACT limits), the permittee must comply with the more stringent limits. [40 CFR 60.4200(a)(2)]

59.a. Emission Standards:

59.a.i. Generator engines must comply with the emission standards for new nonroad CI engines in 40 CFR 60.4202, for all pollutants, for the same model year and maximum engine power. [40 CFR 60.4205(6)]

59.a.ii. Fire pump engines must comply with the emission standards in 40 CFR 60, Subpart IIII, Table 4, for all pollutants. [40 CFR 60.4205(c)]

59.b. Fuel Requirements:

59.b.i. The permittee must use diesel fuel that meets the fuel requirements in 40 CFR 60.4207.

59.c. Monitoring Requirements:

59.c.i. The permittee must install a non-resettable hour meter on each emergency engine prior to startup of the engine. [40 CFR 60.4209(a)]

59.d. Operation and Maintenance Requirements:

59.d.i. The permittee must comply by purchasing engines certified to the emission

standards in Condition 59.a, as applicable, for the same model year and maximum engine power or National Fire Protection Association (NFPA) nameplate engine power. The engines must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in Condition 59.d.v. [40 CFR 60.4211(c)]

59.d.ii. The permittee must operate and maintain stationary engines that achieve the emission standards as required in Condition 59.a over the entire life of the engines. [40 CFR 60.4206]

59.d.iii. The permittee must do all of the following, except as permitted under Condition 59.d.v.: [40 CFR 60.4211(a)]

59.d.iii.1. Operate and maintain the engines and control devices according to the manufacturer's emission-related written instructions;

59.d.iii.2. Change only those emission-related settings that are permitted by the manufacturer; and

59.d.iii.3. Meet the requirements of 40 CFR part 1068, as they apply to the permittee.

59.d.iv. The permittee must operate the emergency stationary engines according to the following operational limitations: [40 CFR 60.4211(f)]

59.d.iv.1. There is no time limit on the use of emergency stationary engines in emergency situations. [40 CFR 60.4211(f)(1)]

59.d.iv.2. The permittee may operate the emergency stationary engines for the purposes specified in Condition 59.d.iv.3. for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by Condition 59.d.iv.4 counts as part of the 100 hours per calendar year allowed by this Condition. (40 CFR 60.4211(f)(2)]

59.d.iv.3. Emergency stationary engines may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The permittee may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the permittee maintains records indicating that federal, state or local standards require maintenance and testing of emergency engines beyond 100 hours per calendar year.

59.d.iv.4. Emergency stationary engines may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in Condition 59.d.iv. The 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

59.d.v. If not installing, configuring, operating and maintaining the engines and control devices according to the manufacturer's emission-related written instructions, or changing emission-related settings in a way that is not permitted by the manufacturer, the permittee must demonstrate compliance as described in 40 CFR 60.4211(g).

59.e. Recordkeeping Requirements:

59.e.i. The permittee must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The permittee must record the time of operation of the engine and the reason the engine was in operation during that time. [40 CFR 60.4214(b)]

59.e.ii. For an engine equipped with a diesel particulate filter, the permittee must keep records of any corrective action taken after the backpressure monitor has notified the permittee that the high backpressure limit of the engine is approached.

Other Requirements:

59.f. The permittee must comply with any other requirements of 40 CFR Part 60 Subpart IIII applicable to emergency stationary engines that are not specifically listed in Condition 59.

National Emissions Standards for Hazardous Air Pollutants

59.g. For engines subject to NSPS Subpart IIII, the permittee must comply with all applicable requirements of NSPS Subpart IIII for emergency ICE in order to comply with the requirements of 40 CFR Part 63 Subpart ZZZZ-NESHAP for Stationary Reciprocating ICE. [40 CFR 63.6590(c)]

General Provisions

59.h. The permittee must comply with the applicable General Provisions in 40 CFR 60.1 through 60.19 as identified in Table 8 of 40 CFR Part 60 Subpart IIII. [40 CFR 60.4218]

60. Monitoring and Recordkeeping The permittee must keep the following records for emergency generator or fire pump RICE:

60.a. For each emergency generator or fire pump RICE, record the following each time it is operated:

60.a.i. Date of operation;

60.a.ii. Time of engine start (clock time);

60.a.iii. Time of engine stop (clock time);

60.a.iv. Elapsed time from engine start to engine stop;

60.a.v. Reason for operation.

60.b. Each month, for each emergency generator or fire pump RICE, record the following:

60.b.i. the total time of operation for maintenance checks and readiness testing (M&R testing) during that month; and

60.b.ii. the total time of operation for maintenance checks and readiness testing (M&R testing) during the most recent 12-month period

60.c. Each day that emergency RICE are operated, record the total number of emergency RICE operated that day.

60.d. The date and time an advisory is received, and the date that the advisory applies to.

60.e. Maintenance records for each emergency RICE.

61. Monitoring Requirement The permittee must perform the following monitoring if Variable Load Emission Factors are to be used to calculate emissions from the following engine/generator combinations:

- Cummins QSK95-G9 diesel engines with both Cummins generator set models C30000D6e and C3500D6e
- Cummins QSK78-G12 diesel engines with Cummins generator set model DQLE

61.a. The approved emission factors are listed in condition 82 and are available per load condition, specifically no load (0%), 25%, 50%, 75% and 100% operation.

61.b. Intel must maintain records of minutes of operation at each load.

61.c. When an operating load condition is between the load brackets shown in the table, Intel must use the highest emission factor for each pollutant that brackets that operating load for that operating duration to ensure conservative emissions calculations.

61.d. This approval includes the assumptions that all particulate matter (PM) is equivalent to $PM_{2.5}$ (i.e., $PM = PM_{10} = PM_{2.5}$), and those engines equipped with Diesel Particulate Filters (DPF) may utilize the DPF removal efficiency applied to PM, CO, VOC and PM HAP.

EU-VOCUNC

EU ID	Applicable Requirement	Condition Number	Pollutant/ Parameter	Limit/ Standard	Monitoring Requirements	
					Method	Condition
EU-VOCunc	BACT	62	VOC	see condition 62	Recordkeeping	63

62. Applicable Requirement The permittee must meet the following limits, operating requirements or equipment specifications for the listed equipment: [BACT, application no. 034907, received 7/7/2023]

62.a. Summary of BACT for EU-VOCUNC, BACT for Isopropyl Alcohol Usage, General Ventilation

Table copied from the permit application 034907 received 7/7/2023, Appendix C BACT Analysis Report, Table 13-7, Summary of Proposed BACT for Isopropyl Alcohol Usage, General Ventilation

Unit	Pollutant	Selected BACT
VOC-from IPA usage	VOC	VOC emissions from the General Ventilation Systems stemming from IPA usage shall be controlled through good operating practices.

63. Monitoring Requirement The permittee must monitor uncontrolled VOC emissions as specified in this condition.

63.a. For the purpose of this permit, uncontrolled VOC emissions means emissions of VOCs that are not directed to VOC abatement devices, but are used in or to clean and maintain manufacturing processes and operations that directly support manufacturing processes, such as but not limited to boilers, abatement equipment and wastewater treatment. Uncontrolled VOC emissions do not include emissions from categorically insignificant activities.

63.b. Monitor the monthly use of all products that contain more than 1 percent VOC by weight and contribute to uncontrolled VOC emissions as defined in this condition.

63.c. Recordkeeping Requirement The permittee must maintain the following records pertaining to uncontrolled VOC emissions:

63.c.i. The identification of all products that contain more than 1 percent VOC by weight and contribute to uncontrolled VOC emissions as defined in this condition;

63.c.ii. The monthly use of all such products; and

63.c.iii. The VOC content of all such products.

EU-COOLING TOWERS

EU ID	Applicable Requirement	Condition Number	Pollutant/ Parameter	Limit/ Standard	Monitoring Requirements	
					Method	Condition
EU-COOLING TOWERS	Categorically Insignificant Activity	64	PM_{10}, $PM_{2.5}$	n/a	n/a	n/a
EU-COOLING TOWERS	BACT	65	PM_{10}, $PM_{2.5}$	Drift Eliminators and TDS Control	n/a	n/a

64. Applicable Requirement Cooling Towers are classified as Categorically Insignificant Activities. [OAR 340-200-0020(24)(zz)]

64.a. PSELs do not include emissions from Categorically Insignificant Activities. [OAR 340-222-0035(5)]

64.b. Emissions from Categorically Insignificant Activities must be considered when determining Major NSR/PSD or Type A State NSR applicability under OAR chapter 340, division 224 [OAR 340-222-0035(5)].

64.c. BACT applies to the Cooling Towers [OAR 340-224-0070(2)]

65. Applicable Requirement The permittee must meet the following limits, operating requirements or equipment specifications for the listed equipment: [BACT, application no. 034907, received 7/7/2023]

65.a. Summary of BACT for Cooling Towers

Table copied from the permit application 034907 received 7/7/2023, Appendix C BACT Analysis Report, Table 11-1 Summary of Proposed BACT for Cooling Towers

Equipment Tag	Pollutant	Proposed BACT
All cooling towers	PM_{10} and $PM_{2.5}$	Drift elimination with drift rate specification and TDS control per manufacturer specifications.

Notes: Details about each piece of equipment are listed in the PSEL Detail Sheets and identified by the Equipment Tag.

EU-PAVED ROADS

EU ID	Applicable Requirement	Condition Number	Pollutant/ Parameter	Limit/ Standard	Monitoring Requirements	
					Method	Condition
EU-PAVED ROADS	Categorically Insignificant Activity	67	PM_{10}, $PM_{2.5}$	n/a	n/a	n/a
EU-PAVED ROADS	BACT	68	PM_{10}, $PM_{2.5}$	Good Housekeeping and Sweeping	Recordkeeping	n/a

67. Applicable Requirement Paved Roads and Parking Lots are classified as Categorically Insignificant Activities. [OAR 340-200-0020(24)(rr)]

67.a. PSELs do not include emissions from Categorically Insignificant Activities. [OAR 340-222-0035(5)]

67.b. Emissions from Categorically Insignificant Activities must be considered when determining Major NSR/PSD or Type A State NSR applicability under OAR chapter 340, division 224 [OAR 340-222-0035(5)].

67.c. BACT applies to the Paved Roads and Parking Lots [OAR 340-224-0070(2)]

68. Applicable Requirement The permittee must meet the following limits, operating requirements or equipment specifications for the listed equipment: [BACT, application no. 034907, received 7/7/2023]

68.a. Summary of BACT for Paved Roads and Parking Lots

Table copied from the permit application 034907 received 7/7/2023, Appendix C BACT Analysis Report, Table 12-1 Summary of Proposed BACT for Paved Roads and Parking Lots

Unit	Pollutant	Selected BACT
Paved Roads and Parking Lots	PM_{10} and $PM_{2.5}$	Good housekeeping practices to include limiting vehicle speeds and sweeping as needed

EU-OTHER

EU ID	Equipment Type	Applicable Requirement	Condition Number	Pollutant/ Parameter	Limit/ Standard	Monitoring Requirements	
						Method	Condition
EU-OTHER	Specialty Exhaust (EXSP)	BACT	69	PM10, PM2.5	Maintain filter system per manufacturer's recommendations	Recordkeeping	70
EU-OTHER	Lime Silo (LIME)	BACT	69	PM10, PM2.5	Maintain filter system per manufacturer's recommendations	Recordkeeping	70

69. Applicable Requirement The permittee must operate and maintain the arsenic Specialty Exhaust and Lime Silo filter systems in accordance with the manufacturer's recommendations.

69.a. BACT for specialty exhaust (EXSP) is the requirement to use HEPA filters for PM10 and PM2.5

69.b. BACT for Lime Silos (LIME) is the requirement to use filters for PM10 and PM2.5

70. Monitoring and Recordkeeping Requirement The permittee must perform inspections of the EXSP filters and Lime Silo filter bags at least once per calendar quarter.

70.a. The permittee must use a maintenance plan or checklist that includes directions to maintenance staff on when filters and filter bags must be replaced. The directions for replacement may be based on the filter or filter bag manufacturer’s recommendations, and must be updated if the manufacturer or manufacturer’s recommendations change;

70.b. Inspections of EXSP filters must include checking the pressure drop across the filters; and

70.c. Inspections of the Lime Silo filter bags must include observation for any visible leaks.

70.d. Recordkeeping Requirement The permittee must keep records of all maintenance performed on the Specialty Exhaust filtration systems or Lime Silos and make the records available to DEQ staff when requested.

NESHAP – SUBPART WWWWWW – STANDARDS FOR PLATING AND POLISHING OPERATIONS

71. The permittee must comply with all applicable provisions of 40 CFR 63 Subpart WWWWWW, adopted herein by reference. (Note – refer to 40 CFR 63 Subpart WWWWWW and/or Subpart A for definitions of terminology stated in these associated conditions).

71.a. The permittee must be in compliance with the applicable provisions of this subpart for each existing affected source it operates, including the applicable management practices and equipment standards at all times;

71.b. If the permittee installs a new Subpart WWWWWW affected source, the source must be in compliance with the subpart upon startup;

71.c. For each electrolytic process plating tank without cyanide that contains plating and polishing metal HAP and operates at a pH of <12, the permittee must comply with one of the three control options below and implement the applicable management practices in Condition 71.d, as practicable [40 CFR 63.11507(a)]:

71.c.i. Use a wetting agent/fume suppressant in the bath of the affected tank as follows:

71.c.i.1. Initially add the wetting agent/fume suppressant in the amounts recommended by the manufacturer for the specific type of electrolytic process;

71.c.i.2. Add wetting agent/fume suppressant in proportion to the other bath chemistry ingredients that are added to replenish the bath, as in the original make-up of the bath, or in proportions such that the bath contents are returned to that of the original make- up of the bath;

71.c.i.3. If a wetting agent/fume suppressant is included in the electrolytic process bath chemicals used in the affected tank, it is not necessary to add additional wetting agent/fume suppressants to the tank to comply with this rule;

71.c.i.4. The permittee must state in the annual compliance certification that wetting agent/fume suppressant has been added according to the manufacturer’s specifications and operating instructions [OAR 340-216-0066(3)(c)]; OR

71.c.ii. Capture and exhaust emissions from the affected electrolytic tank(s) to EXSC wet scrubbers in compliance with permit condition 48 and the following:

71.c.ii.1. Operate all capture and control devices according to the manufacturer's specifications and operating instructions;

71.c.ii.2. The manufacturer's specifications and operating instructions must be kept at the facility at all times in a location where they can be easily accessed by the operators;

71.c.ii.3. Following malfunction or failure of the control equipment, the permittee must take immediate corrective action to return the equipment to normal operation;

71.c.ii.4. The permittee must state in the annual compliance certification that emissions from the affected electrolytic tank(s) were captured and routed to EXSC wet scrubbers [OAR340-216-0066(3)(c)]; OR

71.c.iii. The permittee must cover the tank surface and must demonstrate compliance according to the following:

71.c.iii.1. For batch electrolytic process tanks, a tank cover must be operated with the cover in place for at least 95 percent of the electrolytic process operating time;

71.c.iii.2. For continuous electrolytic process tanks at least 75 percent of the surface of the tank must be covered whenever the electrolytic process tank is in operation;

71.c.iii.3. The permittee must state in the annual compliance certification that the tank has been operated with the cover in place 95 percent of the batch electrolytic process operating time and that at least 75 percent of the surface of the tank is covered for continuous electrolytic process tanks. [OAR340-216-0066(3)(c)]

71.d. For each plating tank subject to 40 CFR 63 Subpart WWWWWW, the permittee must implement the following applicable management practices as practicable, and these management practices must be implemented during all times that the plating tank or process is in operation [40 CFR 63.11507(g)]:

71.d.i. Minimize bath agitation when removing any parts processed in the tank, as practicable except when necessary to meet part quality requirements;

71.d.ii. Maximize draining of bath solution back into the tank by extending drip time when removing parts from the tank; using drain boards/drip shields; or withdrawing parts slowly from the tank;

71.d.iii. Optimize the design of barrels, racks, and parts to minimize dragout of bath solution (such as by using slotted barrels and tilted racks, or by designing parts with flow-through holes to allow the tank solution to drip back into the tank);

71.d.iv. Use tank covers whenever practicable;

71.d.v. Minimize or reduce heating of process tanks;

71.d.vi. Perform regular repair, maintenance, and preventive maintenance of racks, barrels, and other equipment;

71.d.vii. Minimize bath contamination, such as through the prevention or quick recovery of dropped parts, use of distilled/de-ionized water, water filtration, pre-cleaning of parts to be plated, and thorough rinsing of pre- treated parts to be plated;

71.d.viii. Maintain quality control of chemicals, and other bath ingredient concentrations in the tanks;

71.d.ix. Practice good housekeeping such as regular sweeping/vacuuming, and periodic wash-downs;

71.d.x. Minimize spills and overflow of tanks;

71.d.xi. Use squeegee rolls in continuous or reel-to-reel plating tanks; and

71.d.xii. Perform regular inspections to identify leaks and other opportunities for pollution prevention.

40 CFR 63 Subpart WWWWWW Recordkeeping and Reporting requirements

72. Recordkeeping and Reporting requirements. The permittee must maintain the following records and make the following notifications, as applicable [40 CFR§63.11509]:

72.a. The records specified in 40 CFR §63.10(b)(2)(i) through (iii) and (xiv) of the Subpart A General Provisions;

72.b. Upon commencement of commercial operation of the affected sources subject to 40 CFR 63 Subpart WWWWWW, the permittee must submit the Initial Notification which includes a description of the compliance method used for each affected source to the EPA and DEQ [40 CFR §63.11509(a)(2) and (4)].

72.c. A copy of an Initial Notification and Notification of Compliance Status that were submitted and all documentation supporting those notifications.

72.d. For process units or operations subject to 40 CFR 63 Subpart WWWWWW, the occurrence and duration of each startup or shutdown when the startup or shutdown causes the source to exceed any applicable emission limitation in the relevant emission standards.

72.e. An annual certification of compliance report prepared according to 40 CFR§63.11509(c)(1) through (7), prepared no later than January 31 of the year immediately following the reporting period and kept in a readily accessible location for inspector review. These reports do not need to be submitted unless a deviation from the requirements of this subpart has occurred during the reporting year, in which case, the annual compliance report must be submitted to EPA and DEQ postmarked or delivered no later than January 31 of the year immediately following the reporting period, along with the deviation report. The deviation report must identify all deviations that occurred during the year along with the corrective action taken.

Note: The annual certification of compliance must also include the information required by conditions 71.c.i.4, 71.c.ii.4 or 71.c.iii.3, as applicable.

72.f. The occurrence and duration of each malfunction of operation (i.e. process equipment) or the required air pollution control and monitoring equipment. [OAR 340-216-0066(3)(c)]

72.g. All required maintenance performed on the air pollution control and monitoring equipment. [OAR 340-216-0066(3)(c)]

72.h. The records required to show continuous compliance with each management practice as applicable. [40 CFR §63.11509(e)(3)]

INSIGNIFICANT ACTIVITIES

73. DEQ acknowledges that insignificant emissions units (IEUs) identified by rule as either categorically insignificant activities or aggregate insignificant emissions [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:

73.a. OAR 340-208-0110 (20% opacity)

73.b. OAR 340-226-0210 (0.14 gr/dscf for non-fugitive, non-fuel burning equipment installed before April 17, 2015)

73.c. OAR 340-226-0210 (0.10 gr/dscf for non-fugitive, non-fuel burning equipment installed on or after April 17, 2015)

73.d. OAR 340-208-0610 (0.1 gr/dscf for fuel burning equipment except for equipment burning natural gas and liquified petroleum gas) [This condition is enforceable only by the State.]

73.e. OAR 340-226-0310 (process weight limit for process equipment)

73.f. OAR 340-228-0210 (0.14 gr/dscf corrected to 12% CO_2 or 50% excess air for fuel burning equipment installed before April 17, 2015).

73.g. OAR 340-228-0210 (0.10 gr/dscf corrected to 12% CO_2 or 50% excess air for fuel burning equipment installed on or after April 17, 2015).

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 340-208-0010 and perform the testing in accordance with DEQ’s Source Sampling Manual.

AMBIENT MONITORING

Summary - Monitoring must be conducted for hourly NO2 concentrations at or near the fence line of the Ronler Acres campus, at a location representative of that which the modeling shows to be the location of greatest impact from the permittee's NO2 emissions. Monitoring must be done for a minimum of five years, beginning not later than April 1, 2026, and must be done in accordance with DEQ's requirements. Monitoring data must be made available to the public and updated on a reasonable frequency.

74. Applicable Requirement The permittee must conduct ambient air quality monitoring as specified in this condition: [OAR 340-224-0070(1)(b)]

74.a. By April 1, 2025, submit a proposed monitoring plan to DEQ for approval. The plan must include the following:

74.a.i. A designated contact person or persons with contact information;

74.a.ii. Monitoring must be for hourly NO2 concentrations;

74.a.iii. The starting date and ending date for the monitoring;

74.a.iv. The proposed monitoring location;

74.a.v. An explanation of why the proposed monitoring location was chosen;

74.a.vi. A description of the monitoring site, including enclosure, enclosure elevation above ground, height above ground of the sampling point, and provisions for site and power supply security;

74.a.vii. A description of the monitoring equipment with manufacturer(s) name and model numbers;

74.a.viii. The sampling schedule;

74.a.ix. The sample collection schedule;

74.a.x. The name and location of the laboratory that will analyze the samples;

74.a.xi. A Quality Assurance/Quality Control Plan that covers all aspects of sample collection, sample handling, laboratory procedures and data analysis needed to ensure data validity and accuracy;

74.a.xii. A description of how data will be made available to the public and the frequency with which monitoring data that has been QA/QC'd per the approved monitoring plan will be updated; and

74.a.xiii. A schedule for submitting data to DEQ.

74.b. Monitoring must be done for a minimum of five years, beginning not later than April 1, 2026, and must be done in accordance with this condition and the monitoring plan approved by DEQ.

PLANT SITE EMISSION LIMITS

75. Applicable Requirement The permittee must not exceed the following plant site emission limits for any 12 consecutive month period: [OAR 340-222-0040 through OAR 340-222-0043]

Pollutant	Plant Site Emission Limit (tons/12 mo)	Netting Basis (tons/12 mo)	Unassigned Emissions (tons/12 mo)	Emission Reduction Credit (tons/12 mo)
PM	68	0	0	0
PM_{10}	62	62	0	0
$PM_{2.5}$	60	60	0	0
SO_2	35	14	0	0
NO_x	413	413	0	0
CO	598	598	0	0
VOC	351	351	0	0
Fluorides	12.5	12.5	0	0
GHG*	1,725,560 tons**	1,725,560 tons**	0	0
Any individual HAP	9	n/a	n/a	n/a
Aggregate of all HAPs	24	n/a	n/a	n/a

* CO2e basis
** Equivalent to 1,565,428 metric tons; short tons x 0.9072 = metric tons

75.a. Plant Site Emission Limits include aggregate insignificant emissions of 2,756 tpy for GHG, 0.3 tpy for Fluorides, and 1.0 tpy for the other pollutants.

75.b. Monitoring for the Plant Site Emission Limits is included in condition 78.

75.c. The permittee may only use Unassigned Emissions after any necessary construction (OAR 340-218-0190) and permit revision applications (OAR 340-218-0120 through 340-218-0180) have been approved by DEQ. [OAR 340-222-0055]

75.d. Any unassigned emissions that are greater than the SER will be reduced to the SER when this permit is renewed unless used before that date. [OAR 340-222-0055]

75.e. Accounting months may be used in lieu of calendar months.

75.f. The GHG emissions calculations are based on the Global Warming Potentials (GWPs) specified in 40 C.F.R. part 98, subpart A, Table A–1-Global Warming Potentials, 79 FR 72779, Dec. 11, 2014, originally published in 40 CFR Part 98, 2015 Revisions to the Greenhouse Gas Reporting Rule and Final Confidentiality Determinations for New or Substantially Revised Data Elements; Final Rule (73750 Federal Register / Vol. 78, No. 238 / Thursday, December 11, 2014).[1]

[1] For the previous permit, issued on 1/22/2016, the GHG emissions calculations are based on the Global Warming Potentials (GWP) specified in 40 CFR Part 98, 2013 Revisions to the Greenhouse Gas Reporting Rule and Final Confidentiality Determinations for New or Substantially Revised Data Elements; Final Rule (71904 Federal Register / Vol. 78, No. 230 / Friday, November 29, 2013). GWP values used in the 1/22/2016 permit may differ from those used for this permit.

Netting Basis Reset

76. Applicable Requirement This Major NSR/PSD permit (application no. 034907 received 7/7/2023) establishes revised Netting Bases for PM_{10}, $PM_{2.5}$, CO, NOx, VOC, Fluorides and GHG at their respective PTEs. The Netting Bases for PM_{10}, $PM_{2.5}$, CO, NOx, VOC, Fluorides and GHG must be reset as required by this condition and OAR 340-222-0046(3)(d) (netting basis), and OAR 340-222-0051(1), (2) and (3) (actual emissions).

The permittee's netting bases for PM_{10}, $PM_{2.5}$, CO, NOx, VOC, Fluorides and GHG will be reduced when actual emissions are reduced according to OAR 340-222-0051(3); [OAR 340-222-0046(3)(d)]

76.a. The netting bases for PM_{10}, $PM_{2.5}$, CO, NOx, VOC, Fluorides and GHG will be reset to actual emissions as follows and as required by OAR 340-222-0051(3)(a): [OAR 340-222-0051(3)(a)]

76.a.i. Except as provided in condition 64.a.iii, 10 years after the date this permit is issued, or an earlier time if requested by the source in a permit application involving public notice, DEQ will reset actual emissions to equal the highest actual emission rate during any consecutive 12-month period during the ten year period, any shorter period if requested by the source, or any longer period if extended under condition 76.a.iii.

76.a.ii. Any emission reductions achieved due to enforceable permit conditions based on OAR 340-226-0110 and 0120 (highest and best practicable treatment and control) are not included in the reset calculation required in condition 76.a.i.

76.a.iii. DEQ may extend the date of resetting by five additional years upon satisfactory demonstration by the source that construction is ongoing or normal operation has not yet been achieved.

76.b. The PM_{10}, $PM_{2.5}$, CO, NOx, VOC, Fluorides or GHG netting basis or PSEL (or both) that was set based on PTE must be excluded from the tests in OAR 340-224-0025(2) until the netting basis is reset. [OAR 340-224-0025(2)(b)(C) (major modification)]

77. Monitoring Requirement The permittee must monitor the actual monthly emissions of all pollutants for which a PSEL has been established from the date this permit is issued. This monitoring is required for the purpose of resetting the netting bases as required by condition 76.

77.a. Recordkeeping Requirement The permittee must maintain records of actual monthly emissions of all pollutants for which a PSEL has been established from the date this permit is issued.

Plant Site Emission Limits Monitoring. [OAR 340-218-0050(3)(a) and (b)]

78. Monitoring Requirement Compliance with the PSEL is determined for each 12-consecutive month period based on the following calculations in conditions 79 through 89 performed for each pollutant listed in condition 75 (Plant Site Emission Limits):

78.a. The term "detail sheets" refers to the emissions detail sheets associated with this permit.

78.b. The detail sheets may be updated by DEQ, and the most recent version must be used for the emission calculations specified in this condition.

78.c. The permittee may request approval of updated emission factors in writing and may use the updated emission factors upon approval in writing by DEQ.

78.d. For the purpose of emissions monitoring, emissions of PM=PM_{10}=$PM_{2.5}$, except where different values or calculations are specified (such as Wet scrubbers).

BOILERS

79. Calculate monthly emissions for each boiler or group of boilers used during the reporting year.

BOILERS PM, PM10, PM2.5, CO, NOx, SO2 and VOC

79.a. Calculate emissions of PM, PM_{10}, $PM_{2.5}$, CO, NOx, SO_2 and VOC as follows:

79.a.i. Monthly emissions = Monthly natural gas usage x EF x appropriate unit conversions, where EF means the pollutant-specific emission factor used in the Detail Sheets for EU-Boilers, or an approved updated emission factor.

BOILERS HAPs

79.b. Calculate monthly emissions of HAPs as specified in condition 79.a.i.

BOILERS GHG

79.c. Calculate GHG emissions as specified in condition 88.

79.d. Calculate the rolling 12-month emissions by summing the emissions for the most recent month with the emissions for the preceding 11 months.

79.e. Recordkeeping Requirement Keep records of the monthly emissions and the rolling 12-month emissions for each month.

HEATERS

80. Calculate monthly emissions for each heater or group of heaters used during the reporting year.

HEATERS PM, PM10, PM2.5, CO, NOx, SO2 and VOC

80.a. Calculate emissions of PM, PM_{10}, $PM_{2.5}$, CO, NOx, SO_2 and VOC as follows:

80.a.i. Monthly emissions = Monthly natural gas usage x EF x appropriate unit conversions, where EF means the pollutant-specific emission factor used in the Detail Sheets for EU-Heaters, or an approved updated emission factor.

HEATERS HAPs

80.b. Calculate monthly emissions of HAPs as specified in condition 80.a.i.

HEATERS GHG

80.c. Calculate GHG emissions as specified in condition 88.

80.d. Calculate the rolling 12-month emissions by summing the emissions for the most recent month with the emissions for the preceding 11 months.

80.e. Recordkeeping Requirement Keep records of the monthly emissions and the rolling 12-month emissions for each month.

TMXW

81. Calculate monthly emissions for each TMXW device or group of devices used during the reporting year.

TMXW PM, PM10, PM2.5, CO, SO2 and VOC

81.a. Calculate emissions of PM, PM_{10}, $PM_{2.5}$, CO, SO_2 and VOC as follows:

81.a.i. Monthly emissions = Monthly natural gas usage x EF x (1-RE) x appropriate unit conversions, where EF means the pollutant-specific emission factor used in the Detail Sheets for EU-TMXW, or an approved updated emission factor, and RE means the pollutant-specific removal efficiency.

TMXW NOx

81.b. Calculate emissions of NOx using Option 1 or 2 below:

Option 1 Monthly emissions = The sum of the following for all chemicals used in, or that exhaust to, TMXW systems:
Monthly chemical usage rate x EF x (1-RE) x appropriate unit conversions, where EF means the pollutant-specific emission factor approved by DEQ, and RE means the pollutant-specific removal efficiency. (Note: This EF includes combustion NOx).

Option 2 Monthly emissions = Monthly hours of operation x stack tested hourly emission rate for the representative set of TMXW abatement devices

TMXW HAPs

81.c. Calculate monthly emissions of HAPs as follows:

81.c.i. Monthly emissions = Monthly natural gas usage x EF x appropriate unit conversions, where EF means the pollutant-specific emission factor used in the Detail Sheets for EU-TMXW, or an approved updated emission factor.

TMXW GHG

81.d. Calculate GHG emissions as specified in condition 88.

81.e. Calculate the rolling 12-month emissions by summing the emissions for the most recent month with the emissions for the preceding 11 months.

81.f. Recordkeeping Requirement Keep records of the monthly emissions and the rolling 12-month emissions for each month.

RICE

82. Calculate monthly emissions for each RICE used during the reporting year.

RICE PM, PM10, PM2.5, CO, NOx, SO2 and VOC

82.a. Calculate monthly emissions of from each RICE using Option 1 or Option 2. Only one calculation option may be used in any calendar year:

Option 1

82.a.i. Monthly emissions = Monthly hours of operation x EF x (1-RE) x appropriate unit conversions, where

- EF means the pollutant-specific emission factor used in the Detail Sheets for EU-RICE; the Variable Load emission factors referred to in condition 82.a.ii; or other approved updated emission factor; and
- RE means the pollutant specific removal efficiency if so equipped.

82.a.ii. DEQ has approved the use of the Variable Load Emission Factors (EFs) specified in the Detail Sheets for EU-RICE. These Emergency Generator Variable Load Emission Factors are for the following engine types coupled with the associated Cummins Power System generator sets:

- Cummins QSK95-G9 diesel engines with both Cummins generator set models C30000D6e and C3500D6e
- Cummins QSK78-G12 diesel engines with Cummins generator set model DQLE

82.a.iii. The approved emission factors are now available per load condition, specifically no load (0%), 25%, 50%, 75% and 100% operation.

82.a.iv. In order to accurately track emissions across these load profiles, Intel must maintain records of minutes of operation at each load. When an operating load condition is between the load brackets shown in the table, Intel must use the highest emission factor for each pollutant that brackets that operating load for that operating duration to ensure conservative emissions calculations.

82.a.v. This approval includes the assumptions that all particulate matter (PM) is equivalent to $PM_{2.5}$ (i.e., PM = PM_{10} = $PM_{2.5}$), and

82.a.vi. These EFs are uncontrolled values; those engines (to be identified clearly) with Diesel Particulate Filters (DPF) can utilize the filter pollutant-specific removal efficiency as specified in the Detail Sheets for EU-RICE.

Option 2

82.a.vii. The permittee may propose to base emissions calculations on the amount of fuel used. This option may only be used if the method and emission factors are approved by DEQ.

82.a.viii. Monthly emissions = Monthly fuel usage x EF x (1-RE) x appropriate unit conversions, where EF means the pollutant-specific emission factor approved by DEQ and RE means the pollutant-specific removal efficiency, if equipped with a DPF.

RICE HAPs

82.b. Calculate monthly emissions of HAPs as specified in condition 82.a.

RICE GHG

82.c. Calculate GHG emissions as specified in condition 88.

82.d. Calculate the rolling 12-month emissions by summing the emissions for the most recent month with the emissions for the preceding 11 months.

82.e. Recordkeeping Requirement Keep records of the following:

82.e.i. The calculation option used for each RICE; and

82.e.ii. Monthly emissions and the rolling 12-month emissions for each month.

WET SCRUBBERS

83. Calculate monthly emissions for each wet scrubber or wet scrubber system used during the reporting year.

WET SCRUBBERS FLUORIDES

83.a. Calculate monthly emissions of Fluorides from each wet scrubber or wet scrubber system, using Option 1 or Option 2.

Option 1

83.a.i. Monthly emissions = Monthly production rate x EF x appropriate unit conversions, where EF means the pollutant-specific emission factor approved by DEQ.

Option 2

83.a.ii. Calculate emissions of Fluorides as follows:

83.a.iii. Monthly emissions = The sum of the following for all chemicals used in production processes that generate Fluorides and exhaust to wet scrubbers:

Monthly chemical usage rate x EF x (1-RE) x appropriate unit conversions, where EF means the pollutant-specific emission factor approved by DEQ, and RE means the pollutant-specific removal efficiency).

83.a.iv. Only one calculation option may be used in any month, and the selected option must be used for the entire month.

83.a.iv.1. Upon issuance of this permit, the permittee may select which option will be used. Thereafter, the permittee may change options at any time provided that DEQ approves the change.

83.a.iv.2. A request to change options must be submitted in writing, and must include the reason for the requested change.

83.a.iv.3. The permittee may not implement the change until DEQ approves the change.

WET SCRUBBERS HAPs

83.b. Calculate monthly emissions of HAPs from each wet scrubber or wet scrubber system, using Option 1 or Option 2.

Option 1

83.b.i. Monthly emissions = Monthly production rate x EF x (1-RE) appropriate unit conversions, where EF means the pollutant-specific emission factor approved by DEQ.

Option 2

83.b.ii. Monthly emissions = The sum of the following for all chemicals used in production processes that generate HAP emissions and exhaust to wet scrubbers:

Monthly chemical usage rate x EF x (1-RE) x appropriate unit conversions, where EF means the pollutant-specific emission factor approved by DEQ, and RE means the pollutant-specific removal efficiency).

83.b.iii. For each individual HAP, only one calculation option may be used in any month, and the selected option must be used for the entire month.

83.b.iii.1. Upon issuance of this permit, the permittee may select which option will be used. Thereafter, the permittee may change options at any time provided that DEQ approves the change.

83.b.iii.2. A request to change options must be submitted in writing, and must include the reason for the requested change.

83.b.iii.3. The permittee may not implement the change until DEQ approves the change.

WET SCRUBBERS SO2 and VOC

83.c. Calculate emissions of SO_2, and VOC as follows:

Process Emissions

83.c.i. Monthly emissions = Monthly chemical usage rate x EF x appropriate unit conversions, where:

EF means the emission factor used in the Detail Sheets for EU-Wet scrubbers or as approved in writing by DEQ, and

Natural Gas Combustion Emissions

83.c.ii. Monthly emissions = Monthly natural gas usage x EF x appropriate unit conversions, where EF means the pollutant-specific emission factor used in the Detail Sheets for EU-Wet Scrubbers, or an approved updated emission factor.

WET SCRUBBERS PM, PM10, PM2.5

83.d. Calculate emissions of PM, PM10, PM2.5 as follows:

Process Emissions

83.d.i. Monthly emissions = Monthly chemical usage rate x EF x appropriate unit conversions x [(1-(RE x Monthly WESP Uptime percentage)] Where:

83.d.i.1. EF means the emission factor used in the Detail Sheets for EU-Wet Scrubbers, or as approved by DEQ and

83.d.i.2. RE means the WESP removal efficiency as established in condition 77.a and 77.b

Natural Gas Combustion Emissions

83.d.ii. Monthly emissions = Monthly natural gas usage x EF x appropriate unit conversions, where EF means the pollutant-specific emission factor used in the Detail Sheets for EU-Wet Scrubbers, or an approved updated emission factor.

Note: Wet scrubber drift loss emissions are accounted for in condition 84.d.

WET SCRUBBERS WESP

The following acid wet scrubbers are equipped with wet electrostatic precipitators (WESP) for added particulate control:

Wet scrubber ID	WESP ID	Manufacturer
D1X-SC133-1-00	D1X-WSP133-1-30	Lundberg
D1X-SC133-2-00	D1X-WSP133-2-30	Lundberg
D1X-SC133-3-00	D1X-WSP133-3-30	Lundberg/ to be determined
D1X-SC133-5-00	D1X-WSP133-5-30	Beltran
D1XM2-SC133-2-00	D1XM2-WSP133-2-30	Lundberg
D1XM2-SC133-3-00	D1XM2-WSP133-3-30	Lundberg
D1XM2-SC133-4-00	D1XM2-WSP133-4-30	Lundberg
D1XM2-SC133-5-00	D1XM2-WSP133-5-30	Lundberg
D1XM3-SC133-1-00	D1XM3-WSP133-1-30	Lundberg
D1XM3-SC133-2-00	D1XM3-WSP133-2-30	Lundberg
D1XM3-SC133-3-00	D1XM3WSP133-3-30	Lundberg
D1XM3-SC133-4-00	D1XM3-WSP133-4-30	Lundberg/ to be determined
D1XM3-SC133-5-00	D1XM3-WSP133-5-30	Lundberg/ to be determined
RA4-SC133-1	RA4-WSP133-1-30	Lundberg/ to be determined
RA4-SC133-2	RA4-WSP133-2-30	Lundberg/ to be determined

84. Wet scrubber WESP Testing, Monitoring and Recordkeeping [OAR 340-216-0066(3)(c)]

84.a. The permittee may utilize a 90% removal efficiency during any time that the wet scrubber WESPs shown above, or any identical WESPs, are operated and the 15-minute block average voltages are at or above the levels specified in Condition 52. The permittee may use a manufacturer removal efficiency guarantee or conduct particulate source testing in accordance with a DEQ approved source test plan, of the wet scrubber WESP to establish a different removal efficiency, as approved in writing by DEQ, for purposes of emission calculations.

84.b. If future wet scrubber WESPs are installed and are not identical to those listed above, the permittee may use manufacturer removal efficiency guarantee or conduct representative testing (at least one WESP for the group of identical WESPs) within 60 days of reaching maximum design capacity, but no later than the end of the calendar year following the calendar year of installation after the WESP became operational to establish and utilize a higher removal efficiency.

WET SCRUBBERS CO, NOx

84.c. Calculate monthly emissions of CO and NOx using Option 1 or Option 2.

Option 1 - This option includes both combustion and process emissions of CO and NOx with EFs derived from source testing.

84.c.i. Monthly emissions = Monthly production rate x EF x appropriate unit conversions, where EF means the pollutant-specific emission factor approved by DEQ.

Option 2 – This option has separate calculations for combustion and process emissions of CO and NOx.

84.c.ii. Calculate monthly emissions of NOx and CO from Natural Gas combustion, plus emissions from each individual NOx and/or CO generating input using Option 2a or Option 2b:

Emissions from Natural Gas Combustion

Monthly emissions = Monthly natural gas usage x EF x appropriate unit conversions, where EF means the pollutant-specific emission factor used in the Detail Sheets for EU-Wet scrubbers, or an approved updated emission factor.

Plus

Emissions from each Individual NOx and/or CO Generating Input

Option 2a

Monthly emissions = Monthly chemical usage rate x EF x appropriate unit conversions, where EF means the pollutant-specific emission factor approved by DEQ; or

Option 2b

Monthly emissions = Monthly production rate x EF x appropriate unit conversions, where EF means the pollutant-specific emission factor approved by DEQ;

84.c.iii. Only one calculation option may be used in any month, and the selected option must be used for the entire month.

84.c.iii.1. Upon issuance of this permit, the permittee may select which option will be used. Thereafter, the permittee may change options at any time provided that DEQ approves the change.

84.c.iii.2. A request to change options must be submitted in writing, and must include the reason for the requested change.

84.c.iii.3. The permittee may not implement the change until DEQ approves the change.

Drift loss PM, PM10 and PM2.5

Drift Loss Emissions

84.d. Calculate monthly emissions of PM, PM_{10} and $PM_{2.5}$ from wet scrubber drift loss as:

84.d.i. Monthly PM wet scrubber drift loss = (8.46 tons per year)/12.

84.d.ii. Monthly PM_{10} wet scrubber drift loss = (2.24 tons per year)/12.

84.d.iii. Monthly $PM_{2.5}$ wet scrubber drift loss = (0.011 tons per year)/12.

Note: Drift loss emissions are totals for EXSC, EXAM and PSSS wet scrubbers

84.e. If the permittee makes changes that change wet scrubber drift loss emissions, DEQ may approve revised emissions estimates, and the permittee may use the revised emissions estimates upon written approval by DEQ.

Total Emissions of PM, PM10 and PM2.5

84.f. Calculate total monthly emissions of PM, PM_{10} and $PM_{2.5}$ from each wet scrubber or wet scrubber system by summing the Process Emissions, Natural Gas Combustion Emissions and Drift Loss Emissions for PM, PM_{10} and $PM_{2.5}$, as appropriate.

GHG

84.g. Calculate GHG emissions as specified in condition 88.

84.h. Calculate the rolling 12-month emissions by summing the emissions for the most recent month with the emissions for the preceding 11 months.

84.i. Recordkeeping Requirement Keep records of the following:

84.i.i. For each month, which reporting option was used for Fluorides, HAPs, CO and NOx;

84.i.ii. If Option 1 was used, production data, emission factors used and monthly emissions

84.i.iii. If Option 2 was used, natural chemical usage, production data, emission factors used and monthly emissions and the rolling 12-month emissions for each month.

84.i.iv. Calculate total monthly emissions from each wet scrubber or wet scrubber system by summing the process, combustion and drift loss emissions as appropriate.

84.i.v. Calculate the rolling 12-month emissions by summing the emissions for the most recent month with the emissions for the preceding 11 months.

RCTOs

85. Calculate monthly emissions for each RCTO or RCTO system used during the reporting year.

RCTOs CO and SO2

85.a. Calculate monthly emissions of: CO and SO_2 as follows:

Monthly emissions = Monthly natural gas usage rate x EF x appropriate unit conversions, where EF means the pollutant-specific emission factor in the detail sheets, or an approved updated emission factor.

RCTOs NOx

85.b. Calculate monthly emissions of NOx from each RCTO or RCTO system, using Option 1 or Option 2 as appropriate:

Option 1, for use with RCTOs that **do not discharg**e to a NOx abatement system

85.b.i. Monthly emissions = Monthly natural gas usage rate x EF x appropriate unit conversions),
where
EF means the pollutant-specific emission factor in the detail sheets, or an approved updated emission factor.

Option 2, for use with RCTOs that **do discharge** to a NOx abatement system

85.b.ii. Monthly emissions = [(Monthly natural gas usage rate x abated EF x NOx abatement uptime x appropriate unit conversions)
Plus
(Monthly natural gas usage rate x unabated EF x (1- NOx abatement uptime) x appropriate unit conversions)] ,
where
EF means the pollutant-specific emission factor in the detail sheets, or approved updated emission factor; and
NOx abatement uptime for each RCTO or RCTO system is calculated as:
(time each month that the RCTO or RCTO system is connected to the associated NOx abatement system and the NOx abatement system is operating) divided by
(total time each month that the RCTO or RCTO system is online and receiving process exhaust).

RCTOs VOC

85.c. Calculate monthly emissions of VOC from each RCTO or RCTO system, using Option 1 or Option 2.

Option 1

85.c.i. Monthly emissions = The sum of the following for all VOCs used in production processes that exhaust to RCTOs:

The total monthly amount of each VOC and VOC precursor used x EF x (1-DRE for the RCTO or RCTO system) x appropriate unit conversions,
where
DRE is the destruction and removal efficiency of the RCTO or RCTO system as determined by the most recent source test, and
EF means the emission factor approved by DEQ.

Option 2

85.c.ii. Monthly emissions = Monthly production rate x EF x appropriate unit conversions, where
EF means the emission factor based on source testing and approved by DEQ.

85.c.iii. Only one calculation option may be used in any month, and the selected option must be used for the entire month.

85.c.iii.1. Upon issuance of this permit, the permittee may select which option will be used. Thereafter, the permittee may change options at any time provided that DEQ approves the change.

85.c.iii.2. A request to change options must be submitted in writing, and must include the reason for the requested change.

85.c.iii.3. The permittee may not implement the change until DEQ approves the change.

RCTOs VOHAPs (volatile organic HAPs)

85.d. Calculate monthly emissions of VOHAPs from each RCTO or RCTO system, using Option 1 or Option 2.

Option 1

85.d.i. Monthly emissions = The sum of the following for all VOHAPs used in production processes that exhaust to RCTOs:

The total monthly amount of each VOHAP or VOHAP precursor used x EF x (1-DRE for the RCTO or RCTO system) x appropriate unit conversions, where DRE is the destruction and removal efficiency of the RCTO or RCTO system as determined by the most recent source test, and EF means the VOHAP-specific emission factor approved by DEQ.

Option 2

85.d.ii. Monthly emissions = Monthly production rate x EF x appropriate unit conversions, where EF means the VOHAP-specific emission factor based on source testing and approved by DEQ.

85.d.iii. Only one calculation option for each individual VOHAP may be used in any month, and the selected option must be used for the entire month.

85.d.iii.1. Upon issuance of this permit, the permittee may select which option will be used. Thereafter, the permittee may change options at any time provided that DEQ approves the change.

85.d.iii.2. A request to change options must be submitted in writing, and must include the reason for the requested change.

85.d.iii.3. The permittee may not implement the change until DEQ approves the change.

RCTOs Combustion HAPs

85.e. Calculate monthly emissions of combustion HAPs as specified in condition 85.f.iii.

RCTOs PM, PM_{10} and $PM_{2.5}$

85.f. Calculate monthly emissions of PM, PM_{10} and $PM_{2.5}$ as follows:

Process Emissions

85.f.i. Monthly emissions = Monthly chemical usage rate x EF x appropriate unit conversions x [1-(RE x Monthly WESP operating uptime percentage)], where: EF means the emission factor used in the Detail Sheets for EU-RCTOs or as approved by DEQ, and RE means the WESP removal efficiency as established in condition 85.g.

Natural Gas Combustion Emissions

85.f.ii. Calculate monthly emissions of PM, PM_{10} and $PM_{2.5}$ from natural gas combustion in RCTOs.

85.f.iii. Monthly emissions = Monthly natural gas usage x EF x appropriate unit conversions, where EF means the pollutant-specific emission factor used in the Detail Sheets for EU-RCTOs, or as approved by DEQ.

Total Emissions of PM, PM_{10} and $PM_{2.5}$

85.f.iv. Calculate total monthly emissions of PM, PM_{10} and $PM_{2.5}$ from each RCTO or RCTO system by summing the Process Emissions and Natural Gas Combustion Emissions for PM, PM_{10} and $PM_{2.5}$, as appropriate.

RCTO with WESP

85.g. The permittee may utilize an 83% removal efficiency during any time the RCTO WESPs shown below, or any identical RCTO WESPs, are operated with 15-minute block average voltages that are at or above the levels specified in condition 38. The permittee may conduct particulate source testing in accordance with a DEQ approved source test plan, of RCTO WESP to establish a different removal efficiency, as approved in writing by DEQ, for purposes of emissions calculations.

RCTO ID	WESP ID	Manufacturer
D1XM1-VOC138-5-20	D1X-WSP138-5-20	Beltran
D1XM1-VOC138-6-20	D1X-WSP138-6-20	Beltran
D1XM1-VOC138-7-20	D1X-WSP138-7-20	Beltran

85.h. If future RCTO WESPs are installed and are not identical to those listed in condition 85.g, the permittee may use manufacturer removal efficiency guarantee or conduct representative testing (at least one WESP for the group of identical WESPs) within 60 days of reaching maximum design capacity, but no later than the end of the calendar year following the calendar year of installation after the WESP becomes operational to establish and utilize a higher removal efficiency. Prior to Department approval of the new removal efficiency, the permittee must employ the most current removal efficiency for the applicable WESPs.

RCTOs GHG

85.i. Calculate GHG emissions as specified in condition 88.

85.j. Calculate the rolling 12-month emissions by summing the emissions for the most recent month with the emissions for the preceding 11 months.

85.k. Recordkeeping Requirement Keep monthly records of the following:

85.k.i. Which VOC reporting option was used;

85.k.ii. Natural gas usage;

85.k.iii. Production rate;

85.k.iv. Identification and amount of each VOC used;

85.k.v. Emissions of CO, NOx, SO_2, VOC, PM, PM_{10} and $PM_{2.5}$.

UNCONTROLLED VOC

86. Calculate monthly emissions of uncontrolled VOC, where uncontrolled VOC means VOC usage that is not routed to a VOC or wet scrubber abatement system.

86.a. Monthly emissions = The sum of the following for all VOCs used in production processes that do not exhaust to a VOC abatement device:
(The total monthly amount of each VOC used minus any of that VOC that is shipped offsite) x EF x appropriate unit conversions, where EF means the VOC-specific emission factor approved by DEQ.

86.b. Calculate the rolling 12-month emissions by summing the emissions for the most recent month with the emissions for the preceding 11 months.

86.c. Recordkeeping Requirement Keep monthly records of the following:

86.c.i. The identification and amount of each uncontrolled VOC used;

86.c.ii. The following information for any VOC shipped offsite, when applicable for that month:

86.c.ii.1. Amount shipped offsite;
86.c.ii.2. How the amount was determined; and
86.c.ii.3. Destination of the VOC shipped offsite; and

86.c.iii. The identification and amount of each uncontrolled VOC emitted, taking into account any VOC shipped offsite.

EU-Other

87. Calculate monthly emissions from Lime Silos and Specialty Exhaust as:

87.a. Lime Silo Emissions

87.a.i. Monthly PM emissions = (0.44 tons per year)/12.

87.a.ii. Monthly PM_{10} emissions = (0.44 tons per year)/12.

87.a.iii. Monthly $PM_{2.5}$ emissions = (0.44 tons per year)/12.

87.b. If the permittee makes changes that change Lime silo emissions, DEQ may approve revised emissions estimates, and the permittee may use the revised emissions estimates upon approval by DEQ.

87.c. Specialty Exhaust Emissions

For the purpose of this permit only, it is not necessary to monitor or report emissions from this EU because emissions of arsine and arsenic are less than 0.0001 ton per year and will not materially affect emissions reporting results.

GREENHOUSE GAS CALCULATION PROCEDURE

88. The following procedure must be used to calculate GHG emissions:

88.a. Not later than March 31 of each year, calculate emissions of GHG for the preceding year for each applicable emissions unit using the protocols specified in OAR 340 Division 215;

88.b. For each applicable emissions unit, estimate the monthly GHG emissions for the preceding year by apportioning the annual GHG emissions as follows:

$$\text{GHG estimate for month X} = \text{annual GHG emissions} \times \frac{\text{production parameter value for month X}}{\text{total annual production parameter value}}$$

Where "production parameter" is defined as the parameter that best represents GHG emissions from each applicable emissions unit, such as but not limited to: production rate, fuel usage rate, or hours of operation.

88.c. Calculate the rolling 12-month emissions by summing the emissions for each month with the emissions for the preceding 11 months.

88.d. Recordkeeping Requirement Keep records of the following:

88.d.i. The annual facility-wide GHG emissions for each applicable emissions unit;

88.d.ii. The estimated monthly GHG emissions for each emissions unit;

88.d.iii. The rolling 12-month facility total GHG emissions, using the estimated monthly GHG emissions.

89. Calculate the facility-wide monthly and rolling 12-month facility-wide emissions of PM, PM_{10}, $PM_{2.5}$, NOx, CO, VOC, GHG and Fluorides by summing the monthly and rolling 12-month emissions calculated in conditions 79 through 88.

89.a. Recordkeeping Requirement Keep monthly records of the following:

89.a.i. Monthly facility-wide emissions of PM, PM_{10}, $PM_{2.5}$, NOx, CO, VOC, GHG and Fluorides;

89.a.ii. Rolling 12-month facility-wide emissions of PM, PM_{10}, $PM_{2.5}$, NOx, CO, VOC, GHG and Fluorides; and

89.a.iii. Rolling 12-month facility-wide emissions of individual HAPs over 0.1 tpy and total HAPs.

TESTING REQUIREMENTS

90. Monitoring Requirement Unless otherwise specified in this permit, the permittee must conduct all testing in accordance with DEQ's Source Sampling Manual. [OAR 340-212-0120]

90.a. Unless otherwise specified in this permit or 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. A test method modification/variance or substitution of an alternative test method must be pre-approved by DEQ. 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.

90.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.

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

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

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

90.c.iii. At 90 to 110% of the normal maximum operating rate for existing equipment.

90.c.iv. 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.

90.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 unless an alternative method is included and approved in the stack test. 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.

90.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.

Tested Pollutant	Reference Test Method(1)
NO_X	EPA Method 7E or EPA Method 320 / ASTM D6348-12
CO	EPA Method 10 or EPA Method 320 / ASTM D6348-12
VOC	EPA Method 25A or EPA Method 320 / ASTM D6348-12
HF	EPA Method 26A or EPA Method 320 / ASTM D6348-12
HCl	EPA Method 26A or EPA Method 320 / ASTM D6348-12
Fluorides	EPA Method 13B
Opacity	EPA Method 9

Note (1) - Substitution of alternative test method(s) must be pre-approved by DEQ.

MONITORING REQUIREMENTS

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

General Monitoring Requirements

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

92. Permittee must use the same methods to determine compliance as those used to determine actual emissions for fee purposes and can be no less rigorous than the requirements of OAR 340-218-0080. [OAR 340-218-0050(3)(a)(F)]

93. 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)]

RECORDKEEPING REQUIREMENTS

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

GENERAL RECORDKEEPING REQUIREMENTS

94. The permittee must maintain the following general records of testing required by this permit: [OAR 340-218-0050(3)(b)(A)]

    94.a. the date, place as defined in the permit, and time of sampling or measurements;

    94.b. the date(s) analyses were performed;

    94.c. the company or entity that performed the analyses;

    94.d. the analytical techniques or methods used;

    94.e. the results of such analyses;

    94.f. the operating conditions as existing at the time of sampling or measurement; and

    94.g. the records of quality assurance for continuous monitoring systems (including but not limited to quality control activities, audits, calibration drift checks).

95. 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) shall 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 shall not be considered a missing record. [340-212-0160, OAR 340-214-0110, and 340-218-0050(3)(b)]

96. 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)]

97. 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 for continuous monitoring instrumentation, and copies of all reports required by the permit. All existing records required by the previous Air Contaminant Discharge 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)]

GENERAL REPORTING REQUIREMENTS

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

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

98.a. Immediately (not later than 9:00 am on the first business day following the date on which an excess emission occurred-business days are Monday through Friday, excluding holidays observed by DEQ) notify DEQ of an excess emission event by phone, e-mail, or facsimile; and

98.b. Within 15 days of the excess emissions event, submit a written report that contains the following information: [OAR 340-214-0340(1)]

98.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;

98.b.ii. The date and time the owner or operator notified DEQ of the event;

98.b.iii. The equipment involved;

98.b.iv. Whether the event occurred during planned startup, planned shutdown, scheduled maintenance, or as a result of a breakdown, malfunction, or emergency;

98.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;

98.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);

98.b.vii. The final resolution of the cause of the excess emissions; and

98.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.

98.c. 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 Accident Response System (OARs). The current number is 1-800-452-0311.

98.d. 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.

98.e. 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)]

99. 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 preventive 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 98. [OAR 340-218-0050(3)(c)(B)]

100. The permittee must submit any required source test report within 45 days after the source test; unless otherwise approved in the source test plan. [OAR 340-218-0050(3)(c)(C) and 340-212-0120]

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

102. Reporting requirements are in effect 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:

DEQ – Northwest Region
700 NE Multnomah St., Suite 600
Portland, OR 97232
Phone: (503) 229-5263

DEQ – Air Quality Division
700 NE Multnomah St., Suite 600
Portland, OR 97232
Phone: (503) 229-5263

Air Operating Permits
US Environmental Protection Agency
Mail Stop OAQ-108
1200 Sixth Avenue
Seattle, WA 98101

ANNUAL REPORTS

103. The permittee must report GHG emissions to DEQ as required by OAR 340, Division 215.

104. The permittee must submit three (3) copies of reports required by this condition, completed on forms approved by DEQ. [OAR 340-218-0050(3)(c)(A) and 340-218-0080(6)(d)]]

104.a. < reserved for Title V requirement >;

104.b. The annual report is due on March 31 and must consist of the following:

104.b.i. < reserved for Title V requirement >

104.b.ii. The emission fee report. [OAR 340-220-0100]

104.b.iii. A summary of the Excess Emissions and Upset log (per conditions 34.b, 45.c and 86.e). [OAR 340-214-0340]

104.b.iv. The annual certification that the risk management plan is being properly implemented, if applicable (condition 9, OAR 340-244-0230). [OAR 340-218-0080(7)]

104.b.v. The type and amount of fuel combusted.

104.b.vi. The calculated 12-month rolling emission rates for

PM, PM_{10}, $PM_{2.5}$, SO_2,
CO, NOx, VOC, Fluorides,
GHG, combined HAPs and individual HAPs,

for each month of the previous year. Emissions must be calculated using the methods described in the conditions referenced by Condition 78 (PSEL monitoring).

Note: reporting for individual HAPs is only required for pollutants with emission rates of 0.1 or more tons/yr

104.b.vii. A summary of the physical changes, additions, and/or process modifications as well as pollution prevention project(s) performed to offset emission increases associated with these changes/modifications, pre-approved pursuant to Condition 18. In addition, the permittee must identify and summarize any change with an associated emission increase of five (5) or more tons of VOC or one (1) or more tons of any HAP on a yearly basis.

104.b.viii. Summary of complaints relating to air quality received by permittee during the year.

104.b.ix. List major maintenance performed on pollution control equipment.

104.b.x. There are no applicable Subpart Dc specific reporting requirements for affected facilities that are exclusively fired with the fuels listed in Condition 23.b.

105. < reserved for Title V requirement >
106. < reserved for Title V requirement >

NON-APPLICABLE REQUIREMENTS

107. State and Federal air quality requirements (e.g., rules and regulations) currently determined not applicable to the permittee are listed below along with the reason for the non-applicability: [OAR 340-218-0110]

Applicable Requirement	Reason Code
OAR Chapter 340:	
Division 202	
all rules	i
Division 206	
0040	i
0050	c
0060	i
0070	i
Division 208	
0570	e
Division 210:	
0100-0120	b
Division 214:	
0210-0220	c
Division 218:	
0050(4)	b
0050(8)	h
0090	b
0100	b
Division 222	
0042	c
Division 226:	
0400	h
Division 228:	
0100	f
0120	f
0200	e
0300	b
0400-0639	b
Appendix A	b
Division 230:	
all rules	e
Division 232:	
0050	e
0080-0230	b
Division 234:	
all rules	b
Division 236:	
all rules	b
Division 238:	
0080	e
0090	i
0100	e
Division 240:	
all rules	d
Division 242:	
0500-0520	e
0600-0630	b
Division 244:	
0232-0252	e
Division 250	
all rules	i,k
Division 252	
all rules	b,k
Division 256:	
0130	b
0140	b
0200-0470	b
Division 258:	b
0120 through 0310	b
0400	b
Division 260:	
0030	b
Division 262	
all rules	b
Division 264	
0100-0120	d
0140-0170	d
Division 266	
all rules	b,h
40 CFR:	
Part 55	b
Part 57	b
Part 60, except subparts A, Dc, IIII and appendices	b
Part 61, except subpart A, M, and appendices	b
Part 63, except subparts A, ZZZZ, WWWWWW and appendices	b
Part 72 through 76	b
Part77	b
Part78	b
Part 82, except subpart F and appendices	b
Part 85 through 89	b

Reason code definitions:

a	this pollutant is not emitted by the facility
b	the facility is not in this source category
c	the facility is not in a special control/nonattainment area
d	the facility is not in this county
e	the facility does not have this emissions unit
f	the facility does not use this fuel type
g	the rule does not apply because no changes have been made at the facility that would trigger these procedural requirements
h	this method/procedure is not used by the facility
i	this rule applies only to DEQ and regional authorities
j	there are no emissions units with add-on control devices or the pre-controlled potential emissions are is less than 100 tons per year or the emissions units with add-on control devices and pre-controlled emissions greater than 100 tons per year are subject to emissions standards promulgated after November of 1990
k	other

ACDP ADMINISTRATIVE REQUIREMENTS

Permit Renewal	The completed application package for a Title V permit is due not more than 120 days after the issuance date of this permit. Two (2) copies of the application must be submitted to the DEQ Permit Coordinator.
Permit Modification	Application for a modification of this permit must be submitted not less than 60 days prior to the source modification. A special activity fee must be submitted with an application for the permit modification. The fees and two (2) copies of the application must be submitted to the Business Office of the Department.
Permit Coordinator Address	All reports, notices, and applications (without associated fees) should be directed to the Permit Coordinator of the Department's Northwest Regional Office. The address is as follows:
	DEQ – Northwest Region 700 NE Multnomah St., Suite #600, Portland, OR 97232 Telephone: (503) 229-5582
Department Contacts - Internet	Information about air quality permits and the Department's regulations may be obtained from the DEQ web page at www.deq.state.or.us.
Department Contacts - General	All inquiries about this permit should be directed to the Department's Northwest Regional Office. The address and phone number are as follows:
	DEQ – Northwest Region 700 NE Multnomah St., Suite #600, Portland, OR 97232 Telephone: (503) 229-5263

ACDP FEES

Annual Compliance Fee	There is no annual compliance fee for this permit. The permittee must pay Title V fees under OAR 340 Division 220.
Change of Ownership or Company Name Fee	The non-technical permit modification fee specified in OAR 340-216-0020, Table 2, Part 3(a) is due with an application for changing the ownership or the name of the company.
Special Activity Fees	The special activity fees specified in OAR 340-216-0020, Table 2, Part 3 (b through i) are due with an application to modify the permit.
Where to Submit Fees	Fees and any associated permit modification application must be submitted to: Department of Environmental Quality Business Office 700 NE Multnomah St Ste 600 Portland OR 97232-4100

ACDP GENERAL CONDITIONS AND DISCLAIMERS

Permitted Activities	This permit allows the permittee to discharge air contaminants from processes and activities related to the air contaminant source(s) listed on the first page of this permit until this permit expires, is modified, or is revoked.
Other Regulations	In addition to the specific requirements listed in this permit, the permittee must comply with all other legal requirements enforceable by the Department.
Conflicting Conditions	In any instance in which there is an apparent conflict relative to conditions in this permit, the most stringent conditions apply.
Masking of Emissions	The permittee must not cause or permit the installation of any device or use any means designed to mask the emissions 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.
Department Access	The permittee must allow the Department's representatives access to the plant site and pertinent records at all reasonable times for the purposes of performing inspections, surveys, collecting samples, obtaining data, reviewing and copying air contaminant emissions discharge records and conducting all necessary functions related to this permit in accordance with ORS 468-095.
Permit Availability	The permittee must have a copy of the permit available at the facility (one at each campus) at all times.
Open Burning	The permittee may not conduct any open burning except as allowed by OAR 340 Division 264.
Asbestos	The permittee must comply with the asbestos abatement requirements in OAR 340, Division 248 when conducting any demolition, renovation, repair, construction, and maintenance activities at the facility.
Property Rights	The issuance of this 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.
Termination, Revocation, or Modification	The Commission may modify or revoke this permit pursuant to OAR 340-216-0060(3) and (4).

ALL INQUIRIES SHOULD BE DIRECTED TO:

DEQ – Northwest Region
700 NE Multnomah St., Suite #600
Portland, OR 97232
Phone: (503) 229-5263