

Public Notice

DEQ Requests Comments on Armstrong World Industries, Inc. Proposed Air Quality Permit Renewal

DEQ invites the public to submit written comments on the conditions of Armstrong World Industries, Inc. proposed air quality permit renewal, known officially as a Title V permit.

Summary

The existing permit expired on Feb. 1, 2015 and was administratively extended. The renewed permit includes emission limits for fine particulate matter and green house gases. It also includes new national emission standard requirements for hazardous air pollutants for commercial, industrial and institutional boilers.

How do I participate?

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

NWR AQ Permit Coordinator
700 NE Multnomah St, Suite 600
Portland, OR 97232

Fax: 503-229-6945

Email: NWRAQPermits@deq.state.or.us

Written comments are due by 5 p.m. Tuesday Oct. 10, 2017.

About the facility

Armstrong World Industries, Inc. is located at 1645 Railroad Ave, St. Helens, Oregon.

The facility produces acoustical ceiling tiles which contain a combination of various raw materials: natural fibers, fillers, manmade fibers, binder and water. The raw materials are mixed together in various amounts and sent to a forming machine. The forming machine drains most of the water from the stock and forms large mats. The wet mats are then dried in the main board dryer and cut into smaller blanks. The blanks are then sent through a series of operations to create an image on the board. The blanks are then painted with a back epoxy coat and top coats, and cut to the desired finished size. After the board is cut, it is then inspected, packaged, stacked, wrapped and stored in the warehouse or shipped to customers. Products of combustion from the dryer, volatile organic compounds from the coating and particulates are the main pollutants emitted by this source.

What air pollutants would the permit regulate?

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

How does DEQ determine permit requirements?

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

How does DEQ monitor compliance with the permit requirements?

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

Armstrong is required to submit semiannual and annual compliance certifications and reports to demonstrate compliance with the permit conditions. DEQ conducts periodic inspections of the facility to ensure it remains in compliance with the permit.

What happens after the public comment period ends?

DEQ will schedule a public hearing if one is requested by 10 or more people, or by an authorized person representing an organization of at least 10 people. An additional public notice will be published to advertise the public hearing.

DEQ will consider and respond to all comments received by the close of the comment period. DEQ may modify provisions in the proposed permit, but the permit writers can only modify conditions of the permit in accordance with the rules and statutes under the authority of DEQ. Participation in the rulemaking or the legislative process is the only way to change the rules or statutes. Ultimately, if a facility meets all legal requirements, DEQ will issue the facility's air quality permit following EPA review.

After the public comment period, DEQ will send the proposed permit to EPA. EPA will have 45 days to review the proposed permit and submit any objections to DEQ in writing. If EPA has no formal objections, any person may petition EPA with an objection during the following 60 days.



State of Oregon
Department of
Environmental
Quality

Northwest Region
Air Quality Program
700 NE Multnomah St.,
Suite 600
Portland, OR 97232

Phone: 503-229-5053

800-452-4011

Fax: 503-229-6945

Contact: Permit Writer
David Kauth

www.oregon.gov/DEQ

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TV Permits"

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restoring, maintaining and
enhancing the quality of
Oregon's air, land and
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Please include your full name and mailing address so that we can remove you from our print mailing list.

A petition may only be based on objections already raised during the public comment period, unless the person submitting the petition can demonstrate it was impossible or impractical to do so, or that new information is now available to justify a new objection.

Where can I get more information?

Find out more and view the application at <http://www.oregon.gov/deq/Get-Involved/Pages/Public-Notices.aspx> or contact:

NWR AQ Permit Coordinator

Phone: 503-229-5582
800-452-4011
Fax: 503-229-6945

Email: nwraqpermits@deq.state.or.us

View the application and related documents in person at the DEQ office in Portland. For a review appointment, call 503-229-5582.

Accessibility information

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

People with hearing impairments may call 711.

Emissions limits

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

Table 1

Criteria Pollutant	Current Limit (tons/yr)	Proposed Limit (tons/yr)
Particulate matter	166	166
Small particulate matter	166	166
Fine particulate matter	NA	164
Nitrogen oxides	53	53
Sulfur dioxide	40	40
Carbon monoxide	481	481
Volatile organic compounds	163	163
Greenhouse gases	NA	77,000

Fine particulate and greenhouse gases are added as regulated pollutants in this permit renewal. This does not represent an allowed emission increase, only acknowledgement that the pollutants exist. For more information about criteria pollutants, go to: www.epa.gov/criteria-air-pollutants

Hazardous air pollutants:

Armstrong World Industries, Inc. is a major source of hazardous air pollutants. As a major source, it is subject to the following National Emission Standards for Hazardous Air Pollutants: Subpart HHHHH for the manufacture of miscellaneous coatings; and Subpart DDDDD for Commercial Industrial and Institutional Boilers. Table 2 summarizes significant hazardous air pollutants which the source emits. More detailed information can be found in the review report.

Table 2

Hazardous Air Pollutants	Potential Emissions (tons/yr)	2013 Actual Emissions (tons/yr)
Formaldehyde	14.3	5.7
Hexane	1.15	0.15

For more information about hazardous air pollutants, go to: <https://www.epa.gov/haps/health-effects-notebook-hazardous-air-pollutants>





**OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY
OREGON TITLE V OPERATING PERMIT**

Northwest Region
700 NE Multnomah St., Suite 600
Portland OR, 97232
Telephone (503) 229-5263

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

ISSUED TO:

Armstrong World Industries, Inc.
1645 Railroad Avenue
St. Helens, OR 97051

INFORMATION RELIED UPON:

Application Number: 027639
Received: 01/31/14

PLANT SITE LOCATION:

1645 Railroad Avenue
St. Helens, OR 97051

LAND USE COMPATIBILITY STATEMENT:

Issued by: City of St. Helens
Dated: 03/03/95

ISSUED BY THE DEPARTEMENT OF ENVIRONMENTAL QUALITY

Michael R Orman, E.I.T., Northwest Region AQ Manager

Date

Nature of Business:

SIC

NAICS

Ceiling tile manufacturer

3999

339999

RESPONSIBLE OFFICIAL

Barb Jeffords

FACILITY CONTACT PERSON

Title: Logistics & Technical Services Manager
Phone: (503) 397-7631

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LIST OF ABBREVIATIONS THAT MAY BE USED IN THIS PERMIT

ACDP	Air Contaminant Discharge Permit	ID	Identification number
Act	Federal Clean Air Act	I&M	Inspection and maintenance
ASTM	American Society of Testing and Materials	NA	Not applicable
Btu	British thermal unit	NO _x	Nitrogen oxides
CEMs	Continuous emission monitoring system	O ₂	Oxygen
CFR	Code of Federal Regulations	OAR	Oregon Administrative Rules
CMS	Continuous monitoring system	ODEQ	Oregon Department of Environmental Quality
CO	Carbon Monoxide	ORS	Oregon Revised Statutes
CPMS	Continuous parameter monitoring system	O&M	Operation and maintenance
DEQ	Department of Environmental Quality	Pb	Lead
dscf	Dry standard cubic feet	PCD	Pollution Control Device
EF	Emission factor	PM	Particulate matter
EPA	US Environmental Protection Agency	PM ₁₀	Particulate matter less than 10 microns in size
EU	Emissions Unit	ppm	Parts per million
FCAA	Federal Clean Air Act	PSEL	Plant Site Emission Limit
FSA	Fuel sampling and analysis	psia	pounds per square inch, actual
gr/dscf	Grain per dry standard cubic feet (1 pound = 7000 grains)	SERP	Source emissions reduction plan
HAP	Hazardous Air Pollutant as defined by OAR 340-244-0040	SO ₂	Sulfur dioxide
HCFC	Halogenated Chloro-Fluoro-Carbons	ST	Source test
		VE	Visible emissions
		VMT	Vehicle miles traveled
		VOC	Volatile organic compounds

PERMITTED ACTIVITIES

1. Until such time as this permit expires or is modified or revoked, the permittee is allowed to discharge air contaminants from those processes and activities directly related to or associated with air contaminant source(s) in accordance with the requirements, limitations, and conditions of this permit. [OAR 340-218-0010 and 340-218-0120(2)]
2. All conditions in this permit are federally enforceable except Conditions 6 and 7 are only enforceable by the state. [OAR 340-218-0060]

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

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

Emissions Group	Emissions Unit	EU ID *	Pollution Control Device	PCD ID *
Main Board Dryers	Wet Stack #1	U1-E4	None	N/A
	Future new unit wet end	UWEDX-EX	None	N/A
	S Main Board Dryer #1	U2-E5	None	N/A
	N Main Board Dryer #1	U3-E6	None	N/A
	Future new unit main dryer	UBDX-EX	None	N/A
Paint Dryers	Prime Dryer #1	U4-E8 (top)	None	N/A
		U4-E8 (bottom)		
	Intermediate Dryer #1	U5-E10	None	N/A
	Finish Dryer #1	U6-E12	None	N/A
	Future new unit	UPDX-EX	None	N/A
Lin-O-Flames	Prime Lin-O-Flame #1	U7-E7	None	N/A
	Future new unit	ULOFX-EX	None	N/A
Paint Coolers (VOC only)	Prime Cooler #1	U9-E9	None	N/A
	Finish Cooler #1	U10-E13	None	N/A
	Finish Cooler #1	U10-E14	None	N/A
	Future new unit	UPCX-EX	None	N/A
Paint Booths	Curtain Coater	U11-D1A	None	NA
	Intermediate Paint Booth #1	U11-D2	Water wash	CD-D2
	Finish Paint Booth #1	U11-D3	Water wash	CD-D3
	Future new unit	U11-DX	Water wash	CD-DX
Paint mixing	Paint Mixing #1	U12-A2	Wet scrubber	CD-A2
	Future new unit	U12-AX	Wet scrubber	CD-AX
Expanders	Expander #1	U13-A1	Wet scrubber	CD-A1
	Future new unit	U13-AX	Wet scrubber	CD-AX
Baghouses	Baghouse #4	U14-B2	Baghouse	CD-B2
	Baghouse #3	U15-B3	Baghouse	CD-B3
	Baghouse #2	U16-B4	Baghouse	CD-B4

Emissions Group	Emissions Unit	EU ID *	Pollution Control Device	PCD ID *
	Baghouse #1	U17-B5	Baghouse	CD-B5
	Baghouse #5	U20-B6	Baghouse	CD-B6
	Future new unit	UBHX-BX	Baghouse	CD-BX
Filler Unloading	Filler Unloading	U18-J3	None	N/A
Chip Pile (VOC emissions only)	Chip Pile	U19-J2	None	N/A
Boilers	1.255 MM Btu/hr boiler 3.94 MM Btu/hr boiler	U21-BLR	None	N/A
Misc Coating Mfg.	Process vessel vents, storage tanks, wastewater streams, equipment leaks and transfer operations associated with HAP coating manufacture	U21-M1	None	N/A
Insignificant Activities		IEU	None	N/A

* X represents an Emission Unit Identification Number that would be assigned to any new Emission Unit.

EMISSION LIMITS AND STANDARDS, TESTING, MONITORING, AND RECORDKEEPING REQUIREMENTS

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.

Table 1. Facility wide emission limits and standards

Applicable Requirement	Condition Number	Pollutant/Parameter	Limit/Standard	Averaging Time	Testing Condition	Monitoring Condition
340-208-0210(1)	4	Fugitive emissions	Minimize	NA	NA	5
340-208-0300	6.a	Odors and particulate	no nuisance	NA	NA	7
340-208-0450	6.b	PM >250 μ	no fallout	NA	NA	7
340-206-0050	8	SERP	Implementation of SERP	Recordkeeping	NA	9
40 CFR Part 68	10	Risk management	Risk management plan	NA	NA	10

4. **Applicable Requirement:** The permittee must not cause, suffer, allow, or permit any materials to be handled, transported, or stored; or a building, its appurtenances, or a road to be used, constructed, altered, repaired or demolished; or any equipment to be operated, without taking reasonable precautions to prevent particulate matter from becoming airborne in accordance with OAR 340-208-0210(1). [OAR 340-208-0210(1)]
5. **Monitoring Requirement:** At least monthly, the permittee must visually survey the facility using Method 22 for a minimum of 30 minutes for any sources of excess fugitive emissions. For the purpose of this survey, excess fugitive emissions are considered to be any visible emissions that leave, or are likely to leave the plant site boundaries for a period or periods totaling more than 18 seconds in a six minute period. The person conducting this survey does not have to be Modified Method 9 certified. However, the individual should be familiar with the procedures of Modified Method 9 including using the proper location to observe visible emissions.

If sources of excess fugitive emissions are identified during the survey, the permittee must immediately take corrective action to minimize the fugitive emissions, and if the emissions continue conduct Modified Method 9 within 24 hours. [OAR 340-208-0210(2) and (3)]

6. Applicable Requirement: Nuisance Conditions:
 - 6.a. The permittee must not cause or permit the emission of odorous or particulate matter in such a manner as to cause a public nuisance in accordance with OAR 340-208-0300. [OAR 340-208-0300(1)] This condition is enforceable only by the State.
 - 6.b. The permittee must not cause or permit the emission of any particulate matter which is 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.
7. Monitoring Requirement: The permittee must maintain a log of each complaint. Documentation must include date of contact, time of observed nuisance condition, description of nuisance condition, location of receptor, status of plant operation during the observed period, and time of response to complainant. A plant representative 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. This condition is only enforceable by the state. [OAR 340-218-0050(3)(a)]
8. Applicable Requirement: In the event an Air Pollution Alert, Warning, or Emergency Episode is declared in the Portland or St. Helens areas by DEQ, the permittee must take the actions listed below, which constitutes the Source Emission Reduction Plan for the source, when the permittee first becomes aware of such a declaration whether through news media, direct contact with DEQ, or from other sources.
 - 8.a. ALERT: Prepare to curtail combustion of natural gas.
 - 8.b. WARNING: Review production schedules for possibilities to alter line speeds or change product mix to minimize emissions.
 - 8.c. EMERGENCY: Continue Warning actions and minimize emissions by reducing combustion demands to an absolute minimum consistent with the prevention of equipment damage.
 - 8.d. During an applicable Air Pollution Episode, this Source Emission Reduction Plan shall be available on the source premises for inspection by DEQ personnel. [OAR 340-206-0050]
9. Monitoring for Condition 8: The permittee must maintain records of any air pollution episode and emissions reduction actions taken in response to such episode. [OAR 340-214-0114]
10. Applicable Requirement: Should this stationary source become subject to the accidental release prevention regulations in 40 CFR Part 68, the permittee must submit a risk management plan (RMP) by the date specified in 40 CFR 68.10 and comply with the plan and all other applicable Part 68 requirements. [40 CFR Part 68]

Table 2 Emission Unit Specific Emission Limits and Standards

EU ID	Applicable Requirement	Condition Number	Pollutant/Parameter	Limit/Standards	Monitoring Requirements	
					Method	Condition No.
U1-E4, U2-E5, U3-E6, UWEDX-EX, UBDX-EX	340-208-0110(3)(b) and 340-208-0110(2)	11	Visible emissions	20% opacity	VE periodic monitoring	12
	340-226-0210(2)(a)(A) or (2)(b)	13	PM	0.10 gr/dscf	ST and VE periodic monitoring	14
	340-224-0070(1)	15	CO	250 #/hr	CEMS	15
	340-224-0070(1)	17	CO	Good combustion practices	Periodic monitoring and O & M monitoring	18, 19
U9-E9, U10-E13, U10-E14, UPCX-EX	See PSEL	NA	VOC	PSEL Only	NA	NA
U4-E8, U5-E10, U6-E12, UPDX-EX, U7-E7, ULOFX-EX, U12-A2, U12-AX	340-208-0110(3)(b) and 340-208-0110(2)	11	Visible emissions	20% opacity	VE periodic monitoring	12
	340-226-0210(2)(b)(B)	13	PM	0.14 gr/dscf	Recordkeeping	56
U11-D1A, U11-D2, U11-D3, U11-DX	340-208-0110(3)(b) and 340-208-0110(2)	11	Visible emissions	20% opacity	VE periodic monitoring	12
	340-226-0210(2)(b)(B)	23	PM	0.14 gr/dscf	Recordkeeping	24 and 56
U13-A1, U13-AX	340-208-0110(3)(b) and 340-208-0110(2)	11	Visible emissions	20% opacity	VE periodic monitoring	12
	340-238-0060 40 CFR 60.732(a)	20	PM	0.04 gr/dscf	Recordkeeping	14, 20 and 21
U14-B2, U15-B3, U16-B4, U17-B5, U20-B6, UBHX-BX	340-208-0110(3)(b) and 340-208-0110(2)	11	Visible emissions	20% opacity	VE periodic monitoring	12
	340-226-0210(2)(b)(B)	25	PM	0.14 gr/dscf	Recordkeeping	27 and 56
	340-226-0310	25	PM	Division 21 Table 1, lb/hr at tested process rate	Recordkeeping	27 and 56
U18-J3	340-208-0110(3)(b) and 340-208-0110(2)	11	Visible emissions	20% opacity, 6 minutes	VE periodic monitoring	12
U19-J2	See PSEL	NA	VOC	PSEL Only	NA	NA
U21-BLR	40CFR63 subpart DDDDD	54, 55, 56	Work practices	Tune-up and energy audit	Recordkeeping	57

11. **Applicable Requirement:** The permittee must not cause or allow the emissions of any air contaminant into the atmosphere from emissions units U1-E4 (wet end stack), UWEDX-EX (future wet end stacks), U2-E5, (S main board dryer stack), U3-E6 (N main stack), UBDX-EX (future main board dryer stack), U4-E8 (prime dryer), U5-E10 (intermediate dryer), U6-E12 (finish dryer), UPDX-EX (future dryer), U7-E7 (prime lin-o-flame), ULOF-EX (future lin-o-flame), U11-D1A (curtain coater), U11-D2 (intermediate paint booth), U11-D3 (finish paint booth), U11-DX (future paint booth), U12-A2 (paint mixing), U12-AX (future paint mixing), U13-A1 (expander), U13-AX, U14-B2 (baghouse #4), U15-B3 (baghouse #3), U16-B4 (baghouse #2), U17-B5 (baghouse #1), U20-B6 (baghouse #5), UBHX-EX (future baghouse) and U18-J3 (filler unloading) that is equal to or greater than 20 percent opacity. [OAR 340-208-0110(3)(b) and (2)]

12. Monitoring for Condition 11: The permittee must monitor visible emissions from emissions units U1-E4 (wet end stack), UWEDX-EX (future wet end stacks), U2-E5 (S main board dryer stack), U3-E6 (N main board dryer stack), UBDX-EX (future main board dryer stacks), U4-E8 (prime dryer), U5-E10 (intermediate dryer), U6-E12 (finish dryer), UPDX-EX (future dryer), U7-E7 (prime lin-o-flame), ULOFX-EX (future lin-o-flame), U11-D1A (curtain coater), U11-D2 (intermediate paint booth), U11-D3 (finish paint booth), U11-DX (future paint booth), U12-A2 (paint mixing), U12-AX (future paint mixing), U13-A1 (expansion), U13-AX (future expander), U14-B2 (baghouse #4), U15-B3 (baghouse #3), U16-B4 (baghouse #2), U17-B5 (baghouse #1), U20-B6 (baghouse #5), and UBHX-BX (future baghouse) in accordance with the following procedures, test methods, and frequencies: [OAR 340-208-0110(2)]
- 12.a. EPA Method 9 must be used to determine opacity in accordance with DEQ's Source Sampling Manual. Prior notification and a pre-test plan are not required to be submitted to DEQ for each test or survey conducted. [OAR 340-208-0110(2)(a)]
 - 12.b. Visible emissions testing, using EPA Method 9, may be waived provided both of the following conditions are met: [OAR 340-208-0110(2)(c)]
 - 12.b.i. The permittee must conduct a visible emissions survey at various points of observation using EPA Reference Method 22; and
 - 12.b.ii. Visible emissions, excluding condensed water vapor, from an individual monitoring point are not detected for more than 5% of the survey time.
 - 12.c. The permittee must use the following monitoring schedule for conducting the visible emissions tests and/or surveys required by this condition:
 - 12.c.i. The initial monitoring frequency for performing visible emission tests and/or surveys is as follows:

Emissions Unit	Frequency
U1-E4, UWEDX-EX, U2-E5, U3-E6, UBDX-EX	Weekly
U11-D1A, U11-D2, U11-D3, U11-DX, U13-A1, U13-AX, U14-B2, U15-B3, U16-B4, U17-B5, U20-B6, UBHX-BX	Monthly
U4-E8, U5-E10, U6-E12, UPDX-EX, U7-E7, U8-E11, ULOFX-EX, U12-A2, U12-AX	Quarterly

- 12.c.ii. If EPA Method 9 tests are not required as a result of the visible emissions survey, or EPA Method 9 tests show opacity within the applicable limits specified in Condition 9 for at least 6 consecutive observation weeks, the EPA Method 9 tests and/or surveys need only be done once per month.
- 12.c.iii. If EPA Method 9 tests are not required as a result of the visible emissions survey or EPA Method 9 tests show opacity within the applicable limits specified in Condition 9 for at least 10 consecutive observation months, the EPA Method 9 tests and/or surveys need only be done once per quarter.
- 12.c.iv. If an opacity exceedance occurs that is not immediately remedied and fixed, the permittee must conduct a EPA Method 9 test at least daily. If the EPA Method 9 tests conducted during five (5) consecutive observation days identify no exceedance, the survey and/or observation frequency can go back to the same frequency as before the exceedance occurred.
- 12.c.v. Permit renewal does not require the permittee to revert to the initial monitoring frequency.

- 12.d. If the observer is unable to conduct the survey and/or EPA Method 9 tests during the morning hours due to visual interference caused by other visible emissions sources (e.g. fugitive emissions during high wind conditions) or due to weather conditions such as fog, heavy rain, high humidity, winds, or snow which impair visibility, the observer must note such conditions on the data observation sheet and make at least two attempts daily to conduct the surveys and/or tests during the morning hours. Periods of time during which the visible emissions survey and/or test could not be conducted due to visual interference, adverse weather conditions and/or plant shutdown must not be considered in determining the consecutive observation period for purposes of Condition 12.c.
13. Applicable Requirement: The permittee must not cause or allow the emissions of particulate matter in excess of 0.10 grains per dry standard cubic foot from emissions units U1-E4 (wet end stack), UWEDX-EX (future wet end stacks), U2-E5 (S main board dryer stack), U3-E6 (N main board dryer stack), UBDX-EX (future main board dryer stacks), or in excess of 0.14 grains per dry standard cubic foot from emissions units U4-E8 (prime dryer), U5-E10 (intermediate dryer), U6-E12 (finish dryer), UPDX-EX (future dryer), U7-E7 (prime lin-o-flame), ULOFX-EX (future lin-o-flame), UX-EX, U12-A2 (paint mixing), and U12-AX (future paint mixing) as follows: [OAR 340-226-0210(2)(a)(A) or (2)(b)]
- 13.a. Particulate matter emissions for emissions units U1-E4 (wet end stack), UWED-EX (future wet end stacks, U2-E5 (S main board dryer stack), U3-E6 (N main board dryer stack), and UBDX-EX (future main board dryer stacks) must be measured using the test methods identified in Condition 14; and
- 13.b. If testing is required, particulate matter emissions for emissions units U4-E8 (prime dryer), U5-E10 (intermediate dryer), U6-E12 (finish dryer), future unit UPDX-EX, U7-E7 (prime lin-o-flame), U8-E11 (intermediate lin-o-flame), future unit ULOFX-EX, U12-A2 (paint mixing), and future unit U12-EX must be measured using the test methods identified in Condition 56.
14. Monitoring for Condition 13: Particulate matter concentration (gr/dscf) and mass (lb/hr) emissions for emission units U1-E4 (wet end stack), UWEDX-EX (future wet end dryer), U13-A1 (expanders), U13-AX (future expanders), and either U2-E5 (S main board dryer stack), U3-E6 (N main board dryer stack), or UBDX-EX (future main board dryer stack) must be determined using ODEQ Method 5 in accordance with DEQ's Source Sampling Manual. Each test run must be a minimum of 60 minutes long with a minimum sample volume of 31.6 dscf. Test results must be reported as grains per dry standard cubic foot (gr/dscf) and pounds per hour. Opacity must be measured concurrently with Method 5 testing using EPA Method 9 with a 6-minute test. The Method 9 requirement will be waived if adverse atmospheric conditions are occurring during the Method 5 testing. If in operation, at least one source test must be performed on U1-E4 (wet end stack), UWEDX-EX (future wet end stacks), U13-A1 (expansion), U13-AX (future expansion) and either U2-E5 (S main board dryer stack), U3-E6 (N main board dryer stack), or UBDX-EX (future main board dryer stacks) within the term of the permit. Subsequent dryer tests should be rotated between dryers. [OAR 340-226-0210(3)]
15. Applicable Requirement (NSR/PSD Condition): The permittee must not cause or allow emissions of carbon monoxide from the main board dryer (U1-E4, U2-E5, and U3-E6) and future board dryer (UWEDX-EX and UBDX-EX) in excess of 250 pounds per hour. Hourly carbon monoxide emissions for the main board dryer must be monitored using a CEMS in accordance with Condition 16. [OAR 340-224-0070(1)]

16. Monitoring for NSR/PSD Condition 15: CO emissions from the main board dryer must be determined using a continuous emission monitoring system (CEMS). The CEMS must include a diluent oxygen monitor to measure O₂ percent. The CO emissions will be calculated each hour of main board dryer operation in accordance with the following equations: [OAR 340-224-0070(1)]

$$E = C_a \times K_1 \times F_d \times [20.9/(20.9-\%O_2)] \times H$$

where:

E	=	CO emissions from the main board dryer in pounds per hour (lb/hr);
C _a	=	Average CO concentration measured in both North and South stacks over the previous 3-hour period (ppm)
K ₁	=	Constant for converting ppm to lb/dscf = 7.267×10^{-8}
%O ₂	=	Average oxygen concentration measured in both North and South stacks collected over the hour (%)
H	=	Heat input over the hour (MM Btu/hour) for entire board dryer, including North stack, South stack and wet end stack = gas usage (dscf/hr) x 1020×10^{-6} MM Btu/dscf for natural gas [or 2499×10^{-6} MM Btu/dscf for propane]
F _d	=	EPA Method 19 value (8710 dscf/MM Btu for natural gas or propane)

- 16.a. The permittee must operate the CEMS in accordance with the facility's quality assurance plan and operating procedures. The facility's plan and procedures must be available onsite for Department review, upon request.
- 16.b. The CEMS must operate when the main dryer is in operation. Samples collected by the CEMS will alternate between the two stacks on an hourly basis as follows:
- 10 minutes- N. stack
 - 5 minutes- line purge
 - 10 minutes- S. stack
 - 5 minutes- line purge
 - 10 minutes- N. stack
 - 5 minutes- line purge
 - 10 minutes- S. stack
 - 5 minutes- line purge
- 16.c. Real time CO concentrations (ppm) and O₂ % data must be displayed and recorded at least once every minute that samples are collected for a particular stack. Fuel usage must be recorded once each clock hour that the dryer is in operation. Hourly CO emissions from the main board dryer must be calculated and recorded once each clock hour that the dryer is in operation.
- 16.d. Minimum data availability must be 90% of the hours of dryer operation in any month and year. Monitor availability must be determined excluding periods of calibrations, quality control activities, and routine maintenance.
- 16.e. Annual emissions from the main board dryer must be calculated by the sum of the total hourly emissions for each rolling twelve calendar month period converted to tons. For hours when the main board dryer is in operation with missing data, the hourly CO emission will be equal to the highest calculated emission of either the hour preceding or hour after the period of missing data.

- 16.f. The permittee must conduct a Relative Accuracy Test Audit (RATA) within 90 days of starting operation of the CEM system. An additional RATA must be performed during each subsequent 5 year permit term or when required by DEQ. The RATA results must be submitted to DEQ within 60 days of the test date.
- 16.g. The permittee must conduct quarterly Cylinder Gas Audits (CGA) on the CEM system as long as the main board dryer and CO CEM system are in operation. A summary of the CGA results must be submitted with annual report. Inconsistencies must be reported as soon as known and within 60 days of the test.
- 16.h. The RATAs and CGAs must be performed in conformance with the facility's quality assurance plan and DEQ's source test manual unless approved otherwise by DEQ.
17. Applicable Requirement (NSR/PSD/BACT Condition): The permittee must maintain the following work practices as a demonstration of good combustion practices in the main board dryer (U1-E4, U2-E5, and U3-E6) and the future board dryer (UWEDX-EX and UBDX-EX). The monitoring frequencies for the good combustion practices are defined in 18. [OAR 340-224-0070(1)]
- 17.a. The differential pressure of the air-to-fuel in the reheat burner of the main board dryer must be maintained within the action level range to be determined according to this paragraph. The differential pressure measurements will be made at least twice each month for the first six months of this permit. Based on that initial monitoring, Armstrong will submit a proposed action level range for differential pressure within 8 months of permit issuance. The action level range will become part of this permit upon approval in writing from DEQ. A differential pressure excursion outside the action level range will not be considered a violation of the permit as long as corrective action is taken within 4 hours of the monitoring event indicating the excursion.
- 17.b. The permittee must maintain the specific gravity of the air-to-fuel mixture for each burner (54 total) within a range of 0.94 to 0.98. At any time that the specific gravity is measured to be outside of the range, plant staff will adjust the burner to return to this specific gravity indicator range. A specific gravity excursion outside this range will not be considered a violation of the permit as long as corrective action is taken within 4 hours of the monitoring event indicating the excursion.
- 17.c. The permittee must perform visual inspections at startup and at least once each day of operation to ensure that all of the burners are lit while the main board dryer is in operation. The permittee must adjust, repair or replace burners that do not light.
- 17.d. Each burner must be inspected and tuned by plant personnel at least once every six months. The inspection will include inspections of burner joints, the face of burners and burner assemblies, and linkages for the air-to-fuel ratio. Repair and/or retuning of the burners will be made whenever inspections indicate that corrective action is necessary.
- 17.e. At least once during the permit term, an independent contractor will inspect the burners for physical condition and proper tuning and will retune the burners as necessary.
- 17.f. The permittee will use an air wand to clean each burner zone in the dryer to remove debris from the face of the burners at least once every 3 months.
- 17.g. Dryer ductwork will be visually inspected at least once every 6 months for deterioration or leakage. Repairs to the ductwork will be made if deterioration is identified.

18. Monitoring for NSR/BACT Condition 17: The permittee must monitor good combustion practices in the main board dryer according to the schedule defined in this condition. Records of each measurement and any corrective actions must be maintained onsite and be available for DEQ review, upon request. [OAR 340-224-0070(1)]
- 18.a. Measure the differential pressure of air-to-fuel on the reheat burner at least once every six months.
- 18.b. Measure the air-to-fuel ratio (specific gravity) on each burner once per calendar year using a specifigravometer (Ranarex or equivalent). The specifigravometer must be operated in accordance with the manufacturer's instructions.
19. Recordkeeping for NSR/BACT Condition 17: The permittee must keep records of the good combustion practices performed on the main board dryer. Records of each inspection and any corrective actions as required by Conditions 17.c, 17.d, 17.e, 17.f, and 17.g must be maintained onsite and be available for Department review, upon request. [OAR 340-224-0070(1)]
20. Applicable Requirement: The permittee must not cause or allow the emissions of particulate matter in excess of 0.040 gr/dscf from emissions units U13-A1 (expander) or U13-AX. [40 CFR 60.732(a) & OAR 340-238-0060] Particulate matter emissions must be measured, when required, in accordance with the methods set forth in Condition 14.
21. Monitoring for Condition 20: The permittee must install, calibrate, maintain, and operate monitoring devices that continuously measure and record the pressure loss of the gas stream through the emissions units U13-A1 and U13-AX (expander) scrubber CD-A1 and CD-AX and the scrubbing liquid flow rate to the scrubbers, in accordance with 40 CFR 60.734. [40 CFR 60.734(d) & OAR 340-238-0060]
22. Monitoring for Condition 20: The permittee must maintain records of monthly inspection and maintenance procedures for emissions unit U13-A1 and U13-AX (expansion) scrubber CD-A1 and CD-AX which include: [40 CFR 60.734(d) and 60.735(a)]
- 22.a. Replacement of missing spray nozzles or the unplugging of water lines; and
- 22.b. Maintenance activity and inspection records of the scrubber must be recorded on inspection forms.
23. Applicable Requirement: The permittee must not cause or allow the emissions of particulate matter, in excess of 0.14 grains per standard cubic foot from emissions units U11-D1A (curtain coater), U11-D2 (intermediate paint booth), U11-D3 (finish paint booth), or U11-DX (future paint booth). [OAR 340-226-0210(2)(b)(B)] Particulate matter emissions must be measured in accordance with Condition 56, except as provided in Condition 24.
24. Monitoring for Condition 23: The requirements of Condition 23 will be satisfied for U11-D1A (curtain coater), U11-D2 (intermediate paint booth), and U11-D3 (finish paint booth), and U11-DX (future paint booth) provided: [OAR 340-214-0114]
- 24.a. The permittee inspects the water wash areas weekly in the paint booths and maintains proper water quality and equipment operation, where proper water quality constitutes a full water wash curtain that extends completely across the width of the paint booth, and
- 24.b. The permittee monitors the opacity according to Condition 12 and maintains compliance with the opacity limits set forth in Condition 11.

25. Applicable Requirement: The permittee must not cause or allow the emissions of particulate matter in excess of 0.14 gr/dscf from emissions units U14-B2 (baghouse #4), U15-B3 (baghouse #3), U16-B4 (baghouse #2), U17-B5 (baghouse #1), U20-B6 (baghouse #5) or UBHX-EX (future baghouse). [OAR 340-226-0210(2)(b)(B)] Source testing is not currently required. If required in the future, particulate matter emissions must be measured in accordance with Condition 56.
26. Applicable Requirement: The permittee must not cause or allow the emission of particulate matter in any one hour from emissions units U14-B2 (baghouse #4), U15-B3 (baghouse #3), U16-B4 (baghouse #2), U17-B5 (baghouse #1), U20-B6 (baghouse #5) or UBHX-EX (future baghouse) in excess of the amount shown in Table 1, OAR 340-226-0310, for the process weight allocated to that process. [OAR 340-226-0310] Source testing is not currently required. If required in the future, particulate matter emissions must be measured in accordance with Condition 56.
27. Monitoring for Conditions 25 and 26: The permittee must inspect the baghouses monthly and conduct maintenance as needed. Records of the inspections and maintenance of the baghouses for emissions units U14-B2 (baghouse #4), U15-B3 (baghouse #3), U16-B4 (baghouse #2), U17-B5 (baghouse #1), U20-B6 (baghouse #5), and UBHX-BX (future baghouse) must include: [OAR 340-214-0114]
- 27.a. inspection records of the baghouse bags, recorded on inspection forms; and
- 27.b. maintenance activity records of replacement of baghouse bags on occurrence (when broken and routinely replaced), recorded in a maintenance log.

Insignificant Activities Emission Limits and Standards

28. 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:
- 28.a. OAR 340-208-0110 (20% opacity)
- 28.b. OAR 340-228-0210 (0.14 gr/dscf corrected to 12% CO₂ or 50% excess air for fuel burning equipment)
- 28.c. OAR 340-226-0210 (0.14 gr/dscf for non-fugitive, non-fuel burning equipment)
- 28.d. OAR 340-226-0310 (process weight limit for non-fugitive, non-fuel burning process equipment)
29. Testing, Monitoring, and Recordkeeping Requirements: 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.

PLANT SITE EMISSION LIMITS

30. The permittee must not allow plant site emissions for any 12 consecutive calendar month period (tons/year), including insignificant activities (Emission Unit IEU), to exceed the following: [OAR 340-222-0020 and 340-222-0041]

Emissions Unit ID Number	Pollutant	PSEL Tons/year	Monitoring Requirements	
			Method	Permit Condition
Facility-wide	PM/PM ₁₀	166	Recordkeeping	31
	PM _{2.5}	164	Recordkeeping	31
	CO	481	Recordkeeping	31
	NO _x	53	Recordkeeping	31
	SO ₂	40	Recordkeeping	31
	VOC *	163	Recordkeeping	31
	GHG CO _{2e}	77,000	Recordkeeping	31

- * VOC emissions consist of VOC as measured by EPA Method 25A and formaldehyde as measured by EPA Method 316. The combined emissions must be the sum of VOC emissions (as propane) plus formaldehyde emissions (as formaldehyde) recorded as total VOC.

31. The permittee must determine compliance with PSELs established in Condition 30 of this permit by conducting monitoring in accordance with the following procedures, test methods, and frequencies: [OAR 340-222-0080]

- 31.a. The permittee must maintain monthly and annual records of the following material and process parameters:

Material or process parameter	Emissions Unit(s)	Pollutant(s)/parameter(s)	Measurement Technique	Measurement Frequency
Fuel usage: amount of natural gas and LPG used by facility	U4-E8, U5-E10, U6-E12, UPDX-EX, U7-E7, ULOFX-EX, U13-A1, U13-AX, U21-BLR	PM/PM ₁₀ /PM _{2.5} , CO, NO _x & SO ₂	Flow meter/ Tank meter	Monthly
Main Board Dryer Natural Gas	U1-E4, UWEDX-EX, U2-E5, U3-E6, UBDX-EX	PM/PM ₁₀ /PM _{2.5} , CO, NO _x & SO ₂	Flow meter/ Tank meter	Hourly, Monthly
CO and O ₂ Concentrations	U1-E4, UWEDX-EX, U2-E5, U3-E6, UBDX-EX	CO	CEM	Continuous
Filler unloading throughput	U18-J3	PM/PM ₁₀ /PM _{2.5}	Receiving records	Monthly
Gross sheet production	U1-E4, UWEDX-EX, U2-E5, U3-E6, UBDX-EX, U4-E8, U5-E10, U6-E12, UPDX-EX, U7-E7, ULOFX-EX, U9-E9, U10-E13, U10-E14, UPCX-EX, U11-D1A, U11-D2, U11-D3, U11-DX, U12-A2, U12-AX, U13-A1, U13-AX, U14-B2, U15-B3, U16-B4, U17-B5, U20-B6, UBHX-BX	PM/PM ₁₀ /PM _{2.5} , VOC	Production Records	Monthly

31.b. Except for CO emissions from the main board dryer, the permittee must determine compliance with PSELs established in Conditions 30 of this permit by calculating annual emissions using the following formulas, the process parameter measurements identified in Condition 31.a and the emission factors listed in Condition 31.d:

$$E = [\sum (P_{eu} \times EF_{eu})] \times K_1 + K_2$$

where:

- E: pollutant emissions – tons per month and tons/yr
- P_{eu}: process parameter throughput identified in Condition 31.a
- Ef_{eu}: emission factor identified for each emissions unit and pollutant in Condition 31.a.
- K₁: “1 ton/2000 lbs” for monthly and annual emission calculation.
- K₂: Aggregate Insignificant Emissions: “1 tpy” for criteria pollutant

31.b.i. The permittee must determine natural gas usage using the following equations:

Wet End Stacks and Main Board Dryers Stacks:

$$P_{NG} = \{(D_{NG} \times K_5) + [(P_{LPG} \times 1 \text{ cf NG}/0.01106 \text{ LPG gal}) \times K_3 \times K_6]\} \times 10^{-6}$$

Emission Points other than Wet End Stacks and Main Board Dryers Stacks:

$$P_{NG} = \{(T_{NG} \times K_4) + [(P_{LPG} \times 1 \text{ cf NG}/0.01106 \text{ LPG gal}) \times K_3 \times K_6]\} \times 10^{-6}$$

$$T_{NG} = TOT_{NG} - D_{NG}$$

where:

- P_{NG}: Process parameter for natural gas usage, MMcf
- D_{NG}: Main Board Dryer natural gas, cf
- T_{NG}: Emission Point natural gas excluding Main Board Dryer natural gas, cf
- TOT_{NG}: Total plant natural gas, cf
- P_{LPG}: Actual LPG usage, gallon
- K₃: “1.00” for PM/PM₁₀, and CO; “1.50” for NO_x; “1.84” for SO₂
- K₄: Emission Point fraction of total natural gas usage (excluding main board dryer usage)
- K₅: Emission Point Fraction of main board dryer natural gas
- K₆: Emission Point fraction of total plant propane

K₄, K₅, K₆ Values for existing Emissions Units:

Emissions Point	K ₄	K ₅	K ₆
U1-E4	N/A	0.12	0.088
U2-E5	N/A	0.44	0.322
U3-E6	N/A	0.44	0.322
U4-E8 (top)	0.248	N/A	0.066
U4-E8 (bottom)	0.082	N/A	0.022
U5-E10	0.174	N/A	0.047
U6-E12	0.174	N/A	0.047
U7-E7	0.124	N/A	0.033
U13-A1	0.198	N/A	0.053

If additional emissions units are constructed, K₄, K₅, and K₆ need to be recalculated for all emissions units due to a redistribution of MMBTU for natural gas-fired emission units. The following formulas are used to calculate the new values of K₄, K₅, and K₆:

K_4 : Emission Units other than Wet End Stacks and Main Board Dryers Stacks:

$$K_4 = Z_n / \Sigma (Z_n)$$

K_5 : Wet End Stacks:

$$K_5 = Z_{WED} / [\Sigma (Z_{WED}) + \Sigma(Z_{BD})]$$

Main Board Dryer Stacks:

$$K_5 = Z_{BD} / [\Sigma (Z_{WED}) + \Sigma(Z_{BD})]$$

K_6 : Future Wet End and Main Board Dryer Stacks:

$$K_6 = Z_{WED} / [\Sigma (Z_{WED}) + \Sigma(Z_{BD}) + \Sigma (Z_n)]$$

Main Board Dryer Stacks:

$$K_6 = Z_{BD} / [\Sigma (Z_{WED}) + \Sigma(Z_{BD}) + \Sigma (Z_n)]$$

Emission Units other than Wet End Stacks and Main Board Dryer Stacks:

$$K_6 = Z_n / [\Sigma (Z_{WED}) + \Sigma(Z_{BD}) + \Sigma (Z_n)]$$

where:

Z: Emission Units MMBTU ratings

Z_n : Emission Units excluding Wet End Stacks and Main Board Dryer Stacks, MMBTU

Z_{WED} : Wet End Stacks, MMBTU

Z_{BD} : Main Board Dryer Stacks, MMBTU

Emission Points MMBTU Ratings:

Emissions Group	Emissions Unit	MMBTU Rating
Main Board Dryers	U1-E4	20
	UWEDX-EX	Z_{WED}
	U2-E5	73
	U3-E6	73
	UBDX-EX	Z_{BD}
Paint Dryers	U4-E8 (top)	15.05
	U4-E8 (bottom)	5
	U5-E10	10.5
	U6-E12	10.5
	UPDX-EX	Z_n
Lin-O-Flames	U7-E7	7.59
	ULOFX-EX	Z_n
Expanders	U13-A1	12
	U13-AX	Z_n

* where n = 1, 2,∞

- 31.c. For the purposes of PSEL compliance, CO emissions from the main board dryer (U1-E4, U2-E5, and U3-E6) and future main board dryers (UWEDX-EX and UBDX-EX) will be calculated

according to the methods and procedures defined in Condition 16. These results will be added to the CO emissions from other emission units at the plant to determine plant wide CO emissions.

31.d. Emission factors for calculating pollutant emissions:

Emissions Group	Emissions Unit	Pollutant	Emission Factor	Emission Factor Units	Emission Factor Verification Testing	
					Yes/No	Test Method
Main Board Dryers	U1-E4 and UWEDX-EX	PM/PM ₁₀	2.50E-2	Lb/sheet	Yes	ODEQ Method 5
		CO	CEM results	NA	No	NA
		NO _x	38	Lb/MMcf	No	NA
		VOC*	1.94E-2	Lb/sheet	No	NA
	U2-E5	PM/PM ₁₀	7.15E-2	Lb/sheet	Yes	ODEQ Method 5
		CO	CEM results	NA	No	NA
		NO _x	48	Lb/MMcf	Yes	EPA Method 7E
		SO ₂	0.6	Lb/MMcf	No	NA
		VOC*	6.43E-2	Lb/sheet	No	NA
	U3-E6	PM/PM ₁₀	7.31E-2	Lb/sheet	Yes	ODEQ Method 5
		CO	CEM results	NA	No	NA
		NO _x	48	Lb/MMcf	Yes	EPA Method 7E
		SO ₂	0.6	Lb/MMcf	No	NA
		VOC*	6.67E-2	Lb/sheet	No	NA
	UBDX-EX	PM/PM ₁₀	To be developed**	Lb/sheet	Yes	ODEQ Method 5
		CO	CEM results	NA	No	NA
		NO _x	48	Lb/MMcf	Yes	EPA Method 7E
		SO ₂	0.6	Lb/MMcf	No	NA
		VOC*	To be developed**	Lb/sheet	No	NA
	Paint Dryers	U4-E8 (top)	PM/PM ₁₀	7.6	Lb/MMcf	No
CO			230	Lb/MMcf	No	NA
NO _x			100	Lb/MMcf	No	NA
VOC*			7.07E-3	Lb/sheet	No	NA
U4-E8 (bottom)		PM/PM ₁₀	7.6	Lb/MMcf	No	NA
		CO	230	Lb/MMcf	No	NA
		NO _x	140	Lb/MMcf	No	NA
		VOC*	7.07E-3	Lb/sheet	No	NA
U5-E10		PM/PM ₁₀	7.6	Lb/MMcf	No	NA
		CO	230	Lb/MMcf	No	NA
		NO _x	100	Lb/MMcf	No	NA
		VOC*	4.04E-3	Lb/sheet	No	NA
U6-E12		PM/PM ₁₀	7.6	Lb/MMcf	No	NA
		CO	230	Lb/MMcf	No	NA

Emissions Group	Emissions Unit	Pollutant	Emission Factor	Emission Factor Units	Emission Factor Verification Testing	
					Yes/No	Test Method
		NO _x	100	Lb/MMcf	No	NA
		VOC*	1.68E-3	Lb/sheet	No	NA
Paint Dryers	UPDX-EX	PM/PM ₁₀	7.6	Lb/MMcf	No	NA
		CO	230	Lb/MMcf	No	NA
		NO _x	100	Lb/MMcf	No	NA
		VOC*	To be developed**	Lb/sheet	No	NA

Emissions Group	Emissions Unit	Pollutant	Emission Factor	Emission Factor Units	Emission Factor Verification Testing	
					Yes/No	Test Method
Lin-O-Flames	U7-E7	CO	490	Lb/MMcf	No	NA
		NO _x	100	Lb/MMcf	No	NA
		VOC*	2.96E-2	Lb/sheet	No	NA
	ULOFX-EX	CO	490	Lb/MMcf	No	NA
		NO _x	100	Lb/MMcf	No	NA
		VOC*	To be developed**	Lb/sheet	No	NA
Paint Coolers	U9-E9	VOC*	5.47E-3	Lb/sheet	No	NA
	U10-E13	VOC*	5.48E-3	Lb/sheet	No	NA
	U10-E14	VOC*	4.47E-3	Lb/sheet	No	NA
	UPCX-EX	VOC*	To be developed**	Lb/sheet	No	NA
Paint Booths	U11-D1A	PM/PM ₁₀	7.56E-3	Lb/sheet	No	NA
		VOC*	3.18E-3	Lb/sheet	No	NA
	U11-D2	PM/PM ₁₀	7.56E-3	Lb/sheet	No	NA
		VOC*	3.18E-3	Lb/sheet	No	NA
	U11-D3	PM/PM ₁₀	8.61E-3	Lb/sheet	No	NA
		VOC*	3.18E-3	Lb/sheet	No	NA
	U11-DX	PM/PM ₁₀	8.61E-3**	Lb/sheet	--	NA
		VOC*	3.18E-3**	Lb/sheet	--	NA
Paint Mixing	U12-A2	PM/PM ₁₀	1.84E-3	Lb/sheet	No	NA
		VOC*	1.08E-2	Lb/sheet	No	NA
	U12-AX	PM/PM ₁₀	1.84E-3**	Lb/sheet	--	NA
		VOC*	1.08E-2**	Lb/sheet	--	NA
Expanders	U13-A1	PM/PM ₁₀	1.3E-2	Lb/sheet	Yes	ODEQ Method 5
		CO	84	Lb/MMcf	No	NA
		NO _x	100	Lb/MMcf	No	NA
	U13-AX	PM/PM ₁₀	1.3E-2**	Lb/sheet	Yes	ODEQ Method 5
		CO	84	Lb/MMcf	No	NA
		NO _x	100	Lb/MMcf	No	NA

Emissions Group	Emissions Unit	Pollutant	Emission Factor	Emission Factor Units	Emission Factor Verification Testing	
					Yes/No	Test Method
Baghouses	U14-B2	PM/PM ₁₀	***	Lb/sheet	No	NA
	U15-B3	PM/PM ₁₀	3.91E-3	Lb/sheet	No	NA
	U16-B4	PM/PM ₁₀	6.26E-3	Lb/sheet	No	NA
Baghouses	U17-B5	PM/PM ₁₀	1.79E-2	Lb/sheet	No	NA
	U20-B6	PM/PM ₁₀	3.05E-3	Lb/sheet	No	NA
	UBHX-BX	PM/PM ₁₀	To be developed*	Lb/sheet	No	NA

Emissions Group	Emissions Unit	Pollutant	Emission Factor	Emission Factor Units	Emission Factor Verification Testing	
					Yes/No	Test Method
Filler Unloading	U18-J3	PM/PM ₁₀	1.368E-1	Lb/ton perlite	No	NA
Chip Pile****	U19-J2	VOC	8.70	Lb/day	No	NA
			3200	Lb/year	No	NA

- * These VOC emission factors are the sum of VOCs (as propane) and formaldehyde (as formaldehyde)
- ** See Condition 31.e. These factors will be replaced by the factors developed from the testing required by and the procedures set forth in Condition 31.e.
- *** Baghouse 4 (U14-B2) is being used as a backup baghouse. When this baghouse is in use, the emission factor for the replaced baghouse should be used to calculate emissions.
- **** Emissions from the chip piles do not need to be included in the emission calculations if they are eliminated.

31.e. The permittee must develop emission factors for the new process equipment by conducting emission factor determination testing after construction and startup of the new equipment within a specified period of time acceptable to both DEQ and the permittee. All testing must conform to the requirements set forth in Condition 55. DEQ reserves the right to waive the emission factor determination testing requirement if projected pollutant emissions are less than the following pollutant source testing thresholds.

Pollutant	Pollutant Source Testing Threshold (tpy)
PM/PM ₁₀	5
NO _x	10
VOC	10
CO	10
SO _x	10

At DEQ's discretion, the pollutant emission factors for like Emission Units may be used for new Emission Units instead of requiring emission factor determination testing. If emission factor determination testing is required, pollutant emission factors must be calculated as follows:

31.e.i. Pollutant emission factors based on production throughput of sheets must be calculated by dividing the total pollutant emissions for each new piece of process equipment measured during the source test by the total number of sheets (or production units) produced during the source test period, or another method approved in writing by DEQ.

- 31.e.ii. Pollutant emission factors based on throughput of natural gas must be calculated by dividing the total pollutant emissions for each new piece of process equipment measured during the source test by the natural gas variable P_{NG} , as defined in Condition 31.b.

NESHAP 40 CFR PART 63 SUBPART HHHHH

DEFINITIONS – SUBPART HHHHH NESHAP

32. The terms used in the section(s) of this permit that are specifically intended to implement Subpart HHHHH – National Emission Standards for Hazardous Air Pollutants for Miscellaneous Coating Manufacturing, 40 CFR 63.7980 through 63.8105 including Tables 1 through 10, have the meaning given them in 40 CFR 63.8105, Definitions. [40 CFR 63.8105]
33. The terms used in the section(s) of this permit that are specifically intended to implement the NESHAP General Provisions, 40 CFR Part 63 Subpart A, have the meaning given them in 40 CFR 63.2, Definitions. [40 CFR 63.2]

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

34. The emission units regulated by Subpart HHHHH are identified as follows:

Equipment Name	Emission Unit	Pollution Control Device	PCD ID
Miscellaneous Coating Manufacturing	U21-M1	NA	NA

EMISSION LIMITS AND STANDARDS, TESTING, AND MONITORING REQUIREMENTS FOR SUBPART HHHHH

The following tables contain summaries of applicable requirements along with the monitoring methods for Subpart HHHHH:

Applicable Requirement	Condition Number	Pollutant Parameter	Limit/Standard	Condition Number	
				Monitoring	Reporting
40 CFR 63.7995(b)	35	HAP	All applicable requirements	Subpart HHHHH	62
40 CFR 63.8005	36	Process vessels	Identify	36	62
40 CFR 63.8055	37	Process vessels	5 percent HAP	38	62
40 CFR 63.8010	39	Storage Tanks	< 20,000 gallon capacity	40	40 and 62
40 CFR 63.8000 and 63.8010	41	Work Practices	Halogen identification	42	42 and 62
40 CFR 63.8020 and 63.8105	43 and 44	Wastewater Stream	< 4000 ppmw	45	62
40 CFR 63.8015	46	Equipment Leaks	Monitoring	47 and 48	48 and 62
40 CFR 63.8025	49	Transfer Operations	Do not use	50	62
40 CFR 63.8030	51	Heat Exchanger	Do not use	51	62

Emission Limitation and Associated Monitoring

35. Applicable Requirement: The permittee must comply with all of the requirements in 40 CFR Part 63 Subpart HHHHH. [40 CFR 63.7995(b)]

Process Tanks

36. Applicable Requirement: The permittee must not install or use vessels equal to or larger than 250 gallons to manufacture coatings. [40 CFR 63.8005 and 63.8105(g)]
37. Applicable Requirement: The permittee must limit the HAP content of materials in each process vessel used in the manufacture of coatings to less than 5 weight percent HAPs (0.5 kg HAP per kg of product). [40 CFR 63.8055(a)] See Condition 38 for monitoring requirements.
38. Monitoring for Condition 37: The permittee must determine the HAP percentage using one of the following procedures: [40 CFR 63.8055(b)]
- 38.a. Method 311 (appendix A to 40 CFR part 60);
 - 38.b. Method 24 (appendix A to 40 CFR part 60). You may use the Method 24 to determine the mass fraction of volatile matter and use that value as a substitute for the mass fraction of HAP;
 - 38.c. The permittee may use an alternative test method for determining mass fraction of HAP if you obtain prior approval by the Administrator. The permittee must follow the procedure in 40 CFR 63.7(f) to submit an alternative test method; or
 - 38.d. The permittee may rely on formulation data from raw material suppliers if it represents each organic HAP that is present at 0.1 percent by mass or more for OSHA-defined carcinogens, as specified in 29 CFR 1910.1200(d)(4), and at 1.0 percent by mass or more for other compounds. If the HAP weight percent estimated based on formulation data conflicts with the results of a test conducted according to Conditions 38.a through 38.c, then there is a rebuttal presumption that the test results are accurate unless, after consultation, you demonstrate to the satisfaction of DEQ that the test results are not accurate and that the formulation data are more appropriate. The permittee must make a new determination whenever there is a change in formulation or process.

Storage Tanks

39. Applicable Requirement: The permittee must not use any storage tank in the coating manufacturing process, including coating storage, equal to or in excess of 20,000 gallon capacity. [40 CFR 63.8010 and 63.8105(g)] See Condition 40 for monitoring requirements for tanks with less than 20,000 gallon capacity.
40. Monitoring for Condition 39: The permittee must submit a certification to DEQ that all tanks used in coating manufacturing and storage are less than 20,000 gallons capacity. A new certification must be submitted before installing any new storage tank or increasing the capacity of an existing storage tank. [40 CFR 63.8010 and 63.8105(g)]

Work Practices Requirements

41. Applicable Requirement: If the process changes and an emission stream contains halogen atoms as defined in 40 CFR 63.8105, the permittee must determine whether the stream meets the definition of a halogenated stream. A halogenated vent stream means a vent stream determined to contain halogen atoms in organic compounds at a concentration greater than or equal to 20 ppmv. Opening of a safety device as defined in 40 CFR 63.8105, is allowed at any time conditions require it to avoid unsafe conditions. [40 CFR 63.8000(b) and 63.8105(g)] See Condition 42 for monitoring requirements.

42. Monitoring Requirements for Condition 41: The permittee must demonstrate compliance with Condition 41 using one of the following methods: [40 CFR 63.8000(b)]
- 42.a. The permittee must calculate the concentration of each organic compound that contains halogen atoms using the procedures specified in 40 CFR 63.115(d)(2)(v);
 - 42.b. The permittee must designate the emission stream as halogenated; or
 - 42.c. The permittee must submit a certification, including supporting data, that an emission stream contains no halogen atoms.

The demonstration must be updated with any change in the composition of an emission stream.

Wastewater Streams

43. Applicable Requirement: The permittee must maintain the annual concentration of soluble and partially soluble HAPs in the wastewater stream at less than 4000 ppmw, or must maintain the total soluble and partially soluble HAP load to less than 750 pounds per year except as allowed by Condition 44. [40 CFR 63.8020 and 63.8105(g)] See Condition 45 for monitoring requirements.
44. Applicable Requirement: The permittee may exceed the limits set forth in Condition 43 only after satisfying the requirements set forth in 40 CFR 63.8020. See Condition 45 for monitoring requirements for wastewater streams with annual concentration of soluble and partially soluble HAPs of less than 4000 ppmw, or HAP load of less than 750 pounds per year. [40 CFR 63.8020 and 63.8105(g)]
45. Monitoring Requirements for Conditions 43 and 44. The permittee must use one of the methods allowed by 40 CFR 63.8020(b) for determining the HAP concentration in the wastewater. The determination must be revisited prior to a change in the wastewater or in the processes affecting the wastewater. [40 CFR 63.8020(b)]

Equipment Leaks

46. Applicable Requirement: The permittee must satisfy the requirements of subpart TT, UU, or Condition 48 for all equipment "in organic HAP service". Determination of "in organic HAP service" must be made in accordance to Condition 47. The permittee does not need to satisfy Condition 48 if subpart TT or UU is satisfied. See Conditions 47 "in organic HAP service" determination, and Condition 48 for monitoring requirements in lieu of Subpart TT or UU. [40 CFR 63.8015]
47. "In Organic Service Determination for Condition 46: The permittee must determine if each piece of equipment used in the manufacturing of miscellaneous coatings is "in Organic HAP service as follows: [40 CFR 63.180(d)]
- 47.a. Each piece of equipment within a process unit that can reasonably be expected to contain equipment in organic HAP service is presumed to be in organic HAP service unless the permittee demonstrates that the piece of equipment is not in organic HAP service. For a piece of equipment to be considered not in organic HAP service, it must be determined that the percent organic HAP content can reasonably be expected not to exceed 5 percent by weight on an annual average basis. For purposes of determining the percent organic HAP content of the process fluid that is contained in or contacts equipment, Method 18 of 40 CFR Part 60, appendix A shall be used.
 - 47.b. An owner or operator may use good engineering judgment rather than the procedures in Condition 47.a to determine that the percent organic HAP content does not exceed 5 percent by weight. When an owner or operator and DEQ do not agree on whether a piece of equipment is not in organic HAP service, the procedures in Condition 47.a shall be used to resolve the disagreement.

- The permittee may determine that the organic HAP content of the process fluid does not exceed 5 percent by weight, for example, accounting for 98 percent of the content and showing that organic HAP is less than 3 percent. MSDS and product design data sheets may be used in the determination.
- 47.c. If the permittee determines that a piece of equipment is in organic HAP service, the determination can be revised after following the procedures in Condition 47.a, or by documenting that a change in the process or raw material no longer causes the equipment to be in organic HAP service.
- 47.d. Samples used in determining the percent organic HAP content shall be representative of the process fluid that is contained in or contacts the equipment.
48. Monitoring for Condition 46: The permittee must conduct the following monitoring and recordkeeping:
- 48.a. Monthly leak inspections during paint mixing operations. Incorporating sight, sound, and smell are acceptable. [40 CFR 63.424(a)]
- 48.b. A log book shall be used and shall be signed by the operator at the completion of each inspection. A section of the log shall contain a list, summary description, or diagram(s) showing the location of all equipment in HAP service at the facility. [40 CFR 63.424(b)]
- 48.c. Each detection of a liquid or vapor leak shall be recorded in the log book. When a leak is detected, an initial attempt at repair shall be made as soon as practicable, but no later than 5 calendar days after detection of each leak. Repair or replacement of leaking equipment shall be completed within 15 calendar days after detection of each leak, except as provided in paragraph (d) of this condition. [40 CFR 63.424(c)]
- 48.d. Delay of repair of leaking equipment will be allowed upon a demonstration to DEQ that repair within 15 days is not feasible. The owner or operator shall provide a reason(s) a delay is needed and the date by which each repair is expected to be completed. [40 CFR 63.424(d)]
- 48.e. The permittee shall record the following information in the log book for each leak that is detected: [40 CFR 62.428(e)]
- 48.e.i. The equipment type and identification number;
- 48.e.ii. The nature of the leak and method of detection (sight, sound, or smell);
- 48.e.iii. The date the leak was detected and the date of each attempt to repair the leak;
- 48.e.iv. Repair methods applied to each attempt to repair the leak;
- 48.e.v. Repair delayed and the reason for the delay if the leak is not repaired within 15 calendar days after discovery of the leak;
- 48.e.vi. The expected date of successful repair of the leak if the leak is not repaired within 15 days; and
- 48.e.vii. The date of successful repair of the leak.
- 48.f. The permittee must report to DEQ a description of the types, identification numbers, and locations of all equipment in HAP service. For facilities electing to implement an instrument program under 40 CFR 63.424(f), the report shall contain a full description of the program. The report shall be submitted with the notification of compliance status report. [40 CFR 63.424(f)]
- 48.g. The permittee must submit a semiannual report to DEQ including the following information:
- 48.g.i. Each loading for which vapor tightness documentation had not been previously obtained by the permittee. [40 CFR 63.428(g)(1)]
- 48.g.ii. The number of equipment leaks not repaired within 5 days after detection. [40 CFR 63.428(g)(2)]
- 48.g.iii. For each occurrence of an equipment leak for which no repair attempt was made within 5 days or for which repair was not completed within 15 days after detection: [40 CFR 63.428(h)(4)]
- 48.g.iii.A. The date on which the leak was detected;
- 48.g.iii.B. The date of each attempt to repair the leak;
- 48.g.iii.C. The reason for the delay of repair; and
- 48.g.iii.D. The date of successful repair.

Transfer Operations

49. **Applicable Requirement:** The permittee must not install or operate a Group 1 transfer station without first satisfying the requirement set forth in 40 CFR 63.8025. A Group 1 transfer operation means all bulk loading of coating products if the coatings contain grater than or equal to 3.0 million gallons per year of HAP with a weighted average HAP partial pressure grater than or equal to 1.5 psia. Group 2 transfer operation means bulk loading of coating products that do not meet the definition of Group 1 transfer operations. There are no applicable requirements for Group 2 transfer operations. [40 CFR 63.8025 and 63.8105(g)] See Condition 50 for monitoring requirements
50. **Monitoring Requirements for Condition 49:** If a transfer station is installed, the permittee must monitor and record the total quantity of coatings transferred on a monthly basis and keep a rolling 12 month total of such transfers, or monitor the weighted average HAP partial pressure for coatings transferred as may be required to demonstrate compliance. [40 CFR 63.8025 and 63.8105(g)]

Heat Exchangers

51. **Applicable Requirement:** The permittee must not install or operate a heat exchange system associated with the miscellaneous coating operation without first notifying DEQ by Notice of Construction (OAR 340-210-0205 through 0250) and satisfying the requirements set forth in 40 CFR 63.8030. [OAR 340-210-0205 through 0250 and 40 CFR 63.8030]

STARTUP, SHUTDOWN, AND MALFUCNTION PLAN (SSMP)

52. **Applicable Requirement:** SSMP are not required for Group 2 operations. As permitted, the storage tanks, wastewater and transfer operations are considered Group 2. For equipment leaks only, the SSMP requirement is limited to control devices and is optional for other equipment. The permittee does not have a control device for equipment leaks. An SSMP is not required for this facility as operated. The permittee must satisfy the requirements for an SSMP in accordance with 40 CFR 63.6(e)(3) before changing storage tanks, wastewater, or transfer operation, or installing controls for the control of equipment leaks such that they would become subject to Group 1 requirements. [40 CFR 63.6(e)(3)]

RECORDKEEPING REQUIREMENTS [40 CFR 63.8080]

53. The permittee must maintain the following records for at least 5 years. At a minimum, the most recent 2 years of date must be retained on site. [40 CFR 63.10(b)]
- 53.a. Records required by Condition 48;
 - 53.b. Identification of each process vessel; (submitted in the Compliance Status Report and updated as needed and annually)
 - 53.c. Each determination of HAP concentration of the contents of each process vessel; (submitted in the Compliance Status Report and updated as needed and annually)
 - 53.d. Identification and certification that all storage tanks are less then 20,000 gallon capacity; (submitted in the Compliance Status Report and updated as needed and annually)
 - 53.e. Determination if each emission stream is a halogenated stream, including supporting date; (submitted in the Compliance Status Report and updated as needed and annually)
 - 53.f. Determination of the HAP concentration of the wastewater stream, including supporting data; (submitted in the Compliance Status Report and updated as needed and annually)
 - 53.g. Determination of in organic service for each piece of equipment used in the miscellaneous coating manufacturing process; (submitted in the Compliance Status Report and updated as needed and annually)
 - 53.h. The signed results of monthly leak inspections including a list of each piece of equipment, summary description or diagrams showing the location of all equipment in HAP service;
 - 53.i. Each detection of a liquid or vapor leak including:
 - 53.i.i. Equipment type and identification number;
 - 53.i.ii. Nature of leak and method of detection;

- 53.i.iii. Date of leak detection and date of each attempt to repair the leak;
- 53.i.iv. Delayed repairs and reason for the delay if the leak is not repaired within 15 days;
- 53.i.v. The date of expected repair if the leak is not repaired within 15 days; and
- 53.j. Total quantity of coatings transferred on a monthly basis and running 12 month total of such transfers. This condition is only applicable if the permittee installs a transfer operation.

NESHAP 40 CFR 63 SUBPART DDDDD

54. Applicable Requirement: The permittee must comply with all of the requirements in 40 CFR Part 63 Subpart DDDDD. [40 CFR 63.7480 to 63.7575]

Work Practice Standards [40 CFR 63.7500 and Table 3]

55. Applicable Requirement: The permittee must conduct a tune-up of the boilers (U21-BLR) by January 30, 2016 and every 5 years thereafter as specified in 40 CFR 63.7540(a)(10). [40 CFR 63.7500(e)]

Record keeping requirements [40 CFR 63.10 and 40 CFR Part 63 Table 10]

56. The permittee must maintain the following records of boiler tune-ups: [40 CFR 63.7540(a)(10)]
- 56.a. The concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater;
 - 56.b. A description of any corrective actions taken as a part of the tune-up; and
 - 56.c. The type and amount of fuel used over the 12 months prior to the tune-up, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel used by each unit.

Reporting Requirements [40 CFR 63.7550 and Table 9]

57. The permittee must submit a compliance report every 5 years beginning January 31, 2016. [40 CFR 63.7550(b)]. This may be submitted with the annual report and must include: [40 CFR 7550(c)(5)]
- 57.a. Company and Facility name and address,
 - 57.b. Process unit information,
 - 57.c. Date of report and beginning and ending dates of the reporting period,
 - 57.d. The total operating time during the reporting period.
 - 57.e. A work practices deviation report or a statement that there were no deviations to the work practices.

GENERAL TESTING REQUIREMENTS

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

- 58.b. Unless otherwise specified by permit condition or DEQ approved source test plan, all compliance source tests must be performed at maximum operating rates (90 to 110% of device design capacity).
- 58.c. Each source test must consist of at least three (3) test runs and the emissions results must be reported as the arithmetic average of all valid test runs. If for reasons beyond the control of the permittee a test run is invalid, DEQ may accept two (2) test runs for demonstrating compliance with the emission limit or standard.
- 58.d. 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.
59. The permittee must conduct EF verification tests, at least once during the permit term, on the following emission units for the pollutants noted as required by Condition 31.d. [OAR 340-212-0120]

Emission Unit	Description	Pollutant	EF Verification
U1-E4	Wet End Stack #1	PM/PM ₁₀	Yes
UWEDX-EX	Future Wet End Stack	PM/PM ₁₀	Yes
U2-E5	S. Main Board Dryer Stack #1	PM/PM ₁₀	Yes
		NO _x	Yes
U3-E6	N. Main Board Dryer Stack #1	PM/PM ₁₀	Yes
		NO _x	Yes
UBDX-EX	Future Main Board Dryer Stack	PM/PM ₁₀	Yes
		NO _x	Yes
U13-A1	Expander #1	PM/PM ₁₀	Yes
U13-AX	Future Expander	PM/PM ₁₀	Yes

- 59.a. Emission factor verification testing must be performed using the following test methods in accordance with DEQ's Source Sampling Manual, unless otherwise approved in writing by DEQ:
- | | |
|---------------------|--------------------|
| PM/PM ₁₀ | ODEQ Method 5 |
| NO _x | EPA Method 7 or 7E |
- 59.b. The permittee must notify DEQ at least 15 days prior to conducting an emission factor verification test. The permittee is not required to submit a source test plan if a plan has already been approved for the emissions unit and the pollutant to be tested.
- 59.c. The permittee must submit a summary of all emission factor verification tests to DEQ within 60 days of any test, unless otherwise approved by DEQ. The summary must include the following information:
- 59.c.i. emissions unit identification;
 - 59.c.ii. emission results in pounds per hour and same units as emission factors shown in Condition 31.d;
 - 59.c.iii. process parameters during the test (e.g. material throughput, amounts of fuels, fuel, heat input and/or sheets produced); and,
 - 59.c.iv. control device operating parameters.
60. General Testing Requirements Although source testing is not required by this permit for the permit conditions listed below, if source testing is conducted in addition to the monitoring specified in this permit, the permittee must use the following test methods and averaging times to measure the pollutant emissions:

Permit Condition	Test Method	Averaging Time	Special Conditions
13.b, 23, 25, and 25	ODEQ Methods 5, 7, or 8	average of three test runs	ODEQ Method 8 is for sources with exhaust gases at essentially ambient conditions (e.g., material handling cyclones); ODEQ Method 7 is for direct contact combustion sources (e.g., particle and veneer dryers); ODEQ Method 5 is for indirect contact fuel burning equipment (e.g., boilers) and any other source.
20	EPA Method 5	see CFR	In accordance with 40 CFR 60.736

GENERAL MONITORING AND RECORDKEEPING REQUIREMENTS [OAR 340-218-0050(3)(a) and (b)]

61. Monitoring Requirements:

- 61.a. The permittee must not knowingly render inaccurate any required monitoring device or method. [OAR 340-218-0050(3)(a)(E)]
- 61.b. Methods used to determine actual emissions for fee purposes must also be used for compliance determination and can be no less rigorous than the requirements of OAR 340-218-0080. [OAR 340-218-0050(3)(a)(F)]
- 61.c. 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)]

62. Recordkeeping Requirements:

- 62.a. The permittee must maintain the following general records of testing and monitoring required by this permit: [OAR 340-218-0050(3)(b)(A)]
 - 62.a.i. The date, place as defined in the permit, and time of sampling or measurements;
 - 62.a.ii. The date(s) analyses were performed;
 - 62.a.iii. The company or entity that performed the analyses;
 - 62.a.iv. The analytical techniques or methods used;
 - 62.a.v. The results of such analyses;
 - 62.a.vi. The operating conditions as existing at the time of sampling or measurement; and
 - 62.a.vii. The records of quality assurance for continuous monitoring systems (including but not limited to quality control activities, audits, calibration drift checks).
- 62.b. Unless otherwise specified by permit condition, the permittee must make every effort to maintain 100 percent of the records required by the permit. If information is not obtained or recorded for legitimate reasons (e.g., the monitor or data acquisition system malfunctions due to a power outage), the missing record(s) will not be considered a permit deviation provided the amount of data lost does not exceed 10% of the averaging periods in a reporting period or 10% of the total operating hours in a reporting period, if no averaging time is specified. Upon discovering that a required record is missing, the permittee must document the reason for the missing record. In addition, any missing record that can be recovered from other available information will not be considered a missing record. [OAR 340-214-0110 and 340-218-0050(3)(b)]
- 62.c. 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)]

- 62.d. 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. [OAR 340-218-0050(3)(b)(B)]
63. The permittee must maintain the following specific records of required monitoring information: [OAR 340-214-0114(1)]
- 63.a. Monthly and annual records of sheet production for VOC and PM/PM₁₀ emissions calculations;
 - 63.b. Monthly and annual records of filler unloading for PM/PM₁₀ emissions calculations;;
 - 63.c. Monthly and annual records of the amount of fuel used for PM/PM₁₀, CO, NO_x, and SO₂ emissions calculations;
 - 63.d. CO and O₂ CEMS concentration data recorded for the main board dryer;
 - 63.e. Hourly, monthly and annual records of the amount of fuel used in the main board dryer;
 - 63.f. Hourly, monthly and annual records of CO emissions from the main board dryer
 - 63.g. Complaint log and investigation reports;
 - 63.h. Fugitive dust inspection and corrective actions;
 - 63.i. Visible emissions observation reports;
 - 63.j. Records of monthly inspection and maintenance procedures of the baghouse bags;
 - 63.k. Occurrence and length of downtime for all pollution control devices;
 - 63.l. NSPS requirements: continuously record the pressure loss of the gas stream through the scrubber, U13-A1 (expansion) and U13-AX (future expansion), and the scrubbing liquid flow rate to the scrubber per 40 CFR 60.734, and 60.735;
 - 63.m. U13-A1 upset records for the semi-annual NSPS upset report;
 - 63.n. Specific gravity of air/fuel mixture for U1-E4 (wet end stack), U2-E5 (S main board dryer stacks), and U3-E6 (N main board dryer stack);
 - 63.o. Differential pressure of air-to-fuel in the reheat burner in the main board dryer (U1-E4, U2-E5, and U3-E6);
 - 63.p. Records of inspections and corrective actions for good combustion practices on the main board dryer;
 - 63.q. The excess emissions log, and
 - 63.r. Monthly and annual emissions of PM/PM₁₀, CO, NO_x, SO₂, and VOC.

REPORTING REQUIREMENTS [OAR 340-218-0050(3)(C) AND 40 CFR 63.8075]

64. The permittee must submit four (4) copies of reports of any required monitoring at least every 6 months, completed on forms approved by DEQ. Six month periods are January 1 to June 30, and July 1 to December 31. One copy of the report shall be submitted to the Air Quality Division, two copies to the regional office, and one copy to the EPA. All instances of deviations from permit requirements must be clearly identified in such reports: [OAR 340-218-0050(3)(c)(A) and 340-218-0080(6)(d)]
- 64.a. The first semi-annual report is due on July 30 and must include the semi-annual compliance certification, OAR 340-218-0080. [OAR 340-218-0050(3)(c)(A)(i)]
 - 64.b. The annual report is due on March 15 and must contain the following: [OAR 340-214-0114]
 - 64.b.i. The emission fee report; [OAR 340-220-0100]
 - 64.b.ii. The NO_x and VOC emission statement, if applicable; [OAR 340-214-0220];
 - 64.b.iii. The excess emissions upset log; [OAR 340-214-0340]
 - 64.b.iv. The second semi-annual compliance certification; [OAR 340-218-0080]
 - 64.b.v. The annual certification that the risk management plan is being properly implemented; [OAR 340-218-0080(7)]
 - 64.b.vi. Annual records of gross sheet production;

- 64.b.vii. Annual records of Filler 1 unloading;
 - 64.b.viii. Annual records of total plant natural gas and LPG used;
 - 64.b.ix. Hours of operation;
 - 64.b.x. Annual records of main board dryer natural gas and/or propane used;
 - 64.b.xi. Maximum CO emission (lb/hr) from the main board dryer measured during the reporting period and all exceedances of the 250 #CO/hr limit;
 - 64.b.xii. A summary of RATA and CGA results for the calendar year;
 - 64.b.xiii. Annual emissions for each pollutant having a PSEL for each 12 consecutive calendar month period ending in the reporting year;
 - 64.b.xiv. Semi-annual NSPS upset report for U13-A1; and
 - 64.b.xv. Annual greenhouse gas emissions. [OAR 340 Division 215]
65. The semi-annual compliance certification must include the following (provided that the identification of applicable information may cross-reference the permit or previous reports, as applicable): [OAR 340-218-0080(6)(c)]
- 65.a. The identification of each term or condition of the permit that is the basis of the certification;
 - 65.b. The identification of the method(s) or other means used by the owner or operator for determining the compliance status with each term and condition during the certification period, and whether such methods or other means provide continuous or intermittent data. Such methods and other means shall include, at a minimum, the methods and means required under OAR 340-218-0050(3). If necessary, the owner or operator also shall identify any other material information that must be included in the certification to comply with section 113(c)(2) of the FCAA, which prohibits knowingly making a false certification or omitting material information;
 - 65.c. The status of compliance with terms and conditions of the permit for the period covered by the certification, based on the method or means designated in OAR 340-218-0040(6)(c)(B). The certification must identify each deviation and take it into account in the compliance certification. The certification must also identify as possible exceptions to compliance any periods during which compliance is required and in which an excursion or exceedance, as defined under OAR 340-200-0020, occurred;
 - 65.d. Such other facts as DEQ may require to determine the compliance status of the source; and
 - 65.e. Semi-annual NSPS upset report for U13-A1.
66. Each semiannual NESHAP report must include the following information: [40 CFR 63.8075(e)]
- 66.a. Company name and address
 - 66.b. Certification of accuracy by responsible official
 - 66.c. Beginning and ending dates of reporting period
 - 66.d. If there is a SSMP, for each SSM event during which excess emissions occur, the compliance report must include:
 - 66.d.i. Records that the procedures specified in the SSMP were followed or documentation of actions taken the a are not consistent with the SSMP; and
 - 66.d.ii. A description of each malfunction
 - 66.e. Information on deviations, as defined in 40 CFR 63.8105:
 - 66.e.i. If there are no deviations from any emission limit, operating limit, or work practice standard, include a statement that there were no deviations from the emissions, limit, operating limits, or work practice standards during the reporting period.
 - 66.e.ii. Fore each deviation that occurs at an affected source where you are not using a continuous monitoring system (CMS) to comply with the emission limit, operating limit, or work standard, the permittee must include:
 - 66.e.ii.A. The total operating time for each affected source.
 - 66.e.ii.B. The number of deviations, cause of deviations, and corrective action taken.

- 66.e.ii.C. Operating logs for days of deviation. Not required for leak detection.
- 66.f. Notification of process change
- 66.f.i. Except as specified in Condition 62.f.ii, the permittee must notify DEQ in the semiannual report of any change in the information submitted in either the notification of compliance status report or any previously submitted compliance status report. The report must include revisions to any of the original submitted information, and new information not previously reported involving the addition of new processes or equipment.
- 66.f.ii. The permittee must submit a report 60 days before the scheduled implementation date of any of the following changes:
- 66.f.ii.A. Any change to the information contained in either the pre-compliance report or any previously reported change to the pre-compliance report.
- 66.f.ii.B. A change in the status of a control device from small to large; or
- 66.f.ii.C. A change in compliance status
67. Notwithstanding any other provision contained in any applicable requirement, the owner or operator may use monitoring as required under OAR 340-218-0050(3) and incorporated into the permit, in addition to any specified compliance methods, for the purpose of submitting compliance certifications. [OAR 340-218-0080(6)(e)]
68. Excess Emissions Reporting The permittee must report all excess emissions as follows: [OAR 340-214-0300 through 340-214-0360]
- 68.a. Immediately (within 1 hour of the event) notify DEQ of an excess emission event by phone, e-mail, or facsimile; and [340-214-0340(2)]
- 68.b. Within 15 days of the excess emissions event, submit a written report that contains the following information: [OAR 340-214-0340(1)]
- 68.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;
- 68.b.ii. The date and time the owner or operator notified DEQ of the event;
- 68.b.iii. The equipment involved;
- 68.b.iv. Whether the event occurred during planned startup, planned shutdown, scheduled maintenance, or as a result of a breakdown, malfunction, or emergency;
- 68.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;
- 68.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);
- 68.b.vii. The final resolution of the cause of the excess emissions; and
- 68.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.
- 68.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.
- 68.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.

- 68.e. The permittee must notify DEQ of planned startup/shutdown or scheduled maintenance events which result in excess emissions.
- 68.f. 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)]
69. 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 seven (7) 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 69. [OAR 340-218-0050(3)(c)(B)]
70. 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]
71. All required reports must be certified by a responsible official consistent with OAR 340-218-0040(5). [OAR 340-218-0050(3)(c)(D)]
72. Reporting requirements must commence on the date of permit issuance unless otherwise specified in the permit. [OAR 340-218-0050(3)(c)(E)]
73. Addresses of regulatory agencies are the following, unless otherwise instructed:

DEQ – Northwest Region
700 NE Multnomah St., Suite 600
Portland, OR 972032
503-229-5256

DEQ – Air Quality Division
700 NE Multnomah St., Suite 600
Portland, OR 972032
503-229-5359

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

NON-APPLICABLE REQUIREMENTS

74. 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]

<u>Applicable Requirement</u>	<u>Reason Code</u>	<u>Applicable Requirement</u>	<u>Reason Code</u>	<u>Applicable Requirement</u>	<u>Reason Code</u>	<u>Applicable Requirement</u>	<u>Reason Code</u>
OAR Chapter 340:		0060	h	Division 238:		0100 through 0140	d
Division 202		Division 226:		0100	b	0160 through 0170	d
all rules	I	0400	h	Division 240:		Division 266:	
Division 204		Division 228:		0100 through 0270	c or e	all rules	d
all rules	I	0100 through 0130	f	0300 through 360	c or e	40 CFR	
Division 208		0200	f	0400 through 440	c or e	Part 55	b
0520	E	0300	b	Division 242:		Part 57	b
0560	E	Division 230:		all rules	c	Part 60, except	b
0570	E	0100 through 0150	e	Division 244:		subparts A, UUU,	
0610	E	0200 through 0230	e	0110 through 0180	h	and appendixes (40	
0630	F	0310 through 0360	e	0200	b	CFR 60.732b does	
Division 210:		0400 through 0410	e	0210	b	not apply because a	
0100 through 0120	B	Division 232:		0220	b	wet scrubbing	
0200 through 0220	B	all rules	c	Division 254:		control device is	
Division 212:		Division 234:		all rules	c	used	
0210 through 0280	J	0110 through 0140	b	Division 256:		Part 61, except	b
Division 214:		0210 through 0270	b	all rules	b	subpart A, M, and	
0200 and 0220	C	0310 through 0360	b	Division 258:		appendices	
Division 216:		0410 through 0430	b	0120 through 0310	b	Part 63, except	b
0060 through 0090		0510 through 530	b	0400	b	subpart A, SS, TT,	
Division 218:		Division 236:		Division 260:		UU, WW, DDDDD	
0090	B	0120 through 0150	b	0030	b	and HHHHH	
0100	B	0220 and 0230	b	Division 262:		Part 72 through 76	b
Division 222		0310 through 0330	b	all rules	b	Part77	b
0050	H	0410 through 0440	b	Division 264:		Part78	b
		0500	b			Part 82, except	b
						subpart F	
						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 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

GENERAL CONDITIONS**G1. General Provision**

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

G2. Reference materials

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

- a. Source Sampling Manual; April 16, 2015 - State Implementation Plan Volume 3, Appendix A4;
- b. Continuous Monitoring Manual; April 16, 2015 - State Implementation Plan Volume 3, Appendix A6; and
- c. All state and federal regulations as in effect on the date of issuance of this permit.

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

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

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

- a. The permittee must comply with all conditions of this permit. Any permit condition noncompliance constitutes a violation of the Federal Clean Air Act and/or state rules and is grounds for enforcement action; for permit termination, revocation and re-issuance, or modification; or for denial of a permit renewal application. Any noncompliance with a permit condition specifically designated as enforceable only by the state constitutes a violation of state rules only and is grounds for enforcement action; for permit termination, revocation and re-issuance, or modification; or for denial of a permit renewal application.
- b. Any schedule of compliance for applicable requirements with which the source is not in compliance at the time of permit issuance is supplemental to, and does not sanction noncompliance with the applicable requirements on which it is based.
- c. For applicable requirements that will become effective during the permit term, the source must meet such requirements on a timely basis unless a more detailed schedule is expressly required by the applicable requirement.

G5. Masking Emissions:

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

G6. Credible Evidence:

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

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

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

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

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

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

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

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

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

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

- a. Compliance with the conditions of the permit is deemed compliance with any applicable requirements as of the date of permit issuance provided that:
 - i. Such applicable requirements are included and are specifically identified in the permit, or
 - ii. DEQ, in acting on the permit application or revision, determines in writing that other requirements specifically identified are not applicable to the source, and the permit includes the determination or a concise summary thereof.
- b. Nothing in this rule or in any federal operating permit alters or affects the following:
 - i. The provisions of ORS 468.115 (enforcement in cases of emergency) and ORS 468.035 (function of department);
 - ii. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;
 - iii. The applicable requirements of the national acid rain program, consistent with section 408(a) of the FCAA; or
 - iv. The ability of DEQ to obtain information from a source pursuant to ORS 468.095 (investigatory authority, entry on premises, status of records).

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

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

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

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

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

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

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

- a. The permittee must monitor for, and record, any off-permit change to the source that:
 - i. Is not addressed or prohibited by the permit;
 - ii. Is not a Title I modification;
 - iii. Is not subject to any requirements under Title IV of the FCAA;
 - iv. Meets all applicable requirements;
 - v. Does not violate any existing permit term or condition; and
 - vi. May result in emissions of regulated air pollutants subject to an applicable requirement but not otherwise regulated under this permit or may result in insignificant changes as defined in OAR 340-200-0020.
- b. A contemporaneous notification, if required under OAR 340-218-0140(2)(b), must be submitted to DEQ and the EPA.
- c. The permittee must keep a record describing off-permit changes made at the facility that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those off-permit changes.
- d. The permit shield of Condition G11 does not extend to off-permit changes.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

ALL INQUIRIES SHOULD BE DIRECTED TO:

DEQ – Northwest Region Air Quality
700 NE Multnomah St., Ste 600
Portland, OR 97232
(503) 229-5256

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

Armstrong World Industries, Inc.
 1645 Railroad Avenue
 Saint Helens, OR 97051

Source Information:

SIC	3999
NAICS	339999

Source Categories (Part and code)	
-----------------------------------	--

Compliance and Emissions Monitoring Requirements:

Unassigned emissions	
Emission credits	
Compliance schedule	
Source test [date(s)]	

COMS	
CEMS	Yes
Ambient monitoring	

Reporting Requirements

Annual report (due date)	March 15
Emission fee report (due date)	July 30
SACC (due date)	July 30
Quarterly report (due dates)	

Monthly report (due dates)	
Excess emissions report	
Other reports	

Air Programs

NSPS (list subparts)	UUU
NESHAP (list subparts)	HHHHH, DDDDD
CAM	
Regional Haze (RH)	
Synthetic Minor (SM)	
Part 68 Risk Management	
CFC	
RACT	
TACT	

Title V	Yes
ACDP (SIP)	
Major HAP source	
Federal major source	
NSR	
PSD	Yes
Acid Rain	
Clean Air Mercury Rule (CAMR)	

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LIST OF ABBREVIATIONS USED IN THIS REVIEW REPORT

AQMA	Air Quality Management Area	MM	million
ASTM	American Society of Testing and Materials	NA	not applicable
BDT	bone dry ton	NESHAP	National Emission Standard for Hazardous Air Pollutants
CEMS	continuous emissions monitoring system	NO _x	oxides of nitrogen
CFR	Code of Federal Regulations	NSPS	New Source Performance Standard
CMS	continuous monitoring system	NSR	New Source Review
CO	carbon monoxide	O ₂	oxygen
COMS	continuous opacity monitoring system	OAR	Oregon Administrative Rules
DEQ	Oregon Department of Environmental Quality	ORS	Oregon Revised Statutes
dscf	dry standard cubic feet	O&M	operation and maintenance
EF	emission factor	Pb	lead
EPA	United State Environmental Protection Agency	PCD	pollution control device
EU	emissions unit	PM	particulate matter
FCAA	Federal Clean Air Act	PM ₁₀	particulate matter less than 10 microns in size
gr/dscf	grains per dry standard cubic feet	PSD	Prevention of Significant Deterioration
HAP	hazardous air pollutant	PSEL	Plant Site Emission Limit
ID	identification code	SO ₂	sulfur dioxide
I&M	inspection and maintenance	ST	source test
MB	material balance	VE	visible emissions
Mlb	1000 pounds	VMT	vehicle mile traveled
		VOC	volatile organic compound

INTRODUCTION

1. Armstrong World Industries, Inc. submitted application number 027639 on January 28, 2014 to renew their existing Oregon Title V Operating permit.
2. In accordance with OAR 340-218-0120(1)(f), this review report is intended to provide the legal and factual basis for the draft permit conditions. In most cases, the legal basis for a permit condition is included in the permit by citing the applicable regulation. In addition, the factual basis for the requirement may be the same as the legal basis. However, when the regulation is not specific and only provides general requirements, this review report is used to provide a more thorough explanation of the factual basis for the draft permit conditions.
3. The following permit modification was issued since the permit was originally issued.

Date	Permit revision or notification	Brief explanation
2/19/2010	Administrative amendment	Correct expiration date in header

PERMITTEE IDENTIFICATION

4. Armstrong World Industries, Inc. operates a ceiling tile manufacturing facility at 1645 Railroad Avenue, Saint Helens, Oregon.

FACILITY DESCRIPTION

5. The Armstrong St. Helens Plant is located on 173.48 acres bordered by Old Portland Road to the west, Railroad Avenue to the north and Scappoose Bay to the east. The facility produces acoustical ceiling tiles. The tiles are a combination of various raw materials: natural fibers, fillers, manmade fibers, binder, dry broke, wet broke and water. The raw materials are mixed together in various amounts and sent to a forming machine. The forming machine drains most of the water from the stock and forms large mats. The wet mats are then dried in the main board dryer and cut into smaller blanks. The blanks are then sent through a series of operations to create an image on the board. The blanks are then painted with a back coat and top coats, and cut to the desired finished size. After the board is cut, it is then inspected, packaged, stacked, wrapped and stored in the warehouse or shipped to customers.

EMISSIONS UNIT AND POLLUTION CONTROL DEVICE IDENTIFICATION

6. The emissions units at this facility are the following:

Emission Unit	EU ID	Description
Main Board Dryers	U1-E4	Wet Stack #1. Wet End Dryer was installed on 1/1990. This is an exhaust for the Board Dryer Blowout
	UWEDX-EX	Future new unit wet end. Design specifications must be comparable to existing wet end dryer U1-E4
	U2-E5	South Main Board Dryer #1 installed 1/1990. It is an axial fired method using natural gas and propane gas. Design air-to-fuel ratio is 10:1 and design excess combustion air of 10%
	U3-E6	North Main Board Dryer #1 installed 1/1990. It is an axial fired method using natural gas and propane gas. Design air-to-fuel ratio is 10:1 and design excess combustion air of 10%
	UBDX-EX	Future new unit main dryer. Design specifications must be comparable to existing units U2-E5 or U3-E6
Paint Dryers	U4-E8	Prime Dryer #1 installed 1/1990. It is normal firing method using natural gas and propane gas. Design air-to-fuel ratio is 10:1 and design excess combustion air of 20%
	U5-E10	Intermediate Dryer #1 installed 1/1990. It is normal firing method using natural gas and propane gas. Design air-to-fuel ratio is 10:1 and design excess combustion air of 20%
	U6-E12	Finish Dryer #1 installed 1/1990. It is normal firing method using natural gas and propane gas. Design air-to-fuel ratio is 10:1 and design excess combustion air of 20%
	UPDX-EX	Future new unit. Design specifications must be comparable to existing units U4-E8, U5-E10 or U6-E12
Lin-O-Flames	U7-E7	Prime Line-O-Flame #1 installed 1/1990. It is normal, continuous, manual-lighted, spark igniter firing method using natural gas and propane gas. Design air-to-fuel ratio is 10:1 and design excess combustion air of 20%
	ULOFX-EX	Future new unit. Design specifications must be comparable to existing unit U7-E7
Paint Coolers (VOC only)	U10-E13	Finish Cooler #1: Painted blanks are conveyed through an ambient cool down tunnel.
	U10-E14	Finish Cooler #1: Painted blanks are conveyed through an ambient cool down tunnel.
	UPCX-EX	Future new unit. Design specifications must be comparable to existing units U9-E9, U10-E13 or U10-E14
Paint Booths	U11-D1A	Curtain coater
	U11-D2	Intermediate Paint Booth #1 – Spray Booth
	U11-D3	Finish Paint Booth #1 – Spray Booth
	U11-DX	Future new unit. Design specifications must be comparable to existing units U11-D1A, U11-D2 or U11-D3
Paint Mixing	U12-A2	Paint mixing #1. Raw materials for paint are mixed together in multiple large tanks.
	U12-AX	Future new unit. Design specifications must be comparable to existing unit U12-A2
Expanders	U13-A1	Expander unit #1. Natural gas fired burners expand filler by heating it to high temperatures. Design air-to-fuel ration of 10:1, with 5% design excess combustion air. The natural gas fired burners were installed in 1990 and 1993, therefore are subject to 40 CFR 60 Subpart UUU- Standards of Performance for Calciners and Dryers in Mineral Industries.
	U13-AX	Future new unit. Design specifications must be comparable to existing unit U13-A1
Baghouses	U14-B2	Baghouse #4: Compressed air pulsating based on pressure differential, with rated efficiency of 98.9%. Manufactured by Flex-Kleen, with design inlet gas flow rate of 33,500 cfm and design air-to-cloth ratio of 4.56:1, and 480 bags. Backup baghouse, to be used incase of malfunctions in any other baghouse.
	U15-B3	Baghouse #3: Compressed air pulsating based on pressure differential, with rated efficiency of 98.9%. Manufactured by Flex-Kleen, with design inlet gas flow rate of 33,500 cfm and design air-to-cloth ratio of 4.5:1, and 456 bags. Main feeder baghouse
	U16-B4	Baghouse #2: Compressed air pulsating based on pressure differential, with rated efficiency of 98.9%. Manufactured by Flex-Kleen, with design inlet gas flow rate of 33,500 cfm and design air-to-cloth ratio of 4.5:1, and 456 bags.

Emission Unit	EU ID	Description
		Main stacker and dry broke baghouse
	U17-B5	Baghouse #1: Compressed air pulsating based on pressure differential, with rated efficiency of 98.9%. Manufactured by Flex-Kleen, with design inlet gas flow rate of 33,500 cfm and design air-to-cloth ratio of 3.54:1, and 480 bags. Drysaw, roll fissure, and press dust collection baghouse
	U20-B6	Baghouse #5: Compressed air pulsating based on pressure differential, with rated efficiency of 98.9%. Manufactured by Flex-Kleen, with design inlet gas flow rate of 60,000 cfm and design air-to-cloth ratio of 6.54:1, and 600 bags. Equalizer, supersaw, finished feeder/stacker baghouse
	UBHX-BX	Future new unit
Filler Unloading	U18-J3	Filler Unloading
Chip Pile (VOC emissions only)	U19-J2	Chip Pile
Boilers	U21-BLR	1.255 mmBtu/hr paint mix boiler, installed in 1990 and 3.94 mmBtu/hr auxiliary boiler, installed in 2007. Both natural gas fired.
Misc Coating Mfg	U21-M1	Process vessel vents, storage tanks, wastewater streams, equipment leaks, and transfer operations associated with the manufacture of HAP coatings.
Insignificant Activities	IEU	See 7. below

7. Categorically insignificant activities include the following

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

- Routine maintenance, repair, and replacement such as anticipated activities most often associated with and performed during regularly scheduled equipment outages to maintain a plant and its equipment in good operating condition, including but not limited to steam cleaning, abrasive use, and woodworking
- Electric motors
- Storage tanks, reservoirs, transfer and lubricating equipment used for ASTM grade distillate or residual fuels, lubricants, and hydraulic fluids
- On-site storage tanks not subject to any New Source Performance Standards (NSPS), including underground storage tanks (UST), storing gasoline or diesel used exclusively for fueling of the facility's fleet of vehicles
- Natural gas, propane, and liquefied petroleum gas (LPG) storage tanks and transfer equipment
- Pressurized tanks containing gaseous compounds
- Vacuum sheet stacker vents
- Emissions from wastewater discharges to publicly owned treatment works (POTW) provided the source is authorized to discharge to the POTW, not including on-site wastewater treatment and/or holding facilities
- Fire suppression and training
- Paved roads and paved parking lots within an urban growth boundary
- Hazardous air pollutant emissions of fugitive dust from paved and unpaved roads except for those sources that have processes or activities that contribute to the deposition and entrainment of hazardous air pollutants from surface soils
- Health, safety, and emergency response activities
- Emergency generators and pumps used only during loss of primary equipment or utility service due to circumstances beyond the reasonable control of the owner or operator, or to address a power emergency as determined by DEQ
- Non-contact steam vents and leaks and safety and relief valves for boiler steam distribution systems
- Non-contact steam vents on condensate receivers, deaerators and similar equipment
- Boiler blowdown tanks
- Combustion source flame safety purging on startup
- Broke beaters, pulp and repulping tanks, stock chests and pulp handling equipment, excluding thickening equipment and repulpers
- Stock cleaning and pressurized pulp washing, excluding open stock washing systems
- White water storage tanks

EMISSION LIMITS AND STANDARDS, TESTING, MONITORING, AND RECORDKEEPING

8. Armstrong is subject to the following facility wide emission limits and standards:

Applicable Requirement	Pollutant/Parameter	Limit/Standard	Averaging Time
340-208-0210(2)	Fugitive Emissions	Minimize	NA
340-208-0660	Odors and particulate	No nuisance	NA
340-208-0670	PM >250 µm	No fallout	NA
340-206-0050	SERP	Implementation of SERP	Recordkeeping
40 CFR Part 68	Risk management	Risk management plan	NA

9. Armstrong is subject to the following emission unit specific emission limits and standards:

EU ID	Applicable Requirement	Pollutant/Parameter	Limit/Standard	Averaging Time
U1-E4, UWEDX-EX	340-208-0600	Visible emissions	20% opacity	30 seconds
	340-208-0110(3)(b) and 340-208-0110(4)	Visible emissions	20% opacity	3 minutes
	340-226-0210(2)(a)(A) or (2)(b)(A)?	PM	0.10 gr/dscf	NA
	340-224-0070(1)	CO	499 lbs/MMcf of	NA

EU ID	Applicable Requirement	Pollutant/Parameter	Limit/Standard	Averaging Time
			natural gas burned	
U2-E5, U3-E6, UBDX-EX	340-208-0600	Visible emissions	20% opacity	30 seconds
	340-208-0110(3)(b) and 340-208-0110(4)	Visible emissions	20% opacity	3 minutes
	340-226-0210(2)(a)(A) or (2)(b)(A)?	PM	0.10 gr/dscf	NA
	340-224-0070(1)	CO	648 lbs/MMcf of natural gas burned	NA
U4-E8 U5-E10, U6-E12, UPDX-EX, U7-E7, ULOFX- EX U12-A2, U12-AX	340-208-0600	Visible emissions	20% opacity	30 seconds
	340-208-0110(3)(b) and 340-208-0110(4)	Visible emissions	20% opacity	3 minutes
	340-226-0210(2)(b)(B)	PM	0.14 gr/dscf	NA
U11-D1A, U11-D2, U11-D3, U11-DX	340-208-0600	Visible emissions	20% opacity	30 seconds
	340-208-0110(3)(b) and 340-208-0110(4)	Visible emissions	20% opacity	3 minutes
	340-226-0210(2)(b)(B)	PM	0.14 gr/dscf	NA
U13-A1, U13-AX	340-208-0600	Visible emissions	20% opacity	30 seconds
	340-208-0110(3)(b) and 340-208-0110(4)	Visible emissions	20% opacity	3 minutes
	340-238-0060 40 CFR 60.732(a)	PM	0.04 gr/dscf	NA
U13-B2, U15-B3, U16-B4, U17-B5, U20-B6, UBHX-BX	340-208-0600	Visible emissions	20% opacity	30 seconds
	340-208-0110(3)(b) and 340-208-0110(4)	Visible emissions	20% opacity	3 minutes
	340-226-0210(2)(b)(B)	PM	0.14 gr/dscf	NA
	340-226-0310	PM	Process weight limitation Division 226 Table 1	Lb/hr at tested process rate
U18-J3	340-208-0600	Visible emissions	20% opacity	30 seconds
	340-208-0110(3)(b) and 340-208-0110(4)	Visible emissions	20% opacity	3 minutes
U21-BLR	40 CFR Part 63 Subpart DDDDD	NA	Boiler tune-up & Energy audit	Every 5 years Once
U21-M1	40CFR63 Subpart HHHHH	NA	NA	NA

NEW SOURCE PERFORMANCE STANDARDS (NSPS)

10. This source is subject to 40 CFR Part 60 Subpart UUU NSPS for Calciners and dryers in the Mineral Industry.
11. Expander units (U13-A1) and (U13-AX) are subject to particulate matter standards under 40 CFR Part 60 Subpart UUU and OAR 340-238-0060. Because the units are controlled by wet scrubbers, they are not subject to opacity standards under Subpart UUU and OAR 340-238-0060. The facility was required to install, calibrate, maintain, and operate monitoring devices that continuously measure and record the pressure loss of the gas stream through the scrubbers and the scrubbing liquid flow rate to the scrubbers. The scrubber typically operates at 7.45 inches of differential pressure using 40 gallons of water per minute. 40 CFR Part 60 Subpart UUU requires the minimum pressure drop to be within 10% of the average reading recorded during the last compliance test. It also requires the liquid flow to be within 80 to 120 percent of the average flow during the last compliance test. The averages reported during the last compliance test (August 7, 2013) was 6.97 inches of water and 36.66 gpm. The corresponding pressure drop range was 6.42 to 7.30 inches of water and 35.2 to 37.4 gpm.

Source tests, recordkeeping, and DEQ inspections indicate that this emission unit has operated in compliance with the emission limitations set forth in the NSPS.

NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS (NESHAP)

12. The permit details the requirements of 40 CFR Part 63 Subpart HHHHH; National Emission Standard for Hazardous Air Pollutants: Miscellaneous Coating manufacturing. (40 CFR 63.7980 through 63.8105). Subpart HHHHH applies to major sources of Hazardous Air Pollutants (HAP's) that manufacture miscellaneous coatings. The applicable requirements of this subpart address process vessels, storage tanks, work practices, wastewater streams, equipment leaks, transfer operations and heat exchangers associated with the manufacture of coatings. The coatings manufactured at Armstrong are water-based, but some contain low levels of HAPs. The facility is a major source of HAPs due to emissions from other non-paint manufacturing process. While Armstrong is subject to the Maximum Achievable Control Technology (MACT) standard, they are exempt from many of the requirements as discussed below:
 - 12.a. Process Vessel Vents: Process vessels under 250 gallons are exempt. Process vessels containing less than 5% HAPs are also exempt. All of Armstrong's process vessels qualify for one of these exemptions.
 - 12.b. Storage Tanks: Existing storage tanks with a capacity of less than 20,000 gallons are exempt. All storage tanks associated with paint manufacturing at Armstrong are less than 20,000 gallon capacity.
 - 12.c. Wastewater: The applicable standard for wastewater only applies if the average concentration of a soluble or partially soluble HAP equals or exceeds 4000 parts per million by weight (ppmw) and has a load greater than or equal to 750 pounds per year annual average. Armstrong's wastewater contains less than 4000 ppmw HAPs. There is no applicable standard for Armstrong's wastewater.
 - 12.d. Equipment Leaks: Triethylamine (TEA) used in coating manufacturing operations. All coating manufacturing equipment either contains or is in contact with a fluid that consists of less than 5% by weight of total organic HAP and the equipment leak requirements do not apply.
 - 12.e. Transfer Operations: As currently operated, the facility does not have any transfer operations. A Notice of Construction would need to be submitted to approve the installation of transfer operations.
 - 12.f. Heat Exchange Systems: Armstrong does not use a heat exchange system in the paint manufacturing process.
 - 12.g. Startup, Shutdown, and Malfunction Plan (SSMP): The facility does not require an SSMP as operated.
13. The permit contains monitoring requirements to ensure that the facility continues to qualify for the exemptions referenced above.
14. The permit details the requirements of 40 CFR Part 63 Subpart DDDDD; National Emission Standard for Hazardous Air Pollutants: Industrial, Commercial and Institutional Boilers and Process Heaters. The two small boilers (1.255 MMBtu/hr and 3.94 MMBtu/hr) are fired on natural gas, so only the Work Practice Standards (40 CFR 63.7500 and Table 3) and Reporting Requirements 40 CFR (63.7550 and Table 9) apply to the facility.
 - 14.a. Boiler tune-ups are required every 5 years
 - 14.b. A one-time energy audit is required to be conducted by a qualified energy assessor.

Insignificant activities

15. As identified earlier in this Review Report, this facility has insignificant emissions units (IEUs) that include categorically insignificant activities and aggregate insignificant emissions, as defined in OAR 340-200-0020. For the most part, the standards that apply to IEUs are for opacity (20% limit) and particulate matter (0.10 or 0.14 gr/dscf limit). DEQ does not consider it likely that IEUs could exceed an applicable emissions limit or standard because IEUs are generally equipment or activities that do not have any emission controls (e.g., small natural gas fired space heaters) and do not typically have visible emissions. Since there are no controls, no visible emissions, and the emissions are less than one ton per year, DEQ does not believe that monitoring, recordkeeping, or reporting is necessary for assuring compliance with the standards.

PLANT SITE EMISSION LIMITS

16. Provided below is a summary of the baseline emissions rate, netting basis, plant site emission limits, and emissions capacity.

Pollutant	Baseline Emission Rate (tons/yr)	Netting Basis		Plant Site Emission Limit (PSEL)		
		Previous (tons/yr)	Proposed (tons/yr)	Previous PSEL	Proposed PSEL	PSEL Increase
				(tons/yr)	(tons/yr)	(tons/yr)
PM/PM ₁₀	155	155	155	166	166	0
PM _{2.5}	NA	NA	155	NA	164	164
CO	104	382	382	481	481	0
NO _x	43	43	43	53	53	0
SO ₂	1	1	1	40	40	0
VOC	155	155	155	163	163	0
GHG (CO ₂ e)	47,089	NA	47,089	NA	77,000	77,000

- 16.a. The baseline emission rate, except for GHG, was established in prior permit actions and is considered frozen in accordance with DEQ rules
- 16.b. The netting basis was also established in prior permit actions and is not being changed by this permit renewal. The CO netting basis was set at a rate exceeding the Baseline plus the SER in the 2002 PSD permit action.
- 16.c. Except for adding PM_{2.5} and GHG as regulated pollutants, the PSEL is not being changed by this permit renewal. Adding PM_{2.5} and GHG as regulated pollutants does not increase the allowable emissions of these pollutants, just acknowledges their existence. All PM is assumed to be PM₁₀ and PM_{2.5}. The PM_{2.5} PSEL is set lower to keep it below the netting basis plus the SER.
- 16.d. The GHG (CO₂e) baseline emission rate is calculated from actual natural gas usage of 783 mmcf in calendar year 2005.

SIGNIFICANT EMISSION RATE

17. The proposed PSEL is greater than the previous netting basis as shown below. The increases in the PSEL were approved in prior permit actions. This permit renewal does not allow any increase in permitted emissions.

Pollutant	SER	Requested increase over previous netting basis	Increase due to utilizing capacity that existed in the baseline period	Increase due to physical changes or changes in the method of operation
PM	25	11	11	0
PM ₁₀	15	11	11	0
PM _{2.5}	9	9	9	0
CO	100	99	0	99
NO _x	40	10	10	0
SO ₂	40	39	39	0
VOC	40	8	8	0
GHG	75,000	27,911	27,911	0

The **SER** (significant emission rate) for each pollutant is defined in OAR 340-200-0020. Pollutant emission increases above the SER are subject to additional requirements. For PSEL increases that do not involve a physical modification, an air quality assessment is not required to show that there will not be a violation of an ambient air quality standard or PSD increment. For PSEL increases that are the result of a physical modification, the permittee shall comply with the NSR requirements in OAR Chapter 340, Division 224.

The requested increase is the difference between the proposed PSEL and the previous netting basis less any credits and reductions required by rule since the last permit action. The requested increase is also divided into portions that are due to utilization of capacity that existed in the baseline period and/or physical modifications at the facility as discussed in the Proposed PSEL section above. The increase in the PSEL over the Netting Basis is less than the SER for all pollutants.

HAZARDOUS AIR POLLUTANTS

18. The following hazardous air pollutants are estimated by Armstrong World Industries, Inc. to be emitted from the entire facility:

Hazardous Air Pollutant	CAS Number	Tons/year
Formaldehyde	50-00-0	14.3
Hexane	110-54-3	1.1
Total		15.4

19. The following toxic and flammable substances are used at Armstrong World Industries, Inc. in the approximate quantities listed below:

CAS Number	Chemical name	Toxic Substance Usage				
		Insignificant	1,001-10,000 lbs/yr	10,001-20,000 lbs/yr	20,001-50,000 lbs/yr	>50,000 lbs/yr
74-86-2	Acetylene	X				
7783-20-2	Ammonium sulfate	X				
74-98-6	Propane					X
71-55-6	1,1,1-Trichloroethane	X				
1333-74-0	Hydrogen	X				
139-13-9	Nitriolotriacetic	X				
664-41-7	Ammonia					X

GENERAL BACKGROUND INFORMATION

20. The proposed permit is a renewal of an Oregon Title V Operating Permit, which was issued on January 5, 2010; modified by administrative amendment to correct the header date on February 19, 2010; and originally scheduled to expire on February 1, 2015. This renewal adds PSELS for PM_{2.5} and Greenhouse gases since they are now regulated pollutants.
21. Other permits issued or required by DEQ for this source include a Storm Water General Permit 1200-Z No. 106061.
22. This source is located in an area that is in attainment for all pollutants.
23. The source is located within 100 km (62 miles) of Mt. St. Helens Class I air quality protection area.

COMPLIANCE HISTORY

24. The facility was inspected on 6/13/2011, 7/18/2013, 7/13/2014 and 9/20/2016 and was found to be in compliance with DEQ regulations and permit conditions. During the prior permit period, neither DEQ nor Armstrong World Industries Inc. received any air quality complaints concerning Armstrong World Industries Inc. activities.

PUBLIC NOTICE

25. This proposed permit renewal will be made available for public comment from Friday Sept. 1, 2017 until 5pm, Tuesday Oct. 10, 2017. Comments may be submitted in writing during the comment period. DEQ will hold a public hearing if requested by 10 or more individuals or one person representing a group of 10 or more individuals. After the comment period and hearing, if requested, DEQ will review the comments and modify the permit as may be appropriate. A proposed permit will then be sent to EPA for a 45 day review period. DEQ may request and EPA may agree to an expedited review of 5 days if there were no substantive or adverse comments during the comment period.

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