DRAFT

Issuance Date:	March 30, 2018
Effective Date:	April 1, 2018
Expiration Date:	March 31, 2023
Modification No.1 Date:	December 9, 2019
Modification No.2 Date:	DRAFT x, xxxx

AIR OPERATING PERMIT No. 0003697

In compliance with the provisions of
The State of Washington
Clean Air Act Chapter 70.94 Revised Code of Washington

Packaging Corporation of America
Wallula, Washington

is authorized to operate
in accordance with the terms and conditions
of this permit

Issued by:
State of Washington
DEPARTMENT OF ECOLOGY
300 Desmond Drive
PO Box 47600
Olympia, WA 98504-7600

James DeMay, P.E.
Industrial Section Manager
Solid Waste Management Program

Emily Toffol, P.E.
Environmental Engineer
Solid Waste Management Program

TABLE OF CONTENTS

INTRODUCTION AND LEGAL AUTHORITY

This Air Operating Permit (Permit) is authorized under the Operating Permit Regulation, Chapter 173-401 WAC. The provisions of this Permit describe the emissions limitations, operating requirements, monitoring and recordkeeping requirements, and reporting frequencies for the permitted sources.

The Packaging Corporation of America (PCA) Wallula Mill requires a Title V Air Operating Permit because it emits, or has the potential to emit, one hundred tons per year or more of one or more air pollutants. [WAC 173-401-300(1)]

During the drafting of this Permit, Washington State Department of Ecology (Ecology) has attempted to incorporate requirements using the exact language of the law, regulation, or order. Where there is a difference in language, this difference is presented in this Permit only for clarification of the underlying requirement. The legal requirement remains the underlying requirement. Any conflict between the Permit and an underlying requirement that is not acknowledged in this Permit or its support document, nor is addressed in past orders or permits referenced in this Permit or its support document, will be resolved by referring to the underlying requirement. Unless otherwise stated, the effective date of referenced regulations or statutes is that of the provision in effect on the date of permit issuance. Compliance with underlying requirements shall be demonstrated using the methods specified in this Permit or the support document.

The Title V Air Operating Permit consists of all parts of this assembled document, including its footnotes and Appendices, but does not include the accompanying support document, nor the Title V permit application materials submitted by PCA, nor any other past orders or permits.

The definition of terms contained in WAC 173-401-200, and as defined in all referenced regulations, applies to this Permit unless otherwise defined in the Permit.

EMISSION UNIT SPECIFIC REQUIREMENTS
[WAC 173-401-600]

This section contains requirements applicable to described units. General requirements that apply to monitoring, recordkeeping, and reporting for these limits are in the Facility-Wide Requirements section of this Permit. Monitoring and reporting requirements that are specific to each limit are listed in the emission unit specific tables and should be read in conjunction with the general requirements. Unless specified otherwise, the basis of authority for the type and frequency of monitoring imposed in Conditions A through U of this permit is WAC 173-401-615.

Refer to Appendix C for emission estimate algorithms. These algorithms set forth the calculation method for those emission limits that the required reference method itself does not yield a direct emission measurement. The Permittee may use an equivalent method with written approval from Ecology.

A. No. 2 Recovery Furnace

No. 2 Recovery Furnace is subject to the following federal requirement when operating as a recovery furnace, as defined by 40 CFR Part 63, Subpart MM:

- 40 CFR Part 60, Subpart BB
- 40 CFR Part 63, Subpart MM and relevant portions of Subpart A.
- 40 CFR Part 64

No. 2 Recovery Furnace is subject to the following federal requirement when operating as a boiler, as defined by 40 CFR Part 63, Subpart DDDDD:

- 40 CFR Part 63, Subpart DDDDD and relevant portions of Subpart A.

A.1a Notify Ecology within 30 days of switching the primary fuel source for the No. 2 Recovery Furnace. The notification must identify the currently applicable Part 63 Subpart and subcategory (when subject to 40 CFR Part 63, Subpart DDDDD) and the date upon which the fuel switch occurred. (40 CFR 63.7545(h))

A.1.b When the Permittee fires black liquor in the No. 2 Recovery Furnace (RF), Conditions A.2 through A.8 apply. When the Permittee is operating the No. 2 Recovery Furnace (RF) as a natural gas boiler (i.e. not firing black liquor), Conditions A.9 through A.17 apply. The Permittee is not required to operate their air pollution control equipment while operating as a natural gas boiler.

A.1.c If the No. 2 RF has not fired black liquor for more than one year (365 days), any source test that is required on an annual frequency or less must be conducted within 60 days of resuming black liquor firing, unless otherwise approved by Ecology. All other source tests must be conducted within 180 days of resuming black liquor firing, unless otherwise approved by Ecology. Provide notifications to Ecology regarding stack testing as required in the permit conditions below (40 CFR 70.6(c) for monitoring - sufficiency monitoring).

A1.d Keep records of the types and amounts of fuels burned at the No.2 Recovery Furnace. Retain records for at least five years and provide to Ecology upon request. (40 CFR 70.6(c) for monitoring - sufficiency monitoring)

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
A.2.a	Particulate	0.044 gr/dscf at 8% O_2	EPA Method 5 is the reference test method. Sample at least annually consisting of three 1 hour test using EPA Method 5 or a test method approved in writing by Ecology. Report test results within sixty days of completion of the source test. The Permittee shall comply with Condition A.8 for monitoring requirements to indicate compliance.	PSD-X-77-04 as consolidated in Order DE 96-AQI078 and 40 CFR 60.282(a)(1)(i) for PM limit. Order No. DE 96-AQI078 for testing frequency 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping applicability.
A.2.b	HAP metals (Particulate Surrogate)	0.044 gr/dscf at 8% O_2	EPA Method 5 is the reference test method. Each run must be at least 60 minutes with a sample volume of 31.8 dscf. Water must be use as the cleanup solvent instead of acetone in the sample recovery procedure. Sample every five years. The first of the 5-year periodic performance tests must be conducted by October 13, 2020 and thereafter within 5 years following the previous performance test. Notify Ecology 60 calendar days before the performance test is scheduled to begin. The performance test must be done under normal operating conditions. Records of process conditions during test shall be kept and made available upon request.	40 CFR 63.865(b)(1) for reference test method and water requirement. 40 CFR 63.862(a)(1)(i) for PM surrogate HAP limit. 40 CFR 63.863(c) for initial performance test and frequency 40 CFR 63.865 for performance testing requirements 40 CFR 63.865 and 40 CFR 63.866 for recordkeeping

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
			Submit results through CEDRI 60 days after completing each performance test. Report excess emissions in semiannual excess emissions report. The Permittee shall comply with Condition A.8 for monitoring requirements to indicate compliance.	40 CFR 63.9(e) and 40 CFR 63.7(b) for performance test notification 40 CFR 63.867(c)(4) for excess emission reporting and (d) for electronic reporting
A.2.c	Particulate	0.1 gr/dscf @ 8% O_2 avg over three 1 hour tests	EPA Method 5 is the reference test method. Ongoing compliance assured by monitoring specified in Condition A.2.a	WAC 173-405-040(1)(a) for PM limit. 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping applicability.
A.3.a	Particulate	476 lbs/day, rolling annual average	Daily average value is calculated using actual emissions from previous stack test results. Report test results in the monthly report. The Permittee shall comply with Condition A.8 for CAM monitoring requirements intended to indicate compliance with the particulate limit.	PSD-X-77-04 as consolidated in Order DE 96-AQI078 for limit. 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/ recordkeeping applicability.

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
A.3.b	Particulate	75 tons per year, 12 month rolling annual average, calculated monthly.	12 month rolling annual average value is calculated using emissions data from previous stack tests using EPA Method 5. Report test results and calculated emissions within sixty days of completion of the source test. The Permittee shall comply with Condition A.7 for CAM monitoring requirements intended to indicate compliance	Order No. DE 02AQ9IS-5019 and WAC 173-400-091 for limit. 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping applicability.
A.3.c	PM_{10}	63 tons per year, 12 month rolling annual average calculated monthly.	12 month rolling annual average value is calculated using emissions data from previous stack tests using EPA Method 5. Report test results and calculated emissions in the monthly report. The Permittee shall comply with Condition A.7 for CAM monitoring requirements intended to indicate compliance.	Order No. DE 02AQ91S-5019 and WAC 173-400-091 for limit. 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping applicability.
A.4.a	Opacity	Average 35% for more than 6 consecutive minutes in any 60 minute period.	EPA Method 9 is the reference test method. Monitor with Continuous Opacity Monitoring System (COMS). If the total number of contiguous periods of excess emissions in a quarter is less than 6% of the total number of operating hours (excluding periods of startup, shutdown, or malfunction) during the	40 CFR 60.282(a)(1)(ii) 40 CFR 60.11(b) for RM 40 CFR 60.284(a)(1) and 40 CFR 60.13(h) for COM requirements

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
			quarter, the excess emissions do not constitute a violation. Report deviations to Administrator (Ecology) semiannually or more frequently as directed by Ecology. [11,12,13,14]	40 CFR 60.284(e)(1)(ii) for excess emission allowance WAC 173-400-105(7), WAC 173-401-615(1)(c), and 40 CFR 60.13(e) for COMS data recovery and excursion reporting
A.4.b	Opacity	Average 35% for more than 6 consecutive minutes in any 60 minute period.	Ecology Method 9b is the reference test method. The Permittee shall comply with Condition A.8 for CAM monitoring requirements intended to indicate compliance, except corrective action is required when the average of ten consecutive 6 minute averages result in a measurement greater than 35% opacity.	WAC 173-405-040(6) for opacity standard 40 CFR 64.2 and 64.6 through 64.9 for respective opacity CAM monitoring and reporting/recordkeeping applicability.
A.4.c	HAP metals (opacity surrogate)	Average 35% for more than 6 consecutive minutes in any 60 minute period.	Monitor with COMS that conforms to 40 CFR Part 60, Appendix F and Appendix B, Performance Specification 1. If the total number of contiguous periods of excess emissions in a quarter is less than 2% of the total number of operating hours during any semiannual period, the excess emissions do not constitute a violation.	40 CFR 63.864(d) for COM requirements 40 CFR 63.864(k)(2)(i) for violation definition and excess allowance 40 CFR 63.8(c)(4) for COMS data recovery and excursion reporting

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
A.5	SO_2	500 ppm at 8% O_2, hourly average	Sample monthly consisting of three 1 hour test using EPA Method 6 or a test method approved in writing by Ecology. Report test results within sixty days of completion of the source test.[2]	WAC 173-405-040(9)(a) for limit
A.6.a	SO_2	5424 lbs/day, rolling annual average	Daily average value is calculated using actual emissions from previous stack test results. Report deviations in the monthly report.	PSD-X-77-04 as consolidated in Order DE 96-AQI078
A.6.b	SO_2	585 tons per year, 12 month rolling annual average, calculated monthly	12 month rolling annual average value is calculated using CEM concentration data and air flow data from stack test results. Report test results and calculated emissions in the monthly report. [11,14]	Order No. DE 02AQ91S-5019 based on WAC 173-400-091(2); WAC 173-401-615(1)(c); and WAC 173-400-105(7); for CEMS data recovery
A.7	TRS	5 ppmvd at 8% O2, 12 hour average	Monitor continuously using EPA Method 16. Report deviations in the monthly report. If the total number of contiguous periods of excess emissions in a quarter is less than 1% of the total number of operating hours (excluding periods of startup, shutdown, or malfunction) during the quarter, the excess emissions do not constitute a violation of this requirement.[11,13]	40 CFR 60.283(a)(2) for limit 40 CFR 60.284(e)(1)(i) for excursion allowance WAC 173-401-615(1); WAC 173-400-105(7); and 40 CFR§60.13(e) for CEMS data recovery

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
A.8	Operation	Minimum operating condition	Monitor opacity continuously using an approved COM operated in conformance with 40 CFR Part 60 (July 1, 1992), App. B and App. F, Perf. Spec. 1. The Permittee shall operate the continuous opacity monitor as a performance indicator to show continuous operation of the pollution control device. The Permittee will initiate corrective action within 24 hours when the average of ten consecutive 6 minute averages result in a measurement greater than 20% opacity. [4,5] Failure to initiate corrective action within 24 hours may be a violation of the underlying applicable requirement. Report corrective actions and performance indicator deviations (excursions) in the monthly report. [6]	40 CFR 63.864(k)(1)(i) and 40 CFR 64.6 for monitoring and corrective action WAC 173-401-615(1)(c); WAC 173-400-105(7); and 40 CFR 63.8(c)(4) for CEMS data recovery 40 CFR 64.9 for respective PM CAM reporting/recordkeeping

When the Permittee is operating the No. 2 Recovery Furnace (RF) as a natural gas boiler (i.e. not firing black liquor), Conditions A.9 through A.17 apply.

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
A.9	PM	0.1 grains/dscf at 7% O_2	EPA Method 5 is the reference test method. Perform a source test if requested by Ecology. Submit a written source test plan to Ecology for	WAC 173-405-040(5)(c) for limit WAC 173-405-040(10) and 173-401-615(1)(b) for source testing

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
			approval prior to conducting the source test. Maintain records of type and amount of fuel usage during the source test.	
A.10	Opacity State-only requirement	20% for more than 6 consecutive minutes in any 60 minute period	EPA Method 9 is the reference test method. Monitoring using EPA Method 9 is not required unless requested by Ecology. Report all exceedances in the monthly report.	WAC 173-405-040(6)(b) for limit WAC 173-405-040(10) and 173-401-615(1)(b) for monitoring
A.11	SO_2	1000 ppm at 7% $O_{2,,}$ hourly average	EPA Method 6 is the reference test method. Perform a source test if requested by Ecology. Submit a written source test plan to Ecology for approval prior to conducting the source test. Maintain records of type and amount of fuel usage during the source test.	WAC 173-405-040(9)(b) for limit WAC 173-405-040(10) and 173-401-615(1)(b) for source testing
A.12	HAPs	Tune-up (work practice standard)	Permittee shall conduct a tune-up of No. 2 Recovery Furnace within 30 days of the MONTH 2025 permit modification effective date. If the Permittee has conducted a tune-up that meets the requirements of 40 CFR 63.7540(a)(10) no more than 5 years prior to the MONTH 2025 modification effective date, the Permittee may submit documentation demonstrating that the	40 CFR 63.7540(a)(12), 40 CFR 63.7540(a)(13), and Item 1 of Table 3 to Subpart DDDDD of Part 63 for tune-up frequency 40 CFR 63.7540(a)(10) for tune-up requirements

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
			initial tune-up has been met instead of conducting the tune-up. Permittee shall conduct subsequent tune-ups every 5 years from the date of the previous tune-up.	
A.13	HAPs	Boiler oxygen level ≥ %O_2 measured during the most recent tune-up (work practice standard)	This limit applies to any boiler(s) operating a continuous oxygen trim system, as defined in 40 CFR 63.7575, and completing tune-ups less frequently than annually (every 13 months), in accordance with Condition A.12. Set the oxygen level in the No. 2 Recovery Furnace while operating as a natural gas boiler no lower than the oxygen concentration measured during the most recent tune-up. Install, operate, and maintain an oxygen analyzer system in accordance with manufacturer recommendations. Continuously monitor oxygen content while operating the No. 2 Recovery Furnace as a natural gas boiler. Report the minimum recorded oxygen level while operating the boiler(s) during the month, including the date and time of occurrence, and all deviations in the monthly report.	40 CFR 63.7540(a)(12) WAC 173-401-615(1)(b) and 40 CFR 70.6(c)(1) for oxygen analyzer system requirements and reporting requirements.

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
			Report all changes to the oxygen level operating limit in the monthly report following the next tune-up.	
A.14	HAPs	N/A - Notification	Permittee must submit a notification of alternative fuel use within 48 hours of the declaration of each period of natural gas curtailment or supply interruption.	40 CFR 63.7545(f) for notification requirements 40 CFR 63.7575 "Period of gas curtailment or supply interruption"
A.15	HAPs	N/A - Notification	Permittee must submit a notification if a fuel switch or physical change resulted in the applicability of a different subcategory for the No. 2 Recovery Furnace. The notification must be submitted within 30 days of the switch/change.	40 CFR 63.7545(h) for notification requirements
A.16	HAPs	N/A – reporting requirement	Submit compliance reports through CEDRI according to the frequency specified in §63.7550(b).	40 CFR Part 63.7550 for reporting frequency and content requirements Table 9 to Subpart DDDDD of Part 63 (Item 1) for specifics
A.17	HAPs	N/A - Record-keeping	Permittee must keep records of the total hours per calendar year the No. 2 Recovery Furnace operated during periods of natural gas curtailment or gas supply emergencies.	40 CFR 63.7555(h) for fuel use and operating records

Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
		Maintain all records in a form suitable and available for expeditious review for 5 years.	40 CFR 63.7560 and 40 CFR 63.10(b)(1) for recordkeeping schedule

B. No. 3 Recovery Furnace

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
B.1.a	Particulate (PM/PM_{10})	0.027 gr/dscf at 8% O_2 hourly average 0.021 gr/dscf at 8% O_2, rolling annual average 186 tpy rolling average	Sample at least annually EPA Method 5 or a test method approved in writing by Ecology. Sampling shall consist of three 1-hour tests. Sampling frequency shall be determined in accordance with Footnote 2. Report test results within sixty days of completion of the source test. Levels of precipitator voltage and current shall be recorded during particulate compliance source testing for informational purposes only. The Permittee shall comply with Condition B.3 for CAM monitoring requirements intended to indicate compliance with the particulate limits. Rolling annual average means the average of the emissions readings of the previous year leading up to the reporting date. For a rolling annual average limit with an associated monthly reporting requirement the rolling annual average is a 12-month rolling average, calculated monthly. Use the results from the most recent source test to determine mass loading.	WAC 173-400-112 (Lowest Achievable Emission Rate – state nonattainment new source review) as implemented in Order DE 02-AQIS-3588, Modification 1 for concentration PM limits and averaging period definition. Order 96-AQ-078 for mass based limit (Oct 17, 1996 amendment). 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping applicability. WAC 173-401-615 for stipulation to use most recent source test results for mass loading determination.

	Parameter	**Limit & Averaging Period** (shall not exceed)	**Monitoring & Reporting**[1]	**Applicable Requirement(s)**
B.1.b	Particulate	0.044 gr/dscf @ 8% O_2.	EPA Method 5 or a test method approved in writing by Ecology. The Permittee shall comply with Condition B.3 for CAM monitoring requirements intended to indicate compliance.	40 CFR 60.282(a)(1)(i) for PM limit. 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping applicability.
B.1.c	HAP metals (Particulate Surrogate)	0.044 gr/dscf @ 8% O_2.	EPA Method 5 is the reference test method. Each run must be at least 60 minutes with a sample volume of 31.8 dscf. Water must be use as the cleanup solvent instead of acetone in the sample recovery procedure. Sample every five years. The first of the 5-year periodic performance tests must be conducted by October 13, 2020 and thereafter within 5 years following the previous performance test. Notify Ecology 60 calendar days before the performance test is scheduled to begin. The performance test must be done under normal operating conditions. Records of process conditions during test shall be kept and made available upon request. Submit results through CEDRI 60 days after completing each performance test.	40CFR 63.865(b)(1) for reference test method and water requirement 40 CFR 63.862(a)(1)(i) for PM surrogate HAP limit 40 CFR 63.863(c) for initial performance test and frequency 40 CFR 63.865 for performance testing requirements 40 CFR 63.865 and 40 CFR 63.866 for recordkeeping 40 CFR 63.9(e) and 40 CFR 63.7(b) for performance test notification

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
			Report excess emissions in semiannual excess emissions report. The Permittee shall comply with Condition B.3 for monitoring requirements to indicate compliance.	40 CFR 63.867(c)(4) for excess emission reporting and (d) for electronic reporting
B.1.d	Particulate	0.10 gr/dscf @ 8% O_2 averaged over three 1 hour tests.	EPA Method 5 or a test method approved in writing by Ecology. Ongoing compliance assured by monitoring specified in Condition B.1.b.	WAC 173-405-040 (1) for limit 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping applicability
B.2.a	Opacity	Average 35% for more than 6 consecutive minutes in any 60 minute period.	EPA Method 9 is the reference test method. Monitor with Continuous Opacity Monitoring System. If the total number of contiguous periods of excess emissions in a quarter is less than 6% of the total number of operating hours (excluding periods of startup, shutdown, or malfunction) during the quarter, the excess emissions do not constitute a violation. Report deviations to Administrator (Ecology) semiannually or more frequently as directed by Ecology. [11,12,13,14]	40 CFR 60.282(a)(1)(ii) for opacity standard 40 CFR 60.11(b) for RM 40 CFR 60.284(a)(1), 40 CFR 63.864(d), and 40 CFR 60.13(h) for COM requirements 40 CFR 60.284(e)(1)(ii) for excess emission allowance WAC 173-401-615(1)(c); WAC 173-400-105(7); 40 CFR 63.8(c)(4); and

	Parameter	**Limit & Averaging Period** (shall not exceed)	**Monitoring & Reporting**[1]	**Applicable Requirement(s)**
				40 CFR 60.13(e) for COMS data recovery and excursion reporting
B.2.b	Opacity	Average 35% for more than 6 consecutive minutes in any 60 minute period.	Ecology Method 9b is the reference test method. The Permittee shall comply with Condition B.3 for CAM monitoring requirements intended to indicate compliance, except corrective action is required when the average of ten consecutive 6 minute averages result in a measurement greater than 35% opacity.	WAC 173-405-040(6) for opacity standard 40 CFR 64.2 and 64.6 through 64.9 for respective opacity CAM monitoring and reporting/recordkeeping applicability
B.2.c	HAP metals (Opacity surrogate)	Average 35% for more than 6 consecutive minutes in any 60 minute period.	Monitor with COMS that conforms to 40 CFR 60, Appendix F and Appendix B, Performance Specification 1. If the total number of contiguous periods of excess emissions in a quarter is less than 2% of the total number of operating hours during any semiannual period, the excess emissions do not constitute a violation.	40 CFR 63.864(d) for COM requirements 40 CFR 63.864(k)(2)(i) for violation definition and excess allowance 40 CFR 63.8(c)(4) for COMS data recovery and excursion reporting
B.2.d	Opacity/ Visible Emissions	When firing exclusively fuel oil, average 20% opacity for more than 6 consecutive	The Permittee shall install, calibrate, maintain and operate a continuous monitoring system to monitor opacity from the No. 3 Recovery Furnace. Report excursions to Ecology monthly. The monitoring system must conform to 40 CFR Part 60, Appendix B, Performance Specification 1.	Order DE 02AQIS-3588, Modification 1 for limit and definition of a 60-minute period Sufficiency monitoring for COMS QA/QC (40 CFR 70.6(c))

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
		minutes in any 60-minute period, except for one 6-minute period per hour of not more than 27 percent opacity.	60-minute period is the period from the top of one hour to the top of the next hour (e.g., 07:00:00 to 07:59:59).	
B.3	Operation	Minimum operating condition	Monitor opacity continuously using an approved COM operated in conformance with 40 CFR Part 60 (July 1, 1992), App. B and App. F, Perf. Spec. 1. The Permittee shall operate the continuous opacity monitor as a performance indicator. The Permittee will initiate corrective action within 24 hours when the average of ten consecutive 6 minute averages result in a measurement greater than 20% opacity. [4,5] Failure to initiate corrective action within 24 hours may be a violation of the underlying applicable requirement. Report corrective actions and performance indicator deviations/excursions in the monthly report. [6]	40 CFR 63.864(k)(1)(i) and 40 CFR 64.6 for monitoring and corrective action WAC 173-401-615(1)(c); WAC 173-400-105(7); and 40 CFR 63.8(c)(4) for CEMS data recovery 40 CFR 64.9 for respective PM CAM reporting/recordkeeping

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
B.4	Annual Capacity Factor	10% annual fuel capacity factor, calendar year basis.	Annual average heat input from oil or natural gas fossil fuels shall not exceed 10% of the total heat input on an MMBTU basis, calendar year annual average. The unit is not subject to NSPS subpart Db if the annual capacity factor remains at or below 10%. The Permittee shall keep records of heat input calculations which demonstrate that the annual fuel capacity factor is below 10%.	NSPS Subpart Db 40 CFR 60.44b for limit
B.5.a	SO_2	1301 tpy, 12 month12-month rolling annual average.	EPA Method 6 or 6C is the primary reference test method. The Permittee shall perform source tests monthly. Annual average value is calculated using actual emissions from the results of the most recent source tests. The Permittee shall report monthly all source test results and rolling 12 month mass emissions.[2] Source tests shall be conducted at a production rate which is at or above the average production rate in the previous month.	PSD-01-07 condition 1.1 as BACT avoidance limit for SO_2
B.5.b	SO_2	500 ppmvd at 8% O_2 hourly average.	EPA Method 6 or 6C is the primary reference test method. The Permittee shall sample monthly consisting of three 1 hour sample runs using Method 6, 6C, or a test method approved in advance in writing by Ecology. Report test results monthly.[2]	PSD-01-07 condition 1.2 and WAC 173-405-040(9)(a) for SO_2 limit.

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
B.6	NO_X	112 ppmvd at 8% O_2 daily average. 825 tpy	EPA Method 7, 7A, 7B, or 7E is the primary reference test method. The Permittee shall monitor continuously using an approved CEM that conforms to 40 CFR Part 60 Appendix B, Performance Specification 2. Report exceedances monthly. [11,14]	PSD-01-07 condition 1.3 BACT and PSD-95-04 through Order DE 96-AQI078 for concentration limit. PSD-95-04 through Order DE 96-AQI078 for mass limit. WAC173-401-615(1)(c) WAC173-400-105(7) for CEMS data recovery
B.7	CO	500 ppmvd at 8% O_2, 24 hour average. 1355 tpy	EPA Method 10 is the primary reference test method. The Permittee shall monitor continuously using an approved CEM that conforms to 40 CFR Part 60, Appendix B Performance Specification 4. Report exceedances monthly. [11,14]	PSD-01-07 condition 1.4 BACT Limit for concentration limit. PSD-95-04 through Order DE 96-AQI078 for mass limit. WAC 173-401-615(1)(c) WAC173-400-105(7) for CEMs data recovery.
B.8.a	TRS	5 ppmvd at 8% O_2, 12 hour average.	EPA Method 16, 16A, or 16B is the primary reference test method. The Permittee shall monitor continuously using an approved CEM operated in conformance with 40 CFR Part 60, Appendix B, Performance Specification 5. Report monitoring results and exceedances quarterly to Ecology. If the total duration of all 12 hour averaging periods of excess emissions in a quarter is less than 1% of the	PSD-01-07 condition 1.5, WAC 173-405-040(1)(c) as state only, not federally enforceable and 40 CFR 60.283(a)(2) for limit. 40 CFR 60.284(a)(2) for CEM.

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
			total number of operating hours (excluding periods of startup, shutdown, or malfunction) during the quarter, the excess emissions do not constitute a violation of this requirement. [11,13,14]	40 CFR 60.284(e)(1)(i) for excursion allowance. WAC 173-401-615(1)(c) WAC 173-400-105(7) 40 and 40 CFR §60.13(e) for CEMS data recovery.
B.8.b	TRS	27 tpy annual average.	Annual average value is calculated using an approved CEM and is operated in conformance with 40 CFR Pt 60 (July 1, 1992), App. B, Perf. Spec. 5. Annually report emissions. [11,13,14]	PSD-95-04 as consolidated in Order DE 96-AQI078. WAC 173-401-615(1)(c) WAC 173-400-105(7) 40 and 40 CFR §60.13(e) for CEMS data recovery.
B.9	VOC	0.05 lb/ MMBTU hourly average. Source test during the last year of permit term.	Sample consists of one 1 hour test using EPA Method 25A or a test method approved in writing by Ecology once per permit term. The Permittee is required to conduct the test at full load. Results expressed in terms of propane (or other appropriate organic calibration gas) or in terms of carbon per EPA Method 25A. Report test results with the renewal permit application. The Permittee shall comply with Condition B.3.a for O&M requirements intended to indicate compliance with the VOC limit.	PSD-95-04 as consolidated in Order DE 96-AQI078

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
B.10	VOC	179 tpy annual average	Annual average value is calculated using actual emissions from previous stack test results. Results expressed in terms of propane (or other appropriate organic calibration gas) or in terms of carbon per EPA Method 25A. Report test results with the renewal permit application.	PSD-95-04 as consolidated in Order DE 96-AQI078.

B.11 At all times, including periods of abnormal operation and upset, the Permittee shall, to the extent practicable, operate and maintain emissions units with modifications covered by NOC Order DE02AQIS-3588, Modification 1 that have the potential to affect emissions to the atmosphere, along with associated air pollution control equipment, in a manner consistent with good air pollution control practice. For said units, Operations and Maintenance (O&M) manuals shall be prepared, reviewed annually, and updated as needed. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to Ecology which may include, but is not limited to, monitoring results, opacity observations, inspections of the source, and reviews to determine that the mill is following its O&M procedures. (NOC Order DE02AQIS-3588, Modification 1, Condition 8)

C. Lime Kiln

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
C.1.a	HAP metal (PM as surrogate)	0.064 gr/dscf at 10% O_2 hourly average	EPA Method 5 is the reference test method. Each run must be at least 60 minutes with a sample volume of 31.8 dscf. Water must be use as the cleanup solvent instead of acetone in the sample recovery procedure.	40 CFR 63.865(b)(1) for reference test method and water requirement 40 CFR 63.862(a)(1)(i)(c) for HAP PM surrogate limit

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
			Sample every five years. The first of the 5-year periodic performance tests must be conducted by October 13, 2020 and thereafter within 5 years following the previous performance test. Notify Ecology 60 calendar days before the performance test is scheduled to begin. The performance test must be done under normal operating conditions. Records of process conditions during test shall be kept and made available upon request. Submit results through CEDRI 60 days after completing each performance test. Report excess emissions in semiannual excess emissions report. The Permittee shall comply with Condition C.7.a and C.7.b for monitoring requirements to indicate compliance. Sources equipped with a wet scrubber shall not have six or more monitoring parameter deviations in a semiannual reporting period on each unit. A unit deviation day is a 24 hour period in which one or more monitoring parameter deviation(s) occur(s) on a specific emission unit.	40 CFR 63.864(k)(2)(iv) for deviation allowance limitation 40 CFR 63.864(k)(3) for number of exceedances per 24-hour period
C.1.b	Particulate	0.066 gr/dscf at 10% O_2	Sample at least once/permit cycle consisting of three 1 hour tests using EPA Method 5 or a test method approved in writing by Ecology. Report test results	40 CFR 60.282(a)(3) for PM limits.40 CFR 64.2 and 64.6 through 64.9 for respective PM

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
		when firing natural gas 0.13 gr/dscf when firing liquid fossil fuel	within sixty days of completion of the source test. The Permittee shall comply with Condition C.7.a and C.7.b for CAM monitoring requirements intended to indicate compliance with the particulate limit.	CAM monitoring and reporting/recordkeeping applicability.
C.1.c	Particulate	0.067 gr/dscf at 10% O_2 when firing with natural gas hourly average 0.12 gr/dscf at 10% O_2 when firing fuel oil	Sample monthly consisting of one 1 hour test using EPA Method 5 or a test method approved in writing by Ecology.[2] Report test results within sixty days of completion of the source test. The Permittee shall comply with Condition C.7.a and C.7.b for CAM monitoring requirements intended to indicate compliance with the particulate limit.	PSD-X-77-04 as consolidated in Order DE 96-AQI078 for basis of particulate limit when firing with fuel oil, 40 CFR 60.282(a)(3)(i) for basis of PM limit when firing with natural gas 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping applicability
C.1.d	Particulate	0.13 gr/dscf at 10% O_2	EPA Method 5 is reference test method. The Permittee shall comply with Condition C.7.a and C.7.b for CAM monitoring requirements intended to indicate compliance with the particulate limit.	WAC 173-405-040(3) for limit 40 CFR 64.2 and 64.9 for respective PM CAM monitoring and reporting/recordkeeping applicability

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
C.1.e	Particulate	906 lbs/day when firing with fuel oil, 466 lbs/day when firing with natural gas, rolling annual average	Daily average value is calculated using actual emissions from previous stack test results. Lime kiln particulate tests will be performed on the fuel being fired on the day of the scheduled test. Tests will not be scheduled for the purpose of testing the lime kiln while firing a particular fuel type. Report results in the monthly report. The Permittee shall comply with Condition C.7.a and C.7.b for CAM monitoring requirements intended to indicate compliance with the particulate limit.	PSD-X-77-04 as consolidated in Order DE 96-AQI078 for limit 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping applicability
C.2	Opacity (visible emissions)	Average 35% for more than six consecutive minutes in any 60 minute period	EPA Method 9 is the reference test method. The Permittee shall conduct an EPA Method 9 test within 180 days of permit renewal. The results will be used to validate the reliance on Condition C.7.a for ongoing compliance with the opacity limit of this condition.	WAC 173-405-040(6) for limit 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping applicability
C.3	SO_2	500 ppmvd at 10% O_2 hourly average	Sample consisting of three 1-hour tests per quarter using EPA Method 6 or a test method approved in writing by Ecology[2]. Report test results quarterly. Maintain three hour average of caustic addition rate ≥0.25 gpm (based on performance test results from February 16, 2016). Take corrective action within 24 hours. Failure to initiate corrective action may be a	WAC 173-405-040(9)(a) for limit 40 CFR 64.9 for respective PM CAM reporting/recordkeeping

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
			violation of the underlying applicable requirement.[4,5]	
C.4	SO_2	5 ppmvd at 10% O_2 rolling annual average	Sample consisting of three 1-hour tests per quarter using EPA Method 6 or a test method approved in writing by Ecology[2]. Report test results quarterly. Maintain three hour average of caustic addition rate ≥0.25 gpm (based on performance test results from February 16, 2016). Take corrective action within 24 hours. Failure to initiate corrective action may be a violation of the underlying applicable requirement.[4,5]	Order DE 96-AQI078 for limit 40 CFR 64.9 for respective PM CAM reporting/recordkeeping
C.5	SO_2	19 lbs/day, rolling annual average	Daily average value is calculated using actual emissions from previous stack test results. Report test results quarterly in the monthly report.	PSD-X-77-04 as consolidated in Order DE 96-AQI078 for limit
C.5.a	SO_2	15.8 ppmvd at 10% O_2 (oil), rolling annual average. This limit applies when oil is fired at a rate above 1 gpm	See Condition C.4 for monitoring and reporting requirements.	PSD X-77-04 Amendment 2 for limit

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
C.5.b	SO_2	147.7 lbs/day (oil), rolling annual average. This limit applies when oil is fired at a rate above 1 gpm	See Condition C.4 for monitoring and reporting requirements.	PSD X-77-04 Amendment 2 for limit
C.5.c	SO_2	1.55% sulfur content in fuel oil	Fuel oil content shall be monitored through fuel supplier certification of the total sulfur content (expressed as % by weight) in each load fuel oil received by PCA.	PSD X-77-04 Amendment 2 Approval Condition 4 for limit
C.6.a	TRS	8 ppmvd at 10% O_2, 12 hour average	EPA Method 16, 16A, or 16B is the primary reference test method. The Permittee shall monitor continuously using an approved CEM operated in conformance with 40 CFR Part 60, Appendix B, Performance Specification 5. Calculate and record on a daily basis 12-hour average TRS concentration for two consecutive periods of each operating day. Each 12-hour average shall be determined as the arithmetic mean of the appropriate 12 contiguous 1-hour average TRS concentrations provided by the CEMS.	Order DE 96-AQI078 and 40 CFR 60.283(a)(5) for TRS limit 40 CFR 60.284(a)(2) for CEM 40 CFR 60.13(d)(1) for CEM calibration WAC 173-401-615(1)I; WAC 173-400-105(7); and 40 CFR §60.13(e) for CEMS data recovery 40 CFR 60.284(d) for semiannual reporting of excess emissions

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
			See 11 & 13 in Appendix F for data recovery requirements. With respect to 40 CFR Part 60 Subpart BB, the Permittee shall report semiannually periods of excess emissions in accordance with 40 CFR 60.7(c) and 40 CFR 60.284(d). Reports must be postmarked by the 30th day following the end of each six-month period. Excess emissions are 12-hr averages of TRS concentrations above 8 ppm by volume. With respect to 40 CFR Part 60 Subpart BB, Ecology will not consider excess emissions to be violation(s) provided that Ecology determines the affected facility, including air pollution control equipment, is maintained and operated in a manner which is consistent with good air pollution control practice for minimizing emissions during periods of excess emissions. The monitoring is required to demonstrate compliance with Condition J.1	
C.6.b	TRS	20 ppmvd at 10% O_2 on a daily average	EPA Method 16, 16A, or 16B is the primary reference test method. Ongoing compliance indicated by monitoring required in C.6.a.	WAC 173-405-040(3) for limit

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
			Report only deviations in the monthly report. [11,14]	
C.7.a	Operation	Pressure drop across lime kiln scrubber and scrubber recirculation flow rate must meet the minimum level established during initial or subsequent performance test, three hour block average.	Continuously monitor pressure drop, scrubber recirculation rate, and caustic addition flowrate. Report deviations/excursions in monthly, quarterly and semiannual reports. [6] Pressure drop recorded at least once every 15 minutes at equally spaced intervals, or as an arithmetic or integrated three hour block average. [11,12,13] Notes: Maintain three hour average of scrubber recirculation rate ≥550 gpm (based on performance test results from June 26-28, 2012). Maintain three hour average of scrubber pressure drop ≥23" H2O when mud flow >200 gpm and ≥21.3" H2O when mud flow ≤ 200 gpm (based on performance test results from June 26-28, 2012).	40 CFR 63.864(e)(10),40 CFR 60.284(b)(2)(i), and 40 CFR 64.6 for pressure drop and recirculation flow rate monitoring and monitoring accuracy WAC 173-401-615(1)(c); WAC 173-400-105(7); 40 CFR 63.8(c)(4) for CMS data recovery 40 CFR 64.9 for respective PM CAM reporting/recordkeeping
C.7.b	Scrubber Monitoring	Three hour block average parameter value is outside the range established in IPT or	Implement corrective action when any 3 hour block average parameter value is outside the range of values established in the IPT or subsequent performance test. Failure to initiate corrective action may be a violation of the underlying applicable requirement. [4,5]	40 CFR 63.864(k)(1)(ii) and 40 CFR 64.6 for CA requirement

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
		subsequent performance test.		
C.8	O_2	No limit – required for O_2 correction	Monitor and record the percent oxygen by volume on a dry basis, using a CEMS that conforms to 40 CFR Part 60, Appendix B, Performance Specification 3. See 11 & 13 in Appendix F for data recovery requirements. Calculate and record on a daily basis 12-hour average oxygen concentrations for the two consecutive periods of each operating day. These 12-hour averages shall correspond to the 12-hour average TRS concentrations in Condition C.6.a and shall be determined as an arithmetic mean of the appropriate 12 contiguous 1-hour average oxygen concentrations provided by the continuous monitoring system.	40 CFR 60.284(a)(2) for monitoring requirement 40 CFR 60.284 (c)(2) for recording requirement

The following **state only** requirement is not federally enforceable under the federal Clean Air Act:

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
C.9	TRS	80 ppmvd at 10% O_2 for two consecutive hours.	EPA Method 16, 16A, or 16B is the primary reference test method. Ongoing compliance indicated by monitoring required in C.6.a. Report only deviations in the monthly report. [11,14]	WAC 173-405-040(3)(b) for limit WAC 173-401-615(1)(c); WAC 173-400-105(7); and WAC 173-405-077 for CEMS data recovery

D. No. 2 Smelt Tank

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
D.1.a	HAP metals (PM as surrogate HAP)	0.2 lbs PM/ton of black liquor solids (dry weight), hourly average.	EPA Method 5 is the reference test method. Each run must be at least 60 minutes with a sample volume of 31.8 dscf. Water must be use as the cleanup solvent instead of acetone in the sample recovery procedure. Sample every five years. The first of the 5-year periodic performance tests must be conducted by October 13, 2020 and thereafter within 5 years following the previous performance test. Notify Ecology 60 calendar days before the performance test is scheduled to begin. The performance test must be done under normal operating conditions.	40 CFR 63.865(b)(1) for reference test method and water requirement 40 CFR 63.862(a)(1)(i)(B) for PM surrogate HAP limit 40 CFR 63.864(k)(2)(iv) for excursion allowance limitation

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
			Records of process conditions during test shall be kept and made available upon request. Submit results through CEDRI 60 days after completing each performance test. Report excess emissions in semiannual excess emissions report. The Permittee shall comply with Condition D.5 for requirements intended to indicate compliance. For sources equipped with a wet scrubber, a violation occurs when six or more monitoring parameter exceedances occur in a semiannual reporting period on each unit. A unit exceedance day is a 24 hour period in which one or more monitoring parameter exceedance(s) occur(s) on a specific emission unit.	
D.1.b	Particulate	0.2 lbs/ton of black liquor solids (dry weight), hourly average.	Sample monthly consisting of three 1 hour test using EPA Method 5 or a test method approved in writing by Ecology. Report test results within sixty days of completion of the source test.[2] The Permittee shall comply with Condition D.5 for O&M and CAM monitoring requirements intended to indicate compliance.	Order DE 96-AQI078 and 40 CFR 60.282(a)(2) for PM limit 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping applicability

	Parameter	**Limit & Averaging Period** (shall not exceed)	**Monitoring & Reporting**[1]	**Applicable Requirement(s)**
D.1.c	Particulate	0.30 lbs/ton black liquor solids	EPA Method 5 is the reference test method. Ongoing compliance assured by monitoring specified in Condition D.1.b.	WAC 173-405-040(2) for limit 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping applicability
D.2	Particulate	71 lbs/day rolling annual average	Daily average value is calculated using actual emissions from previous stack test results. Report results in the monthly report. The Permittee shall comply with Condition D.5.a and D.5.b for CAM monitoring requirements intended to indicate compliance with the particulate limit.	Order DE 96-AQI078 for limit 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping applicability
D.3	Opacity (visible emissions)	Average 35% for more than six consecutive minutes in any 60 minute period.	EPA Method 9 is the reference test method. The Permittee shall comply with Condition D.5.a and D.5.b for CAM monitoring and reporting requirements intended to indicate compliance with the opacity limit. The Permittee shall conduct an EPA Method 9 test within 180 days of permit renewal and unit operation. The results will be used to validate the reliance on Condition D.5.a for ongoing compliance with the opacity limit of this condition.	WAC 173-405-040(6) for limit 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping applicability

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
D.4.a	TRS	0.033 lbs/ton of black liquor solids.	Sampling consists of one test per year using EPA Method 16 and procedures under 40 CFR 60.285(e). Report test results annually. Each test shall consist of three separate runs. Each run shall be at least 60 minutes.	40 CFR 60.283(a)(4) for limit 40 CFR 60.285(e) for determining compliance 40 CFR 60.285(a) for reference to 40 CFR 60.8; 40 CFR 60.8(f) for three run requirement 40 CFR 70.6(a)(3)(i)(B) for 60-minute run requirement
D.4.b	TRS	0.033 lbs/ton of black liquor solids, annual average	Sampling consists of one test per year using EPA Method 16A/6C bag sample or equivalent method. Report test results annually.	Order DE 96 AQI078 for limit and averaging period
D.5.a	Scrubber Monitoring	Pressure drop across SDT scrubber and recirculation flow rate to SDT scrubber must meet the minimum level established during initial or subsequent	Continuously monitor pressure drop and recirculation flow. Report deviations/excursions in the monthly, quarterly and semiannual reports. [6] Pressure drop recorded at least once every 15 minutes at equally spaced intervals, or as an arithmetic or three hour block average. [11,12] Note: Maintain 3-hour block scrubber recirculation rate and pressure drop equal or greater than 60 gpm and 0.7 H2O, respectively, based on initial performance test results of 7/2/2004.	40 CFR 63.864(e)(10) and 40 CFR 64.6 for pressure drop and flow rate monitoring 40 CFR 63.867(c) and 40 CFR 63.10(c) for reporting 40 CFR 64.9 for respective PM CAM reporting/recordkeeping

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
		performance tests, three hour block average.		40 CFR 63.8(c)(4)(ii) for recording frequency. 40 CFR 63.8(g)(2) for monitored data management requirements WAC 173-401-615(1)(c); WAC 173-400-105(7); and 40 CFR §63.8(c)(4) for CMS data recovery
D.5.b	Scrubber Monitoring	Three hour block average parameter value is outside the range established in IPT or subsequent performance test.	Implement corrective action when any three hour block average parameter value is outside the range of values established in the IPT or subsequent performance test. Failure to initiate corrective action may be a violation of the underlying applicable requirement. [4,5]	40 CFR 63.864(k)(1)(ii) and 40 CFR 64.6 for CA requirement

The following **state only** requirement is not federally enforceable under the federal Clean Air Act.

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
D.6	Damper position	None	Record the damper position. Report only bypass periods.	Order DE 96-AQI078 for requirement

E. No. 3 Smelt Tank

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
E.1.a	HAP metals (PM as surrogate HAP)	0.20 lbs PM/ton of black liquor solids (dry weight), hourly average.	EPA Method 5 is the reference test method. Each run must be at least 60 minutes with a sample volume of 31.8 dscf. Water must be use as the cleanup solvent instead of acetone in the sample recovery procedure. Sample every five years. The first of the 5-year periodic performance tests must be conducted by October 13, 2020 and thereafter within 5 years following the previous performance test. Notify Ecology 60 calendar days before the performance test is scheduled to begin. The performance test must be done under normal operating conditions. Records of process conditions during test shall be kept and made available upon request.	40 CFR 63.865(b)(1) for reference test method and water requirement 40 CFR 63.862(a)(1)(i)(B) for PM Surrogate HAP limit 40 CFR 63.864(k)(2)(iv) for excursion allowance limitation

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
			Submit results through CEDRI 60 days after completing each performance test. Report excess emissions in semiannual excess emissions report. The Permittee shall comply with Condition E.3.a and E.3.b for requirements intended to indicate compliance. For sources with a wet scrubber, a violation occurs when six or more monitoring parameter exceedances occur in a semiannual reporting period on each unit. A unit exceedance day is a 24 hour period in which one or more monitoring parameter exceedance(s) occur(s) on a specific emission unit.	
E.1.b	Particulate	0.30 lbs/ton of black liquor solids, hourly average.	Sampling consists of one 1 hour test per month using EPA Method 5 or a test method approved in writing by Ecology. Report test results within sixty days of completion of the source test.[2] The Permittee shall comply with Condition E.3.a for CAM monitoring requirements intended to indicate compliance with the particulate limit.	WAC 173-405-040(2) for PM limit 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping applicability

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
E.2	Opacity (visible emissions)	Average 35% for more than six consecutive minutes in any 60 minute period.	EPA Method 9 is the reference test method. The Permittee shall comply with Condition E.3.a for CAM monitoring and reporting requirements intended to indicate compliance with the opacity limit. The Permittee shall conduct an EPA Method 9 test within 180 days of permit renewal. The results will be used to validate the reliance on Condition E.3.a for ongoing compliance with the opacity limit of this condition.	WAC 173-405-040(6) for limit 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping applicability
E.3.a	Scrubber Monitoring	Pressure drop across SDT scrubber and recirculation flow rate to SDT scrubber must meet the minimum level established during initial or subsequent performance test, three hour block average.	Continuously monitor pressure drop and recirculation flow. Report deviations/excursions in the monthly, quarterly and semiannual reports. [6] Pressure drop recorded at least once every 15 minutes at equally spaced intervals, or as an arithmetic or three hour block average. [11,12] Note: Maintain 3-hour block scrubber recirculation rate equal or greater than 25 gpm and pressure drop equal or greater than 2" H2O based on initial performance test results of 6/15/2004.	40 CFR 63.864(e)(10) and 40 CFR 64.6 for pressure drop and flow rate monitoring 40 CFR 63.867(c) and 40 CFR 63.10(c) for reporting 40 CFR 64.9 for respective PM CAM reporting/recordkeeping 40 CFR 63.8(c)(4)(ii) and 40 CFR 63.8(g)(2) for data management requirements WAC 173-401-615(1)(c); WAC 173-400-105(7); and 40 CFR 63.8(c)(4) for CMS data recovery.

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
E.3.b	Scrubber Monitoring	Three hour block average parameter value is outside the range established in IPT or subsequent performance test.	Implement corrective action when any three hour block average parameter value is outside the range of values established in the IPT or subsequent performance test. Failure to initiate corrective action may be a violation of the underlying applicable requirement. [4,5]	40 CFR 63.864(k)(1)(ii) and 40 CFR 64.6 for CA requirement

The following **state only** requirement is not federally enforceable under the federal Clean Air Act.

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
E.4	Damper position	None	Record the damper position. Report only bypass periods.	Order DE 96-AQI078 for requirement

F. Hogged Fuel Boiler

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
F.1	Particulate (PM/PM_{10})	0.026 gr/dscf at 7% O_2 average of three 1 hour tests.	Sample at least annually using EPA Method 5 or a test method approved in writing by Ecology. Sampling shall consist of three 1-hour runs. Report test results within sixty days of completion of the source test. Sampling frequency shall be determined in accordance with Footnote 2[2] Ongoing compliance indicated by monitoring specified in Condition F.12.	Order DE 02AQIS-3588 for limit 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping applicability
F.2	Particulate	0.2 gr/dscf at 7% O_2.	EPA Method 5 is reference test method. Ongoing compliance indicated by monitoring specified in Condition F.12.	WAC 173-405-040(5)(a) for limit 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping applicability
F.3	Particulate	459 lbs/day, rolling annual average.	Daily average value is calculated using actual emissions from previous stack test results. Report results quarterly.	PSD-X-77-04 as consolidated in Order DE 96-AQI078 for limit 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
			Ongoing compliance indicated by monitoring specified in Condition F.12.	reporting/recordkeeping applicability
F.4	Particulate (PM/PM_{10})	77 tons/year, 12 month rolling annual average.	EPA Method 5 is the reference test method. Annual average value is calculated using actual emissions from the most recent stack test results from Condition F.1. Report test results monthly. Calculate as shown below: PM/PM10 (mass per time)= Concentration * Air Flow Rate * Unit Conversion Factor * Time Adjustment Where, Concentration is Reference Method (RM) dependent. For example, EPA RM 5 yields particulate emission in terms of grains per dry standard cubic foot (gr/dscf). Air Flow Rate must be representative of normal operations and is derived from the applicable RM in terms of dry standard cubic feet per minute. Unit Conversion Factor is case specific. For example, 1 pound = 7,000 grains	Order DE 02AQIS-3588 limiting PM/PM_{10} to past actual emissions Order DE 02AQIS-3588 for calculation methodology 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping applicability

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
			Time Adjustment is case specific and is dependent on the flow rate time unit. This value will then be averaged with the preceding year of the applicable calculated PM emission rates (monthly, quarterly, or other test frequency, whichever applicable) to determine the rolling annual average. Ongoing compliance indicated by monitoring specified in Condition F.12.	
F.5	Opacity (Visible Emissions)	Average 20% for more than three consecutive minutes in any 60 minute period, except for emissions due to soot blowing or grate cleaning for up to 15 minutes in eight	EPA Method 9 is the reference test method. If visible emissions are greater than 20%, the Permittee shall, within 24 hours, initiate corrective action to reduce visible emissions. Failure to initiate corrective action may be a violation of the underlying applicable requirement. Document and report any excursion and corrective actions monthly. Ongoing compliance indicated by monitoring specified in Condition F.12.	WAC 173-400-070(2)(a) for basis of opacity limit WAC 173-401-615 for monitoring 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping applicability

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
		consecutive hours.		
F.6	SO_2	1000 ppm one hour average at 7% O_2	EPA Method 6 is the reference test method. Compliance is demonstrated by firing fuel oil that does not exceed 2% sulfur content by weight. Maintain fuel receipts showing that all fuel oil fired is ≤ 2% sulfur. Report all occasions when fuel oil with sulfur content greater than 2% is burned. No monitoring is required when fuel oil is not burned.	WAC 173-405-040(9)(b) for limit
F.7	SO_2 (from the combustion of LVHCs)	102 tons/year 12 month rolling annual average.	The Permittee shall record time of combustion of low-volume high-concentration (LVHC) non-condensable gases (NCGs) and evaluate compliance as described below: SO2 (tons per year) = Sum of SO2 emission in tons per month, for 12 months SO2 (tons per month) = Emission factor * Pulp production Where, Pulp production is the total amount of air-dried unbleached Kraft and NSSC pulp the Permittee produced during the times when the Permittee also	Order DE 02AQIS-3588, Modification 1 for limit and calculation methodology

Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
		burned LVHCs in the hogged fuel boiler. The permittee must calculate this value for each month. The Permittee must use the Emission factor of 3.57 lbs of SO2 per air dried ton of unbleached Kraft and NSSC pulp following the issuance of modified Order No. DE02AQIS-3588. Within 365 days of the issuance of the modified order, submit to Ecology a test plan for approval, to calculate a site-specific emission factor. The test must include the collection of site-specific data. Following Ecology approval of the test plan, begin the test within 60 days. Submit to Ecology the site-specific emission factor, for approval, within 60 days following the completion of the test. The submittal must include an analysis of whether the site-specific emission factor indicates a potential increase in hourly emissions between the original Order DE 02AQIS-3588 and the modified Order DE 02AQIS-3588. Following Ecology approval of the site-specific emission factor, the Permittee must begin using the site-specific emission factor for calculations in the calendar month following approval.	

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
F.8	NO_X	0.30 lb/ MMBtu 30 day rolling average. 0.30 lb/ MMBtu	EPA Method 7, 7A, 7B, or 7E is the reference test method. The Permittee shall install, calibrate, maintain, and operate a continuous monitoring system to monitor NOx from the HFB. Monitor continuously using an approved CEM that conforms to 40 CFR Part 60, Appendix B, Performance Specification 2. CEM data shall be averaged over a rolling 30 day period. Report monitoring results and exceedances semiannually to the Administrator (Ecology) as required by 40 CFR 60.49b(w). [11,13,14]	PSD-01-07 Amendment 1 (2/1/06) approval condition 2.1 for 0.30 lb/MMBtu limit 40 CFR 60.44b for 0.30 lb/MMBtu limit WAC 173-401-615(1)(c); WAC 173-400-105(7); and 40 CFR §60.13(e)for CEMS data recovery
F.9	CO	500 ppmvd at 7% O_2, 12 month rolling annual average.	EPA Method 10/10B is the primary reference test method. Source test monthly consisting of three 1 hour sample runs using a modified Ecology Method 10/10B (Tedlar bag method). Annual average is calculated from monthly test results.[2] Report results monthly. As an alternative to source testing, the Permittee may install, calibrate, maintain, and operate a CEM system to monitor CO from the HFB. Monitor continuously using an approved CEMS that conforms to 40 CFR Part 60, Appendix B, Performance Specification 4. CEMS data must be averaged over a rolling 12-month period. PCA must report monitoring results and exceedances monthly to the	PSD-01-07 condition 2.2 for limit WAC 173-401-615(1)(c); WAC 173-400-105(7); and 40 CFR §60.13(e) for CEMs data recovery PSD-01-07 condition 2.2 amendment 2 dated May 24, 2017 for CEM monitoring allowance

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
			permittee's air regulatory authority of their Title V air operating permit. [11,14]	
F.10	Operation	Minimum operating condition for CO process monitoring	Maintain a continuous process combustion CO monitor at the boiler outlet and monitor in process. CO concentration as a performance indicator. Whenever CO concentration at the boiler outlet is in excess of 2,000 ppmvd (7% O_2) for more than 24 hours, the Permittee shall, within 24 hours, initiate corrective action to reduce in process CO concentration. Failure to initiate corrective action within 24 hours is a violation of WAC 173-405-040(10) and may be a violation of the underlying applicable requirement. The Permittee shall report 24 hour average in process CO concentration in excess of 2,000 ppmvd (7% O_2) and corrective action on a monthly basis. [11,14]	PSD-01-07 condition 2.3 for monitoring WAC 173-401-615(1)(c); and WAC 173-400-105(7) for CMS data recovery
F.11	Operation	Minimum operating condition for bypassing ESP when firing natural gas exclusively.	Maintain ESP bypass valves in closed position during biomass or solid fuel firing. Monitor and record the positions of ESP bypass valves at all times. The Permittee shall report monthly all bypass periods and the type of fuel fired during bypass period.	Condition 2.4 of PSD-01-07 and Condition 2.4 of Order DE 02AQIS-3588 for bypass requirement

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
F.12	Operation	Minimum operating condition for Wet ESP	During firing biomass or solid fuel, continuously monitor total secondary electric power input of the electrostatic precipitator. Total secondary power must be recorded at least once every 15 minutes at equally spaced intervals, or as an arithmetic or three hour block average. [11,12] Maintain the three hour average total secondary electric power input of the electrostatic precipitator at or above the minimum operating limits established in an IPT or subsequent performance test. Note: Maintain the three hour average total secondary electric power input of the electrostatic precipitator equal to or greater than 16 kVA based on initial performance test results of 1/20/2016. The Permittee must initiate corrective action within 72 hours of discovery that the three hour rolling average total secondary power input is outside the range of values established in the IPT or subsequent performance test. [4,5] Failure to initiate corrective action within 24 hours may be a violation of the underlying applicable requirement. Report corrective actions and performance indicator deviations (excursions) in the monthly report. [6]	40 CFR 64.6 for monitoring and corrective action requirement 40 CFR 64.9 for respective PM CAM reporting/recordkeeping WAC 173-401-615(1)(c); and WAC 173-400-105(7) for CMS data recovery

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
F.13	CO	If performing stack tests: 1,500 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average until October 6, 2025 and 1,100 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average beginning October 6, 2025; orif using a CEMS:	EPA Method 10 is the reference method. Conduct performance test annually. If performance tests show that the emissions are at or below 75 percent of the emission limit for at least 2 consecutive years for the pollutant, and if there are no changes in the operation of the individual boiler or process heater or air pollution control equipment that could increase emissions, the Permittee may choose to conduct performance tests for the pollutant every third year. The Permittee may also show compliance through a CO continuous emission monitoring system (CEMS). The Permittee must develop a site-specific monitoring plan that addresses design, data collection, and the quality assurance and quality control elements outlined in §63.8(d) and the elements described in 40 CFR 63.7505(d)(1)(i) through (iii).	40 CFR 63.7500(a)(1) and Tables 2 and 15 to Subpart DDDDD of Part 63 (Item 7a) for limit 40 CFR 63.7515(a) and (b) and Table 5 to Subpart DDDDD of Part 63 (Item 5) for monitoring 40 CFR 63.7505(c) for compliance options 40 CFR 63.7505(d) for site-specific plan

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
		720 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average		
F.14	Filterable PM	4.3E-02 lb per MMBtu of steam output until October 6, 2025 and 4.0E-02 lb per MMBtu of steam output beginning October 6, 2025; or 3.7E-02 lb per MMBTU of heat input	EPA Method 5 is the reference method. Conduct performance test annually. If performance tests show that the emissions are at or below 75 percent of the emission limit for at least 2 consecutive years for the pollutant, and if there are no changes in the operation of the individual boiler or process heater or air pollution control equipment that could increase emissions, the Permittee may choose to conduct performance tests for the pollutant every third year.	40 CFR 63.7500 (a)(1) and Tables 2 and 15 to Subpart DDDDD of Part 63 (Item 7b) for limit 40 CFR 63.7515(a) and (b) and Table 5 to Subpart DDDDD of Part 63 (Item 1) for monitoring

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
		until October 6, 2025 and 3.4E-02 lb per MMBTU of heat input beginning October 6, 2025		
F.15	HCl	2.5E-02 lb per MMBtu of steam output until October 6, 2025 and 2.3E-02 lb per MMBtu of steam output beginning October 6, 2025 or	EPA Method 26 or 26A is the reference method. Conduct performance test annually. If performance tests show that the emissions are at or below 75 percent of the emission limit for at least 2 consecutive years for the pollutant, and if there are no changes in the operation of the individual boiler or process heater or air pollution control equipment that could increase emissions, the Permittee may choose to conduct performance tests for the pollutant every third year. The Permittee may also demonstrate compliance with the applicable emission limit using fuel analysis if the emission rate calculated according to §63.7530(c) is less than the applicable emission limit.	40 CFR 63.7500 (a)(1) and Tables 2 and 15 to Subpart DDDDD of Part 63 (Item 1.a) for limit 40 CFR 63.7505(c) for compliance options 40 CFR 63.7515(a) and (b) and Table 5 to Subpart DDDDD of Part 63 (Item 3) for monitoring

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
		2.2 E-02 lb per MMBTU of heat input until October 6, 2025 and 2.0E-02 lb per MMBTU of heat input beginning October 6, 2025		
F.16	Hg	6.4E-06 lb per MMBtu of steam output until October 6, 2025 and 6.2E-06 lb per MMBtu of steam output beginning	EPA Method 26 or 26A is the reference method. Conduct performance test annually. If performance tests show that the emissions are at or below 75 percent of the emission limit for at least 2 consecutive years for the pollutant, and if there are no changes in the operation of the individual boiler or process heater or air pollution control equipment that could increase emissions, the permittee may choose to conduct performance tests for the pollutant every third year. The permittee may also demonstrate compliance with the applicable emission limit using fuel analysis	40 CFR 63.7500 (a)(1) and Tables 2 and 15 to Subpart DDDDD of Part 63 (Item 1.b) for limit 40 CFR 63.7505(c) for compliance options 40 CFR 63.7515(a) and (b) and Table 5 to Subpart DDDDD of Part 63 (Item 4) for monitoring

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
		October 6, 2025 or 5.7E-06 lb per MMBTU of heat input and 5.4E-06 lb per MMBTU of heat input beginning October 6, 2025	if the emission rate calculated according to §63.7530(c) is less than the applicable emission limit.	
F.17	Dioxins/Furans	N/A – work practice standard (tune-Up)	Perform annual boiler tune-ups within 13 months of the previous tune-up. Alternatively, if the Permittee operates a continuous oxygen trim system, as defined in 40 CFR 63.7575, that maintains an optimum air to fuel ratio in the boiler(s), the Permittee may conduct tune-ups every 5 years (within 61 months). Tune-ups must be conducted in accordance with the requirements of §63.7540(a)(10).	40 CFR 63.7540(a)(10) and Table 3 (Item 3) for annual tune-up 40 CFR 63.7540(a)(12) for 5-year tune-up allowance 40 CFR 63.7515(d) for tune-up frequency

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
				40 CFR 63.7540(a)(10) for tune-up requirement
F.18	HAPs	N/A – work practice standard (startup)	PCA must operate all CMS during startup. For startup, the Permittee must use only clean fuel such as natural gas. The Permittee must comply with all applicable emissions limits at all times except for startup or shutdown periods conforming with this work practice. The Permittee must collect monitoring data during periods of startup, as specified in §63.7535(b), and must keep records during periods of startup. The Permittee must keep records concerning activities and periods of startup, as specified in §63.7555. This permit condition applies while the HFB's Boiler MACT subcategory is "stoker/sloped grate/other units designed to burn wet biomass"	40 CFR Part 63.7500(f) for requirement and Table 3 to Subpart DDDDD of Part 63 (Item 5) for specifics
F.19	HAPs	N/A – work practice standard (shutdown)	The Permittee must operate all CMS during shutdown. While firing fuels that are not clean fuels during shutdown, you must vent emissions to the main stack(s) and operate all applicable control devices.	40 CFR Part 63.7500(f) for requirement and Table 3 to Subpart DDDDD of Part 63 (Item 6) for specifics

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
			If, in addition to the fuel used prior to initiation of shutdown, another fuel must be used to support the shutdown process, that additional fuel must be one or a combination of the following clean fuels: Natural gas, synthetic natural gas, propane, other Gas 1 fuels, distillate oil, syngas, ultra-low sulfur diesel, refinery gas, and liquefied petroleum gas. The Permittee must comply with all applicable emissions limits at all times except for startup or shutdown periods conforming with this work practice. The Permittee must collect monitoring data during periods of shutdown, as specified in §63.7535(b), and must keep records during periods of shutdown. The Permittee must keep records concerning activities and periods of shutdown, as specified in §63.7555.	
F.20	HAPs (Operations - Wet ESP)	Maintain the 30-day rolling average total secondary electric power input of the electrostatic precipitator at or above the operating	Report deviations in the monthly report.	40 CFR Part 63.7500(a)(2) for requirement and Table 4 to Subpart DDDDD of Part 63 (Item 4.b) for specifics 40 CFR Part 63.7550(a) for deviation reporting

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
		limits established during the performance test according to §63.7530(b) and Table 7 to 40 CFR 63 Subpart DDDDD.		
F.21	HAPs (Operations - Operating Load)	Maintain the 30-day average operating load such that it does not exceed 110 percent of the highest hourly average operating load established during the applicable	Report deviations in the monthly report.	40 CFR Part 63.7500(a)(2) for requirements and Table 4 to Subpart DDDDD of Part 63 (Item 7) for specifics 40 CFR Part 63.7550(a) for deviation reporting

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
		performance test.		
F.22	CO	Maintain the 30-day rolling average oxygen content at or above the lowest hourly average oxygen concentration established during the applicable CO performance test.	This condition does not apply if the permittee elects to show compliance with Condition F.13 using a CO CEMS. Report deviations in the monthly report.	40 CFR Part 63.7500(a)(2) for requirement and Table 4 to Subpart DDDDD of Part 63 (Item 8) for specifics 40 CFR Part 63.7550(a) for deviation reporting
F.23	Reporting	N/A – reporting requirement	Submit compliance reports according to the frequency specified in §63.7550(b).	40 CFR Part 63.7550 for general reporting requirements Table 9 to Subpart DDDDD of Part 63 (Item 1) for specific reporting requirements

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
F.24	Site Specific Monitoring Plan	N/A – work practice standard	If the Permittee demonstrates compliance with any applicable emission limit through performance testing and subsequent compliance with operating limits (including the use of CPMS), or with a CEMS, or COMS, they must develop a site-specific monitoring plan according to the requirements in paragraphs (d)(1) through (4) of this section for the use of any CEMS, COMS, or CPMS. This requirement does not apply to affected sources with existing CEMS or COMS operated according to the performance specification under appendix B to part 60 of this chapter and that meet the requirements of 63.7525. The Permittee shall develop and maintain a site-specific fuel monitoring plan meeting the requirements of §63.7521 (b)(1) and (2) only if required to conduct fuel analyses as specified in §63.7510.	40 CFR Part 63.7505(d) for site specific monitoring plan; 63.7510(a)(2)for fuel analysis ; and 63.7521(b)(1) and (2) for fuel analysis specifics
F.25	TRS	Minimum temperature of 1200°F for at least 0.5 seconds (3-hour block average),	The hog fuel boiler is not an incinerator and, therefore, is not subject to the temperature monitoring requirements specified by 40 CFR 60.284a(b)(1). However, temperature monitoring is required by Condition K.1.	40 CFR 60.283a(a)(1)(iii) for standard 40 CFR 60.284a(d)(3)(ii) for excess emission definition

Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
	when burning NCGs	Excess emissions are defined as all 3-hour block averages during which the combustion temperature at the point of incineration is less than 650 °C (1200 °F). Ecology will not consider excess emissions to be violation(s) provided that Ecology determines the affected facility, including air pollution control equipment, is maintained and operated in a manner which is consistent with good air pollution control practice for minimizing emissions during periods of excess emissions. Excess emissions shall be reported semi-annually in accordance with 40 CFR 60.7(c). Report NCG venting per condition J.1	40 CFR 60.284a(e)(2) for violation determination 40 CFR 60.284(d) and 40 CFR 60.7(c) for semi-annual reporting requirement WAC 173-400-105(7)(a) for CMS data recovery

F.26 At all times, including periods of abnormal operation and upset, the Permittee shall, to the extent practicable, operate and maintain emissions units with modifications covered by NOC Order DE02AQIS-3588, Modification 1 that have the potential to affect emissions to the atmosphere, along with associated air pollution control equipment, in a manner consistent with good air pollution control practice. For said units, Operations and Maintenance (O&M) manuals shall be prepared, reviewed annually, and updated as needed. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to Ecology which may include, but is not limited to, monitoring results, opacity observations, inspections of the source, and reviews to determine that the mill is following its O&M procedures. (Condition 8 of NOC Order DE02AQIS-3588, Modification 1)

F.27 Culled fibers from the Recycled Fiber Plant that will be combusted in the Hogged Fuel Boiler by PCA must meet the definition of paper recycling residuals (PRRs) in 40 CFR Part 241.2. [Condition 7 of NOC Order No. 17965]

G. No. 1 Power Boiler

	Parameter	**Limit & Averaging Period** (shall not exceed)	**Monitoring & Reporting**[1]	**Applicable Requirement(s)**
G.1	Particulate	0.1 gr/dscf at 7% O^2, hourly average.	Based on calculations for maximum emissions, this boiler cannot exceed the grain loading limit when firing natural gas or fuel oil. Sulfur content limit of ≤ 2% for fuel oil is intended to indicate compliance with the particulate standard. Permittee shall keep records of receipts showing all oil fired is ≤ 2% sulfur.	WAC 173-405-040(5)(c) for limit
G.2	Particulate	229 lbs/day, annual average.	Based on calculations for maximum emissions, this boiler cannot exceed the mass loading limit when firing natural gas. When firing with fuel oil, pounds per day average value is calculated using emission factor from EPA's AP-42 (9/98) with fuel oil of ≤ 2% sulfur. Report emissions annually.	Order DE 96-AQI078 for limit
G.3	SO_2	3025 lbs/day, annual average.	Based on calculations for maximum emissions, this boiler cannot exceed the SO2 mass loading limit when firing natural gas. Fuel oil may be fired at any time in the No. 1 Power Boiler, subject to the stated mass loading limit. The Permittee shall report emissions annually. Fuel oil fired cannot exceed ≤ 2% sulfur content by weight. Maintain fuel receipts showing that all fuel oil fired is ≤ 2% sulfur.	Order DE 96-AQI078, PSD-01-07 Amendment 1 condition 3.1 for limit

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
G.4	SO_2	1000 ppm one hour average at 7% O_2	EPA Method 6 is reference test method. Compliance is indicated by either burning natural gas or fuel oil. Fuel oil fired cannot exceed 2% sulfur content by weight. Maintain fuel receipts showing that all fuel oil fired is ≤ 2% sulfur. Report all occasions when fuel oil with sulfur content greater than 2% is burned.	WAC 173-405-040(9)(b) for limit
G.5	SO_2	8750 lbs/day from No. 1 and No. 2 power boilers combined, daily average. This is a State-Only requirement, not federally enforceable under the Clean Air Act	Based on calculations for maximum emissions, the boilers cannot exceed the combined mass loading limit when exclusively firing natural gas. When firing with fuel oil, daily average value is calculated using emission factor from AP-42 (9/98) with fuel oil of ≤ 2% sulfur. Fuel oil fired cannot exceed ≤ 2% sulfur content by weight. Report emissions in the monthly report. Maintain fuel receipts showing that all fuel oil fired is ≤ 2% sulfur.	Order DE 96-AQI078 for limit
G.6	SO_2	1104 tpy from No. 1 and No. 2 power boilers	Based on calculations for maximum emissions, the boilers cannot exceed the combined mass loading limit when exclusively firing natural gas. When firing with fuel oil, annual average value is calculated using	Order DE 96-AQI078 for limit

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
		combined annual average This is a State-Only requirement, not federally enforceable under the Clean Air Act	emission factor from AP-42 (9/98) with fuel oil of ≤ 2% sulfur. Fuel oil fired cannot exceed ≤ 2% sulfur content by weight. Report emissions in the monthly report. Maintain fuel receipts showing that all fuel oil fired is ≤ 2% sulfur.	
G.7	Tune-up	Conduct tune-up of the boiler	Subsequent tune-ups shall be performed every 5 years or as specified in §63.7540(a)(10) and Table 3. Conduct this tune-up as a work practice for regulated emissions under this subpart.	40 CFR 63.7540(a)(10) and Table 3 to Subpart DDDDD of Part 63 (Item 3) for subsequent tune-ups
G.8	Reporting		Submit compliance reports according to the frequency specified in §63.7550(b).	Table 9 to Subpart DDDDD of Part 63 (Item 1)

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
G.9	HCl (only applicable if fuel switching triggered and firing light or heavy liquid fuel)	1.4E-03 lb per MMBtu of steam output or 1.1E-03 lb per MMBtu of heat input	EPA Method 26 or 26A is the reference method. Conduct performance test annually. If performance tests show that the emissions are at or below 75 percent of the emission limit for at least 2 consecutive years for the pollutant, and if there are no changes in the operation of the individual boiler or process heater or air pollution control equipment that could increase emissions, the Permittee may choose to conduct performance tests for the pollutant every third year. Conduct performance test within 60 days of fuel switch. The Permittee may also demonstrate compliance with the applicable emission limit using fuel analysis if the emission rate calculated according to §63.7530(c) is less than the applicable emission limit.	40 CFR 63.7500 (a)(1) and Table 2 to Subpart DDDDD of Part 63 (Item 14.a) for limit 40 CFR 63.7505(c) for compliance options 40 CFR 63.7515(a) and (b) for monitoring frequency 40 CFR 63.7515(h) for fuel switch triggered performance testing 40 CFR 63.7530(c) for compliance determination through fuel analysis option
G.10	Hg (only applicable if fuel switching triggered and firing light or	2.5E-06 lb per MMBtu of steam output until October 6, 2025 and 8.8E-07 lb per MMBtu of	EPA Method 26 or 26A is the reference method. Conduct performance test annually. If performance tests show that the emissions are at or below 75 percent of the emission limit for at least 2 consecutive years for the pollutant, and if there are no changes in the operation of the individual boiler or process heater or air pollution control equipment that could increase emissions, the Permittee may	40 CFR 63.7500 (a)(1) and Tables 2 and 15 to Subpart DDDDD of Part 63 (Item 14.b) 40 CFR 63.7505(c) for compliance options 40 CFR 63.7515(a) and (b) for monitoring

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
	heavy liquid fuel)	steam output beginning October 6, 2025 or 2.0E-06 lb per MMBtu of heat input until October 6, 2025 and 7.3E-07 lb per MMBtu of heat input beginning October 6, 2025	choose to conduct performance tests for the pollutant every third year. Conduct performance test within 60 days of fuel switch to oil. The Permittee may also demonstrate compliance with the applicable emission limit using fuel analysis if the emission rate calculated according to §63.7530(c) is less than the applicable emission limit.	40 CFR 63.7515(h) for performance testing requirement
G.11	CO (only applicable if fuel switching triggered	0.13 lb per MMBtu of steam output or	EPA Method 10 is the reference method. Conduct performance test annually. If performance tests show that the emissions are at or below 75 percent of the emission limit for at least 2 consecutive years for the pollutant, and if there are no changes in the operation of the individual boiler or process heater or air pollution control equipment that could	40 CFR 63.7500 (a)(1) and Table 2 to Subpart DDDDD of Part 63 (Item 15.a) for limit 40 CFR 63.7515(a) and (b) for monitoring

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
	and firing light or heavy liquid fuel)	130 ppm corrected to 3% oxygen	increase emissions, the Permittee may choose to conduct performance tests for the pollutant every third year. Conduct performance test within 60 days of fuel switch to oil.	40 CFR 63.7505(c) for compliance options 40 CFR 63.7505(d) for site-specific plan 40 CFR 63.7515(h) for performance testing requirement
G.12	Filterable PM (only applicable if fuel switching triggered and firing light liquid fuel)	9.6E-03 lb per MMBtu of steam output or 7.9E-02 lb per MMBtu of heat input	EPA Method 5 is the reference method. Conduct performance test annually. If performance tests show that the emissions are at or below 75 percent of the emission limit for at least 2 consecutive years for the pollutant, and if there are no changes in the operation of the individual boiler or process heater or air pollution control equipment that could increase emissions, the Permittee may choose to conduct performance tests for the pollutant every third year. Conduct performance test within 60 days of fuel switch to oil.	40 CFR 63.7500 (a)(1) and Table 2 to Subpart DDDDD of Part 63 (Item 16.b) for limit 40 CFR 63.7515(a) and (b) for monitoring 40 CFR 63.7515(h) for performance testing requirement
G.13	Filterable PM (only applicable if fuel switching	7.5E-02 lb per MMBtu of steam output or	EPA Method 5 is the reference method. Conduct performance test annually. If performance tests show that the emissions are at or below 75 percent of the emission limit for at least 2 consecutive years for the pollutant, and if there are no changes in the operation of the individual boiler or process heater	40 CFR 63.7500 (a)(1) and Table 2 to Subpart DDDDD of Part 63 (Item 16.a) for limit

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
	triggered and firing heavy liquid fuel)	6.2E-02 lb per MMBtu of heat input	or air pollution control equipment that could increase emissions, the Permittee may choose to conduct performance tests for the pollutant every third year. Conduct performance test within 60 days of fuel switch to oil.	40 CFR 63.7515(a) and (b) for monitoring 40 CFR 63.7515(h) for performance testing requirement

H. No. 2 Power Boiler

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
H.1	Particulate	0.1 gr/dscf at 7% O2, hourly average.	Based on calculations for maximum emissions, this boiler cannot exceed the grain loading limit when firing natural gas or fuel oil. Compliance is demonstrated through normal operation. Maintain records of type of fuel used.	WAC 173-405-040(5)(c) for limit
H.2	SO_2	1000 ppm one hour average at 7% O_2	EPA Method 6 is reference test method. Compliance is indicated by either burning natural gas or fuel oil. Fuel oil fired cannot exceed 2% sulfur content by weight. Maintain fuel receipts showing that all fuel oil fired is ≤ 2% sulfur. Report all occasions when fuel oil with sulfur content greater than 2% is burned.	WAC 173-405-040(9)(b) for limit

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
H.3	SO_2	≤ 2% sulfur in fuel oil fired. This is a State-Only requirement, not federally enforceable under the Clean Air Act	Fuel oil fired cannot exceed ≤ 2% sulfur content by weight. Maintain fuel receipts showing that all oil fired is ≤ 2% sulfur.	Order DE 96-AQI078 for fuel oil requirement
H.4	SO_2	8750 lbs/day from No. 1 and No. 2 power boilers combined, daily average. This is a State-Only requirement, not federally enforceable under the Clean Air Act	Based on calculations for maximum emissions, the boiler cannot exceed the limit when firing exclusively natural gas. When firing with fuel oil, daily average value is calculated using emission factor from AP-42 (9/98) with fuel oil of ≤ 2% sulfur. Fuel oil fired cannot exceed ≤ 2% sulfur content by weight. Report emissions in the monthly report. Maintain fuel receipts showing that all fuel oil fired is ≤ 2% sulfur.	Order De 96-AQI078 for limit

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
H.5	SO_2	1104 tpy from No. 1 and No. 2 power boilers combined annual average. This is a State-Only requirement, not federally enforceable under the Clean Air Act	Based on calculations for maximum emissions, the boiler cannot exceed the limit when firing exclusively natural gas. When firing with fuel oil, annual average value is calculated using emission factor from AP-42 (9/98) with fuel oil of ≤ 2% sulfur. Fuel oil fired cannot exceed ≤ 2% sulfur content by weight. Report emissions in the monthly report. Maintain fuel receipts showing that all fuel oil fired is ≤ 2% sulfur.	Order DE 96-AQI078 for limit
H.6	Tune-up	Conduct tune-up of the boiler	Subsequent tune-ups shall be performed every 5 years or as specified in §63.7540(a)(10) and Table 3. Conduct this tune-up as a work practice for regulated emissions under this subpart.	40 CFR 63.7540(a)(10) and Table 3 to Subpart DDDDD of Part 63 (Item 3) for subsequent tune-ups
H.7	Reporting	N/A - Reporting	Submit compliance reports according to the frequency specified in §63.7550(b).	Table 9 to Subpart DDDDD of Part 63 (Item 1) for reporting
H.8	HCl (only applicable if fuel	1.4E-03 lb per MMBtu of steam output	EPA Method 26 or 26A is the reference method. Conduct performance test annually. If performance tests show that the emissions are at or below 75 percent of the emission limit for at least 2	40 CFR 63.7500 (a)(1) and Table 2 to Subpart DDDDD of Part 63 (Item 14.a) for limit

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
	switching triggered and firing light or heavy liquid fuel)	or 1.1E-03 lb per MMBtu of heat input	consecutive years for the pollutant, and if there are no changes in the operation of the individual boiler or process heater or air pollution control equipment that could increase emissions, the Permittee may choose to conduct performance tests for the pollutant every third year. Conduct performance test within 60 days of fuel switch. The Permittee may also demonstrate compliance with the applicable emission limit using fuel analysis if the emission rate calculated according to §63.7530(c) is less than the applicable emission limit.	40 CFR 63.7505(c) for compliance options 40 CFR 63.7515(a) and (b) for monitoring frequency 40 CFR 63.7515(h) for fuel switch triggered performance testing 40 CFR 63.7530(c) for compliance determination through fuel analysis option
H.9	Hg (only applicable if fuel switching triggered and firing light or heavy liquid fuel)	2.5E-06 lb per MMBtu of steam output until October 6, 2025 and 8.8E-07 lb per MMBtu of steam output beginning	EPA Method 26 or 26A is the reference method. Conduct performance test annually. If performance tests show that the emissions are at or below 75 percent of the emission limit for at least 2 consecutive years for the pollutant, and if there are no changes in the operation of the individual boiler or process heater or air pollution control equipment that could increase emissions, the Permittee may choose to conduct performance tests for the pollutant every third year. Conduct performance test within 60 days of fuel switch to oil.	40 CFR 63.7500 (a)(1) and Table 2 to Subpart DDDDD of Part 63 (Item 14.b) for limit 40 CFR 63.7505(c) for compliance options 40 CFR 63.7515(a) and (b) for monitoring 40 CFR 63.7515(h) for performance testing

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
		October 6, 2025 or 2.0E-06 lb per MMBtu of heat input until October 6, 2025 and 7.3E-07 lb per MMBtu of heat input beginning October 6, 2025	The Permittee may also demonstrate compliance with the applicable emission limit using fuel analysis if the emission rate calculated according to §63.7530(c) is less than the applicable emission limit.	
H.10	CO (only applicable if fuel switching triggered and firing light or	0.13 lb per MMBtu of steam output or	EPA Method 10 is the reference method. Conduct performance test annually. If performance tests show that the emissions are at or below 75 percent of the emission limit for at least 2 consecutive years for the pollutant, and if there are no changes in the operation of the individual boiler or process heater or air pollution control equipment that could increase emissions, the Permittee may choose to	40 CFR 63.7500 (a)(1) and Table 2 to Subpart DDDDD of Part 63 (Item 15.a) for limit 40 CFR 63.7515(a) and (b) for monitoring

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
	heavy liquid fuel)	130 ppm corrected to 3% oxygen	conduct performance tests for the pollutant every third year. Conduct performance test within 60 days of fuel switch to oil.	40 CFR 63.7505(c) for compliance options 40 CFR 63.7505(d) for site-specific plan 40 CFR 63.7515(h) for performance testing
H.11	Filterable PM (only applicable if fuel switching triggered and firing light liquid fuel)	9.6E-03 lb per MMBtu of steam output or 7.9E-02 lb per MMBtu of heat input	EPA Method 5 is the reference method. Conduct performance test annually. If performance tests show that the emissions are at or below 75 percent of the emission limit for at least 2 consecutive years for the pollutant, and if there are no changes in the operation of the individual boiler or process heater or air pollution control equipment that could increase emissions, the Permittee may choose to conduct performance tests for the pollutant every third year. Conduct performance test within 60 days of fuel switch to oil.	40 CFR 63.7500 (a)(1) and Table 2 to Subpart DDDDD of Part 63 (Item 16.b) for limit 40 CFR 63.7515(a) and (b) for monitoring 40 CFR 63.7515(h) for performance testing
H.12	Filterable PM (only applicable if fuel switching	7.5E-02 lb per MMBtu of steam output or	EPA Method 5 is the reference method. Conduct performance test annually. If performance tests show that the emissions are at or below 75 percent of the emission limit for at least 2 consecutive years for the pollutant, and if there are no changes in the operation of the individual boiler or process heater	40 CFR 63.7500 (a)(1) and Table 2 to Subpart DDDDD of Part 63 (Item 16.a) for limit

Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
triggered and firing heavy liquid fuel)	6.2E-02 lb per MMBtu of heat input	or air pollution control equipment that could increase emissions, the Permittee may choose to conduct performance tests for the pollutant every third year. Conduct performance test within 60 days of fuel switch to oil.	40 CFR 63.7515(a) and (b) for monitoring 40 CFR 63.7515(h) for performance testing

I. No. 1 M&D Digester; No. 1 and No 2. Evaporator Sets and Concentrators

The following **state only** requirement is not federally enforceable under the federal Clean Air Act:

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
I.1	TRS	Treat all collectible noncondens-able gas (NCG) to reduce TRS emissions equal to reduction achieved by thermal oxidation in a lime kiln.	Record the number of hours that NCGs generated were not combusted each month. Report periods of such noncombustion monthly. Periods of noncombustion arising from the need to prevent loss of life or limb are not subject to this requirement and need not be considered in determining total monthly periods of noncombustion. Continuously monitor pressure differentials throughout collection system. [11,14]	WAC 173-405-040(4) for TRS treatment WAC 173-401-615(1)(c); WAC 173-400-105(7) for CMS data recovery

J. No. 2 M&D Digester, KAMYR Digester, and No. 3 Evaporator Set

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
J.1	TRS	Combust collectible noncondens-able gas (NCG) either	Collect NCGs in a closed-vent system meeting the requirements of 40 CFR 63.450. Record and report the number of hours that NCGs were not collected and combusted monthly.	40 CFR 60.283(a)(1)(i) and (iii) for NCG collection and combustion for Kamyr Digester and No. 3 Evaporator Set

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
		at the lime kiln or at the hog fuel boiler at a minimum temperature of 1200°F for at least 0.5 seconds (3-hour block average).	Refer to Permit Conditions C.6.a and F.25 for the required monitoring and excess emission definitions for each unit. The Permittee may submit an affirmative defense to a claim for civil penalties for violations that are caused by malfunction.	40 CFR 60.283a(a)(1)(i) and (iii) for NCG collection and combustion for No. 2 M&D Digester 40 CFR 60.284a(a)(2) for monitoring 40 CFR 60.284a(d)(3)(ii) for excess emissions definition and averaging period 40 CFR 60.286(a) for affirmative defense WAC 173-401-615(1)(c); WAC 173-400-105(7) for CMS data recovery

The following **state only** requirement is not federally enforceable under the federal Clean Air Act:

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
J.2	TRS	Treat all collectible noncondens-able gas (NCG) to reduce TRS	Record all periods during which NCGs generated were not combusted. Report periods of such noncombustion monthly. Continuously monitor pressure differentials throughout collection system. [11,14]	WAC 173-405-040(4) for TRS treatment WAC 173-401-615(1)(c); WAC 173-400-105(7) for CMS data recovery

Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
	emissions equal to reduction achieved by thermal oxidation in a lime kiln.		

K. No. 2 M&D Digester

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
K.1	CO	Combust collectible noncondens-able gases (NCGs) from No. 2 M&D Digester at a minimum temperature of 1200°F for at least 0.5 seconds (3-	The final control for the NCG stream shall be continuously determined and recorded (lime kiln, hog fuel boiler, or bypass). Permittee must install and maintain a monitoring device in the Lime Kiln and the Hog Fuel Boiler which measures and records the combustion temperature at the point of incineration of effluent gases which are emitted from any digester system. The monitoring device is to be certified by the manufacturer to be accurate within ±1 percent of the temperature being measured.	PSD 18-01 V.D and Table VI-2 for limit PSD 18-01 VIII.B for monitoring requirements PSD 18-01 VIII.D, IX.B, and IX.C for recordkeeping requirement PSD 18-01 XI.C for deviation/excess emission reporting requirement

Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
	hour block average)	Record at least once each successive 5-minute period all measurements obtained from the continuous monitoring devices required above. Calculate 3-hour block averages from the recorded measurements of incinerator temperature. Temperature measurements recorded when no NCGs are fired in the incinerator (e.g., during incinerator warm-up and cool-down periods when no NCGs are generated or an alternative control device is used) may be omitted from the block average calculation. Excess emissions are defined as all 3-hour block averages during which the combustion temperature at the point of incineration is less than 650 °C (1200 °F). Report deviations/excess emissions in accordance with Facility Wide General Requirement 35 in monthly air report, including any periods of bypass, any periods where adequate combustion was not achieved, or deviations from temperature monitoring requirements. Records must be maintained for not less than five (5) years after their origination. The most recent two years must be retained on-site. Records must be	WAC 173-400-105(7)(a) for CMS data recovery

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
			available for inspection by Ecology within ten (10) days of request. Note: Temperature monitoring required by this condition may be used to determine compliance with Condition J.1 for the hog fuel boiler.	
K.2	NOx	< 1 TPY increase after modification of No. 2 M&D Digester	Compliance demonstrated through compliance with production limits specified by K.3 and K.4.	PSD 18-01 Table VI-2 for limit
K.3	Total Kraft digesters pulp production (Surrogate for NOx)	1,345 Oven Dry Tons (ODT)/ day, rolling 12 month average	Permittee must record monthly the total Kraft digesters pulp production for the last 12 months. Permittee must report totals monthly with monthly air monitoring report. Monthly report must include total Kraft digesters pulp production, Kamyr Kraft digester pulp production, and M&D Kraft digesters pulp production. Records must be maintained for not less than five (5) years after their origination. The most recent two years must be retained on-site. Records must be	PSD 18-01 V.B for limit PSD 18-01 VIII.C for monitoring requirements PSD 18-01 IX.B and C for recordkeeping requirements

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
			available for inspection Ecology within ten (10) days of request.	
K.4	Total Black Liquor Solids Combusted (Surrogate for NOx)	1,327 million lbs/year, rolling 12-month average	Permittee must determine monthly the total amount of BLS combusted in the recovery furnaces for the last 12 months. Permittee must report monthly with monthly air monitoring report. Records must be maintained for not less than five (5) years after their origination. The most recent two years must be retained on-site. Records must be available for inspection by Ecology within ten (10) days of request.	PSD 18-01 V.C for limit

K.5 At all times, to the extent practicable, maintain and operate No. 2 M&D Digester and the associated sawdust blower, including any associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being followed for the No. 2 M&D Digester and associated sawdust blower will be based on information available to Ecology, EPA, and/or their authorized representatives, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. [PSD 18-01 Condition X.A and X.B]

K.6 The 2018 modification to No. 2 M&D Digester and associated sawdust blower must be constructed and operated in accordance with PSD 18-01, NOC Order 15783 and the associated application for each construction permit. [PSD 18-01 Condition XIV.A, NOC Order 15873 Condition 5, and R10PSD00200 Condition 2.1]

L. Cyclone Box Clipping Collection System

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
L.1	Particulate	15.02 tpy, annual average (from cyclone baghouse system vent)	Corrugated scrap dust particles shall be captured in the filter bags downstream of the cyclone. Install and maintain a pressure drop measurement device on the baghouse. Record instantaneous baghouse pressure drop reading at least once per week. Maintain baghouse pressure drop less than or equal to 4 inches H2O as performance indicator during process operation. A log of weekly readings of the pressure drop will be maintained. Initiate corrective action within 72 hours when weekly pressure drop reading exceeds 4 inches. Failure to initiate corrective action within 72 hours may be a violation of the requirement. Report deviations/excursion and corrective action in the monthly report. [4,5,6] Maintain and follow an O&M manual for equipment that has the potential to affect emissions to the atmosphere. The manual shall be made available to Ecology upon request. Excess emissions that result from a failure to follow the requirements of the O&M manual may be considered proof that the equipment was not properly operated and maintained in accordance	Order DE 95AQI-84 modification 4 for particulate limit, O&M, and inspection log requirement 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping applicability

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
			with RCW 70A.15.2210. A log of inspections and maintenance of the equipment shall be maintained.	
L.2	Opacity (Visible Emissions)	Average 20% for more than six consecutive minutes in any 60 minute period	EPA Method 9 is the reference test method. Ongoing compliance indicated by monitoring specified in Condition L.1.	WAC 173-405-040(6) for basis of opacity limit WAC 173-401-615 for monitoring 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping applicability

M. LVHC Collection and Incineration System

(Includes KAMYR Digester, NSSC Digester, and No. 1 and No. 2 M&D Digesters; No. 1, No. 2, and No. 2 Evaporator Sets and Concentrators; and Foul Condensate Collection Tank)

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
M.1	Total HAP emissions	Enclose, collect, and treat all vent gases from LVHC	Record all periods during which LVHC gases were not collected and treated each month. Report periods of such nontreatment monthly.	40 CFR 63.443(c) and WAC 173-400-075(5) (incorporates MACT by reference) for HAP management

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
		equipment systems.		40 CFR 63.456 for affirmative defense.
M.2	Total HAP emissions	Collect LVHC gases in closed vent system.	Conduct annual performance tests on closed vent systems using the referenced procedures annually. Report test results within 60 days of conducting performance test. Perform monthly visual inspection of closed vent system components as specified in 40 CFR 63.453(k).	40 CFR 63.443(c) and WAC 173-400-075(5) (incorporates MACT by reference) for HAP management requirement 40 CFR 63.453(k) for monthly visual inspection
M.3	Total HAP emissions	Treat LVHC vent gases to reduce total HAP emissions using hog fuel boiler, lime kiln, by introducing the HAP emission stream with the primary fuel or into the flame zone.	Record all periods during which LVHC gases are combusted in each control device. Report periods during which LVHC gases are vented to the atmosphere before control in the monthly report. Venting of LVHC gases from main bypass vent valves for periods in excess of 1% of total operating time in a semi-annual period shall constitute a violation of the applicable emission standard. [11,12]	40 CFR 63.443(d)(4) and WAC 173-400-075(5) (incorporates MACT by reference) for HAP management options and specifications 40 CFR 63.443(e)(1) for excess emission allowance. 40 CFR 63.456 for affirmative defense WAC 173-401-615(1)(c); WAC 173-400-105(7); and 40 CFR 63.8(c)(4) for CMS data recovery

N. Pulping Condensate Collection and Treatment System

(Includes KAMYR Digester; No. 1 and No. 2 M&D Digesters; No. 1, No. 2, and No. 3 Evaporator Sets; and LVHC and Foul Condensate Collection Tanks)

	Parameter	Requirement	Monitoring & Reporting[1]	Applicable Requirement(s)
N.1	Total HAP emissions from pulping process condensates	Enclose, collect, and convey pulping condensates from the identified equipment in 40 CFR 63.446(c)(3) and discharge below the liquid surface of a biological treatment system.	Manage, inspect, and maintain records for the condensate collection system. Conduct repairs as necessary. Record all periods during which identified condensate streams were not collected or treated each month, and conduct monthly closed collection system inspections.	40 CFR 63.446(d) for collection requirement 63.446(e)(2) for discharge location 63.453(l) and 63.454(b) for inspection frequency, corrective action, and recordkeeping requirements 63.454(a) for recordkeeping requirements
N.2	Total HAPs collected from pulping process condensates	Collect condensates from the identified equipment in 40 CFR 63.446(c)(3) such that the	Record kraft pulp production (in oven dry tons of unscreened brownstock) and volumetric flow rates for each condensate stream collected on a daily basis.	40 CFR 63.446(b) specifies equipment systems for collection requirement, (c)(3) specifies HAP collection requirement Calculation procedure from the February 2021 *Wallula Mill 40 CFR*

	Parameter	Requirement	Monitoring & Reporting[1]	Applicable Requirement(s)
		total collected HAP mass contains 7.2 pounds or more per ton of oven dry pulp (for mills that do not perform bleaching), 15-day rolling average.	Report 15-day rolling average condensate collection for each day of the calendar month in each monthly air report. If collected HAP mass falls below 7.2 lbs/ODTP based on a 15-day rolling average, Permittee will initiate corrective action within 24 hours. On a daily basis, calculate the following: (a) Total HAP collected using the HAP collection factor (in terms of lbs/gpm-day) and the daily volumetric flows of collected condensate streams. The HAP collection factor is to be updated using procedures in Condition N.3. (b) Total HAP collected during the 15-day period. (c) Total kraft pulp production during the 15-day period. (d) Total HAP per ODTP by dividing total HAP collected during 15-day period by the total kraft pulp production during the 15-day period. (e) Discount the total methanol collected by an 89.5% efficiency factor. Changes to these procedures may be made if changes are incorporated into the *Wallula Mill 40 CFR 63.446 and 63.447 Demonstration of Compliance* document and approved by Ecology.	*63.446 and 63.447 Demonstration of Compliance*
N.3	Total HAPs collected from pulping	Perform annual verification	Annual verification tests shall be performed to confirm or re-calculate condensate collection factors. Ecology shall be provided with a test plan 60	Annual verification tests from the February 2021 *Wallula Mill 40 CFR*

	Parameter	Requirement	Monitoring & Reporting[1]	Applicable Requirement(s)
	process condensates	tests to confirm or re-calculate condensate collection factors.	days prior to performing the test. The Permittee will submit the test report to Ecology within 60 days of completion of the test. Changes to the condensate collection factors must be documented in the report. Composite samples shall be analyzed for total HAP using EPA Method 305, NCASI DI/MeOH 94.02, or an alternative method approved by EPA. Changes to these procedures may be made if changes are incorporated into the *Wallula Mill 40 CFR 63.446 and 63.447 Demonstration of Compliance* document and approved by Ecology.	*63.446 and 63.447 Demonstration of Compliance*
N.4	Total HAPs treated in collected pulping condensates	Treat collected pulping condensates to achieve the following: At mills that do not perform bleaching, treat the pulping process condensates to remove 6.6 or more pounds of	Perform the percent reduction test procedure specified in 40 CFR 63.457(l) within 45 days after the beginning of each quarter. Report test results within 60 days of conducting percent reduction test. The quarterly performance tests must be performed over a period of not less than three days (except as outlined in N.5 below). A violation occurs if the three-day quarterly performance test does not demonstrate the removal of 6.6 or more pounds of HAP per ton of oven-dry pulp over the course of the performance test. The Permittee may choose to only calculate the value *r* for the first quarterly performance test each year and use the same value of *r* for the remaining performance tests conducted that year.	40 CFR 63.446(e) and WAC 173-400-075(6) (incorporates MACT by reference) for treatment options 40 CFR 63.453(j) for monitoring and performance testing 40 CFR 63.453(j)(3)(ii) for only calculating *r* in the first quarter of each year

	Parameter	Requirement	Monitoring & Reporting[1]	Applicable Requirement(s)
		HAP per ton of oven dry pulp.		
N.5	Calculated HAP removal as an indicator of measured HAP treatment	Maintain the calculated level of removal of the pulping process condensates at or above 6.6 or more pounds of HAP per ton of oven dry pulp on a calculated 15-day rolling average.	Calculate daily HAP mass removal (using methanol as a surrogate) using the equation below $F=F_b*(f_{bio}$ (MeOH)/(1+1.087(r)) Where F= daily methanol mass removal F_b= Daily inlet mass flow rate of methanol as calculated in Condition N.2 f_{bio} (MeOH) = The fraction of methanol removed as calculated from most recent performance test required by N.4. r= Ratio of the sum of acetaldehyde, methyl ethyl ketone, and propionaldehyde as calculated from first quarter performance test required by N.3, or more recent performance test as required by N.3 Calculate 15-day averages from the daily values calculated above. Report 15-day rolling average condensate treatment for each day of the calendar month in each monthly air report. If the 15-day rolling average HAP removal falls below 6.6 lbs of HAP per ton of oven dry pulp, this does not constitute a violation of the mass removal standard if the Permittee performs a mass removal	WAC 173-400-075(6) (incorporates MACT by reference) 40 CFR 63.446(e) for treatment options 40 CFR 63.453(j) for performance parameter requirements and (p) for performance parameter excursion specification One-day test run for monitoring parameter excursions allowance established in 2002 Initial Performance Test Plan

	Parameter	Requirement	Monitoring & Reporting[1]	Applicable Requirement(s)
			performance test as described under 40 CFR 63.453(p) as soon as practical which demonstrates compliance with the mass removal standard. All necessary sampling must be conducted prior to taking steps to repair or adjust the operation of the process to end the parameter excursion. Performance test in the event of monitoring parameter excursions shall be one-day tests. Changes to these procedures may be made if changes are incorporated into the *Wallula Mill 40 CFR 63.446 and 63.447 Demonstration of Compliance* and approved by Ecology.	
N.6	Total horsepower as an indicator of HAP treatment	Maintain total applied horsepower above the established minimum value, 15-day average	Maintain the total aerator horsepower above the established minimum aerator horsepower (15- day average) as a performance indicator. Report 15-day rolling average horsepower values for each day of the calendar month in each monthly air report. If the 15-day rolling average total aerator horsepower falls below the required minimum, this does not constitute a violation of the mass removal standard if the Permittee performs a mass removal performance test as described under 40 CFR 63.453(p) as soon as practical which demonstrates compliance with the mass removal standard. All necessary sampling must be conducted prior to taking steps to repair or adjust the operation of the process to end the parameter excursion.	WAC 173-400-075(6) (incorporates MACT by reference); 40 CFR 63.453(j) for performance parameter requirements and (p) for performance parameter excursion specification. One-day test run for monitoring parameter excursions allowance established in 2002 Initial Performance Test Plan.

Parameter	Requirement	Monitoring & Reporting[1]	Applicable Requirement(s)
		Performance test in the event of monitoring parameter excursions shall be one-day tests. Note: Minimum HP set at 75,218 HP/day based on January 2020 performance test. To establish a new minimum value for horsepower, the Permittee shall use the procedures described in 40 CFR 63.453(n). The new operating parameter must be documented in the *Wallula Mill 40 CFR 63.446 and 63.447 Demonstration of Compliance* and approved by Ecology.	

O. Clean Condensate Alternative (CCA)

	Parameter	Requirement	Monitoring & Reporting[1]	Applicable Requirement(s)
O.1	Total HAP emissions	Reduce HAP emissions compared to CCA baseline by at least 0.3 lbs/ODTP on a 15-day rolling average	Report 15-day rolling average clean condensate alternative credit for each day of the calendar month in each monthly air report. On a daily basis, calculate the HAP emissions reduction using the following equations: CCA credit = (Total MeOH Load – Discharge Effluent MeOH) X (18%-F_{air})/(1+1.087(r)) Where Total MeOH Load is the sum of methanol from the foul condensate tank (as determined in Condition N.2) and from the clarifier (lb/ODT). Mass of methanol from the clarifier will be determined	WAC 173-400-075(6) (incorporates MACT by reference); 40 CFR 63.443(c) for HAP control requirement; 40 CFR 63.453(k) for enclosure and closed vent system management requirements; and 40 CFR 63.447 for CCA alternative

	Parameter	Requirement	Monitoring & Reporting[1]	Applicable Requirement(s)
			from daily flow rates and data gathered from the most recent quarterly performance test required by Condition N.3. Discharge Effluent MeOH is the mass of methanol remaining (lb/ODT) in the effluent from the ASB to the river. This will be determined from daily flow rates and data gathered from the most recent quarterly performance test required by Condition N.3. F_{air} is calculated from the most recent quarterly performance test required by Condition N.3 (Equivalent to 1-F_{bio}). 18% is the CCA baseline F_{air} r= Ratio of the sum of acetaldehyde, methyl ethyl ketone, and propionaldehyde as calculated from first quarter performance test required by N.3, or more recent performance test as required by N.3. Changes to these procedures can be made if the Permittee submits an updated *Wallula Mill 40 CFR 63.446 and 63.447 Demonstration of Compliance* and it is approved by Ecology.	
O.2	HAP CCA Operational Parameter	Maintain the level of improved treatment system	Maintain the 15-day average total aerator horsepower above the established minimum 15-day average aerator total horsepower as a performance indicator.	40 CFR 63.447 for CCA alternative

	Parameter	Requirement	Monitoring & Reporting[1]	Applicable Requirement(s)
		performance required to meet the CCA requirements of 40 CFR 63.447 proposed in the *Wallula Mill 40 CFR 63.446 and 63.447 Demonstration of Compliance*.	Report 15-day rolling average horsepower values in each monthly air report. Take corrective action within 24 hours if the 15-day total aerator horsepower falls below minimum. Failure to take corrective action constitutes a violation of this requirement. Note: Minimum HP set at 75,218 HP/day based on January 2020 performance test. Changes to the operation parameter can be made if the Permittee submits an updated *Wallula Mill 40 CFR 63.446 and 63.447 Demonstration of Compliance* and it is approved by Ecology.	40 CFR 63.453(j)(2) for alternative site specific parameter monitoring. WAC 173-401-615(1)(c); WAC 173-400-105(7); and 40 CFR 63.8(c)(4) for CMS data recovery.
O.3	HAP CCA Operational Parameter	Permittee shall not use segregated condensate in brownstock washers or deckers.	Permittee shall continuously monitor segregated condensate collection status to demonstrate that condensates are not used in brownstock washers or deckers and certify once per year that segregated condensate will not be used in brownstock washers or deckers. [11,12]	40 CFR 63.447(b)-(h) for CCA alternative requirements WAC 173-401-615(1)(c); WAC 173-400-105(7); and 40 CFR 63.8(c)(4) for CMS data recovery
O.4	HAP CCA Operational Parameter and Testing	Record-keeping	Permittee shall maintain all CCA compliance demonstration records, testing, and reporting for a period not less than five years.	40 CFR 63.454(a) and 63.10(b) by reference for recordkeeping requirements

	Parameter	Requirement	Monitoring & Reporting[1]	Applicable Requirement(s)
O.5	Annual Verification Tests	Perform Annual Verification Tests as described in *Wallula Mill 40 CFR 63.446 and 63.447 Demonstration of Compliance*	Permittee shall conduct annual performance tests (minimum 3-day test) to confirm that collected and treated condensate methanol levels are consistent with levels contained in the mill's CCA final proposal documented in the most recent *Wallula Mill 40 CFR 63.446 and 63.447 Demonstration of Compliance* approved by Ecology. The performance test must show a collection of at least 8.3 lbs methanol/ODT and an F_{bio} of 82% or greater. Changes to the frequency of the testing may be revised if the Permittee submits an updated *Wallula Mill 40 CFR 63.446 and 63.447 Demonstration of Compliance* and it is approved by Ecology.	40 CFR 63.447 for CCA February 2021 *Wallula Mill 40 CFR 63.446 and 63.447 Demonstration of Compliance*
O.6	Monitoring of Nutrient Addition to meet CCA requirements	Follow Nutrient Addition Plan in February 2021 *Wallula Mill 40 CFR 63.446 and 63.447 Demonstration of Compliance*	Monitor nitrogen and phosphorus residuals at the outlet of the Kenics Basin. At a minimum, one grab sample will be collected from the outlet of the Kenics Basin three times per week. If the 15-day rolling average nutrient residual drops below 0.1 mg/L, PCA will: • Include the calculated residuals in the monthly air report along with a description of corrective actions that have been taken to address low residuals, and	40 CFR 63.447 for CCA February 2021 *Wallula Mill 40 CFR 63.446 and 63.447 Demonstration of Compliance*

	Parameter	Requirement	Monitoring & Reporting[1]	Applicable Requirement(s)
			• Perform a quarterly methanol performance test in response to low residuals to verify CCA compliance. The testing shall be performed within 30 days of the 15-day rolling average nutrient residual falling below 0.1 mg/L. The results of the performance test shall be provided to Ecology within 60 days after the collection of the last sample. Changes to the monitoring requirements can be made if the Permittee submits an updated *Wallula Mill 40 CFR 63.446 and 63.447 Demonstration of Compliance* and it is approved by Ecology.	
O.7	Perform additional testing as needed in accordance with *Wallula Mill 40 CFR 63.446 and 63.447 Demonstration of Compliance*	Perform an additional performance test if Fbio is less than 0.87.	If a quarterly performance test performed under Condition N.3 yields an Fbio lower than 0.87, PCA shall perform an additional performance test following the procedures under Condition N.3.The Permittee shall investigate, take corrective action, and retest if the 15-day rolling average of condensate collection (lbs methanol per ton of kraft pulp) falls below the threshold established in the performance tests. The additional performance test shall be performed within 30 days from the last day of the previous performance test. The results of the repeat performance test will be submitted to Ecology within 60 days from the last day of the additional performance test.	40 CFR 63.447 for CCA February 2021 *Wallula Mill 40 CFR 63.446 and 63.447 Demonstration of Compliance* 40 CFR 63.447 for CCA

P. Landfill/Compost Operation

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
P.1	Particulate fugitive dust	Minimum Operating condition	The Permittee shall comply with Landfill/Compost Dust control plan after the implementation date specified in the order establishing the dust control plan. This order is part of the SIP maintenance plan for the local air shed.	Order No. 1614-AQ04 for dust control plan requirement

Q. Reciprocating Internal Combustion Engines (RICE) MACT

40 CFR Part 63 Subpart ZZZZ (Table 2c) applies to the following emergency engines:

- 318 HP Detroit diesel CI engine; Last rebuilt in 1986; Used to drive an emergency backup fire water pump.
- 318 HP Detroit diesel CI engine; Last rebuilt in 1998; Used to drive an emergency backup mill process water pump.
- 200 HP Ford propane SI backup generator; manufactured in April 2004; backup generator for providing electricity to the main office.

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
Q.1	HAPs	N/A	Change the oil and filter every 500 hours of operation or annually, whichever comes first. Inspect the air cleaner and/or spark plugs every 1,000 hours of operation or annually, whichever comes first, and replace as necessary.	40 CFR Part 63 Subpart ZZZZ Table 2c for maintenance requirements

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
			Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	
Q.2	Operations	N/A	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.	40 CFR 63.6625(h) for minimizing idling and startup time
Q.3	Operations	100 hour operations	There is no time limit on the use of emergency stationary RICE in emergency situations. Emergency RICEs may operate for up to 100 hours per year for maintenance checks and readiness testing or other periods defined in 40 CFR 63.6640(f). Emergency RICE's may operate for up to 50 hours per year in non-emergency situations not mentioned above. This time will count toward the 100 hours per year previously mentioned.	40 CFR 63.6640(f) for emergency RICE operation requirements
Q.4	Record-keeping	N/A	Copies of each notification and report submitted for compliance must be kept. Document the occurrence and duration of each malfunction of operation.	40 CFR 63.6655 for recordkeeping requirements

Parameter	**Limit & Averaging Period** (shall not exceed)	**Monitoring & Reporting**[1]	**Applicable Requirement(s)**
		Records of performance tests and evaluations must be kept. Document actions taken during periods of malfunction to minimize emissions and the corrective actions to restore malfunctioning processes. Records must be retained of the operation and maintenance of the engines according to the manufacturer's emission related instructions or according to the developed maintenance plan consistent with good air pollution control practice for minimizing emissions. Records of the hours of operation of the engine that is recorded through the non-resettable hour meter must be maintained. Records must include how many hours are spent for emergency operation; including what classified the operation as an emergency and how many hours are spent for non-emergency operation. If the engines are used for demand response operation, maintain records of the notification of the emergency situation and the time the engine was operated as part of demand response.	

40 CFR Part 63 Subpart ZZZZ applies to the following non-emergency CI engine:

- 195 HP Detroit diesel CI engine; Installed in 1992; Used to drive a backup fire water pump.

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
Q.5	CO	230 ppmvd at 15% O_2	EPA Method 10 is the reference method. Initial performance test with three 1 hour test runs. Note: The performance test was performed on February 17, 2015 and showed CO emissions of 78 ppm @ 15% O_2. No subsequent compliance test specified in 40 CFR Part 63 Subpart ZZZZ.	40 CFR Part 63 Subpart ZZZZ Table 2c Item 3 for limit 40 CFR 63.6612 and 40 CFR Part 63 Subpart ZZZZ Table 4 Item 3 and Table 5 Item 12 for compliance demonstration
Q.6	Record-keeping		Copies of each notification and report submitted for compliance must be kept. Document the occurrence and duration of each malfunction of operation. Records of performance tests and evaluations must be kept. Document actions taken during periods of malfunction to minimize emissions and the corrective actions to restore malfunctioning processes. Records must be retained of the operation and maintenance of the engines according to the manufacturer's emission related instructions or	40 CFR 63.6655 for recordkeeping requirements

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
			according to the developed maintenance plan consistent with good air pollution control practice for minimizing emissions.	

40 CFR Part 60 Subpart JJJJ applies to the following 4 stroke lean burn non-emergency SI engine:

- 80 HP Engine Distributors, Inc. Model MSG-425; manufactured in 2016; Used to drive the lime kiln when the electric drive is offline.

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
Q.7	HC + NOx, and CO	(HC + NOX) ≤3.8 g/kW-hr CO ≤31.0 g/kW-hr (HC + NOX) × CO^0.791 ≤16.78	Compliance is demonstrated through manufacturer certification and operating and maintaining the certified stationary SI internal combustion engine and control device according to the manufacturer's emission related written instructions.	40 CFR 1048.101(c)(3) for limit 40 CFR 60.4243 for compliance demonstration
Q.8	Record-keeping		The following documentation shall be maintained: Notifications of compliance submitted along with all supporting documentation of the notification.	40 CFR 60.4245(a) for recordkeeping requirements

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
			All records of maintenance conducted on the engine. Manufacturer certification that the engine is certified to meet the applicable emission standards.	

40 CFR Part 60 Subpart JJJJ applies to the following emergency engine:

- 97 HP Generac propane SI backup generator; manufactured in August 2013; backup generator for providing electricity to the R8 generator.

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
Q.9	CO	519 g/KW-hr (387 g/HP-hr)	Compliance is demonstrated through manufacturer certification and operating and maintaining the certified stationary SI internal combustion engine and control device according to the manufacturer's emission related written instructions.	40 CFR 60.4233(d) and 40 CFR Part 60 Subpart JJJJ Table 1 for limit 40 CFR 60.4243 for compliance demonstration
Q.10	HC + NO_X	13.4 g/KW-hr (10g/HP-hr)	Compliance is demonstrated through manufacturer certification and operating and maintaining the certified stationary SI internal combustion engine and control device according to the manufacturer's emission related written instructions. Maintain records of maintenance.	40 CFR 60.4233(d) and 40 CFR Part 60 Subpart JJJJ Table 1 for limit 40 CFR 60.4243 for compliance demonstration 40 CFR 60.4243(a)(1) for maintenance recordkeeping

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
Q.11	Operations	N/A	Install a non-resettable hour meter upon startup of the emergency engine.	40 CFR 60.4237(c) for hour meter requirement
Q.12	Operations	N/A	There is no time limit on the use of emergency stationary RICE in emergency situations. Emergency RICEs may operate for up to 100 hours per year in for maintenance checks and readiness testing or other periods defined in 40 CFR 60.4243(d)(2). Emergency RICEs may operate for up to 50 hours per year in non-emergency situations not mentioned above. This time will count toward the 100 hours per year previously mentioned.	40 CFR 60.4243(d) for emergency RICE operations
Q.13	Record-keeping	N/A	The following documentation shall be maintained: Notifications of compliance submitted along with all supporting documentation of the notification. All records of maintenance conducted on the engine. Manufacturer certification that the engine is certified to meet the applicable emission standards.	40 CFR 60.4245(a) for recordkeeping requirements

R. No. 3 Paper Machine (No. 3 PM)

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
R.1	No. 3 Paper Machine production	1,400 machine dry tons/day (12-month rolling average)	Permittee must determine monthly the average daily paper production for the last 12 months. Report deviations/excess emissions in accordance with Facility Wide General Requirement 35 in monthly air report. Records must be maintained for not less than five (5) years after their origination. The most recent two years must be retained on-site. Records must be available for inspection Ecology within ten (10) days of request.	PSD 18-01 Condition V.A.1 for limit PSD 18-01 Condition VIII.C.1 for monitoring PSD 18-01 Condition IX.B for recordkeeping requirements PSD 18-01 Condition IX.C.1 and XI.C for reporting requirements
R.2	VOCs	Additives used in the paper-making process on No.3 PM shall be “low-VOC”	Annually compile a list of VOC-containing additives used in the paper-making process on No.3 PM and identify the VOC content of each (weight percent basis). Include a certification statement in the annual compliance certification report that affirms the VOC-content requirement has been satisfied.	NOC Order No. 15873 Condition 1
R.3	VOCs and TAPs	Exclusive use of mill segregated clean condensates with a methanol content less	Maintain records demonstrating that the clean condensates used in pulp decking and washing systems contain less than 400 ppm of methanol by weight. Records must be retained for at least 5 years. Report any deviations and corrective actions taken in monthly air report.	NOC Order No. 15873 Condition 2 for clean condensate requirements and reporting WAC 173-401-615 for recordkeeping

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
		than 400 ppm by weight for pulp decking and washing upstream of No. 3		
R.4	Particulate Matter	Minimize particulate matter emissions	Develop a work practice to minimize particulate matter emissions from No. 3 PM. Provide an electronic copy to Ecology by January 1, 2020.	NOC Order No. 15873 Condition 3

R.5. No.1 Paper Machine shall no longer be operated. [NOC Order No. 15873 Condition 4]

R.6. No. 3 PM direct fire heaters and coating operations must be shut down prior to the start-up of modified No. 3 PM. [PSD 18-01 Condition V.A.2.

R.7 At all times, to the extent practicable, maintain and operate No. 3 PM, including any associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being for the No. 3 PM will be based on information available to Ecology, EPA, and/or their authorized representatives, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. [PSD 18-01 Condition X.A and X.B]

R.8 The 2018 modification to No. 3 PM must be constructed and operated in accordance with PSD 18-01, NOC Order 15783 and the associated application for each construction permit. [PSD 18-01 Condition XIV.A, NOC Order 15873 Condition 5, and R10PSD00200 Condition 2.1]

S. NESHAP General Recordkeeping, Reporting and Affirmative Defense Requirements

See the emission unit specific section of the permit for emission unit applicability.

NESHAP Recordkeeping Requirements:

S.1. NESHAP Subparts S & MM Record Retention – maintain files of all information (including all reports and notifications) required by 40 CFR Part 63, Subparts S and MM, in a form suitable and readily available for inspection for at least five years following the date of each occurrence, measurement, maintenance, corrective action, report or record. [40 CFR 63.10(b)(1) and 40 CFR 63.6(e)(3)(v)]

NESHAP Reporting Requirements:

S.2. Semiannual NESHAP Subparts S and MM Summary Report. The monthly CEM reports filed (by July 30th and January 30th) for the months of June and December shall include a semiannual NESHAP Subparts S & MM excess emissions and continuous monitoring system performance report and/or summary report for the six month reporting periods ending June 30 and December 31. [40 CFR 63.10(e)(3) and WAC 173-401-615(3)]

S.3. Comply with NESHAP General Reporting. [40 CFR 63.10(b) and (c)]

S.5. Permittee shall maintain records of all malfunctions as defined in 40 CFR 63.2 of the applicable emission units subject to 40 CFR Part 63 Subpart S including: LVHC System and CCA System. These malfunctions shall be reported to Ecology on a semiannual basis. [40 CFR 63.454(g) for recordkeeping, 40 CFR 63.455(g) for reporting requirement]

NESHAP Affirmative Defense:

S.6 Permittee may elect to claim an affirmative defense to a claim for civil penalties for violations of the emissions standards in 40 CFR Part 63 Subpart S caused by malfunctions. [40 CFR 63.456 for affirmative defense (09/11/2012)]

T. No. 2 Paper Machine (No. 2 PM)

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
T.1	VOCs	Operate No.2 PM in a manner consistent with good air pollution control practices	Operate No.2 Paper Machine in a manner consistent with good air pollution control practices, including minimizing usage rates and VOC contents of additive chemicals. Annually compile a list of VOC-containing additives used in the paper-making process on No.2 PM and identify the VOC content of each (weight percent basis). Include a certification statement in the annual compliance certification report that affirms the VOC-content requirement has been satisfied.	Condition 1 of NOC Order No. 17965 [BACT]
T.2	VOCs and Toxic Air Pollutants	Exclusive use of mill segregated clean condensates with a methanol content less than 400 ppm by weight for pulp decking and washing	Maintain records demonstrating that the clean condensates used in pulp decking and washing systems contain less than 400 ppm of methanol by weight. Records must be retained for at least 5 years. Report any deviations and corrective actions taken in monthly air report.	Condition 2 of NOC Order No. 17965 for clean condensate requirements and reporting [BACT] WAC 173-401-615 for recordkeeping

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
		upstream of No. 2		
T.3	No. 2 Paper Machine production	524 air-dry tons per day (507 machine dry tons/day @ 7% moisture), 12-month rolling average	Beginning the 12th month after completion of the No.2 PM modification, the average 12-month production rate for the previous 12 months shall be included in each monthly air report.	Condition 6 of NOC Order No. 17965

T.4 At all times, to the extent practicable, maintain and operate the No. 2 PM, including any associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions. The operation and maintenance procedures for the No.2 PM must be updated to reflect the changes associated with the project approved by NOC Order No. 17965 within six months from the date of project completion. Operation and maintenance procedures must be followed. A copy of the procedures must be available to Ecology during inspections and upon request. Determination of whether acceptable operating and maintenance procedures are being followed for the No. 2 PM will be based on information available to Ecology, EPA, and/or their authorized representatives, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. [Condition 8 of NOC Order No. 17965]

T.5 The modification to No. 2 PM must be in accordance with NOC Order 17965 and the associated application. Any activity or operation inconsistent with the associated application and information provided to Ecology for NOC Order 17965 is subject to Ecology enforcement under applicable regulation. [Condition 10 of NOC Order 17965]

U. Recycled Fiber Plant (RFP)

	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting[1]	Applicable Requirement(s)
U.1	Recycled Fiber Plant Production	1125 air dry tons/day (12-month rolling annual average)	Beginning the 12th month after completion of the RFP, the average 12-month production rate for the previous 12 months shall be included in each monthly air report.	Condition 5 of NOC Order No. 17965

U.2 The RFP must be operated and maintained in a manner consistent with safety and good air pollution control practices for minimizing emissions at all times. Operation and maintenance procedures for the RFP must be followed. A copy of the procedures must be available to Ecology during inspections and upon request. Determination of whether acceptable operating and maintenance procedures are being followed for the RFP will be based on information available to Ecology, EPA, and/or their authorized representatives, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. [Condition 8 of NOC Order No. 17965]

U.3 The operation of the RFP must be in accordance with NOC Order 17965 and the associated application. Any activity or operation inconsistent with the associated application and information provided to Ecology for NOC Order 17965 is subject to Ecology enforcement under applicable regulation. [Condition 10 of NOC Order 17965]

FACILITY WIDE GENERAL REQUIREMENTS
[WAC 173-401-600]

These generally applicable requirements apply facility-wide, including insignificant emission units or activities. Insignificant emission units or activities, however, are not subject to monitoring, testing, recordkeeping, reporting, or compliance certification requirements.

1. Varying Emission Rate. The Permittee cannot vary the rate of emission of a pollutant according to atmospheric conditions or ambient concentrations of that pollutant, except as directed according to air pollution episode regulations. [WAC 173-400-205]

2. Emissions Detrimental to Persons or Property. The Permittee shall not cause or permit emission of any contaminant if it is detrimental to the health, safety, or welfare of any person, or causes damage to property or business. [WAC 173-400-040(6)]

3. Concealment and Masking. The Permittee shall not install or use any means that conceal or mask an emission of an air contaminant that would otherwise violate provisions in this permit. [WAC 173-400-040(8)]

4. Fugitive Emissions. The Permittee shall take reasonable precautions to prevent the release of air contaminants from emission units engaged in material handling, construction, demolition, or any other operation that is a source of fugitive emissions. Reasonable precautions include, but are not limited to, application of water as necessary to control fugitive dust or the timely removal or coverage of material piles. [WAC 173-400-040(4)(a)]

5. Fugitive Dust. The Permittee shall take reasonable precautions to prevent fugitive dust from becoming airborne and maintain and operate the source to minimize emissions. Reasonable precautions include, but are not limited to, application of water as necessary to control fugitive dust or the timely removal or coverage of material piles. [WAC 173-400-040(9)(a)]

6. Particulate Matter Deposition. The following condition is **state only** and is not federally enforceable under the Clean Air Act: No deposit of particulate matter beyond property line so as to interfere unreasonably with use and enjoyment. [WAC 173-400-040(3)]

7. Odors. The following condition is **state only** and is not federally enforceable under the Clean Air Act: Any person causing odor which may unreasonably interfere with use and enjoyment of property must use recognized good practice and procedures to reduce odors to a reasonable minimum. [WAC 173-400-040(5)]

8. Opacity. The Permittee may not cause or allow the emission of a plume from any emission unit other than a kraft recovery furnace, smelt dissolver tank, or lime kiln, which has an average opacity greater than 20% for more than 6 consecutive minutes in any 60 minute period except as provided in WAC 173-405-040(6). [WAC 173-405-040(6)]

9. Complaints. Except where specific requirements are defined elsewhere, the Permittee shall assure compliance with conditions 1 through 8 by recordkeeping of actions taken by the Permittee in response to complaints received by the Permittee or of possible noncompliance noticed by the facility staff in day to day operations. The Permittee shall assess the validity of each complaint and commence corrective action, if warranted, as soon as possible, but no later than 3 working days of receiving the complaint. The Permittee shall keep records of the following: complaints received; the assessment of validity; and what, if any, corrective action is taken in response to the complaint. [WAC 173-401-630]

10. Sulfur Dioxide Emissions. The emission of sulfur dioxide from any emissions unit other than a recovery furnace or lime kiln shall not exceed 1,000 parts per million for an hourly average, corrected to 7% oxygen for combustion units. [WAC 173-405-040(9)]

11. Credible Evidence. For the purpose of submitting compliance certifications or establishing whether or not a person has violated or is in violation of the applicable requirements cited in this requirement, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed. [40 CFR 51.212; 40 CFR 52.12; 40 CFR 52.33; 40 CFR 60.11; 40 CFR 61.12; PSD 18-01 Condition XIV.D; R10PSD00200 Condition 2.6]

12. Good Air Pollution Control Practice. The Permittee shall at all times, including periods of abnormal operation and upset conditions, to the extent practicable, maintain and operate any affected facility, including associated air pollution control equipment, in a manner consistent with good air pollution control practice. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to Ecology which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. [WAC 173-405-040(10)]

13. Chemical Accidental Release Program. The Permittee does not meet the applicability standards for Accidental Release Prevention Provisions under 40 CFR Part 68. The Permittee has a general duty to: identify hazards which may result from accidental releases using appropriate hazard assessment techniques; to design and maintain a safe facility taking such steps as are necessary to prevent releases; and to minimize the consequences of accidental releases that do occur. [40 CFR Part 68]

14. Stratospheric Ozone Protection.
    a. The Permittee shall comply with applicable standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for Motor Vehicle Air Conditions (MVACs) in Subpart B:
        i. Persons opening appliances for maintenance, service, repair or disposal must comply with the required practices pursuant to §82.156.
        ii. Equipment used during the maintenance, service, repair or disposal must comply with the standards for recycling and recovery equipment pursuant to §82.158.
        iii. Persons performing maintenance, service, repair or disposal of appliances must be certified by an approved technical certification program pursuant to §82.161.
        iv. Persons disposing of small appliances, MVACs, and MVAC like appliances must comply with recordkeeping requirements pursuant to §82.166 ("MVAC like appliance" is defined at §82.152.)
        v. Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to §82.156.
        vi. Owners/operators of appliances normally containing 50 or more pounds or refrigerant purchased and added to such appliances pursuant to §82.166.
    b. Permittee may switch from any ozone depleting substance to any alternative approved pursuant to the Significant New Alternatives Program (SANP), 40 CFR Part 82, Subpart G, without a permit revision but shall not switch to a substitute listed as unacceptable pursuant to such program. [40 CFR 82.174]
    c. Any certified technician employed by Permittee shall keep a copy of their certification at their place of employment. [40 CFR 82.166(1)]
    d. The Permittee shall not willfully release any regulated refrigerant and shall use refrigerant extraction equipment to recover regulated refrigerant that would otherwise be released into the atmosphere. [RCW 7070.94.970(2), 970(4)] State Only
    e. Compliance with this term and condition will be demonstrated by using a certified contractor or employee. [40 CFR Section 82 and RCW 70.94.970 (the RCW is a **state only** requirement)]

15. Insignificant Emission Units. The generally applicable requirements that apply to IEUs are, WAC 173-405-040(5), WAC 173-400-040, WAC 173-400-050(1) & (3), and WAC 173-400-060. [WAC 173-401-530(2)(b)]

16. Volatile Organic Liquid Storage Vessels. The Permittee shall keep records showing the dimensions, capacities, and vapor pressure of contents of all storage vessels having capacities greater than or equal to 75 cubic meters or vapor pressure of contents greater than or equal to 3.5 kPa that are used to store volatile organic liquids and for which construction, reconstruction, or modification commenced after July 23, 1984. These records are to be kept for the life of each storage vessel. [40 CFR 60.116b (a) and (b)]

17. Used Oil Burning. The following condition is **state only** and is not federally enforceable under the Clean Air Act. The Permittee can burn used oil only if it meets the standards prescribed in RCW 70.94.610(1). [RCW 70.94.610]

18. Asbestos. The Permittee shall comply with the applicable requirements of 40 CFR Part 61, subpart M (asbestos NESHAP) and WAC 173-400-075 when conducting any renovation or demolition at the facility. [WAC 173-400-075]

19. Mill Derived Solid Waste. The following condition is **state only** and is not federally enforceable under the Clean Air Act. As approved by letter from Ecology dated November 22, 2005, the Permittee is authorized to burn up to, but not in excess of, 12 tons per day of mill derived solid waste generated on the Wallula Mill site in the Hogged Fuel Boiler, excluding material designating as dangerous waste. As such, the facility is not subject to the requirements of WAC 173-350-240 and the solid waste incinerator rules.

MONITORING, RECORDKEEPING & REPORTING

Monitoring Requirements [WAC 173-401-630(5)(b)]

20. Unit Specific Requirements. The Permittee shall conduct routine monitoring of emissions in accordance with the program of monitoring or testing required by specific emission unit conditions of this permit. [WAC 173-405-072]

21. Unavoidable Excess Emissions. The following applies, where applicable, to excess emissions that are claimed to be unavoidable pursuant to WAC 173-400-107 until WAC 173-400-109 becomes effective. The Permittee may include in its reports demonstrations that excess emissions were unavoidable, consistent with the requirements of WAC 173-400-107. The Permittee shall have the burden to prove that deviations from permit terms were unavoidable. Excess emissions that are unavoidable are excused and are not subject to penalty. [WAC 173-400-107]

    After the effective of WAC 173-400-109, the Permittee may include in its reports demonstrations that excess emissions were unavoidable, consistent with the requirements of WAC 173-400-109. The Permittee shall have the burden to prove that deviations from permit terms were unavoidable. Excess emissions that are unavoidable are not subject to penalty. Claim of unavoidable excess emissions does not apply to exceedance of an emission standard in 40 CFR Parts 60, 61, 62, 63, and 72, or Ecology's adoption by reference of these standards. [WAC 173-400-109]

22. Violation Duration. A violation of an emission limit is presumed to commence at the time of the testing, recordkeeping or monitoring indicating noncompliance, and to continue until the time of retesting, recordkeeping or monitoring that indicates compliance. This presumption may be defeated if credible evidence shows that the violation was of longer

duration, that there were intervening days during which no violation occurred or that the violation was not continuing in nature. [42 U.S.C. 7413(e)(2)]. The Permittee may conduct monitoring or testing more frequently than required by this permit.

23. Insignificant Emission Units. The Permittee is not subject to any testing, monitoring, reporting, or recordkeeping for the insignificant emission units or activities listed. [WAC 173-401-530(2)(c)]

Recordkeeping Requirements

24. Monitoring Records. The Permittee shall keep records of any periodic and continuous monitoring required by this permit. These records shall include the following, where applicable:
    a. The date, place as defined in requirement, and time of sampling or measurement;
    b. The date(s) analysis were performed;
    c. The company or entity that performed the analysis;
    d. The analytical techniques or methods used;
    e. The results of such analysis; and
    f. The operating conditions existing at the time of sampling or measurement.
    [WAC 173-401-615(2)(a); WAC 173-400-105]

25. Inspection Checklists. Where the Permittee is required to use and maintain an inspection checklist, the checklist must contain, at a minimum, the following information:
    a. The person conducting the inspection;
    b. The date/time of the inspection'
    c. Location of the inspection;
    d. The observations made during the inspection;
    e. Corrective actions taken if any; and
    f. The date and time corrective action was initiated and completed.
    [WAC 173-401-615(1)(b)]

26. Changes at Source. The Permittee shall keep records describing changes made at the source 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 changes. [WAC 174-401-724(5)]

27. Records Retention. The Permittee shall retain records of all required monitoring data and support information for a period of 5 years from the date of monitoring sample, measurement, report, or application. Support information includes all calibration and

maintenance records and all data from continuous monitoring instrumentation, and copies of all reports required by this permit. [WAC 173-401-615(2)(c)]

28. Recording Permit Deviations. The Permittee shall maintain a contemporaneous record of any deviation from the requirements of this permit. [WAC 173-401-615(3)(b)]

Reporting Requirements [WAC 173-401-520, -615(3), & -710]

29. Unit Reporting Requirements. In addition to any emission unit specific reporting requirements identified below, emission unit specific reporting requirements are identified in specific emission unit conditions of this permit.

30. Production Reporting. Report within 15 days of the end of each month average daily production of air dried unbleached pulp. [WAC 173-405-072(4)]

31. Monthly Reports. Monitoring reports required by this permit must be submitted to Ecology within 15 days of the end of each calendar month. [WAC 173-405-072]. The reports must clearly identify all instances of deviations from permit requirements. [WAC 173-401-615(3)(a)]

32. Emission Inventory. The Permittee shall submit an inventory of emissions, as specified in WAC 173-405-078, from the source each year no later than 105 days after the end of the calendar year. The Permittee shall maintain records of information necessary to substantiate any reported emissions. [WAC 173-405-078 and WAC 173-400-105(1)]

33. PSD Applicability Reporting. In accordance with WAC 173-400-720(4)(b)(iii)(D)(iii), calculate estimated actual facility wide emissions in tpy of PM_{10}, $PM_{2.5}$, and VOCs for each calendar year. Identify if there is a reasonable possibility that there is a significant emissions increase. A reasonable possibility occurs when the actual emissions are 50% or more of the amount that is a "significant emissions increase" for the regulated pollutant. Submit calculations for the prior calendar year to Ecology Industrial and PSD sections by April $30^{t.h}$ This report shall be submitted for 10 years following the resumption of regular operations after the completion of the Paper Machine No.3 Rebuild Project approved in NOC Order No. 15783 (i.e., the PSD project was completed on March 2, 2019, therefore, the annual report is required through operating year 2028). Records must be retained for at least 5 years. [PSD 18-01 Condition VIII.A and IX.A]

34. Greenhouse Gas Reporting. The following condition is **state only** and is not federally enforceable under the Clean Air Act.

Reporting Schedule

The Permittee must submit the report required under chapter 173-441 WAC to Ecology no later than March 31st of each calendar year for GHG emissions in the previous calendar year. [WAC 173-441-050(2)] Reporting requirements begin for calendar year 2012 and each subsequent calendar year. [WAC 173-441-050(b)]

The report and certificate or representation must be submitted electronically in accordance with the requirements of WAC 173-441-050 and 173-441-060 and in a format specified by ecology. [WAC 173-441-070]

Submit a revised annual GHG report within forty-five days of discovering that an annual GHG report previously submitted contains one or more substantive errors. [WAC 173-441-050(7)]

Reporting Content

Each annual GHG report shall contain the content specified in WAC 173-441-050(3). [WAC 173-441-050(3)]

Each GHG emission report and any other submission under this chapter 173-441 WAC shall be certified, signed, and submitted by the designated representative or any alternate designated representative in accordance with WAC 173-441-060 and 40 CFR §3.10 as adopted on October 13, 2005.

(a) Each such submission shall include the following certification statement signed by the designated representative or any alternate designated representative: "I am authorized to make this submission on behalf of the owners and operators of the facility or supplier, as applicable, for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment." [WAC 173-441-060(5)]

All requests, notifications, and communications to Ecology pursuant to chapter 173-441 WAC, other than submittal of the annual GHG report, shall be submitted to the following address: Greenhouse Gas Report, Air Quality Program, Department of Ecology, P.O. Box 47600, Olympia, WA 98504-7600. [WAC 173-441-100]

Emissions Calculations

Use the calculation methodologies specified in the relevant sections of WAC 173-441. Use the same calculation methodology throughout a reporting period unless you provide a written explanation of why a change in methodology was required. [WAC 173-441-050(4)]

Calibration and accuracy requirements

The Permittee must meet the applicable flow meter calibration and accuracy requirements of WAC 173-441-050(8). The accuracy specifications in this subsection do not apply where either the use of company records (as defined in WAC 173-441-020(3)) or the use of “best available information’ is specified in an applicable subsection of WAC 173-441 to quantify fuel usage and/or other parameters. Further, the provisions of this subsection do not apply to stationary fuel combustion units that use the methodologies in 40 CFR Part 75 to calculate CO_2 mass emissions. [WAC 173-441-050(8)]

Recordkeeping

Keep records as specified in WAC 173-441-050(6). Retain all required records for at least three years. The records shall be kept in an electronic or hard copy format (as appropriate) and recorded in a form that is suitable for expeditious inspection and review. Upon request by Ecology, the records required under this section must be made available to Ecology. Records may be retained offsite if the records are readily available for expeditious inspection and review. For records that are electronically generated or maintained, the equipment or software necessary to read the records shall be made available, or, if requested by Ecology, electronic records shall be converted to paper documents. [WAC 173-441-050(6)] and [40 CFR 64.9]

35. Permit Deviations/Excess Emissions. The Permittee shall promptly submit a report of any deviations from permit conditions.
    a. For purposes of this permit, submitting a report "promptly" means the following: (1) if the deviation presents a potential threat to human health or safety, the report shall be made as soon as possible, but no later than 12 hours after the discovery of the deviation; (2) for other deviations, "promptly" means that the deviations are identified in the respective monthly report.
    b. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken. The Permittee may include in its reports demonstrations that excess emissions were unavoidable, consistent with the requirements of WAC 173-400-107 or WAC 173-400-109, whichever is in effect at the time of the excess emissions. [WAC 173-401-615(3)(b), WAC 173-400-107, WAC 173-400-109 and 40 CFR 64.9]

36. Certifications. Any application form, report, or compliance certification submitted pursuant to Chapter 173-401 WAC shall contain certification by a responsible official of truth, accuracy, and completeness. This certification and any other certification required under Chapter 173-401 WAC shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. [WAC 173-401-520]

37. Report Address. All reports, renewal applications, and compliance certifications required by this permit shall be submitted to:

    Department of Ecology
    Industrial Section
    P.O. Box 47600
    Olympia, WA 98504-7706

Compliance certification shall also be submitted to:

Environmental Protection Agency
Air Operating Permits, Region 10
1200 Sixth Avenue, OAQ-108
Seattle, WA 98101-1128

38. Compliance Requirements/Certification.

a. The Permittee shall continue to comply with applicable requirements with which the Permittee is in compliance [WAC 173-401-510(2)(h)(ii)(A)];
b. The Permittee shall meet applicable requirements that will become effective during the permit period on a timely basis [WAC 173-401-510(2)(h)(ii)(B)];
c. The Permittee shall submit a report to Ecology and to EPA Region X within 105 days after the close of the calendar year, and every year thereafter, certifying compliance with the terms and conditions contained in this permit for the previous calendar year. A report filed in a format approved by Ecology is deemed to meet the requirements of this condition. The initial compliance certification shall cover the period from when the permit is effective to the end of the calendar year. The certification shall describe the following:
    i. The permit term or condition that is the basis of the certification;
    ii. The compliance status;
    iii. Whether compliance was continuous or intermittent; and
    iv. The methods used for determining compliance. [WAC 173-401-630(5)]

    The compliance status shall be based on compliance with the final averaging period of the annual certification period. Determination of continuous or intermittent compliance (condition 37c) shall be based on compliance during the entire annual certification period.

d. The Permittee is not required to certify compliance for insignificant emission units or activities. [WAC 173-401-530(2)(d)]

STANDARD TERMS & CONDITIONS

39. Duty to Comply. The Permittee must comply with all conditions of this chapter 401 permit. Any permit noncompliance constitutes a violation of chapter 70.94 RCW and, for federally enforceable provisions, a violation of the FCAA. Such violations are grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. [WAC 173-401-620(2)(a)]

40. Need to Halt or Reduce Activity Not a Defense. It shall 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. [WAC 173-401-620(2)(b); R10PSD00200 Condition 2.5 (Federal Only)]

41. Permit Actions. This permit may be modified, revoked, reopened, and reissued or terminated for cause. The filing of a request by the Permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. [WAC 173-401-620(2)(c)]

42. Property Rights. This permit does not convey any property rights of any sort, or any exclusive privilege. [WAC 173-401-620(2)(d); R10PSD00200 Condition 2.11 (Federal-Only Requirement)]

43. Duty to Provide Information. The Permittee shall furnish to the permitting authority, within a reasonable time, any information that the permitting authority 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 shall also furnish to the permitting authority copies of records required to be kept by the permit or, for information claimed to be confidential, the Permittee may furnish such records directly to the administrator along with a claim of confidentiality. Permitting authorities shall maintain confidentiality of such information in accordance with RCW 70.94.205. [WAC 173-401-620(2)(e), R10PSD00200 Condition 2.14 (Federal-Only Requirement)]

44. Permit Fees. The Permittee shall pay fees as a condition of this permit in accordance with Ecology's fee schedule. Failure to pay fees in a timely fashion shall subject the Permittee to civil and criminal penalties as prescribed in chapter 70.94 RCW. [WAC 173-401-620(2)(f)]

45. Emissions Trading. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for in this permit. [WAC 173-401-620(2)(g)]

46. Severability Clause. If any provision of this permit is held to be invalid, all unaffected provisions of the permit shall remain in effect and be enforceable. [WAC 173-401-620(2)(h)]

47. Permit Appeals. The Permittee may appeal this permit or any conditions in it only by filing an appeal with the pollution control hearings board and serving it on the permitting authority within thirty days of receipt pursuant to RCW 43.21B.310. This provision for appeal in this section is separate from and additional to any federal rights to petition and review under §505(b) of the FCAA. [WAC 173-401-620(2)(i)]

48. Permit Continuation. This permit and all terms and conditions contained therein, including any permit shield provided under WAC 173-401-640, shall not expire until the renewal

permit has been issued or denied if a timely and complete application has been submitted. [WAC 173-401-620(2)(j)]

49. Application and Issuance of a Renewal Permit. The Permittee shall submit a complete permit renewal application to Ecology no later than six months, but no earlier than 18 months, prior to the expiration date of the existing permit.

    Permits being renewed are subject to the same procedural requirements, including those for public participation, affected state and EPA review that apply to the initial permit. [WAC 173-401-710(1)&(2)]

50. Inspection and Entry. The Permittee shall allow the permitting authority or an authorized representative to perform the following upon presentation of credentials and other documents as may be required by law.
    a. Enter upon the Permittee's premises where a chapter 401 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 the 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 WAC 173-400-105 and the FCAA, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.
    [WAC 173-401-630(2), PSD 18-01 Condition XII, R10PSD00200 Condition 2.13 (Federal-Only Requirement)]

51. Federally Enforceable Requirements. All terms and conditions of this permit, including any provisions designed to limit potential to emit, are enforceable by EPA and citizens under the FCAA, unless they are specifically designated as not federally enforceable. [WAC 173-401-625]

52. Reopening for Cause. This permit shall be reopened and revised under any of the following circumstances:
    a. Additional applicable requirements become applicable when the remaining permit term is greater than three years. Such reopening shall be completed no later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions have been extended pursuant to WAC 173-401-620(2)(j).

b. Additional requirements (including excess emissions requirements) become applicable under the acid rain program. Upon approval by EPA, excess emissions offset plans shall be deemed to be incorporated in the permit.
c. Ecology determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit; or
d. Ecology determines that the permit must be revised or revoked to assure compliance with the applicable requirements.

Procedures to reopen and issue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. [WAC 173-401-730]

53. Tampering and False Statements. No person shall make any false material statement, representation or certification in any form, notice or report required in this permit. No person shall render inaccurate any monitoring device or method required under this permit. [WAC 173-400-105(7) and (8) and 40 CFR 70.11(a)]

54. Providing Additional Data. For Ecology to evaluate a plant's emissions or emission control program the Permittee shall furnish other data requested by Ecology. [WAC 173-405-072(5)]

55. Change in Ownership. The Permittee must notify Ecology of any changes in ownership or operational control. The notification must include a written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new permittee. [WAC 173-401-720 and PSD 18-01 Condition XIII.B]

    a. With respect to the No. 3 PM rebuild project, R10PSD00200 requires notification of EPA as soon as possible, but no later than 30 days after the change in ownership is effective. The notification must specify the date on which ownership was transferred, identify the previous owner, and update the name, street address, mailing address, contact information, and any other information about the ownership and/or operation of the source that will change as a result of the change in ownership. The Permittee shall ensure that the source remains in compliance with R10PSD00200 during any such transfer of ownership.

PERMIT SHIELD/INAPPLICABLE REQUIREMENTS

Pursuant to WAC-173-401-640(1), compliance with the terms and conditions of this permit shall be deemed compliance with the applicable requirements identified in this permit, as of the date of permit issuance. This permit shield does not exempt the Permittee from requirements, determined to be applicable, enacted after the permit issuance date. This permit shield shall not apply to any insignificant emission unit or activity designated under WAC 173-401-530. [WAC 173-401-530(3)]

Pursuant to WAC 173-401-640(2), Ecology has determined that the requirements listed in Appendix A of this permit do not apply to the facility, as of the date of permit issuance, for the reasons specified.

APPENDIX A – Permit Shield/Inapplicable Requirements

CITATION	SOURCE	TOPIC/PARAMETER	REASONING
WAC 173-400-040(1)	All sources	Opacity < 20%	Not applicable, since the specific limits set in WAC Chapter 405 take precedence.
WAC 173-400-040(3)(a)	Material handling/ construction in attainment areas	Use reasonable methods to control fugitive emissions	Facility is located in a PM nonattainment area.
WAC 173-400-040(6)	Any emission unit	SO2 emissions < 1,000 ppm	Not applicable, since the specific limits set in WAC Chapter 405 take precedence.
WAC 173-400-050(1)	Combustion sources	Grain loading (0.1 gr/dscf)	Not applicable, since the specific limits set in WAC Chapter 405 take precedence.
WAC 173-400-050(1)	Steam boiler firing wood derived fuel	< 0.2 gr/dscf (Using EPA Method 5 testing)	Not applicable, since the specific limits set in WAC Chapter 405 take precedence.
WAC 173-400-060	General process	Grain loading (0.1 gr/dscf)	Not applicable, since the specific limits set in WAC Chapter 405 take precedence.
WAC 173-410	NSSC process	Various	The NSSC process does not use a sulfurous acid in conjunction with a sulfite or bisulfite salt.
WAC 173-405-040(1)(b)	Recovery furnace stacks constructed before 1/1/70, and those recovery furnaces with direct contact evaporators	TRS emissions < 17.5 ppm (8% O_2 daily average)	None constructed before 1/1/70, and none with direct contact evaporators.
40 CFR 60.2	All sources	Definitions	General information and terms. Not applicable; no requirement described.
40 CFR 60.3	All sources	Units and Abbreviations	Abbreviations and symbols of units of measure. Not applicable; no requirement described.
40 CFR 60.4	All sources	Address and Locations of Government Agencies	Not applicable; no requirement described.
40 CFR 60.5	N/A	Determination of Construction or Modification	Requirement for state or federal agencies. Not applicable; no requirement described.
40 CFR 60.6(a)	N/A	Review of Plans	Requirement for state or federal agencies. Not applicable; no requirement described.
40 CFR 60.9	N/A	Availability of Information	Requirement for state or federal agencies. Not applicable; no requirement described.

CITATION	SOURCE	TOPIC/PARAMETER	REASONING
40 CFR 60.10	N/A	State Authority	Requirement for state or federal agencies. Not applicable; no requirement described.
40 CFR 60.11(e)(6)	N/A	Review of the Opacity Data vs. Performance Tests to Determine Opacity Standard	Requirement for state or federal agencies. Not applicable; no requirement described.
40 CFR 60.11(e)(7)	N/A	Granting Opacity Petition	Requirement for state or federal agencies. Not applicable; no requirement described.
40 CFR 60.11(e)(8)	N/A	Establishing Opacity Standard	Requirement for state or federal agencies. Not applicable; no requirement described.
40 CFR 60.13(i)	N/A	Alternate Monitoring Approval	Requirement for state or federal agencies. Not applicable; no requirement described.
40 CFR 60.13(j)	N/A	Alternate Test and Method Approval	Requirement for state or federal agencies. Not applicable; no requirement described.
40 CFR 60.14(h)	Electric utility steam generation unit	Various	Not applicable; not an existing electric utility steam generation unit.
40 CFR 60.14(i)	DOE repowering projects	Various	Not applicable; not a repowering project.
40 CFR 60.14(j)	Repowering project	Extension	Not applicable; not a repowering project.
40 CFR 60.14(k)	Temporary clean coal technology demonstration project	Various	Not applicable; not a temporary clean coal technology demonstration project.
40 CFR 60.14(l)	Very clean coal fired electric utility steam generating unit	Reactivation	Not applicable; not a very clean coal fired electric utility steam generating unit.
40 CFR 60.16	All sources	Priority List	Not applicable; no requirement described.
40 CFR 60.17	All sources	Incorporations by Reference	Not applicable; no requirement described.
40 CFR Part 60 Subpart D	Industrial fossil fuel steam generators	Various	None after 1971 that meet applicability.
40 CFR Part 60 Subpart Da	Electric utility steam generators (fossil fuel)	Various	Not an electric utility.
40 CFR Part 60 Subpart De	Industrial fossil fuel steam generators	Various	None after 1989.
40 CFR Part 60 Subpart Kb except as specified in 40 CFR 60.116b(a-b)	Volatile organic liquid storage vessels	Various	Volatile organic liquid storage tanks at the mill with a capacity greater than 40 cubic meters contain liquids with a

CITATION	SOURCE	TOPIC/PARAMETER	REASONING
			maximum true vapor pressure less than 3.5 kPa.
40 CFR §60.283(a)(3)	Cross kraft recovery furnaces constructed after 9/24/76	TRS emissions < 25 ppm by volume on a dry basis corrected to 8% O_2	No cross kraft recovery furnaces present.
40 CFR §60.284(b)(1)	Digester systems (excluding No.2 M&D digester), brownstock washer systems, multiple effect evaporator systems, and condensate stripper systems constructed after 9/24/76 for which gases are combusted in a lime kiln or recovery furnace not subject to this subpart, incinerator, or other device.	Temperature monitoring requirements	The listed gases are sent to a lime kiln or power boiler. The lime kiln is subject to the provisions of this subpart. Therefore, this temperature monitoring requirement is not applicable to the lime kiln. The power boiler is not considered to be an incinerator based on EPA support document EPA-450/3-85-020. Therefore, this temperature monitoring requirement is not applicable to the power boiler.
40 CFR §60.284a(b)(1)	No.2 M&D digester constructed after 5/23/2013 for which gases are combusted in a lime kiln or recovery furnace not subject to this subpart, incinerator, or other device.	Temperature monitoring requirements	The listed gases are sent to a lime kiln or power boiler. The lime kiln is subject to the provisions of this subpart. Therefore, this temperature monitoring requirement is not applicable to the lime kiln. The power boiler is not considered to be an incinerator based on EPA support document EPA-450/3-85-020. Therefore, this temperature monitoring requirement is not applicable to the power boiler.
40 CFR §60.285(d)(3)	Recovery furnaces constructed after 9/24/76	When determining whether a furnace is a straight kraft or cross recovery furnace, must use TAPPI Method T.624 three times daily.	Based on the intrinsic system design of the recovery furnaces that the black liquor cannot exceed 7% of the total pulp solids from the NSSC process. Thus, the furnaces are of the straight kraft variety. No further determinations are required.

APPENDIX B – Permit Shield/Noncategorically, Nonapplicable Requirements

Those air quality requirements specifically identified in this Appendix for units subject to 40 CFR §60 are considered inapplicable to all other units without qualifying actions on the part of either Ecology, the Permittee, or both.

TOPIC/ PARAMETER	LIMIT & AVERAGE PERIOD	CITATION(S)	SOURCE	REASONING FOR NON-APPLICABILITY
Continuous Emissions Monitoring	Various	40 CFR 60.7(c) 40 CFR 60.7(d) 40 CFR 60.7(e) 40 CFR 60.13(a) 40 CFR 60.13(b) 40 CFR 60.13(c) 40 CFR 60.13(d) 40 CFR 60.13(e) 40 CFR 60.13(f)	All sources except: No. 2 recovery furnace Lime kiln	These units have no requirement for continuous emissions monitoring
Continuous Opacity Monitoring	Various	40 CFR 60.7(a)(5) 40 CFR 60.7(a)(6) 40 CFR 60.7(a)(7) 40 CFR 60.11(b) 40 CFR 60.11(c) 40 CFR 60.11(e)(1) 40 CFR 60.11(e)(2) 40 CFR 60.11(e)(3) 40 CFR 60.11(e)(4) 40 CFR 60.11(e)(5) 40 CFR 60.13(c)	All sources except: No. 2 recovery furnace	These units have no requirement for continuous opacity monitoring.
TRS	5 ppmvd at 8% O_2 12 hour average	40 CFR 60.283(a)(2)	No. 3 recovery furnace	The unit was not constructed or modified after September 24, 1976.
Particulate	0.2 lbs/ton of black liquor solids (dry weight), hourly average	40 CFR 60.282(a)(2)	No. 3 smelt tank	The unit was not constructed or modified after September 24, 1976.
TRS	0.033 lbs/ton of black liquor solids as H_2S, annual average	40 CFR 60.283(a)(4)	No. 3 smelt tank	The unit was not constructed or modified after September 24, 1976.
TRS emissions	< 5 ppm corrected to 10% O_2 unless controlled using one of the	40 CFR 60.283(a)(1)	Brownstock washers; No. 1 M&D digester; No. 1 and No. 2 evaporator sets	These units were not constructed or modified after September 24, 1976.

TOPIC/ PARAMETER	LIMIT & AVERAGE PERIOD	CITATION(S)	SOURCE	REASONING FOR NON-APPLICABILITY
	methods listed and other provisions of this section are met.			
Reporting	Must report semiannually to the EPA periods of emissions for which the 12 hour TRS average exceeds 5 ppm (satisfies the requirements of 40 CFR 60.7(c))	40 CFR 60.284(d)(3)(i)	Brownstock washers; No. 1 M&D digester; No. 1 and No. 2 evaporator sets	These units were not constructed or modified after September 24, 1976.
The TRS concentration must be determined using EPA Method 16 with a sample time of at least three hours	Various	40 CFR 60.285(d)(1)	Brownstock washers; No. 1 M&D digester; No. 1 and No. 2 evaporator sets	These units were not constructed or modified after September 24, 1976.
Oxygen concentrations for correcting TRS emissions must be determined using EPA Method 3B	Various	40 CFR 60.285(d)(2)	Brownstock washers; No. 1 M&D digester; No. 1 and No. 2 evaporator sets	These units were not constructed or modified after September 24, 1976.

APPENDIX C – Algorithms for Emissions Calculations

The following algorithms set forth the calculation method for those emission limits for which the designated reference method itself does not yield a direct emission measurement. The Permittee may use an equivalent method with written approval from Ecology.

Reference Method Dependent Emission Limits

Conditions A.1.a, A.1.b and B.1.a, B.1.b, and C.1.a, C.1.b, C.1.c, C.1.d, and D.1.a, D.1.b, and E.2.a, E.2.b, and F.1, F.2.

PM (mass per time) = Concentration * Air Flow Rate *Unit Conversion Factor * Time Adjustment

Where,
Concentration is Reference Method (RM) dependent. For example, RM 5 yields particulate emission in terms of grains per dry standard cubic foot (gr/dscf).
Air Flow Rate must be representative of normal operations and is derived from the applicable RM in terms of dry standard cubic feet per minute.
Unit Conversion Factor is case specific. For example, 1 pound = 7,000 grains.
Time Adjustment is case specific and is dependent on the flow rate time unit.

For rolling averages. Each subsequent value will then be averaged with the preceding value of the applicable calculated PM emission rates (monthly, quarterly, or other test frequency, whichever applicable) to determine the rolling average.

Conditions A.4, A.5.a, A.5.b, and B.6.a, B.6.b, and C.4, C.5, C.6, C.6.a, C.6.b, and F.6, F.7 and G.4.

SO2 (mass per time) = Concentration * Air Flow Rate * Unit Conversion Factor * Time Adjustment

Where,
Concentration is case specific in terms of averaging period as required by the Permit.
Air Flow Rate must be representative of normal operations and is in the unit of dry standard in cubic feet per minute during the applicable source test period.
Unit Conversion Factor is case specific. For example, the density of SO2, 0.166 lb per cubic foot of SO2 based on a molecular weight of 64 lb/lb mol and an ideal gas volume of standard conditions of 385ft3/lb.mol
Time Adjustment is case specific and is dependent on the flow rate time unit.

For rolling averages: Each subsequent value will then be averaged with the preceding value of the applicable calculated PM emission rates (monthly, quarterly, or other test frequency, whichever applicable) to determine the rolling average.

Conditions B.10, B.11.

VOC (mass per time) = Concentration * Annual Heat Input * Unit Conversion Factor
Where,
Concentration is RM dependent. For example, RM 25A yields VOC emission in terms of lb/MMBtu.
Annual Heat Input is the Btu input to the No. 3 recovery furnace.
Unit Conversion Factor is case specific. For example, 1 ton = 2000 lb.

Condition B.7.

NOx (mass per time) = Concentration * Air Flow Rate * Unit Conversion Factor * Time Adjustment

Where,
Concentration is case specific in terms of averaging period as required by the Permit. Each emission unit limitation specifies the averaging period used by the CEM. For example, the CEM on the No. 2 recovery furnace derives an hourly average. The monthly average will be calculated based on the sum of valid individual hourly averages divided by the total number of valid hour averages available.
Air Flow Rate must be representative of normal operation. For example, dry standard cubic feet per minute is obtained from the most recent PM sampling period.
Unit conversation Factor is pollutant specific and involves molar mass and molar volume. For example, the unit conversion factor for nitrogen oxide is 0.1194 lb NOx per cubic foot of NOx.
Time Adjustment is case specific and is dependent on the flow rate time unit.

The monthly values for the year will be summed to determine the annual average at the end of the calendar year.

Condition B.8, and F.9.

Where,
Concentration is case specific in terms of averaging period as required by the Permit. Each emission unit limitation specifies the averaging period used by the CEM. For example, the CEM on the No. 2 recovery furnace derives an hourly average. The monthly average will be calculated based on the sum of valid individual hourly averages divided by the total number of valid hour averages available.
Air Flow Rate must be representative of normal operation. For example, dry standard cubic feet per minute is obtained from the most recent PM sampling period.
Unit conversation Factor is pollutant specific and involves molar mass and molar volume. For example, the unit conversion factor for carbon monoxide is 0.0728 lb CO per cubic foot of

CO based on a molecular weight of 28 lb/lb mol and an ideal gas volume of standard conditions of 385ft3/lb mol.

Time Adjustment is case specific and is dependent on the flow rate time unit.

The monthly values for the year will be summed to determine the annual average at the end of the calendar year.

For rolling averages. Each subsequent value will then be averaged with the preceding value of the applicable calculated PM emission rates (monthly, quarterly, or other test frequency, whichever applicable) to determine the rolling average.

Condition A.6 and B.9.a, B.9.b and C.7.a, C.7.b, C.9 and D.4.

TRS (mass per time) = Concentration * Air Flow Rate * Unit Conversion Factor * Time Adjustment

Where,

Concentration is case specific in terms of averaging period as required by the Permit. Each emission unit limitation specifies the averaging period used by the CEM. For example, the CEM on the No. 2 recovery furnace derives an hourly average. The monthly average will be calculated based on the sum of valid individual hourly averages divided by the total number of valid hour averages available.

Air Flow Rate must be representative of normal operation. For example, dry standard cubic feet per minute is obtained from the most recent PM sampling period.

Unit conversation Factor is pollutant specific and involves molar mass and molar volume. For example, the unit conversion factor for TRS as H2S is 0.0883 lb per cubic foot based on a molecular weight of 34 lb/lb mol and an ideal gas volume of standard conditions of 385ft3/lb mol.

Time Adjustment is case specific and is dependent on the flow rate time unit.

The monthly values for the year will be summed to determine the annual average at the end of the calendar year.

Condition G.3

SO2 (mass per time) = AP42 Emission Factor * Fuel Sulfur Content * Amount of Fuel Used

Where AP-42 Emission Factor is the SO2 emission factor listed in U.S. EPA's "Compilation of Air Pollutants Emission Factors (AP-42)". The SO2 emission factor is expressed in pounds per thousand gallons (lb/1000 gallons) as a multiple of the fuel sulfur content.

Fuel Sulfur Content is the sulfur content of the fossil fuel in percent. For example if a 1.7% sulfur fuel is used, the fuel sulfur content to be used in the above equation is 1.7.

Amount of Fuel Used is the amount of fuel used in a year, in 1000 gallons

This value (lb/year) will then be divided by 365 days per year to determine the lb/day value based on an annual average.

Condition F.8

NOx (lb per million but) = Concentration * Unit Conversion Factor * F Factor*20.9/(20.9-O_2 percent)

Where concentration is obtained using EPA Method 7, NOx CEM data, or an alternative test method approved by Ecology. It is expressed on a dry basis.

Unit Conversion Factor is the density of NOx, 0.1194 lb per cubic foot of NOx at 20°C.

F Factor is the volume of combustion components per unit of heat content as calculated using Equation 19-16 for multiple fuels and Table 19-2 of EPA Method 19.

O_2 Percent is the oxygen percent expressed on a dry basis and averaged over the same averaging time used in the concentration measurement.

This value (lb/mmbtu) will then be averaged with previous twenty nine days to determine the rolling 30 day average.

APPENDIX D – Glossary of Terms Used in the Air Operating Permit

Annual Average. In defining the averaging period of a particular limit, annual average means the calendar year average. Determining compliance with a limit with an annual average shall be based on the unit's operation for a calendar year.

Calendar Year Average. The calendar year average is the average value of a given parameter over the period beginning on January 1 and ending on December 31.

Corrective Action. Action taken by Permittee with the intent of removing the identified deviation.

Intermittent Compliance. For the purpose of annually certifying compliance, the Permittee is considered to be in intermittent compliance with a permit term or condition if it is not in continuous compliance with the permit term or condition during the annual certification period.

In Operation. In operation means engaged in activity related to the primary design function of the source. For example, a straight recovery furnace is in operation only when combusting black liquor, and a lime kiln is in operation only when feeding lime mud.

IPT-Initial Performance Plan Detailed test plan outlining the test protocol in which operating parameters will be determined.

Rolling Annual Average. In defining the averaging period of a particulate emissions limit, the rolling annual average means the average of the emissions readings of the previous year leading up to the reporting date. For a rolling annual average limit with an associated monthly reporting requirement, the rolling annual average is a 12 month rolling average, calculated monthly. The need for this term is necessitated by the possibility of different reporting frequencies for a single emissions limit, based on the performance of the unit compared to the permit limit.

30 Day Rolling Average. In defining the averaging period for MACT I pulping condensate collection, the 30 day rolling average means the average of the total HAPs collected per oven dry ton of unbleached pulp in the previous 30 days leading up to the reporting date.

60 Minute Period. The period from the top of one hour to the top of the next hour (e.g., 07:00:00 to 07:59:59).

Visual Opacity Assessment. A visual opacity assessment as used in this Permit, is the use of an observer trained in general procedures for determining visible emissions, which could include EPA Method 9B or EPA Method 9. A trained observer does not need to have current

certification in Method 9B. Under normal conditions, a trained observer will be present at the facility, while a certified Method 9B observer is not always readily available.

APPENDIX E – Existing Orders and Permits

All of the following past permits and regulatory orders are applicable (included).

Order 1614-AQ04
Order DE 95AQI-84 Modification 4
Order DE 96-AQ-I078
Order DE 02-AQIS-5019
Order DE 02-AQIS-3588 Modification 1
Order No. 15873
Order No. 17965
PSD-X-77-04
PSD-01-07
PSD-X-77-04 Amendment 2 (also incorporates Modification 1 issued by EPA January 1983)
PSD-95-04
PSD-01-07
PSD-01-07 Amendment 1
PSD 18-01
R10PSD00200

All of the following past permits and regulatory orders are inapplicable (not included).

Regulatory Order 36-8
DE 78-112
DE 78-120
DE 88-112
DE 92-AQI045
DE 95-AQI053 Amendement 1
DE 95AQI055
DE 95AQI084 Modification 1, Modification 2, and Modification 3
DE 96-AQI013

APPENDIX F – Footnote Key

1. Monitoring is required only when emission unit is operating.

2. If monitored emissions are equal to or less than 75% of the emission limitation for any six consecutive months, emissions will be monitored by three 1 hour test per quarter and reported quarterly.

   If monitored emissions are less than or equal to 65% of the emission limitation for any four consecutive quarters, emissions will be monitored by three 1 hour tests per year and reported annually.

   If monitored emissions are less than or equal to 50% of the emission limitation for any four consecutive quarters, emissions may be monitored by one 1 hour test per year and reported annually.

   Three 1 hour tests averaging less than or equal to 50% of the limitation qualify for the 1 hour annual test per year option. The Permittee shall conduct source testing within 105 days between two consecutive quarterly tests. If monitored emissions exceed the current threshold, the monitoring frequency will revert to the previous frequency. [PSD-X-77-04, WAC 173-401-615, or underlying applicable air order as basis for testing frequency flexibility]

3. Reserved

4. Upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable. Determination of whether the owner or operator has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include but is not limited to, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process. [40 CFR 64.7(d)]

5. Based on the results of a determination made under Footnote 4, the Permittee may be required to develop and implement a quality improvement plan (QIP). [40 CFR 64.8]

6. The CAM excursion or exceedance reporting must include, at a minimum, (i) summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken; (ii) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and (iii) A description of the actions taken to implement a QIP during the reporting period as specified in §64.8, if applicable. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring. [40 CFR 64.9]

7. Reserved

8. Reserved

9. Reserved

10. Reserved

11. CMS Data Recovery. State and federal regulations recognize that monitoring data may be lost for legitimate reasons. The Permittee may be exempted from monitoring and reporting requirements during periods of monitoring system malfunctions, provided that the Permittee shows that the malfunction was unavoidable and is being repaired as expeditiously as practicable. [40 CFR §60.13(e); 40 CFR 63.8(c)(4); WAC 173-400-105(7); WAC 173-405-077]

    The Permittee shall make every effort to acquire, maintain, and recover valid monitoring data. CMS downtime and resulting monitoring data loss due to malfunctions shall be less than 10% of the monthly unit operating time. An acceptable explanation for the loss of monitoring data must be provided in the monthly report. Periods when CMS data is not recovered due to daily calibration, zero and span checks are not considered nor reported as CMS downtime in the monthly report. Records of daily calibration, zero and span checks shall be kept for a period of five years and made available upon request to Ecology. [WAC 173-401-615(1)(c); WAC 173-401-630(1)]

12. MACT CMS Performance Reports. The Permittee shall record and report CMS downtime in the semiannual MACT report. [40 CFR 63.10(e)]

13. NSPS CMS Performance Reports. The Permittee shall record and report CMS downtime in the semiannual report. [40 CFR §60.7(c) and (d) (2/12/99)]

14. WA PSD/NSR/SIP CMS Performance Reports. The Permittee shall record and report CMS downtime other than calibration, zero and span checks, in the monthly report. In the case of monitor downtime due to system malfunctions, the report will address whether the malfunction was unavoidable, and repaired as expeditiously as practicable. [WAC 173-400-105(7); WAC 173-405-077; WAC 173-401-615(1)(c); WAC 173-401-630(1)]