WestRock

See attachments for comments on draft AOP and AOP SOB

COMMENTS ON

DRAFT AIR OPERARING PERMIT 0000078

FOR WESTROCK LONGVIEW LLC

June 23, 2020

WestRock Longview LLC (WestRock) submits the following comments on the Washington State Department of Ecology (Ecology) proposed draft Air Operating Permit 0000078 (AOP) and its corresponding statement of Basis (SOB) for the WestRock Longview Mill located at 300 Fibre Way, Longview, Washington. The suggested edits from these comments are outlined in the attached redlined versions of the draft AOP and AOP SOB. Some additional minor edits are also provided in these redline files.

Permit Conditions

Comment No.1: Frequency of 40 CFR Part 60 and Part 63 semi-annual reports

Conditions A1.2, A1.4, A2.2, A2.4, A2.5, A2.7b, B1.2, B1.4, B2.2., B2.4, C1.2, C1.4, C2.2, C2.4, C3.2, C3.4, C3.6a and G1.4c state that semi-annual reporting frequency could be "*on a more frequent basis as determined necessary by Ecology*." WestRock requests to remove this language and cite instead the governing criteria in §60.7(c) and §63.10(e)(3) of when the agency may require more frequent reporting.

§60.7(c): "…*except when: more frequent reporting is specifically required by an applicable subpart; or the Administrator, on a case-by-case basis, determines that more frequent reporting is necessary to accurately assess the compliance status of the source*."

§63.10(e)(3): "*except when— (A) More frequent reporting is specifically required by a relevant standard; (B) The Administrator determines on a case-by-case basis that more frequent reporting is necessary to accurately assess the compliance status of the source*…"

Conditions A1.2, A2.2, B1.2, B2.2, C1.2, C2.2 and C3.2 do not reference §63.10(e)(3). WestRock recommends adding this reference in these conditions.

Comment No. 2: Conditions A1.3b, A2.3b and C3.3b (RF19, RF22 and LK5 Opacity WAC 173-405 limits)

WestRock would like to provide a comment requesting some clarification to the interpretation of opacity WAC 173-405 limits. The opacity standard in WAC 173-405-040(6) has a time limit basis that states that "*no person shall cause or allow the emission of a plume from any kraft recovery furnace, smelt dissolver tank, or lime kiln, which has an average opacity greater than thirty-five percent for <u>more than six consecutive minutes in any sixty minute period</u>*" [emphasis added]. The plain reading of this limit indicates that a single six-minute average over 35% is not an exceedance of the limit and opacity would need to average over 35% for more than 6 consecutive minutes. Given that opacity monitoring is required for several of these sources by continuous opacity monitoring system (COMS) and

since monitoring data for opacity must be reduced to discrete six-minute block averages when a COMS is used as required by WAC 173-400-105, it would require two six-minute period block averages in excess of 35% within a 60 minute period to exceed that opacity limit. Ecology has interpreted this standard to mean that one six-minute period in excess of 35% is a violation. We believe that Ecology should review this interpretation and that it is appropriate to add some clarification in the permit in light of other similar particulate and opacity limitations that are also applicable to these units.

Opacity represents a monitoring parameter that is indicative of the performance of the control devices utilized for control of particulate. Particulate limitations are often represented in terms of one-hour to three-hour standards while opacity is often expressed in six-minute averages. WestRock is requesting that this linkage be more clearly recognized with respect to application of excess emissions of opacity for the WAC 173-405 limits for Recovery Furnace No, 19 (RF19), Recovery Furnace No. 22 (RF22) and Lime Kiln No. 5 (LK5). We believe that it is more appropriate to treat instances of opacity in the same manner they are in 40 CFR Part 63 Subpart MM. These units are subject to similar opacity limitations as is required by the WAC standard, some of which are even more stringent. WestRock believes that this will align operation and compliance with these opacity standards more closely with the original intent of underlying requirements. This will allow for more consistency and clarity for both the facility and for Ecology. Some more background and supporting information for this request is added below.

Opacity and Particulate Matter Relationship

EPA

There has been a long history within numerous regulatory programs to use opacity as a surrogate measurement and an indication of performance for particulate control devices. EPA, beginning with the incorporation of 40 CFR 60 Subpart BB - Standards of Performance for Kraft Pulp Mills in the 1970s and 1980s, adopted opacity limits as surrogates for particulate matter (PM) emissions. EPA also provided definitions of excess emissions and violations of these opacity standards in 40 CFR 60.284(d) and (e). The intent of these definitions was to recognize that there can be transient periods of higher opacity, but that they should be short lived and, if they are, then the underlying particulate limitations would still be maintained. In contrast, longer periods of higher opacity would be indicative of poorer performance requiring some sort of corrective action or possibly enforcement.

In the preamble to the 1974 40 CFR Part 60 rule for a number of different sources EPA discussed the reason behind opacity standards and their relationship to particulate matter standards as shown below (FR 9308-9309, Vol. 39, No. 47, March 8, 1974):

> *It is evident from comments received that an inadequate explanation was given for applying both an enforceable opacity standard to the same source and that the relationship between the concentration standard and the opacity standard was not clearly presented… The concentration/mass standard is established at a level which will result in the design, installation, and operation of the best adequately*

demonstrated system of emission reduction (taking cost into account) for each source. The opacity standard is established at a level which will require proper operation and maintenance of such control systems on a day-to-day basis, but not require the design and installation of a control system more efficient or expensive than that required by the concentration/mass standard.

Opacity standards are a necessary supplement to concentration/mass standards. Opacity standards help ensure that sources and emission control systems continue to be properly maintained and operated so as to comply with the concentration/mass standards. Particulate testing by EPA method 5 and most other techniques requires an expenditure… scheduling and preparation are required such that it is seldom possible to conduct a test with less than 2 weeks notice. Therefore, method 5 particulate tests can be conducted only on an infrequent basis.

The regulatory opacity limits are sufficiently close to observed opacity to ensure proper operation and maintenance of control systems on a continuous basis but still allow some room for minor variations from the conditions existing at the time opacity readings were made.

Time exemptions further reflect the stated purpose of opacity standards… The time exemptions now provide for circumstances specific to the sources and… provide much better assurance that the opacity standards are not unfairly stringent.

In the late 1990s and early 2000s, EPA adopted additional particulate standards using opacity as a surrogates as Maximum Achievable Control Technology standards governing Kraft Mill recovery furnaces and lime kilns consistent the same framework. For example, in 1996 as part of the initial development of the NESHAP Subpart MM rule, EPA saw opacity as the surrogate measurement that best characterized the level of PM emissions for recovery furnaces and lime kilns (*Technical Support Document EPA-453/R-96-012,* October 1996). As a result, EPA established two criteria for opacity. One representing a period of time in which facilities are required to implement corrective actions and another as indicative of excess emissions.

Finally, more recently during the multi-year Residual Risk and Technology Review of the NESHAP Subpart MM rule finalized in 2017, EPA reinforced this approach by making the allowances even more stringent. In this action, EPA stated that opacity monitoring provided an additional indicator of ESP performance and that the opacity limit should be seen as an operating limit that is used as an indicator of compliance with the PM limit (Residual Risk and Technology Review, Final Amendments Response to Public Comments on December 30, 2016 Proposal, September 2017).

EPA stated that continuous compliance with the underlying PM limit is ensured through initial and repeat performance tests as well as through continuous opacity monitoring. As a result, an opacity monitoring allowance was retained in the final rule to accommodate process variability while being protective of the underlying standards. EPA stated that the requirements in the NESHAP Subpart MM rule make it feasible for the standards to apply at all times:

- Opacity monitoring allowances specifying a limited number of exceedances that will not be considered as violations, developed through review of COMS data sets while making it clear that instances in excess of these periods are violations.
- A new requirement to maintain proper operation of the ESP automatic voltage controller (AVC). The requirement for the ESP to maintain proper operation of the ESP AVC applies at all times, including times when the opacity monitoring allowance is used.

State-Ecology

In 1987 the state legislature amended the state Air Act in regards to air quality standards and emission standards so that "*an industry, or the air pollution control authority having jurisdiction, can choose, subject to the submittal of appropriate data that the industry has quantified, to have any limit on the opacity of emissions from a source whose emission standard is stated in terms of a weight of particulate per unit volume of air (e.g., grains per dry standard cubic foot) be based on the applicable particulate emission standard for that source, such that any violation of the opacity limit accurately indicates a violation of the applicable particulate emission standard*." RCW 70.94.331(2)(c). WAC 173-405 was amended at the time as a result of this directive. As discussed above, EPA has provided extensive historical and consistent justification for evaluating opacity in relation to underlying particulate emission standards. For the specific case of opacity limits applicable to lime kilns and recovery boilers in the pulp and paper industry, this has been an effective approach in multiple programs including 40 CFR Part 60 Subparts BB and BBa, and in 40 CFR Part 63 Subpart MM.

Ecology has recognized opacity as a surrogate for PM emissions in previous permitting actions for the site. For instance, NOC 3462-AQ07 was an administrative change to NOC Order No. DE 01AQIS-3294 that was originally issued on December 14, 2001. NOC Order No. DE 01AQIS-3294 was re-issued to include additional requirements not addressed in the 2001 PSD Permit No. 01-03 and to include unchanged limits from previous orders such as Order Nos. DE 00AQIS-704. Order No. DE 00AQIS-704 was issued on July 10, 2000 and amended previous applicable limits and superseded more than ten previously issued orders between 1975 and 1996. Order No. DE 00AQIS-704 already included opacity limits for Recovery Furnace Nos. 19 and 22, and Lime Kiln No. 5, although the origin of these opacity limits were the older orders. For instance, Order No. DE 78-115 issued on April 11, 1978 included opacity limits for Recovery Furnace No. 19.

In the "Fact Sheet for Prevention of Significant Deterioration and Notice of Construction Longview Fibre Modernization and Expansion" dated June 5, 1990 Ecology compared the opacity limits imposed on Recovery Furnace No. 22 with the NSPS Subpart BB opacity limit, which also treats excess emissions periods consistent with NESHAP Subpart MM. Ecology stated:

> *A good indicator of particulate emissions and in particular PM10 emissions is stack opacity. Opacity of a stack is the amount of light that is obscured by the plume. The federal NSPS is 35 percent. Recovery furnaces with similar control equipment have*

consistently met 20 percent opacity limitations. Ecology concludes that an opacity limit of 20 percent is BACT for Recovery Furnace No. 22. Longview will be required to continuously monitor opacity and provide reports of any excess emissions. (Fact Sheet – 2000 Revision LVF No. PSD-X81-10A Appendix A).

The PM-opacity linkage is firmly recognized by the fact that Ecology maintains that the WAC 173-405 opacity limits are subject to Compliance Assurance Monitoring (CAM) rule requirements due to their surrogacy for PM limits. Ecology has explained that this is a view maintained by EPA as noted in the CAM section of the AOP SOB.

The applicable PM limit to RF19 and RF22 found in WAC 173-405(1)(a) is 0.10 gr/dscf @ 8% O2, 1-hr average, and the applicable PM limit to LK5 found in WAC 173-405-040(3)(a) is 0.13 gr/dscf @ 10% O2, 1-hr average. RF19 is also subject to a PM limit of 0.040 gr/dscf @ 8% O2, 1-hr average, which is 40% of the state limit, RF22 is also subject to a PM limit of 0.027 gr/dscf @ 8% O2, 1-hr average, which is 27% of the state limit, and LK5 is also subject to a PM limit of 0.035 gr/dscf @ 10% O2, 1-hr average, which is about 27% of the state PM limit. These units have been subject to monthly stack testing requirements for these more stringent PM limits since they became effective as part of the 2001 PSD permit and all results have been in compliance with these limits since. The CAM indicator range for these limits (average of ten consecutive 6-minute averages result in a measurement greater than 20% opacity) is the standard selected by EPA for continuous compliance assurance monitoring of recovery furnaces and lime kilns equipped with an ESP under 40 CFR Part 63 Subpart MM, which are also more stringent that the WAC 173-405 PM limits.

The above clearly indicates that for both EPA and Ecology's rules, opacity has the same purpose of acting as surrogate for compliance of applicable PM limits. Moreover, the specific WAC 173-405 opacity limits have the same purpose as the opacity limits imposed by NESHAP Subpart MM and NSPS Subpart BB to recovery furnaces and lime kilns. The provisions and plain language of WAC 173-405, however, do not provide the same clarity on the length of time for excess emissions as the federal standards. EPA has provided ample justification for how to appropriately treat excess emission periods of these type of 6-minute opacity averages and we believe that Ecology as the ability to include similar concepts within the permit renewal as it is in the spirit of what Ecology originally intended when it established opacity as a standard.

<u>WAC 173-405 standards</u>

The opacity standard in WAC 173-405-040(6) has a time limit basis that states that "*no person shall cause or allow the emission of a plume from any kraft recovery furnace, smelt dissolver tank, or lime kiln, which has an average opacity greater than thirty-five percent for <u>more than six consecutive minutes in any sixty minute period</u>*" [emphasis added]. The plain reading of this limit indicates that a single six-minute average over 35% is not an exceedance of the limit and opacity would need to average over 35% for more than 6 consecutive minutes. Given that opacity monitoring is required for several of these sources by continuous opacity monitoring system (COMS) and since monitoring data for opacity must be reduced to

discrete six-minute block averages when a COMS is used as required by WAC 173-400-105, it would require two six-minute period block averages in excess of 35% within a 60 minute period to exceed that opacity limit. The treatment of excess emission periods in 40 CFR Part 63 Subpart MM is more restrictive than the plain reading of the opacity limits in WAC 173-400-105 when taking into consideration the total unit's operating time. In this context, the current Title V permit already includes monitoring language for the mill's operating smelt dissolving tanks and lime kilns with wet scrubber air pollution control consistent with 40 CFR Part 63 Subpart MM monitoring requirements for the applicable WAC 173-405 opacity limits applicable to these sources.

As noted, the WAC 173-405 opacity limits are also subjected to CAM requirements. Per §64.8, the CAM rule allows the agency to require the development and implementation of a quality improvement plan (QIP). This section states that "*consistent with §64.6(c)(3), the part 70 or 71 permit may specify an appropriate threshold, such as an accumulation of exceedances or excursions exceeding 5 percent duration of a pollutant-specific emissions unit's operating time for a reporting period, for requiring the implementation of a QIP*." The percent of operating time threshold for opacity excess emissions in 40 CFR Part 63 Subpart MM is consistent with these CAM requirements. The selected CAM indicator range is the same as for the strictest particulate limit for this unit and will indicate compliance for the other limits as well.

Ecology has already utilized the same criteria used by 40 CFR Part 63 Subpart MM for the WAC 173-405 opacity limits in other state permits.

Summary

For all the reasons listed above, WestRock believes there is ample justification to apply the excess emissions treatment of 40 CFR Part 63 Subpart MM.

Comment No. 3: Conditions B1.4, B2.4, C1.4 and C2.4 (40 CFR Part 63 Subpart MM operating limits reporting)

The draft AOP requires in these conditions to report daily minimum operating parameter 3-hour values for the operating limits on all the §63 Subpart MM sources with wet control devices. §63 Subpart MM already requires that all three hour values be maintained by the facility for inspection and for the facility to report any monitoring exceedances on its semi-annual report. The permit also already includes a requirement to report monitoring exceedances monthly for these parameters.

WestRock requests that this additional language be removed from these conditions. It is not clear what Ecology would do with this information as it cannot be used to determine emissions nor is it indicative of a concern with the control device. It is merely informational. Further, it adds an unnecessary burden to the facility to determine the minimum value as it would require significant amounts of data to be added to an already large and burdensome monthly report, especially when considered together with similar draft language added for Boiler MACT operating limit conditions (see comment No. 12).

Comment No. 4: Condition B1.5a and B2.5a (SO2 limit from WAC 173-405 rule).

These conditions include an SO2 limit of 1,000 ppm, 1-hr average for smelt dissolving tanks 19 and 22 citing WAC 173-405-040(9)(b) when this citation is applicable to combustion units. Please remove these conditions as smelt dissolving tanks are not combustion units.

Comment No. 5: Condition C3.3a (LK5 opacity limit from Order 3462-AQ07).

Correct opacity limit to 25%. The limit in Order 3462-AQ07 is 25% and not 20% or 30% as shown in the current draft AOP.

Comment No. 6: Condition C3.6a (LK5 TRS limits).

WestRock recommends separating the TRS limits applicable to LK5 into two different conditions. The TRS limit from the 2001 PSD permit is subject to different CEMS requirements (Condition 26) than TRS limit from 40 CFR Part 60 Subpart BB. This is also the case for reporting and a few other requirements.

Comment No. 7: Condition C3.6b (LK5 temperature and retention time requirement from 40 CFR Part 60 Subpart BB).

The temperature and retention time requirements included in the draft AOP do not apply to LK5 as the kiln is subject to the 8 ppm standard in §60.283(a)(5). These temperature and retention time requirements only apply to lime kilns subject to §60.283(a)(1)(iii). LK5 satisfies the combustion requirements in accordance with §60.283(a)(1)(i). Language in Condition F1.1 needs to remove reference to this monitoring requirement for LK5.

Comment No. 8: Conditions D3.10, D3.11 and D3.12 (Clean condensate alternative requirements).

These conditions identify the clean condensate alternative (CCA) sources, and the additional CCA collection and destruction requirements. Washer lines No. 5, 6 and 7 for which these CCA requirements were needed have been permanently removed from service. WestRock requests that this is documented in the AOP SOB and to add a reference to this in these permit conditions.

Comment No. 9: Condition F1 (40 CFR Part 60 Subpart BB for digesters and evaporators).

Conditions F1 and F1.1 cite Kamyr Washers No.1 and No. 2 as subject to the requirements of 40 CFR Part 60, Subpart BB. These washers at the Longview mill Kamyr digesters are diffusion washers as discussed in the SOB of the draft AOP. Per §60.280(a), brown stock washer systems are the only stock washing systems subject to the provision of this subpart. Diffusion washers are excluded from the brown stock washer system definition in §60.281.

Comment No. 10: Condition G1.1e (PB20 40 CFR Part 60 Subpart Db PM limit).

WestRock recommends to document in the AOP SOB EPA's approval of the performance test waiver for the PM limit in §60.43b(h)(4) granted on a letter a letter dated December 12, 2012 and reference this waiver in Condition G1.1e as necessary.

Comment No. 11: Condition G1.3c (PB20 40 CFR Part 60 Subpart Db Opacity monitoring).

WestRock recommends to document in the AOP SOB EPA's approval of opacity alternative monitoring for the opacity limit in §60.43b(f) granted on a letter dated February 24, 2012 and reference this approval in Condition G1.3c as necessary.

EPA approved monitoring of the scrubber and wet electrostatic precipitator parameters in the Emission Control Compliance Demonstration Plan (ECCDP) applicable to Power Boiler 20 instead of opacity.

Comment No. 12: Conditions G1.12, G1.13, G1.14 and G1.18 (PB20 Boiler MACT operating limits reporting)

The draft AOP includes language in these conditions to report daily 30-day rolling averages for the operating limits for total secondary electric power, scrubber pressure drop, scrubber flows and operating load. Considering that PB is equipped with four wet scrubbers and two wet electrostatic precipitators and that the facility has chosen to use the last 720 valid hours of operation to calculate the 30-day rolling averages, there would be 24 different averages for each parameter for a total of 264 different averages each day, 7,920 different averages each 30-day month and 96,360 different averages each year. The facility is required to report semi-annually periods when these parameters fail to meet the operating level limits that were established during performance testing.

WestRock requests that this language be removed from these conditions. It is not clear what Ecology would do with this information as it cannot be used to determine emissions nor is it indicative of a concern with the control device. It is merely informational. Further, adds unnecessary burden to the facility as it would require large amounts of data to be added to an already large and burdensome monthly report. It should be noted that EPA had originally proposed a similar reporting requirement for operating limit averages, but it was removed from the final rule due to the overly burdensome concerns of such a reporting requirement.

The draft conditions also have language to "report exceedances monthly." The Boiler MACT rule does not use the term "exceedances" for operating limits and as mentioned, it already requires the reporting of operating limit deviations on a semi-annual basis. This is also a redundant reporting requirement, but if it is to be kept, it should read to report operating limit deviations monthly.

Comment No. 13: General Condition 27 (NSPS CMS Data Recovery).

This general condition is cited as applicable to 40 CFR Part 60 (NSPS) sources for continuous monitoring systems (CMS) data recovery. The condition is cited as applicable to Conditions

A2.4 and A2.7b. The draft language in this condition includes the following reference and language that is inconsistent with the CMS data recovery requirements in 40 CFR Part 60 as shown below:

> *[40 CFR 63.8(c)(4)]*
>
> *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 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. [40 CFR 70.6(c)(1)]*
>
> *The cited provision of 40 CFR 70.6(c)(1) states the following: Consistent with paragraph (a)(3) of this section, compliance certification, testing, monitoring, reporting, and recordkeeping requirements sufficient to assure compliance with the terms and conditions of the permit. Any document (including reports) required by a part 70 permit shall contain a certification by a responsible official that meets the requirements of §70.5(d) for this part.*

- 40 CFR 63.8(c)(4) is a citation not applicable to 40 CFR Part 60 sources.
- We believe that the language in the permit goes well beyond the requirement of being sufficient to assure compliance. The following examples already exist as applicable requirements from other standards and are in conflict with this language. The "shall be less than 10%" draft language is not found in 40 CFR 60 and it is in conflict the % time requirements established in §60.7(d)(1) and (2), which is 5%.
- This language is also not found in any of the applicable subparts to the 40 CFR Part 60 units at the Longview mill.
- The added language assesses CMS downtime base on the unit's monthly operating time. 40 CFR Part 60 Subparts BB define the unit's operating time period for reporting and CMS downtime evaluation is semiannual and not monthly.
- The draft language that states that "*CMS data is not recovered due to daily calibration, zero and span checks are not considered nor reported as CMS downtime*" is in conflict with language in §60.13(e) that excludes from CMS downtime "*system breakdowns, repairs, calibration checks, and zero and span adjustments required under paragraph (d) of this section, all continuous monitoring systems shall be in continuous operation and shall meet minimum frequency of operation requirements.*" §60.13(e) language is included in the first part of this same general condition.

WestRock requests that the aforementioned draft language is removed from this condition and only include the CMS data recovery language found in 40 CFR Part 60 or for this entire condition to be removed from the general conditions as the mill units subject to 40 CFR Part 60

subparts already include references to the applicable requirements in §60.7, §60.13 and any other specific subpart conditions related to CMS data recovery. Note that the language in WAC 173-400-105(7), which is the basis of Condition 26, is consistent with CMS data recovery requirements in 40 CFR Part 60.7 and 60.13.

Comment No. 14: General Condition 28 (MACT CMS Data Recovery).

This general condition is cited as applicable to 40 CFR Part 63 (MACT) sources for continuous monitoring systems (CMS) data recovery. The condition is cited as applicable to Conditions A1.4, A2.5, B1.4, B2.4, C1.4, C2.4, C3.4, C3.6a, G1.12, G1.13, G1.14 and G1.18. The draft language in this condition includes the following reference and language that is inconsistent with the CMS data recovery requirements in 40 CFR Part 63 as shown below:

> *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 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. [40 CFR 70.6(c)(1)]*
>
> *The cited provision of 40 CFR 70.6(c)(1) states the following: Consistent with paragraph (a)(3) of this section, compliance certification, testing, monitoring, reporting, and recordkeeping requirements sufficient to assure compliance with the terms and conditions of the permit. Any document (including reports) required by a part 70 permit shall contain a certification by a responsible official that meets the requirements of §70.5(d) for this part.*

- We believe that the language in the permit goes well beyond the requirement of being sufficient to assure compliance. The following examples already exist as applicable requirements from other standards and are in conflict with this language. The "shall be less than 10%" draft language is not found in 40 CFR 63 and it is in conflict the % time requirements established in §63.10(e)(2)(vii) and (viii), which is 5%.
- This language is also not found in any of the applicable subparts to the 40 CFR Part 63 units at the Longview mill and is in conflict with specific CMS requirements in the applicable 40 CFR Part 63 subparts. For instance, 40 CFR 63.7535 includes the specific CMS requirements for §63 Subpart DDDDD. These requirements are included in condition G1.24.
- The added language assesses CMS downtime base on the unit's monthly operating time. 40 CFR Part 63 Subparts S, MM and DDDDD define the unit's operating time period for reporting and CMS downtime evaluation is semiannual and not monthly.
- The draft language that states that "*CMS data is not recovered due to daily calibration, zero and span checks are not considered nor reported as CMS downtime*" is in conflict with language in §63.8(c)(4) that excludes from CMS

downtime "*system breakdowns, out-of-control periods, repairs, maintenance periods, calibration checks, and zero (low-level) and high-level calibration drift adjustments, all CMS, including COMS and CEMS, shall be in continuous operation and shall meet minimum frequency of operation requirements.*" §63.8(c)(4) language is included in the first part of this same general condition.

WestRock requests that the aforementioned draft language is removed from this condition and only include the CMS data recovery language found in 40 CFR Part 63 or for this entire condition to be removed from the general conditions as the mill units subject to 40 CFR 63 subparts already include references to the applicable requirements in §63.8, §63.10 and any other specific subpart conditions related to CMS data recovery. Note that the language in WAC 173-400-105(7), which is the basis of Condition 26, is consistent with CMS data recovery requirements in 40 CFR Part 63.8 and 63.10.

Comment No. 15: General Condition 66 (Use of elemental chlorine).

This condition should be removed from the permit as the bleach plant is no longer in operation.

Comment No. 16: Appendix B (ECCP parameters for LK4).

The ECCDP shows a value of 170 as a loading rate limit for Lime Kiln No. 4 when firing oil instead of the proper equation to calculate it ("[TCaO/D + % oil substitution (heat input basis)] ≤ 215, and oil substitution ≤ 50% (heat input basis).

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Comment No.1: Frequency of 40 CFR Part 60 and Part 63 semi-annual reports

Conditions A1.2, A1.4, A2.2, A2.4, A2.5, A2.7b, B1.2, B1.4, B2.2., B2.4, C1.2, C1.4, C2.2, C2.4, C3.2, C3.4, C3.6a and G1.4c state that semi-annual reporting frequency could be "*on a more frequent basis as determined necessary by Ecology*." WestRock requests to remove this language and cite instead the governing criteria in §60.7(c) and §63.10(e)(3) of when the agency may require more frequent reporting.

§60.7(c): "…*except when: more frequent reporting is specifically required by an applicable subpart; or the Administrator, on a case-by-case basis, determines that more frequent reporting is necessary to accurately assess the compliance status of the source*."

§63.10(e)(3): "*except when— (A) More frequent reporting is specifically required by a relevant standard; (B) The Administrator determines on a case-by-case basis that more frequent reporting is necessary to accurately assess the compliance status of the source*…"

Conditions A1.2, A2.2, B1.2, B2.2, C1.2, C2.2 and C3.2 do not reference §63.10(e)(3). WestRock recommends adding this reference in these conditions.

Comment No. 2: Conditions A1.3b, A2.3b and C3.3b (RF19, RF22 and LK5 Opacity WAC 173-405 limits)

WestRock would like to provide a comment requesting some clarification to the interpretation of opacity WAC 173-405 limits. The opacity standard in WAC 173-405-040(6) has a time limit basis that states that "*no person shall cause or allow the emission of a plume from any kraft recovery furnace, smelt dissolver tank, or lime kiln, which has an average opacity greater than thirty-five percent for <u>more than six consecutive minutes in any sixty minute period</u>*" [emphasis added]. The plain reading of this limit indicates that a single six-minute average over 35% is not an exceedance of the limit and opacity would need to average over 35% for more than 6 consecutive minutes. Given that opacity monitoring is required for several of these sources by continuous opacity monitoring system (COMS) and

since monitoring data for opacity must be reduced to discrete six-minute block averages when a COMS is used as required by WAC 173-400-105, it would require two six-minute period block averages in excess of 35% within a 60 minute period to exceed that opacity limit. Ecology has interpreted this standard to mean that one six-minute period in excess of 35% is a violation. We believe that Ecology should review this interpretation and that it is appropriate to add some clarification in the permit in light of other similar particulate and opacity limitations that are also applicable to these units.

Opacity represents a monitoring parameter that is indicative of the performance of the control devices utilized for control of particulate. Particulate limitations are often represented in terms of one-hour to three-hour standards while opacity is often expressed in six-minute averages. WestRock is requesting that this linkage be more clearly recognized with respect to application of excess emissions of opacity for the WAC 173-405 limits for Recovery Furnace No, 19 (RF19), Recovery Furnace No. 22 (RF22) and Lime Kiln No. 5 (LK5). We believe that it is more appropriate to treat instances of opacity in the same manner they are in 40 CFR Part 63 Subpart MM. These units are subject to similar opacity limitations as is required by the WAC standard, some of which are even more stringent. WestRock believes that this will align operation and compliance with these opacity standards more closely with the original intent of underlying requirements. This will allow for more consistency and clarity for both the facility and for Ecology. Some more background and supporting information for this request is added below.

Opacity and Particulate Matter Relationship

EPA

There has been a long history within numerous regulatory programs to use opacity as a surrogate measurement and an indication of performance for particulate control devices. EPA, beginning with the incorporation of 40 CFR 60 Subpart BB - Standards of Performance for Kraft Pulp Mills in the 1970s and 1980s, adopted opacity limits as surrogates for particulate matter (PM) emissions. EPA also provided definitions of excess emissions and violations of these opacity standards in 40 CFR 60.284(d) and (e). The intent of these definitions was to recognize that there can be transient periods of higher opacity, but that they should be short lived and, if they are, then the underlying particulate limitations would still be maintained. In contrast, longer periods of higher opacity would be indicative of poorer performance requiring some sort of corrective action or possibly enforcement.

In the preamble to the 1974 40 CFR Part 60 rule for a number of different sources EPA discussed the reason behind opacity standards and their relationship to particulate matter standards as shown below (FR 9308-9309, Vol. 39, No. 47, March 8, 1974):

> *It is evident from comments received that an inadequate explanation was given for applying both an enforceable opacity standard to the same source and that the relationship between the concentration standard and the opacity standard was not clearly presented… The concentration/mass standard is established at a level which will result in the design, installation, and operation of the best adequately*

demonstrated system of emission reduction (taking cost into account) for each source. The opacity standard is established at a level which will require proper operation and maintenance of such control systems on a day-to-day basis, but not require the design and installation of a control system more efficient or expensive than that required by the concentration/mass standard.

Opacity standards are a necessary supplement to concentration/mass standards. Opacity standards help ensure that sources and emission control systems continue to be properly maintained and operated so as to comply with the concentration/mass standards. Particulate testing by EPA method 5 and most other techniques requires an expenditure… scheduling and preparation are required such that it is seldom possible to conduct a test with less than 2 weeks notice. Therefore, method 5 particulate tests can be conducted only on an infrequent basis.

The regulatory opacity limits are sufficiently close to observed opacity to ensure proper operation and maintenance of control systems on a continuous basis but still allow some room for minor variations from the conditions existing at the time opacity readings were made.

Time exemptions further reflect the stated purpose of opacity standards… The time exemptions now provide for circumstances specific to the sources and… provide much better assurance that the opacity standards are not unfairly stringent.

In the late 1990s and early 2000s, EPA adopted additional particulate standards using opacity as a surrogates as Maximum Achievable Control Technology standards governing Kraft Mill recovery furnaces and lime kilns consistent the same framework. For example, in 1996 as part of the initial development of the NESHAP Subpart MM rule, EPA saw opacity as the surrogate measurement that best characterized the level of PM emissions for recovery furnaces and lime kilns (*Technical Support Document EPA-453/R-96-012,* October 1996). As a result, EPA established two criteria for opacity. One representing a period of time in which facilities are required to implement corrective actions and another as indicative of excess emissions.

Finally, more recently during the multi-year Residual Risk and Technology Review of the NESHAP Subpart MM rule finalized in 2017, EPA reinforced this approach by making the allowances even more stringent. In this action, EPA stated that opacity monitoring provided an additional indicator of ESP performance and that the opacity limit should be seen as an operating limit that is used as an indicator of compliance with the PM limit (Residual Risk and Technology Review, Final Amendments Response to Public Comments on December 30, 2016 Proposal, September 2017).

EPA stated that continuous compliance with the underlying PM limit is ensured through initial and repeat performance tests as well as through continuous opacity monitoring. As a result, an opacity monitoring allowance was retained in the final rule to accommodate process variability while being protective of the underlying standards. EPA stated that the requirements in the NESHAP Subpart MM rule make it feasible for the standards to apply at all times:

- Opacity monitoring allowances specifying a limited number of exceedances that will not be considered as violations, developed through review of COMS data sets while making it clear that instances in excess of these periods are violations.
- A new requirement to maintain proper operation of the ESP automatic voltage controller (AVC). The requirement for the ESP to maintain proper operation of the ESP AVC applies at all times, including times when the opacity monitoring allowance is used.

State-Ecology

In 1987 the state legislature amended the state Air Act in regards to air quality standards and emission standards so that "*an industry, or the air pollution control authority having jurisdiction, can choose, subject to the submittal of appropriate data that the industry has quantified, to have any limit on the opacity of emissions from a source whose emission standard is stated in terms of a weight of particulate per unit volume of air (e.g., grains per dry standard cubic foot) be based on the applicable particulate emission standard for that source, such that any violation of the opacity limit accurately indicates a violation of the applicable particulate emission standard*." RCW 70.94.331(2)(c). WAC 173-405 was amended at the time as a result of this directive. As discussed above, EPA has provided extensive historical and consistent justification for evaluating opacity in relation to underlying particulate emission standards. For the specific case of opacity limits applicable to lime kilns and recovery boilers in the pulp and paper industry, this has been an effective approach in multiple programs including 40 CFR Part 60 Subparts BB and BBa, and in 40 CFR Part 63 Subpart MM.

Ecology has recognized opacity as a surrogate for PM emissions in previous permitting actions for the site. For instance, NOC 3462-AQ07 was an administrative change to NOC Order No. DE 01AQIS-3294 that was originally issued on December 14, 2001. NOC Order No. DE 01AQIS-3294 was re-issued to include additional requirements not addressed in the 2001 PSD Permit No. 01-03 and to include unchanged limits from previous orders such as Order Nos. DE 00AQIS-704. Order No. DE 00AQIS-704 was issued on July 10, 2000 and amended previous applicable limits and superseded more than ten previously issued orders between 1975 and 1996. Order No. DE 00AQIS-704 already included opacity limits for Recovery Furnace Nos. 19 and 22, and Lime Kiln No. 5, although the origin of these opacity limits were the older orders. For instance, Order No. DE 78-115 issued on April 11, 1978 included opacity limits for Recovery Furnace No. 19.

In the "Fact Sheet for Prevention of Significant Deterioration and Notice of Construction Longview Fibre Modernization and Expansion" dated June 5, 1990 Ecology compared the opacity limits imposed on Recovery Furnace No. 22 with the NSPS Subpart BB opacity limit, which also treats excess emissions periods consistent with NESHAP Subpart MM. Ecology stated:

> *A good indicator of particulate emissions and in particular PM10 emissions is stack opacity. Opacity of a stack is the amount of light that is obscured by the plume. The federal NSPS is 35 percent. Recovery furnaces with similar control equipment have*

consistently met 20 percent opacity limitations. Ecology concludes that an opacity limit of 20 percent is BACT for Recovery Furnace No. 22. Longview will be required to continuously monitor opacity and provide reports of any excess emissions. (Fact Sheet – 2000 Revision LVF No. PSD-X81-10A Appendix A).

The PM-opacity linkage is firmly recognized by the fact that Ecology maintains that the WAC 173-405 opacity limits are subject to Compliance Assurance Monitoring (CAM) rule requirements due to their surrogacy for PM limits. Ecology has explained that this is a view maintained by EPA as noted in the CAM section of the AOP SOB.

The applicable PM limit to RF19 and RF22 found in WAC 173-405(1)(a) is 0.10 gr/dscf @ 8% O2, 1-hr average, and the applicable PM limit to LK5 found in WAC 173-405-040(3)(a) is 0.13 gr/dscf @ 10% O2, 1-hr average. RF19 is also subject to a PM limit of 0.040 gr/dscf @ 8% O2, 1-hr average, which is 40% of the state limit, RF22 is also subject to a PM limit of 0.027 gr/dscf @ 8% O2, 1-hr average, which is 27% of the state limit, and LK5 is also subject to a PM limit of 0.035 gr/dscf @ 10% O2, 1-hr average, which is about 27% of the state PM limit. These units have been subject to monthly stack testing requirements for these more stringent PM limits since they became effective as part of the 2001 PSD permit and all results have been in compliance with these limits since. The CAM indicator range for these limits (average of ten consecutive 6-minute averages result in a measurement greater than 20% opacity) is the standard selected by EPA for continuous compliance assurance monitoring of recovery furnaces and lime kilns equipped with an ESP under 40 CFR Part 63 Subpart MM, which are also more stringent that the WAC 173-405 PM limits.

The above clearly indicates that for both EPA and Ecology's rules, opacity has the same purpose of acting as surrogate for compliance of applicable PM limits. Moreover, the specific WAC 173-405 opacity limits have the same purpose as the opacity limits imposed by NESHAP Subpart MM and NSPS Subpart BB to recovery furnaces and lime kilns. The provisions and plain language of WAC 173-405, however, do not provide the same clarity on the length of time for excess emissions as the federal standards. EPA has provided ample justification for how to appropriately treat excess emission periods of these type of 6-minute opacity averages and we believe that Ecology as the ability to include similar concepts within the permit renewal as it is in the spirit of what Ecology originally intended when it established opacity as a standard.

<u>WAC 173-405 standards</u>

The opacity standard in WAC 173-405-040(6) has a time limit basis that states that "*no person shall cause or allow the emission of a plume from any kraft recovery furnace, smelt dissolver tank, or lime kiln, which has an average opacity greater than thirty-five percent for <u>more than six consecutive minutes in any sixty minute period</u>*" [emphasis added]. The plain reading of this limit indicates that a single six-minute average over 35% is not an exceedance of the limit and opacity would need to average over 35% for more than 6 consecutive minutes. Given that opacity monitoring is required for several of these sources by continuous opacity monitoring system (COMS) and since monitoring data for opacity must be reduced to

discrete six-minute block averages when a COMS is used as required by WAC 173-400-105, it would require two six-minute period block averages in excess of 35% within a 60 minute period to exceed that opacity limit. The treatment of excess emission periods in 40 CFR Part 63 Subpart MM is more restrictive than the plain reading of the opacity limits in WAC 173-400-105 when taking into consideration the total unit's operating time. In this context, the current Title V permit already includes monitoring language for the mill's operating smelt dissolving tanks and lime kilns with wet scrubber air pollution control consistent with 40 CFR Part 63 Subpart MM monitoring requirements for the applicable WAC 173-405 opacity limits applicable to these sources.

As noted, the WAC 173-405 opacity limits are also subjected to CAM requirements. Per §64.8, the CAM rule allows the agency to require the development and implementation of a quality improvement plan (QIP). This section states that "*consistent with §64.6(c)(3), the part 70 or 71 permit may specify an appropriate threshold, such as an accumulation of exceedances or excursions exceeding 5 percent duration of a pollutant-specific emissions unit's operating time for a reporting period, for requiring the implementation of a QIP*." The percent of operating time threshold for opacity excess emissions in 40 CFR Part 63 Subpart MM is consistent with these CAM requirements. The selected CAM indicator range is the same as for the strictest particulate limit for this unit and will indicate compliance for the other limits as well.

Ecology has already utilized the same criteria used by 40 CFR Part 63 Subpart MM for the WAC 173-405 opacity limits in other state permits.

Summary

For all the reasons listed above, WestRock believes there is ample justification to apply the excess emissions treatment of 40 CFR Part 63 Subpart MM.

Comment No. 3: Conditions B1.4, B2.4, C1.4 and C2.4 (40 CFR Part 63 Subpart MM operating limits reporting)

The draft AOP requires in these conditions to report daily minimum operating parameter 3-hour values for the operating limits on all the §63 Subpart MM sources with wet control devices. §63 Subpart MM already requires that all three hour values be maintained by the facility for inspection and for the facility to report any monitoring exceedances on its semi-annual report. The permit also already includes a requirement to report monitoring exceedances monthly for these parameters.

WestRock requests that this additional language be removed from these conditions. It is not clear what Ecology would do with this information as it cannot be used to determine emissions nor is it indicative of a concern with the control device. It is merely informational. Further, it adds an unnecessary burden to the facility to determine the minimum value as it would require significant amounts of data to be added to an already large and burdensome monthly report, especially when considered together with similar draft language added for Boiler MACT operating limit conditions (see comment No. 12).

Comment No. 4: Condition B1.5a and B2.5a (SO2 limit from WAC 173-405 rule).

These conditions include an SO2 limit of 1,000 ppm, 1-hr average for smelt dissolving tanks 19 and 22 citing WAC 173-405-040(9)(b) when this citation is applicable to combustion units. Please remove these conditions as smelt dissolving tanks are not combustion units.

Comment No. 5: Condition C3.3a (LK5 opacity limit from Order 3462-AQ07).

Correct opacity limit to 25%. The limit in Order 3462-AQ07 is 25% and not 20% or 30% as shown in the current draft AOP.

Comment No. 6: Condition C3.6a (LK5 TRS limits).

WestRock recommends separating the TRS limits applicable to LK5 into two different conditions. The TRS limit from the 2001 PSD permit is subject to different CEMS requirements (Condition 26) than TRS limit from 40 CFR Part 60 Subpart BB. This is also the case for reporting and a few other requirements.

Comment No. 7: Condition C3.6b (LK5 temperature and retention time requirement from 40 CFR Part 60 Subpart BB).

The temperature and retention time requirements included in the draft AOP do not apply to LK5 as the kiln is subject to the 8 ppm standard in §60.283(a)(5). These temperature and retention time requirements only apply to lime kilns subject to §60.283(a)(1)(iii). LK5 satisfies the combustion requirements in accordance with §60.283(a)(1)(i). Language in Condition F1.1 needs to remove reference to this monitoring requirement for LK5.

Comment No. 8: Conditions D3.10, D3.11 and D3.12 (Clean condensate alternative requirements).

These conditions identify the clean condensate alternative (CCA) sources, and the additional CCA collection and destruction requirements. Washer lines No. 5, 6 and 7 for which these CCA requirements were needed have been permanently removed from service. WestRock requests that this is documented in the AOP SOB and to add a reference to this in these permit conditions.

Comment No. 9: Condition F1 (40 CFR Part 60 Subpart BB for digesters and evaporators).

Conditions F1 and F1.1 cite Kamyr Washers No.1 and No. 2 as subject to the requirements of 40 CFR Part 60, Subpart BB. These washers at the Longview mill Kamyr digesters are diffusion washers as discussed in the SOB of the draft AOP. Per §60.280(a), brown stock washer systems are the only stock washing systems subject to the provision of this subpart. Diffusion washers are excluded from the brown stock washer system definition in §60.281.

Comment No. 10: Condition G1.1e (PB20 40 CFR Part 60 Subpart Db PM limit).

WestRock recommends to document in the AOP SOB EPA's approval of the performance test waiver for the PM limit in §60.43b(h)(4) granted on a letter a letter dated December 12, 2012 and reference this waiver in Condition G1.1e as necessary.

Comment No. 11: Condition G1.3c (PB20 40 CFR Part 60 Subpart Db Opacity monitoring).

WestRock recommends to document in the AOP SOB EPA's approval of opacity alternative monitoring for the opacity limit in §60.43b(f) granted on a letter dated February 24, 2012 and reference this approval in Condition G1.3c as necessary.

EPA approved monitoring of the scrubber and wet electrostatic precipitator parameters in the Emission Control Compliance Demonstration Plan (ECCDP) applicable to Power Boiler 20 instead of opacity.

Comment No. 12: Conditions G1.12, G1.13, G1.14 and G1.18 (PB20 Boiler MACT operating limits reporting)

The draft AOP includes language in these conditions to report daily 30-day rolling averages for the operating limits for total secondary electric power, scrubber pressure drop, scrubber flows and operating load. Considering that PB is equipped with four wet scrubbers and two wet electrostatic precipitators and that the facility has chosen to use the last 720 valid hours of operation to calculate the 30-day rolling averages, there would be 24 different averages for each parameter for a total of 264 different averages each day, 7,920 different averages each 30-day month and 96,360 different averages each year. The facility is required to report semi-annually periods when these parameters fail to meet the operating level limits that were established during performance testing.

WestRock requests that this language be removed from these conditions. It is not clear what Ecology would do with this information as it cannot be used to determine emissions nor is it indicative of a concern with the control device. It is merely informational. Further, adds unnecessary burden to the facility as it would require large amounts of data to be added to an already large and burdensome monthly report. It should be noted that EPA had originally proposed a similar reporting requirement for operating limit averages, but it was removed from the final rule due to the overly burdensome concerns of such a reporting requirement.

The draft conditions also have language to "report exceedances monthly." The Boiler MACT rule does not use the term "exceedances" for operating limits and as mentioned, it already requires the reporting of operating limit deviations on a semi-annual basis. This is also a redundant reporting requirement, but if it is to be kept, it should read to report operating limit deviations monthly.

Comment No. 13: General Condition 27 (NSPS CMS Data Recovery).

This general condition is cited as applicable to 40 CFR Part 60 (NSPS) sources for continuous monitoring systems (CMS) data recovery. The condition is cited as applicable to Conditions

A2.4 and A2.7b. The draft language in this condition includes the following reference and language that is inconsistent with the CMS data recovery requirements in 40 CFR Part 60 as shown below:

> *[40 CFR 63.8(c)(4)]*
>
> *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 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. [40 CFR 70.6(c)(1)]*
>
> *The cited provision of 40 CFR 70.6(c)(1) states the following: Consistent with paragraph (a)(3) of this section, compliance certification, testing, monitoring, reporting, and recordkeeping requirements sufficient to assure compliance with the terms and conditions of the permit. Any document (including reports) required by a part 70 permit shall contain a certification by a responsible official that meets the requirements of §70.5(d) for this part.*

- 40 CFR 63.8(c)(4) is a citation not applicable to 40 CFR Part 60 sources.
- We believe that the language in the permit goes well beyond the requirement of being sufficient to assure compliance. The following examples already exist as applicable requirements from other standards and are in conflict with this language. The "shall be less than 10%" draft language is not found in 40 CFR 60 and it is in conflict the % time requirements established in §60.7(d)(1) and (2), which is 5%.
- This language is also not found in any of the applicable subparts to the 40 CFR Part 60 units at the Longview mill.
- The added language assesses CMS downtime base on the unit's monthly operating time. 40 CFR Part 60 Subparts BB define the unit's operating time period for reporting and CMS downtime evaluation is semiannual and not monthly.
- The draft language that states that "*CMS data is not recovered due to daily calibration, zero and span checks are not considered nor reported as CMS downtime*" is in conflict with language in §60.13(e) that excludes from CMS downtime "*system breakdowns, repairs, calibration checks, and zero and span adjustments required under paragraph (d) of this section, all continuous monitoring systems shall be in continuous operation and shall meet minimum frequency of operation requirements.*" §60.13(e) language is included in the first part of this same general condition.

WestRock requests that the aforementioned draft language is removed from this condition and only include the CMS data recovery language found in 40 CFR Part 60 or for this entire condition to be removed from the general conditions as the mill units subject to 40 CFR Part 60

subparts already include references to the applicable requirements in §60.7, §60.13 and any other specific subpart conditions related to CMS data recovery. Note that the language in WAC 173-400-105(7), which is the basis of Condition 26, is consistent with CMS data recovery requirements in 40 CFR Part 60.7 and 60.13.

Comment No. 14: General Condition 28 (MACT CMS Data Recovery).

This general condition is cited as applicable to 40 CFR Part 63 (MACT) sources for continuous monitoring systems (CMS) data recovery. The condition is cited as applicable to Conditions A1.4, A2.5, B1.4, B2.4, C1.4, C2.4, C3.4, C3.6a, G1.12, G1.13, G1.14 and G1.18. The draft language in this condition includes the following reference and language that is inconsistent with the CMS data recovery requirements in 40 CFR Part 63 as shown below:

> *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 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. [40 CFR 70.6(c)(1)]*
>
> *The cited provision of 40 CFR 70.6(c)(1) states the following: Consistent with paragraph (a)(3) of this section, compliance certification, testing, monitoring, reporting, and recordkeeping requirements sufficient to assure compliance with the terms and conditions of the permit. Any document (including reports) required by a part 70 permit shall contain a certification by a responsible official that meets the requirements of §70.5(d) for this part.*

- We believe that the language in the permit goes well beyond the requirement of being sufficient to assure compliance. The following examples already exist as applicable requirements from other standards and are in conflict with this language. The "shall be less than 10%" draft language is not found in 40 CFR 63 and it is in conflict the % time requirements established in §63.10(e)(2)(vii) and (viii), which is 5%.
- This language is also not found in any of the applicable subparts to the 40 CFR Part 63 units at the Longview mill and is in conflict with specific CMS requirements in the applicable 40 CFR Part 63 subparts. For instance, 40 CFR 63.7535 includes the specific CMS requirements for §63 Subpart DDDDD. These requirements are included in condition G1.24.
- The added language assesses CMS downtime base on the unit's monthly operating time. 40 CFR Part 63 Subparts S, MM and DDDDD define the unit's operating time period for reporting and CMS downtime evaluation is semiannual and not monthly.
- The draft language that states that "*CMS data is not recovered due to daily calibration, zero and span checks are not considered nor reported as CMS downtime*" is in conflict with language in §63.8(c)(4) that excludes from CMS

downtime "*system breakdowns, out-of-control periods, repairs, maintenance periods, calibration checks, and zero (low-level) and high-level calibration drift adjustments, all CMS, including COMS and CEMS, shall be in continuous operation and shall meet minimum frequency of operation requirements.*" §63.8(c)(4) language is included in the first part of this same general condition.

WestRock requests that the aforementioned draft language is removed from this condition and only include the CMS data recovery language found in 40 CFR Part 63 or for this entire condition to be removed from the general conditions as the mill units subject to 40 CFR 63 subparts already include references to the applicable requirements in §63.8, §63.10 and any other specific subpart conditions related to CMS data recovery. Note that the language in WAC 173-400-105(7), which is the basis of Condition 26, is consistent with CMS data recovery requirements in 40 CFR Part 63.8 and 63.10.

Comment No. 15: General Condition 66 (Use of elemental chlorine).

This condition should be removed from the permit as the bleach plant is no longer in operation.

Comment No. 16: Appendix B (ECCP parameters for LK4).

The ECCDP shows a value of 170 as a loading rate limit for Lime Kiln No. 4 when firing oil instead of the proper equation to calculate it ("[TCaO/D + % oil substitution (heat input basis)] ≤ 215, and oil substitution ≤ 50% (heat input basis).

STATEMENT OF BASIS

Air Operating Permit 0000078

WestRock Longview, LLC
PO Box 639
Longview, WA 98632

Permit Issued Date: DRAFT
Permit Effective Date: DRAFT
Permit Expiration Date: DRAFT

Prepared by:

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Table of Contents

List of Abbreviations and Acronyms

Btu	British thermal units
BACT	Best Available Control Technology
CAA	Clean Air Act [42 U.S.C. section 7401 et seq.]
CAM	Compliance assurance monitoring
CEMS	Continuous emission monitoring system
CFR	Code of Federal Regulations
CMS	Continuous monitoring system
CO	Carbon Monoxide
COMS	Continuous opacity monitoring system
CO_2	Carbon dioxide
dscf	Dry standard cubic foot
Ecology	Washington State Department of Ecology
EPA	United States Environmental Protection Agency
EU	Emission Unit
gr/dscf	Grains/dry standard cubic foot (7,000 grains = 1 pound)
HAP	Hazardous air pollutant
hr	Hour
IEU	Insignificant emission unit
lb	Pound
MACT	Maximum Achievable Control Technology
mm	One million
NESHAP	National Emission Standards for Hazardous Air Pollutants (40 CFR 61 and 63)
NOC	Notice of Construction
NOx	Oxides of nitrogen
NSPS	New source performance standards
O_2	Oxygen
PM	Particulate matter
PM_{10}	Particulate matter with an aerodynamic diameter ≤ 10 microns
ppmdv	Parts per million, on a dry volume basis
PSD	Preventions of Significant Deterioration
PTE	Potential to emit
SCR	Selective catalytic reduction
SO_2	Sulfur dioxide
SOx	Oxides of sulfur
tpy	Tons per year
tBACT	Toxics Best Available Control Technology
VOC	Volatile organic compounds
WAC	Washington Administrative Code

1.0 INTRODUCTION

This document, the Statement of Basis or support document, summarizes the legal and factual basis for the permit conditions in the Air Operating Permit issued by the Washington State Department of Ecology (Ecology) to the source. When Ecology issues a draft Operating Permit, we must provide a statement that sets forth the legal and factual basis for these draft permit conditions, including references to the applicable statutory or regulatory provisions per Washington Administrative Code (WAC) 173-401-700(8).

Unlike the Air Operating Permit, this document is not legally enforceable. This Statement of Basis summarizes the emitting processes at the facility, air emissions, permitting and compliance history, the statutory or regulatory provisions that relate to the facility, and the steps taken to provide opportunities for public review of the permit. The Permittee is obligated to follow the terms of the permit. Any errors or omissions in the summaries provided here do not excuse the Permittee from the requirements of the permit.

2.0 PERMIT AUTHORITY

Title V of the Federal Clean Air Act Amendments requires all states to develop a renewable operating permit program for industrial and commercial sources of air pollution. The Washington State Clean Air Act (Revised Code of Washington (RCW) 70.94) was amended in 1991 and 1993 to provide the Department of Ecology and Local Air Agencies with the necessary authority to implement a statewide operating permit program. The law requires all major sources or any source that is subject to a standard, limitation or other requirement under the Standards of Performance for New Stationary Sources obtain an air operating permit. A major source is defined as one that either directly emits or has the potential to emit 100 tons per year (tpy) or more of a pollutant that is subject to regulation, for example criteria pollutants, 10 tpy or more of a hazardous air pollutant, or 25 tpy or more in the cumulative of hazardous air pollutants. Criteria pollutants include sulfur dioxide (SO_2), nitrogen dioxide (NO_2), particulate matter (PM), carbon monoxide (CO), lead (Pb), and ozone (O_3).

Chapter 173-401 of the WAC, which specifies the requirements of Washington State's Operating Permit Regulation became effective November 4, 1993. EPA granted Washington's program interim approval December 9, 1994. Final approval of Washington's program was granted on August 13, 2001. The current version of the regulation was filed in August 2018 and became effective September 16, 2018.

3.0 FACILITY INFORMATION

Company/Owner	WestRock Longview LLC~~Company~~
Plant or Facility Name	WestRock Longview, LLC
Responsible Official	Stephen J. Devlin General Manager, Longview Mill ~~Work~~
Facility Contact(s)	Roberto Artiga Environmental Services Manager
Facility Location	300 Fibre Way, Longview, WA 98632
Mailing Address	PO Box 639, Longview, WA 98632
Telephone	(360) 575-5901
SIC Code	26 (Pulp and Allied Products)
Attainment Classification	As of May 22, 2020 there are no Washington State counties (or adjacent Oregon counties) in nonattainment for any of the criteria pollutants. (Green Book, EPA)
Basis for Title V applicability	The facility by definition is a major source with a potential emissions of over 100 tons of a regulated air pollutant and 10 tons of HAP per year (See Table 1)

Figure 1 - Location map (Longview, Washington)

A. Source Description

Ownership

WestRock Longview, LLC (WestRock Longview) is a large, integrated pulp and paper mill.

The mill began operation in 1927 under the ownership of the Longview Fibre Company. The mill used wood waste that was otherwise burned in wigwam burners. In 2007 the mill was sold to Brookfield Capital Partners II, L.P., Brookfield Capital Partners II (NR) L.P., and Brookfield Capital Partners II (PC) L.P. (collectively referred to herein as "Brookfield"). In July 2013, Brookfield sold the mill to KapStone Kraft Paper Corporation. Longview Fibre Paper and Packaging, Inc. remained the owner and Permittee but the mill was doing business as (d/b/a) KapStone Kraft Paper Corporation. In 2018, WestRock purchased KapStone Kraft Paper Corporation and obtained the mill in the transaction.

Process

The mill uses three main sources of fiber to make paper. The mill purchases secondary fiber in two forms: bales of Old Corrugated Container (OCC) and bales of Bleached Market Pulp (BMP). WestRock Longview also creates its own virgin pulp from chips. WestRock Longview produces the virgin pulp using the kraft process and the neutral sulfite semi-chemical process.

Production

WestRock Longview produces unbleached kraft pulp and kraft paper/corrugated products for sale. Based on data provided to Ecology from March 2016 through September 2017, the mill produces approximately 1,200 air dried tons per day (ADT/day) of OCC pulp, 2,200 ADT/day of unbleached kraft pulp, 3,300 ADT/day of non-integrated paperboard, and 3,500 ADT/day of kraft paper and corrugated products.

Maximum annual production of unbleached kraft pulp and kraft paper/corrugated are 1.022 million machine dried tons (MDT) and 1.314 million MDT respectively.

Emissions

The potential-to-emit (PTE) for each emission unit is tabulated in Table 1. The PTE values were taken from the 2011 AOP renewal application. Recovery Furnace 18, Smelt Dissolver 18, Power Boiler 12, and Power Boiler 13 were not included in the PTE table because they have been permanently shut down. Actual emissions from the Washington Emissions Reporting System (WEIRS) for the 2019 reporting year are tabulated in Table 2.

Commented [RA1]: 2018 emissions or an average of the 2018-2019 emissions might be more representative of mill operations as there was some market driven production curtailments in 2019

Table 1
Criteria Pollutants and VOC Potential to Emit

Emission Unit	PM&PM$_{10}$ Filterable [tons]	SO_2 [tons]	CO [tons]	NO_x [tons]	TRS [tons]	VOC [tons]
LK 3	34	27	581	238	10	~~0~~
LK 4	35.6	28	605	248	11	~~0~~
LK 5	69	28	282	262	6	~~0~~
RF 19	292	301	2628	753	59	1020
SDT 19	44	16	66	11	114	~~0~~
RF 22	256	1291	1380	735	17	~~0~~
SDT 22	44	31	65	11	6	~~0~~
~~PB 16~~	~~475~~	~~1357~~	~~2300~~	~~1679~~	~~0~~	~~0~~
PB 20	365	946	3942	1183	0	~~0~~
NSSC	0	0	0	0	0	26.4
Total	**1614.6**	**4025**	**11849**	**5120**	**223**	**1046.4**

Commented [RA2]: It needs to be noted that the PM limits reference in this table are filterable only PM emissions

Commented [RA3]: Suggest removing the zeros as the facility has not reported such values

Commented [RA4]: PB16 has been permanently retired from service

Table 2
Criteria and Other Air Pollutants Actual Emissions Summary (2019)

Emission Unit	PM [tons]	SO2 [tons]	CO [tons]	NOx [tons]	VOC [tons]	TRS [tons]
Lime Kiln 3	1.0	0.2	1.1	6.0	0.3	0.5
Lime Kiln 4	9.2	1.1	5.5	100.7	1.7	3.3
Lime Kiln 5	6.9	1.7	11.4	41.6	0.1	1.9
Recovery Furnace 19	48.6	40.4	59.27	240.4	4.0	7.1
Smelt Tank 19	16.8	0.2	0.8	0.6	5.7	1.0
Recovery Furnace 22	34.8	119.2	83.4	377.9	8.6	3.2
Smelt Tank 22	13.8	0.2	0.4	0.0	6.7	1.9
Power Boiler 20	47.0	17.2	550.8	342.3	0.0	--
Kamyr Digester No. 1 Deckers	--	--	--	--	23.6	2.1
Kamyr Digester No. 2 Deckers	--	--	--	--	31.9	2.8
Brown Stock Washer No. 6	--	--	--	--	0.0	0.0
Strong Black Liquor Oxidation	1.0	--	--	--	34.5	0.2
Strong Black Liquor Storage Tanks	--	--	--	--	3.83	2.9
Heavy Black Liquor Storage Tanks	--	--	--	--	0.7	0.5
Lime Slaker No. 2	0.03	--	--	--	0.07	0.0
Lime Slaker No. 4	0.04	--	--	--	0.09	0.01
Lime Slaker No. 5	0.8	--	--	--	2.1	0.1
Lime Slaker No. 6	0.9	--	--	--	2.2	0.1
Lime Mud Oxidizer	--	--	--	--	0.7	--
Effluent Cooling Tower	--	--	--	--	0.26	--
NSSC System	--	--	--	--	11.8	--
Paper Machine 5	0.6	--	--	--	3.6	--
Paper Machine 7	2.9	--	--	--	17.8	--
Paper Machine 10	4.3	--	--	--	26.1	--
Paper Machine 11	2.1	--	--	--	12.5	--
Paper Machine 12	1.8	--	--	--	11.0	--
OCC Fugitive	--	--	--	--	2.8	--
Green Liquor Clarifier	--	--	--	--	5.3	--
Total	**193**	**180**	**712**	**1,110**	**218**	**27.6**

Commented [RA5]: It needs to be clarified that the PM emissions shown in this table include both the filterable and condensable portion. WestRock recommends to only include the filterable portion of the PM emissions reported in the annual emission inventories to avoid confusion by comparing two sets of completely different values and their meaning from a PM emissions perspective.

B. Permitting Summary

WestRock Longview submitted a Title V permit renewal application to Ecology which was received on September 1, 2011. Ecology reviewed the renewal application and determined the application to be complete on December 8, 2011.

This section summarizes the major permitting actions at WestRock Longview.

Table 3
WestRock Longview Permitting History Summary

Date	Order/PSD	Description
11/12/1980 and 4/27/1981	Order DE 80-602 and PSD X81-10	Major mill expansion by 500 tons pulp per day capacity to 2,530. Multi-phase project over 5 - 10 years. Projects include: - New Lime Kiln 5 (approx. 1,100 ADT/d) - New scrubber on LK3 and LK4 - New precipitator on RF14 - New pulp digesting and washing facilities - New paper machine 12 (200 tpd) - New bleach plant (500 tpd) - New Recovery Furnace 22 and SDT22 (1,100 ADT/d) - New Boiler 23 (600,000 lb steam/hr using wood waste, coal, oil, and gas)
5/29/1984	Order DE 84-301	Compliance order requiring precipitator upgrades at RF15, RF18, RF19 to address opacity issues.
5/15/1986	Letter to Ecology	Mill expansion work update. Due to tech improvements and change in product mix, LFPP reached a production rate of 2,700 tpd without need new paper machine. Also with energy conservation programs, no need for PB23. Improved pulping and recovery no need for new RF22.
4/17/1989	Order DE 89-35	Compliance order requiring modification of LK3 primary air fan and installation of dedicated NCG burner.
7/27/1990	REVISED Order DE 80-602 and PSD X81-10	PSD re-review prior to construction of RF22 and SDT22. - Production increase 2,530 tpd to 3,000 tpd - new Kamyr continuous digester/washer - new secondary fiber plant - New RF22 and SDT22; RF 11 shutdown - RF15, 18, 19 modifications - RF15: 3rd level of combustion air, improved combustion control instrumentation (including O2 trim), automatic port cleaning, additional air fan for 2nd and 3rd levels (increase air pressure), additional heat recovery and scrubber system following the ESP. BLS firing rate increase from 2.0 to 2.4 MM lbs of BLS/day. - RF18: combustion air supply improvement (increase air pressure), improved combustion control instrumentation (including O_2 trim), automatic port cleaning, new section added to ESP. BLS firing rate increase from 2.1 to 2.5 MM lbs of BLS/day. - RF19: Additional air fans for 2nd and 3rd levels, increased

Date	Order/PSD	Description
		combustion air pressure, improved combustion control instrumentation, automatic port cleaning. BLS firing rate increase from 3.3 to 4.4 MM lbs BLS/day.
3/30/1994	Order DE 94AQ-I013	GE 7B Gas Turbine HRSG and modification to RF19.
10/25/1995	Order 95AQI068	Replacement of portion of NSSC pulp washer system. Replaces existing secondary pressifiner pulp washers with a new chemi-washer pulp washer. Chemi-washer rated to 400 tpd. Limited by NSSC plant capacity of 250 tpd.
10/3/1996	Order 96AQI076	Improve NSSC plant to increase capacity to 400 tpd.
10/5/1999	Order DE 99AQ-I052	Medical/infections waste incineration limit at PB12, 13, 20. Rescinded by Order 8429.
7/6/2000	PSD-X81-10A	- CO and NOx limits at RF15, RF18, RF19, RF22, and LK5 changed from lb/ADTP to tons/day. - CO and NOx concentration limit at RF15, RF18, RF19, and LK5 removed since no CEMS requirement. - Requirements of PSD and Order separated for regulatory clarity
9/12/2000	Order DE 00AQIS-1627	New press section to PM10. Increase from 550 lb/ft of pressure to 6000 lb/ft. Reduce water content prior to dryer section. Potential to increase paper production capacity since dryer section limits capacity for some grades of paper.
2/16/2001	Order DE 01AQIS-2038	Revised portions of Order DE 00AQIS-704.
4/12/2001	AOP WA000007-8	AOP issued 4/12/2001 and expires 4/12/2006.
7/10/2001	Order DE01AQIS-3076	Pollution control upgrades at SDT18. Upgrade to venturi scrubber/packed tower scrubber units in each stack.
10/18/2001	Order DE 01AQIS-3279	MACT I implementation order.

Date	Order/PSD	Description
12/14/2001 and 12/10/2001	Order DE 01AQIS-3294 and PSD 01-03	Increase primary paper production capacity from 3,000 to 3,600 MDT/day. Kraft pulp production limited at 2800 MDT/d (12-month rolling average). Existing kraft production equipment, OCC production equipment, and paper machines to be operated at a higher rate. - adding presses at PM1, 6, and 10 - replacing drive and adding dryers to PM 7 - automating caps on Batch Digesters 19, 20, and 21 and four other smaller digesters - OCC plant improvements - capacity improvements in purchased bleach pulp system - rebuilding or replacing washer lines 5, 6, and 7 - stack modifications to PB12, 13, and 20 - stack replacements for PB16 and 17 - stack modifications to LK1, 2, 3, 4 - replacing mist eliminators at SDT15 and 18 - using caustic solution in scrubbers at PB12, 13, and 20 - replacement of firebox at RF19 - replacement of economizer at RF18 - various projects for MACT cluster rule compliance - replacing headbox at PM11 - installation of double extraction condensing turbine to used excess heat from plant steam
1/11/2002	Order DE02AQIS-3440	Revision to Order DE 01AQIS-3279 to clarify MACT I inspection language and allow for alternative inspection schedules for areas without safe access.
3/20/2003	PSD 01-03, First Amendment	Descriptive and typographical error corrections.
8/8/2003	Order DE 03AQIS-5687	Improve air pollution control equipment at PB12, 13, and 20 as alternative to meet requirements of PSD 01-03 and Order DE 01AQIS-3294. Wet ESPs to be installed.
9/13/2005	Order 2723-AQ05	Administrative order for clean condensate alternative (CCA).
11/2/2006	PSD 01-03, Second Amendment	Typographical corrections and additional clarifications.
2/21/2007	Order 4115-AQ07	Replace existing wet scrubber (which precedes the wet ESP). Existing scrubber is 30 years old and nearing end of service life. New scrubber will increase PM removal efficiency, reduce energy consumption and better saturate stream to improve wet ESP operation.
2/23/2007	AOP 000007-8	AOP issued 2/23/2007 and expires 3/1/2012.

Date	Order/PSD	Description
2/23/2007	Order 3462-AQ07	Cleanup of Order DE 01AQIS-3294. Update name, PB17 shutdown, expired interim limits removed. This is now the accompanying order to PSD 01-03.
2/23/2007	Order 3463-AQ07	Rescinds previous orders since AOP has been issued with includes Subpart S requirements and the orders are no longer needed. Also includes language from Order DE 02AQIS-3440 because that order referenced Order DE 01AQIS-3279 which has been rescinded.
2/23/2007	Order 3466-AQ07	Streamlining due to Boiler MACT. Opacity limits and opacity monitoring removed from Order and included in separate Order. Standardizing opacity requirements from Order DE 03AQIS-5687 and Boiler MACT and placing them in a single order. Removed references to PB17 (shutdown).
6/2/2011	Order 8429	Mill infrastructure project. Units shutdown: PB12, PB13, RF18, SDT18, several smaller units. New emission controls: RF19 and PB20 (SNCR) Physical/operational changes: RF19, SDT19, RF22, LK5, Lime Slaker 6, PB20 New emission units: Heavy BLS tank, cooling tower Other changes: different units used to combust NCGs, new steam turbine generating capacity to be added Determination made by AQP that the project does not trigger PSD but may require some revisions to PSD 01-03 (March 15, 2011 Letter).
7/26/2012	Order 9213	Improve performance and efficiency of paper machines. Existing paper machines are PM5, 6, 7, 9 10, 11, and 12. Hourly production increases at five of seven (PM5, 7, 10, 11, and 12). Existing production limits in PSD 01-03 will remain unchanged.
12/31/2013	Order 10373	Voluntary emission limits at RF18 and SDT18 prior to shutting down the units.
6/18/2015	PSD 01-03, Third Amendment	Facility name change, removal of shutdown units (RF15, SDT15, LK1, LK2, CoGen23, PB12, and PB13), and general cleanup.
8/3/2017	Order 13302	Flexo Folder Gluer (FFG) project. New piece of equipment which would allow for increased production of corrugated cardboard boxes.

C. Compliance Summary

This section summarizes the air violations which have occurred the previous five years at WestRock Longview for which there are associated Ecology notices of violation (NOVs).

Table 4
WestRock Longview Exceedances and Violations

Date	Docket Number	Unit	Parameter	Additional Information
8/28/19	NOV 16635	Recovery Furnace 19	Opacity	Excess opacity at Recovery Furnace No. 19 on February 13, 2019. Opacity of 36% (six minute average) was recorded from 19:12 – 19:18.
2/1/19	NOV 16190	Recovery Furnace 19	Opacity	Excess opacity at Recovery Furnace No. 19 on November 12, 2018. Opacity of 36% (six minute average) was recorded from 19:42 – 19:48.
1/3/19	NOV 16166	Recovery Furnace 19	Opacity	Excess opacity at Recovery Furnace No. 19 on October 5, 2018. Opacity of 44% (six minute average) was recorded from 10:00 – 10:06.
12/4/18	NOV 16130	Smelt Dissolver Tank 19	Source Test Frequency	Failure to test as required by permit.
10/29/18	NOV 16076	Lime Kiln 5	SO_2	Sulfur dioxide was 22 ppm (3-hr average) on September 20, 2018; in excess of the 20 ppm limit.
7/6/18	NOV 15876	Power Boiler 20	NO_x	NOx was 0.22 lb/mmBTU on May 25, 2018; in excess of the 0.20 lb/mmBTU limit.
3/28/18	NOV 15805	Recovery Furnace 19	Opacity	Excess opacity at Recovery Furnace No. 19 on March 28, 2018. Opacity of 31% (six minute average) was recorded from 17:06 - 17:12.
3/27/18	NOV 15804	Recovery Furnace 19	Opacity	Excess opacity at Recovery Furnace No. 19 on March 27, 2018. Opacity of 58% (six minute average) was recorded from 17:30 - 17:48.
10/16/17	NOV 15569	Recovery Furnace 19	Opacity	Excess opacity at Recovery Furnace No. 19 on October 16, 2017. Opacity of 33% (six minute average) was recorded from 17:42 - 17:48.
9/15/18	NOV 15478	Recovery Furnace 19	Opacity	Excess opacity at Recovery Furnace No. 19 on September 15, 2017. Opacity of 34% (six minute average) was recorded from 6:48 - 6:54 AM
8/31/17	NOV 15461	Recovery Furnace 19	Opacity	Excess opacity at Recovery Furnace No. 19 on August 31, 2017. Opacity of 36% (six minute average) was recorded from 10:42 - 10:48 AM.
6/14/17	NOV 15317	Recovery Furnace 19	Opacity	Excess opacity at Recovery Furnace No. 19 on June 17, 2017. Opacity of 33% (six minute average) was recorded from 8:18 - 8:24. Excess opacity was caused by failed #5 and 6 transformer/rectifier interface control pads. Opacity is not to exceed 30%.
12/12/16	NOV 14049	Recovery Furnace 19 and Recovery Furnace 22	Opacity and Data Loss	Excess opacity at Recovery Furnace 19 on December 12, 2016. Opacity of 32% (six minute average) was recorded. Opacity is not to exceed 30%. Data loss exceeded 10%.
10/10/16	NOV 13992	Recovery Furnace 22	Opacity	Excess opacity at Recovery Furnace 22. Opacity of 26% was observed. Opacity is not to exceed 20%.

Date	Docket Number	Unit	Parameter	Additional Information
4/7/16 and 4/9/16	NOV 13451	Recovery Furnace 22	Opacity	The opacity limit for Recovery Furnace 22 at the Longview Fibre Paper and Packaging facility was exceeded on 4/7/16 and again on 4/9/16. The limit is an average opacity of 20% for more than 6 consecutive minutes. The average opacity for 12 minutes on 4/7/16 was 26% and for six minutes on 4/9/16 was 30%
3/4/16	NOV 13450	Recovery Furnace 19	Opacity	The opacity limit for Recovery Furnace 19 at the Longview Fibre Paper and Packaging facility was exceeded on 3/4/16. The limit specified by the air operating permit is an average of more than 30% opacity for more than six consecutive minutes and the average opacity for one six minute period on 3/4/16 was 37.8%.
9/14/15	NOV 13005	Lime Kiln 5	Opacity	The opacity limit for Lime Kiln 5 at the Longview Fibre Paper and Packaging, Inc, d/b/a KapStone Kraft Paper Corporation, facility was exceeded on 9/14/15. The limit is specified as an average opacity of no more than 25% for more than 6 consecutive minutes in any 60 minute period. The opacity was 42% for 24 minutes on 9/14/15.
7/10/15	NOV 12874	Recovery Furnace 22	Opacity	The opacity limit for Recovery Furnace 22 at the Longview Fibre Paper and Packaging, Inc, d/b/a KapStone Kraft Paper Corporation, facility was exceeded on 07/10/15. The limit specified by the air operating permit is a 6 minute average of 20% opacity and the average opacity for one six minute period on 7/10/15 was 21%.
3/22/15	NOV 11424	Lime Kiln 5	Opacity	The opacity limit for Lime Kiln 5 at the Longview Fibre Paper and Packaging, Inc, d/b/a KapStone, facility was exceeded on 3/22/15. The limit specified by the air operating permit is a 6 minute average of 25% opacity and the average opacity for twelve minutes on 3/22/15 was 32%.
3/11/15	NOV 11423	Recovery Furnace 19	Opacity	The opacity limit for Recovery Furnace 19 at the Longview Fibre Paper and Packaging, Inc, d/b/a KapStone, facility was exceeded on 3/11/15. The limit specified by the air operating permit is a 6 minute average of 20% opacity and the average opacity for one six minute period on 3/11/15 was 32%.
~~10/25/14~~	~~NOV 11141~~	~~Recovery Furnace 22~~	~~Opacity~~	~~The opacity limit for Recovery Furnace 22 at the Longview Fibre Paper and Packaging, Inc, d/b/a KapStone, facility was exceeded on 10/25/14. The limit specified by the air operating permit is a 6 minute average of 20% opacity and the average opacity for one six minute period on 10/25/14 was 23%.~~
~~8/25/14~~	~~NOV 11000~~	~~Recovery Furnace 19~~	~~Opacity~~	~~The opacity limit for Recovery Furnace 19 at the Longview Fibre Paper and Packaging, Inc, d/b/a KapStone, facility was exceeded on 8/25/14. The limit specified by the air operating permit is a 6 minute average of 30% opacity and the average opacity for two six minute periods on 8/25/14 was 34%~~
~~7/28/14~~	~~NOV 10940~~	~~Recovery Furnace 22~~	~~Opacity~~	~~The opacity limit for Recovery Furnace 22 at the Longview Fibre Paper and Packaging, Inc, d/b/a KapStone, facility was exceeded on 7/28/14. The limit specified by the air operating permit is a 6 minute average of 20% opacity and the average opacity for one six minute period on 7/28/14 was 38%.~~

Commented [RA6]: Section introductory paragraph states that it covers the previous five years so remove these to only include the 2015-2019 5-year period

Date	Docket Number	Unit	Parameter	Additional Information
~~12/8/13~~	~~NOV 15583~~	~~Power Boiler 13~~	~~Sulfur Dioxide~~	~~The sulfur dioxide (SO2) limit for Power Boiler 13 was exceeded on December 8, 2013. The limit specified by the air operating permit is a 3 hour average limit of 100 ppm and one of the 3 hour averages measured on December 8, 2013 was 114 ppm.~~

4.0 APPLICABLE REQUIREMENTS

A. Federal Air Quality Requirements: NESHAP, NSPS, CAM

National Emission Standards for Hazardous Air Pollutants (NESHAPs): 40 CFR Part 61 Subpart E and 40 CFR Part 63 Subparts A, S, KK, MM, ZZZZ, DDDDD (adopted by reference in WAC 173-400-075).

New Source Performance Standards (NSPS): 40 CFR Part 60 Subparts A, D, Db, BB and IIII (adopted by reference in WAC 173-400-115).

Compliance Assurance Monitoring (CAM): 40 CFR Part 64 (adopted by reference in WAC 173-401-615). See CAM Section for Applicability & Requirements.

Greenhouse Gases: 40 CFR Part 98 (no applicable requirements under Title V operating permit program).

B. State Air Quality Requirements

The Permittee is subject to several state-only requirements, which are not enforceable under the Federal Clean Air Act. These requirements include the total reduced sulfur (TRS) treatment standard applicable to the digester, multi-effect evaporators, and condensate stripper system in WAC 173-405-040(4); the TRS limits at the lime kiln in WAC 173-405-040(3); and the greenhouse gas reporting requirements in Chapter 173-441 WAC~~. and the greenhouse gas performance standards in Chapter 173-407 WAC~~.

Commented [RA7]: This is an incorrect reference as the as standards applicable to power plants

C. Regulatory Orders

As of the date of this renewal, the Permittee is subject to following regulatory orders and modifications.

No. 01-03, Third Amendment of Final Approval of Prevention of Significant Deterioration Application (PSD 01-03);
Order No. 2737-AQ05;
NOC Order No. 3462-AQ07;
Order No. 3463-AQ07;
NOC Order No. 3466-AQ07;
NOC Order No. 8429, Modification 1;
NOC Order No. 9213
Order No. 13302, Modification 1.

5.0 EMISSION UNITS DESCRIPTION

A. RECOVERY FURNACES

Recovery Furnace 11 (Shut Down)

Recovery Furnace 11 was permanently shut down in 1989.

Recovery Furnace 14 (Shut Down)

Recovery Furnace 14 was permanently shut down in 1994.

Recovery Furnace 15 (Shut Down)

Recover Furnace 15 was permanently shut down in March 2006 and abandoned in place per letter to Ecology dated June 6, 2007.

Recovery Furnace 18 (Shut Down)

Recovery Furnace 18 was last operated in June 2012. On May 30, 2018, KapStone submitted to Ecology a letter formalizing the permanent shutdown.

RECOVERY FURNACE 19 (Condition A1)

Recovery Furnace 19 was constructed as part of a Notice of Construction Application submitted to Ecology on December 11, 1972 (*Historical Project Review*, Trinity Consultants, April 2001).

Recovery Furnace 19 is a direct-contact recovery furnace with a 2017 annual throughput of 503,030 tons of black liquor solids. Emissions of PM from Recovery Furnace 19 are controlled using a wet bottom electrostatic precipitator (ESP). The ESP has two chambers (east and west) with four fields each (#1 through 8). Emissions of TRS are minimized through use of the strong black liquor oxidation ($SBLO_X$) process. Emissions of NOx and CO are minimized through proper operation and maintenance of the unit. Controlled emissions from the Recovery Furnace 19 have been redirected from the structurally compromised Recovery Furnace 19 stack to the shutdown Recovery Furnace 15 stack.

The stack is equipped with multiple continuous emissions monitoring system (CEMS) units to measure SO_2, TRS, and oxygen. The stack is equipped with a continuous opacity monitoring system (COMS) unit to measure opacity.

Prevention of Significant Deterioration (PSD) Permit No. 01-03 (issued December 2001) approved a modification to the mill which would increase capacity from 3,000 machine dry tons (MDT) of paper per day to 3,600 MDT of paper per day. The modification included modifications to the paper machines, batch digesters, washer lines, power boilers, recovery furnaces, lime kilns, smelt dissolving tanks, purchased bleach pulp systems, and the OCC plant.

PSD 01-03 was amended in 2003, 2006, and 2015.

Applicable unit specific regulations include: 40 CFR Part 63, Subpart MM (National Emission Standards for Hazardous Air Pollutants for Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-alone Semi-chemical Pulp Mills); 40 CFR Part 64; 173-405 Washington Administrative Code (Kraft Pulping Mills); PSD 01-03, Amendment 3; and Order 3462-AQ07, Modification 1.

Ecology has adopted 40 CFR Part 63 and appendices by reference in WAC 173-400-075.

Condition A1.1 – Particulate Matter: PSD 01-03, Amendment 3, WAC 173-405-040(1)(a) and 40 CFR Part 64

The Permittee monitors PM and PM10 emission limit compliance with monthly/quarterly source tests. Source test frequency may be reduced to quarterly if 6 consecutive months' tests are below 75% of the limitation. The frequency reverts back to monthly if any quarterly test result is more than 75% of the limitation.

The compliance assurance requirements in 40 CFR Part 63, Subpart MM (Condition A1.4) require that opacity be monitored continuously using a COMS and that the Permittee implement corrective action if the average of ten consecutive 6-minute averages result in a measurement greater than 20% opacity. This compliance assurance language has been included in Condition A1.1.

Language has been added requiring the submittal of stack test reports to Ecology.

Mass emissions are calculated using the source test data to assure compliance with the 12 month rolling total mass limit. The tons per year limit language has been updated to clarify that the compliance value is a 12-month total and not an average.

Condition A1.2 – HAP Metals: 40 CFR Part 63, Subpart MM

The National Emission Standards for Hazardous Air Pollutants (NESHAP) for pulp mill combustion sources (40 CFR Part 63, Subpart MM) was originally proposed in 1998 and promulgated in 2001.

40 CFR Part 63, Subpart MM established a particulate matter emission limit of 0.044 grains/dry standard cubic foot (gr/dscf) corrected to 8% oxygen. The particulate matter emission limit is a surrogate used for determining emissions of hazardous air pollutant (HAP) metals.

40 CFR Part 63, Subpart MM required the implementation of maximum achievable control technology (MACT). The Clean Air Act (CCA) requires that EPA periodically review MACT standards to assess whether residual risk remains and if additional standards are need. This Risk and Technology Review (RTR) was completed on October 11, 2017 for the standards in 40 CFR Part 63, Subpart MM. As a result of the RTR, EPA included periodic source test requirements (every 5 years) for recovery boilers to demonstrate compliance with the HAP metals standard. The proposed AOP has been updated to include this updated source test frequency. Language regarding representative conditions, notification, recordkeeping, on-going compliance, and reporting have also been added.

Condition A1.3a – Opacity: Order 3462-AQ07, Modification 1

This condition has been updated to reflect the modification of Order 3462-AQ07 and the updated requirements for opacity.

Condition A1.3b – Opacity: WAC 173-405-040(6) and 40 CFR Part 64

This condition has been updated to clarify that the reference test method is EPA RM 9 for WAC 173-405-040(6). Opacity is continuously monitored with a COMS. Language referring to "excursions" has been updated to read "exceedance".

Commented [RA8]: See comments in AOP for this limit

Condition A1.4 – HAP Metals (Operating Limit): 40 CFR Part 63, Subpart MM

Continuous compliance with the HAP metals standard is assured through the use of a COMS. As a result of the RTR, EPA revised the violation determination. A violation now occurs when opacity is greater than 35 percent for 2 percent or more of operating time during a semi-annual period when spent pulping liquor is fed; previously the allowance was 6 percent of operating time. Recordkeeping and reporting language has been updated.

The RTR revised the excess emission reporting requirement from quarterly to semi-annual; this change has been reflected in the AOP.

Condition A1.5 – Sulfur Dioxide (SO_2): PSD 01-03, Amendment 3 and WAC 173-405-040(9)(a)

SO_2 limit compliance is monitored continuously with a CEMS that conforms with Performance Specification 5 in 40 CFR Part 60, Appendix B. Mass emissions are calculated with CEMS data to assure compliance with the 12 month rolling total mass limit. The tons per year limit language has been updated to clarify that the compliance value is a 12-month total and not an average.

Condition A1.6 – Total Reduced Sulfur (TRS): PSD 01-03, Amendment 3

TRS limit compliance is continuously monitored with a CEMS. Mass emissions are calculated with CEMS data to assure compliance with the 12 month rolling total mass limit. The tons per year limit language has been updated to clarify that the compliance value is a 12-month total and not an average.

Condition A1.7 – Carbon Monoxide (CO): PSD 01-03, Amendment 3

CO limit compliance is monitored annually/monthly using an EPA Reference Method 10 source test. Source testing frequency may be increased from annually to monthly if a single source test exceeds 75% of the limit.

Language has been added requiring the submittal of stack test reports to Ecology.

The tons per year limit language has been updated to clarify that the compliance value is a 12-month total and not an average.

Condition A1.8 – Nitrogen Oxides (NO_x): PSD 01-03, Amendment 3

NO_x limit compliance is monitored annually/monthly using an EPA Reference Method 7 source test. Source testing frequency may be increased from annually to monthly if a single source test exceeds 75% of the limit.

Language has been added requiring the submittal of stack test reports to Ecology.

The tons per year limit language has been updated to clarify that the compliance value is a 12-month total and not an average.

Condition A1.9 – Oxygen (O_2): Order 3462-AQ07

Order 3462-AQ07 requires that O_2 be monitored continuously with a CEMS that conforms with Performance Specification 3 in 40 CFR Part 60, Appendix B.

Condition A1.10 – Operating Limit: PSD 01-03, Amendment 3

PSD 01-03, Amendment 3, Condition 1.14 limits Recovery Furnace 19 to a throughput of 2000 tons of black liquor solids per day on a monthly average.

Condition A1.11 – Automatic Voltage Control: 40 CFR Part 63, Subpart MM

As a result of the RTR, EPA revised 40 CFR Part 63, Subpart MM to include a requirement that facilities maintain proper operation of the electrostatic precipitator's automatic voltage control (AVC). Language has been added to the AOP to reflect this new requirement.

Condition A1.12 – Volatile Organic Compounds (VOC): PSD 01-03, Amendment 3

PSD 01-03, Amendment 3, Condition 1.20 limits VOC emissions to 1020 tons per year.

Language has been added requiring the submittal of stack test reports to Ecology.

The limit language has been updated to clarify that the compliance value is a 12-month total and not an average. The VOC limit has been updated to indicate that VOC is measured on a carbon basis.

Condition A1.13 – Fuel Oil Burning Limit: Order 3462-AQ07

Annual heat input from fossil fuels is limited to less than 10 percent of the potential annual heat input from all fuels.

Condition A1.14 – Annual Exhaust Flow Correlation Submittal: PSD 01-03, Amendment 3

Condition A1.5 is expressed in pounds per hour. The exhaust flow through the stack is required in order to convert ppm values (provided by the CEMS) to a mass rate for compliance. The Permittee is required to submit an exhaust flow correlation to Ecology for approval on an annual basis. The correlation will develop a relationship between production and exhaust flow. This requirement was not previously included in the body of the AOP; it has been added for clarity.

Condition A1.15 – Total Reduced Sulfur (TRS): WAC 173-405-040(1)(b)

This is a state-only requirement and is not federally enforceable. TRS limit compliance is continuously monitored with a CEMS.

Other Notable Changes

Startup, Shutdown, Malfunction (SSM) exemption and plan language was removed from 40 CFR Part 63, Subpart MM as part of the EPA RTR. The SSM language (Condition A3.11 in the AOP which expired on March 1, 2012) has been removed from the proposed AOP.

RECOVERY FURNACE 22 (Condition A2)

Recovery Furnace 22 is a non-direct contact recovery furnace with a 2017 annual throughput of 544,304 tons of black liquor solids. Emissions of PM from Recovery Furnace 22 are controlled using a dry ESP. The ESP has two chamber with six fields each. ~~Emissions of TRS are minimized through use of the SBLO$_x$ process.~~ Emissions of NOx and CO are minimized through proper operation and maintenance of the unit. The stack is equipped with CEMS units to measure SO_2, TRS, and oxygen. The stack is equipped with a COMS to measure opacity.

Commented [RA9]: There are no SBLOx associated with 22F operations

Recovery Furnace 22 was approved as part of a three-phase mill modernization and expansion project which was to add approximately 500 tons per day of capacity and bring the average daily production to 2,530 air dry tons per day. The project was approved on April 27, 1981 through PSD X81-10 and Order No. DE 80-602 with the condition that emission limits for Recovery Furnace 22 would be re-reviewed no later than 18 months prior to commencement of construction.

Revised PSD-X81-10A and revised Order No. DE 80-602, issued July 27, 1990, was issued to supersede the previous PSD permit (PSD X81-10) and provided a re-analysis for the construction of Recovery Furnace 22 which had not occurred since the issuance of the initial PSD permit.

Prevention of Significant Deterioration (PSD) Permit No. 01-03 (issued December 2001) approved a modification to the mill which would increase capacity from 3,000 machine dry tons (MDT) of paper per day to 3,600 MDT of paper per day. The modification included modifications to the paper machines, batch digesters, washer lines, power boilers, recovery furnaces, lime kilns, smelt dissolving tanks, purchased bleach pulp systems, and the OCC plant.

PSD 01-03 was amended in 2003, 2006, and 2015.

Applicable unit specific regulations include: 40 CFR Part 63, Subpart MM (National Emission Standards for Hazardous Air Pollutants for Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-alone Semi-chemical Pulp Mills); 40 CFR Part 60, Subpart BB (Standards of Performance for Kraft Pulp Mills); 173-405 Washington Administrative Code (Kraft Pulping Mills); PSD 01-03, Amendment 3; and Order 3462-AQ07.

Condition A2.1 – Particulate Matter: PSD 01-03, Amendment 3; 40 CFR Part 60, Subpart BB; 40 CFR Part 64, and WAC 173-405-040(1)(a)

The Permittee monitors PM and PM10 emission limit compliance with monthly/quarterly source tests. Source test frequency may be reduced to quarterly if 6 consecutive months' tests are below 75% of the limitation. The frequency reverts back to monthly if any quarterly test result is more than 75% of the limitation.

Language has been added requiring the submittal of stack test reports to Ecology.

The compliance assurance requirements in 40 CFR Part 63, Subpart MM (Condition A2.5) require that opacity be monitored continuously using a COMS and that the Permittee implement corrective action if the average of ten consecutive 6-minute averages result in a measurement greater than 20% opacity. This compliance assurance language has been included in Condition A2.1.

Language regarding the use of water as a cleanup solvent instead of acetone has been included in the NSPS PM requirement in Condition A2.1c.

Mass emissions are calculated using the source test data to assure compliance with the 12 month rolling total mass limit. The tons per year limit language has been updated to clarify that the compliance value is a 12-month total and not an average.

Condition A2.2 – HAP Metals: 40 CFR Part 63, Subpart MM

The NESHAP for pulp mill combustion sources (40 CFR Part 63, Subpart MM) was originally proposed in 1998 and promulgated in 2001.

40 CFR Part 63, Subpart MM established a particulate matter emission limit of 0.044 grains/dry standard cubic foot (gr/dscf) corrected to 8% oxygen. The particulate matter emission limit is a surrogate used for determining emissions of hazardous air pollutant (HAP) metals.

As discussed above, 40 CFR Part 63, Subpart MM required the implementation of maximum achievable control technology (MACT), which was updated after completion of the RTR that was completed on October 11, 2017. The update included periodic source test requirements (every 5 years) for recovery boilers to demonstrate compliance with the HAP metals standard. The proposed AOP has been updated to include this updated source test frequency.

Language regarding representative conditions, notification, recordkeeping, on-going compliance, and reporting have also been added.

Ecology has moved this requirement to group it with other limits on PM emissions. This will provide for one general location for all PM limits.

Condition A2.3a – Opacity: Order 3462-AQ07, Modification 1

This condition has been updated to reflect the modification of Order 3462-AQ07 and the updated requirements for opacity.

Condition A2.3b – Opacity: WAC 173-405-040(6) and 40 CFR Part 64

Commented [RA10]: See comments in AOP for this limit

This condition has been updated to clarify that the reference test method is EPA RM 9 for WAC 173-405-040(6). Opacity is continuously monitored with a COMS. Language referring to "excursions" has been updated to read "exceedance".

Condition A2.4 – Opacity as a surrogate for PM: 40 CFR Part 60, Subpart BB

This requirement was previously included with the preceding condition for opacity. Ecology has separated it out to clarify that this is a PM limit which uses opacity as a surrogate for compliance.

Condition A2.5 – Opacity as a surrogate for HAP Metals: 40 CFR Part 63, Subpart MM

Continuous compliance with the HAP metals standard is assured through the use of a continuous opacity monitoring system (COMS). As a result of the RTR, EPA revised the violation determination. A violation now occurs when opacity is greater than 35 percent for 2 percent or more of operating time during a semi-annual period when spent pulping liquor is fed; previously the allowance was 6 percent of operating time. Recordkeeping and reporting language has been updated.

The RTR revised the excess emission reporting requirement from quarterly to semi-annual; this change has been reflected in the AOP.

Ecology has moved this condition to group it with other limits on opacity. This will provide for one general location for all opacity limits.

Condition A2.6 – Sulfur Dioxide (SO_2): PSD 01-03, Amendment 3 and WAC 173-405-040(9)(a)

SO_2 limit compliance is monitored continuously with a CEMS that conforms with Performance Specification 5 in 40 CFR Part 60, Appendix B. Mass emissions are calculated with CEMS data to assure compliance with the 12 month rolling total mass limit. The tons per year limit language has been updated to clarify that the compliance value is a 12-month total and not an average.

Condition A2.7 – Total Reduced Sulfur (TRS): PSD 01-03, Amendment 3

TRS limit compliance is continuously monitored with a CEMS. Mass emissions are calculated with CEMS data to assure compliance with the 12 month rolling total mass limit. The tons per year limit language has been updated to clarify that the compliance value is a 12-month total and not an average.

Condition A2.8 – Carbon Monoxide (CO): PSD 01-03, Amendment 3

CO limit compliance is monitored annually/monthly using an EPA Reference Method 10 source test Source testing frequency may be increased from annually to monthly if a single source test exceeds 75% of the limit. The tons per year limit language has been updated to clarify that the compliance value is a 12-month total and not an average.

Language has been added requiring the submittal of stack test reports to Ecology.

Condition A2.9 – Nitrogen Oxides (NO_x): PSD 01-03, Amendment 3

NO_x limit compliance is monitored annually/monthly using an EPA Reference Method 7 source test. Source testing frequency may be increased from annually to monthly if a single source test exceeds 75% of the limit. The tons per year limit language has been updated to clarify that the compliance value is a 12-month total and not an average.

Language has been added requiring the submittal of stack test reports to Ecology.

Condition A2.10 – Oxygen (O_2): Order 3462-AQ07 and 40 CFR Part 60, Subpart BB

Order 3462-AQ07 and 40 CFR Part 60, Subpart BB require that O_2 be monitored continuously with a CEMS that conforms with Performance Specification 3 in 40 CFR Part 60, Appendix B.

Condition A2.11 – Operating Limit: PSD 01-03, Amendment 3

PSD 01-03, Amendment 3, Condition 1.21 limits Recovery Furnace 19 to a throughput of 1950 tons of black liquor solids per day on a monthly average.

Condition A2.12 – Automatic Voltage Control: 40 CFR Part 63, Subpart MM

As a result of the RTR, EPA revised 40 CFR Part 63, Subpart MM to include a requirement that facilities maintain proper operation of the electrostatic precipitator's automatic voltage control (AVC). Language has been added to the AOP to reflect this new requirement.

Condition A2.13 – Fuel Oil Burning Limit: Order 3462-AQ07

Annual heat input from fossil fuels is limited to less than 10 percent of the potential annual heat input from all fuels.

Condition A2.14 – Annual Exhaust Flow Correlation Submittal: PSD 01-03, Amendment 3

Condition A2.6 is expressed in pounds per hour. The exhaust flow through the stack is required in order to convert ppm values (provided by the CEMS) to a mass rate for compliance. The Permittee is required to submit an exhaust flow correlation to Ecology for approval on an annual basis. The correlation will develop a relationship between production and exhaust flow. This requirement was not previously included in the body of the AOP; it has been added for clarity.

Condition A2.15 – Total Reduced Sulfur (TRS): WAC 173-405-040(1)(b)

This is a state-only requirement and is not federally enforceable. TRS limit compliance is continuously monitored with a CEMS.

Other Notable Changes

Startup, Shutdown, Malfunction (SSM) exemption and plan language was removed from 40 CFR Part 63, Subpart MM as part of the EPA RTR. The SSM language (Condition A4.10 in the AOP which expired on March 1, 2012) has been removed from the proposed AOP.

B. SMELT DISSOLVER TANKS

Smelt Dissolver Tank 18 (Shut Down)

Smelt Dissolver Tank 18 permanently shut down as part of NOC Order 8429. Smelt Dissolver Tank 18 was last operated in June 2012. On May 30, 2018, KapStone submitted a letter to Ecology formalizing the permanent shutdown.

SMELT DISSOLVER TANK 19 (Condition B1)

Smelt Dissolver Tank 19 receives smelt from Recovery Furnace 19. Particulate matter emissions from Smelt Dissolver Tank 19 are controlled by a venturi scrubber followed by packed tower and chevron-type mist eliminator. Weak wash is used as a scrubber liquor. Smelt Dissolver Tank 19 exhausts through two stacks. Opacity limits apply to each stack individually. All other limits apply to the total emissions from the combined stacks.

Smelt Dissolver Tank 19 is equipped with continuous parameter monitoring systems (CPMS) to monitor pressure drop (inches H_2O), venturi scrubber flow (gallons per minute), and packed tower flow (gallon per minute).

Applicable unit specific regulations/orders include: 40 CFR Part 63, Subpart MM (National Emission Standards for Hazardous Air Pollutants for Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-alone Semi-chemical Pulp Mills); 40 CFR Part 64 (Compliance Assurance Monitoring); 173-405 Washington Administrative Code (Kraft Pulping Mills); PSD 01-03, Amendment 3; and Order 3462-AQ07.

Ecology has adopted 40 CFR Part 63 and appendices by reference in WAC 173-400-075.

Condition B1.1 – Particulate Matter: PSD 01-03, Amendment 3; WAC 173-405-040(2); Order 3462-AQ07; and 40 CFR Part 64

The Permittee monitors PM and PM_{10} emission limit compliance with monthly/quarterly source tests. Source test frequency may be reduced to quarterly if 6 consecutive months' tests are below 75% of the limitation.

The Permittee is required to reasonably assure compliance with these applicable requirements. The Permittee accomplishes this by monitoring emission control device parameters that have been established in the "Emission Control Compliance Demonstration Plan". The plan was developed as a requirement of Order 3462-AQ07. The Permittee monitors the pressure drop (inches water), venturi scrubber flow (gallons per minute), and packed tower flow (gallons per minute). Any three-hour average deviation from the established operating parameters requires corrective action.

Mass emissions are calculated using the source test data to assure compliance with the 12 month rolling total mass limit. The tons per year limit language has been updated to clarify that the compliance value is a 12-month total and not an average.

Language has been added requiring the submittal of stack test reports to Ecology.

Condition B1.2 – PM as a surrogate for HAP Metals: 40 CFR Part 63, Subpart MM

The National Emission Standards for Hazardous Air Pollutants (NESHAP) for pulp mill combustion sources (40 CFR Part 63, Subpart MM) was originally proposed in 1998 and promulgated in 2001.

40 CFR Part 63, Subpart MM established a particulate matter emission limit of 0.20 pounds of PM per ton of black liquor solids fired. The particulate matter emission limit is a surrogate used for determining emissions of HAP metals.

As discussed above, 40 CFR Part 63, Subpart MM required the implementation of MACT which was updated after completion of the RTR that was completed on October 11, 2017. As a result of the RTR, EPA included periodic source test requirements (every 5 years) for smelt dissolver tanks to demonstrate compliance with the HAP metals standard. The proposed AOP has been updated to include this updated source test frequency. Language regarding representative conditions, notification, recordkeeping, on-going compliance, and reporting have also been added.

Ecology has moved this requirement to group it with other limits on PM emissions. This will provide for one general location for all PM limits

Condition B1.3 – Opacity: Order 3462-AQ07; WAC 173-405-040(6); and 40 CFR Part 64

Order 3462-AQ07 requires that the Permittee demonstrate compliance with the opacity limit by maintaining emission control parameter 3-hour average rates at levels specified in the "Emission Control Compliance Demonstration Plan".

The WAC 173-405-040(6) condition has been updated to clarify that the reference test method is EPA RM 9.

Condition B1.4 – Scrubber Operating Limit as surrogate for HAP Metals: 40 CFR Part 63, Subpart MM

Continuous compliance with the HAP metals standard is assured through the use of continuous parameter monitoring systems (CPMS). AOP language has been updated to reflect the language in the federal regulation. Recordkeeping requirements have been included.

Monthly reporting requirements have been added.

The RTR revised the excess emission reporting requirement from quarterly to semi-annual; this change has been reflected in the AOP.

Ecology has moved this condition to group it with other limits on scrubber operation. This will provide for one general location for all such limits.

Condition B1.5 – Sulfur Dioxide (SO_2): PSD 01-03, Amendment 3

SO_2 limit compliance is monitored triennially/monthly using an EPA Reference Method 6C source test. Source testing frequency may be increased from triennially to monthly if a single source test exceeds 75% of the limit. The tons per year limit language has been updated to clarify that the compliance value is a 12-month total and not an average.

The WAC SO_2 limit was redundant since it was already contained in the facility-wide general requirements. It has been removed from this condition of the AOP.

Condition B1.6 – Total Reduced Sulfur (TRS): PSD 01-03, Amendment 3

TRS limit compliance is monitored triennially/monthly using an EPA Reference Method 16 source test. TRS is to be reported as H_2S. Source testing frequency may be increased from triennially to monthly if a single source test exceeds 75% of the limit. The tons per year limit language has been updated to clarify that the compliance value is a 12-month total and not an average.

Language has been added requiring the submittal of stack test reports to Ecology.

Condition B1.7 – Carbon Monoxide (CO): PSD 01-03, Amendment 3

CO limit compliance is monitored triennially/monthly using an EPA Reference Method 10 source test. Source testing frequency may be increased from triennially to monthly if a single source test exceeds 75% of the limit. The tons per year limit language has been updated to clarify that the compliance value is a 12-month total and not an average.

Language has been added requiring the submittal of stack test reports to Ecology.

Condition B1.8 – Nitrogen Oxides (NO_x): PSD 01-03, Amendment 3

NO_x limit compliance is monitored triennially/monthly using an EPA Reference Method 7 source test. Source testing frequency may be increased from triennially to monthly if a single source test exceeds 75% of the limit. The tons per year limit language has been updated to clarify that the compliance value is a 12-month total and not an average.

Language has been added requiring the submittal of stack test reports to Ecology.

Condition B1.9 – Operating Limit: PSD 01-03, Amendment 3

PSD 01-03, Amendment 3, Condition 1.39 limits recovery furnace throughput (associated with Smelt Dissolver Tank 19) to 2000 tons of black liquor solids per day on a monthly average.

Other Notable Changes

Startup, Shutdown, Malfunction (SSM) exemption and plan language was removed from 40 CFR Part 63, Subpart MM as part of the EPA RTR. The SSM language (Condition B3.9 in the AOP which expired on March 1, 2012) has been removed from the proposed AOP.

SMELT DISSOLVER TANK 22 (Condition B2)

Smelt Dissolver Tank 22 receives smelt from Recovery Furnace 22. Emission from Smelt Dissolver Tank 22 are controlled by a venturi scrubber followed by packed tower. Weak wash is used as a scrubber liquor.

Smelt Dissolver Tank 22 is equipped with continuous parameter monitoring systems (CPMS) to monitor pressure drop (inches H_2O), venturi scrubber flow (gallons per minute), and packed tower flow (gallons per minute).

Applicable unit specific regulations/orders include: 40 CFR Part 63, Subpart MM (National Emission Standards for Hazardous Air Pollutants for Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-alone Semi-chemical Pulp Mills); 40 CFR Part 64 (Compliance Assurance Monitoring); 40 CFR Part 60, Subpart BB (Standards of Performance for Kraft Pulp Mills); 173-405 Washington Administrative Code (Kraft Pulping Mills); PSD 01-03, Amendment 3; and Order 3462-AQ07.

Ecology has adopted 40 CFR Part 63 and appendices by reference in WAC 173-400-075.

Ecology has adopted 40 CFR Part 60 and appendices by reference in WAC 173-400-115.

Condition B2.1 – Particulate Matter; PSD 01-03, Amendment 3: WAC 173-405-040(2); 40 CFR Part 60, Subpart BB; 40 CFR Part 64; and Order 3462-AQ07

The Permittee monitors PM and PM10 emission limit compliance with monthly/quarterly source tests. Source test frequency may be reduced to quarterly if 6 consecutive months' tests are below 75% of the limitation.

The Permittee is required to reasonably assure compliance with these applicable requirements. The Permittee accomplishes this by monitoring emission control device parameters that have been established in the "Emission Control Compliance Demonstration Plan". The plan was developed as a requirement of Order 3462-AQ07. The Permittee monitors the pressure drop (inches water), venturi scrubber flow (gallons per minute), and packed tower flow (gallons per minute). Any three-hour average deviation from the established operating parameters requires corrective action.

Language regarding the sample test methodology, monitoring, and recordkeeping requirements in 40 CFR Part 60, Subpart BB have been added.

Mass emissions are calculated using the source test data to assure compliance with the 12-month rolling total mass limit. The tons per year limit language has been updated to clarify that the compliance value is a 12-month total and not an average.

Condition B2.2 – PM as a surrogate for HAP Metals: 40 CFR Part 63, Subpart MM

The NESHAP for pulp mill combustion sources (40 CFR Part 63, Subpart MM) was originally proposed in 1998 and promulgated in 2001.

40 CFR Part 63, Subpart MM established a particulate matter emission limit of 0.20 pounds of PM per ton of black liquor solids fired. The particulate matter emission limit is a surrogate used for determining emissions of HAP metals.

As discussed above, 40 CFR Part 63, Subpart MM required the implementation of MACT which was updated after completion of the RTR that was completed on October 11, 2017. As a result of the RTR, EPA included periodic source test requirements (every 5 years) for smelt dissolver tanks to demonstrate compliance with the HAP metals standard. The proposed AOP has been updated to include this updated source test frequency. Language regarding representative conditions, notification, recordkeeping, on-going compliance, and reporting have also been added.

Ecology has moved this requirement to group it with other limits on PM emissions. This will provide for one general location for all PM limits

Condition B2.3 – Opacity: Order 3462-AQ07; WAC 173-405-040(6); and 40 CFR Part 64

Order 3462-AQ07 requires that the Permittee demonstrate compliance with the opacity limit by maintaining emission control parameter hourly average rates at levels specified in the "Emission Control Compliance Demonstration Plan".

The WAC 173-405-040(6) condition has been updated to clarify that the reference test method is EPA RM 9.

Condition B2.4 – Scrubber Operating Limit as a surrogate for HAP Metals: 40 CFR Part 63, Subpart MM

Continuous compliance with the HAP metals standard is assured through the use of continuous parameter monitoring systems (CPMS). AOP language has been updated to reflect the language in the federal regulation. Recordkeeping requirements have been included.

Monthly reporting requirements have been added.

The RTR revised the excess emission reporting requirement from quarterly to semi-annual; this change has been reflected in the AOP.

Ecology has moved this condition to group it with other limits on scrubber operation. This will provide for one general location for all such limits.

Condition B2.5 – Sulfur Dioxide (SO_2): WAC 173-405-040(11)(b) and PSD 01-03, Amendment 3

SO_2 limit compliance is monitored triennially/monthly using an EPA Reference Method 6C source test. Source testing frequency must be increased from triennially to monthly if a single source test exceeds 75% of the limit. The tons per year limit language has been updated to clarify that the compliance value is a 12-month total and not an average.

The WAC SO_2 limit was redundant since it was already contained in the facility-wide general requirements. It has been removed from this condition of the AOP.

Condition B2.6 – Total Reduced Sulfur (TRS): PSD 01-03, Amendment 3 and 40 CFR Part 60, Subpart BB

TRS limit compliance is monitored triennially/monthly using an EPA Reference Method 16 source test. TRS is to be reported as H_2S. Source testing frequency must be increased from triennially to monthly if a single source test exceeds 75% of the limit. The tons per year limit language has been updated to clarify that the compliance value is a 12-month total and not an average.

Language has been added requiring the submittal of stack test reports to Ecology.

Condition B2.7 – Carbon Monoxide (CO): PSD 01-03, Amendment 3

CO limit compliance is monitored triennially/monthly using an EPA Reference Method 10 source test. Source testing frequency must be increased from triennially to monthly if a single source test exceeds 75% of the limit. The tons per year limit language has been updated to clarify that the compliance value is a 12-month total and not an average.

Language has been added requiring the submittal of stack test reports to Ecology.

Condition B2.8 – Nitrogen Oxides (NO_x): PSD 01-03, Amendment 3

NO_x limit compliance is monitored triennially/monthly using an EPA Reference Method 7 source test. Source testing frequency must be increased from triennially to monthly if a single source test exceeds 75% of the limit. The tons per year limit language has been updated to clarify that the compliance value is a 12-month total and not an average.

Language has been added requiring the submittal of stack test reports to Ecology.

Condition B2.9 – Operating Limit: PSD 01-03, Amendment 3

PSD 01-03, Amendment 3, Condition 1.45 limits recovery furnace throughput (associated with Smelt Dissolver Tank 22) to 1950 tons of black liquor solids per day on a monthly average.

Other Notable Changes

The Startup, Shutdown, Malfunction (SSM) exemption and associated plan language was removed from 40 CFR Part 63, Subpart MM as part of the EPA RTR. The SSM language (Condition B4.9 in the AOP which expired on March 1, 2012) has been removed from the proposed AOP.

C. LIME KILNS

Lime Kiln 1 (Shut Down)

Lime Kiln 1 was shut down in March 2006 per letter received by Ecology on October 23, 2008.

Lime Kiln 2 (Shut Down)

Lime Kiln 2 was permanently retired in March 2008 per letter to Ecology on November 1, 2012.

LIME KILN 3 (Condition C1)

Emissions from Lime Kiln 3 are controlled by a Ducon wet venturi scrubber.

Lime Kiln 3 is equipped with CPMS to monitor pressure drop (inches H_2O), scrubber recirculation flow (gallons per minute), and make-up water flow (gallon per minute). Lime Kiln 3 is equipped with CEMS for measurement of total reduced sulfur and oxygen.

Applicable unit specific regulations/orders include: 40 CFR Part 63, Subpart MM (National Emission Standards for Hazardous Air Pollutants for Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-alone Semi-chemical Pulp Mills); 40 CFR Part 64 (Compliance Assurance Monitoring); 173-405 Washington Administrative Code (Kraft Pulping Mills); PSD 01-03, Amendment 3; and Order 3462-AQ07.

Ecology has adopted 40 CFR Part 63 and appendices by reference in WAC 173-400-075.

Ecology has adopted 40 CFR Part 60 and appendices by reference in WAC 173-400-115.

Condition C1.1 – Particulate Matter: PSD 01-03, Amendment 3; WAC 173-405-040(3)(a); and 40 CFR Part 64

The Permittee monitors PM and PM_{10} emission limit compliance with monthly/quarterly source tests. Source test frequency may be reduced to quarterly if 6 consecutive months' tests are below 75% of the limitation.

Language has been added requiring the submittal of stack test reports to Ecology.

The Permittee is required to reasonably assure compliance with these applicable requirements. The Permittee accomplishes this by monitoring emission control device parameters that have been established in the "Emission Control Compliance Demonstration Plan". The plan was developed as a requirement of Order 3462-AQ07. The Permittee monitors the pressure drop (inches water), scrubber recirculation flow (gallons per minute), and make-up water flow (gallons per minute). Any three-hour average deviation from the established operating parameters requires corrective action.

Mass emission are calculated using the source test data to assure compliance with the 12-month rolling total mass limit. The tons per year limit language has been updated to clarify that the compliance value is a 12-month total and not an average.

Condition C1.2 – PM as surrogate for HAP Metals: 40 CFR Part 63, Subpart MM

The NESHAP for pulp mill combustion sources (40 CFR Part 63, Subpart MM) was originally proposed in 1998 and promulgated in 2001.

40 CFR Part 63, Subpart MM established a particulate matter emission limit of 0.064 grains per dry standard cubic feet corrected to 10 percent oxygen. The particulate matter emission limit is a surrogate used for determining emissions of hazardous air pollutant (HAP) metals.

As discussed above, 40 CFR Part 63, Subpart MM required the implementation of MACT which was updated after completion of the RTR that was completed on October 11, 2017.As a result of the RTR, EPA included periodic source test requirements (every 5 years) for lime kilns to demonstrate compliance with the HAP metals standard. The proposed AOP has been updated to include this updated source test frequency. Language regarding representative conditions, notification, recordkeeping, on-going compliance, and reporting have also been added.

Ecology has moved this requirement to group it with other limits on PM emissions. This will provide for one general location for all PM limits.

Condition C1.3 – Opacity: Order 3462-AQ07; WAC 173-405-040(6); and 40 CFR Part 64

Order 3462-AQ07 requires that the Permittee demonstrate compliance with the opacity limit by maintaining emission control parameter hourly average rates at levels specified in the "Emission Control Compliance Demonstration Plan".

The WAC 173-405-040(6) condition has been updated to clarify that the reference test method is EPA RM 9.

Condition C1.4 – Scrubber Operating Limit as a surrogate for HAP Metals: 40 CFR Part 63, Subpart MM

Continuous compliance with the HAP metals standard is assured through the use of CPMS. AOP language has been updated to reflect the language in the federal regulation. Recordkeeping requirements have been included.

Monthly reporting requirements have been added.

The RTR revised the excess emission reporting requirement from quarterly to semi-annual; this change has been reflected in the AOP.

Condition C1.5 – Sulfur Dioxide (SO_2): WAC 173-405-040(11)(a) and PSD 01-03, Amendment 3

SO_2 limit compliance was previously monitored triennially/monthly using an EPA Reference Method 6C source test. The use of a CEMS to demonstrate compliance was approved by Ecology per letter dated September 9, 2008. Periodic source testing is no longer required and has been removed from the AOP and replaced with a requirement for CEMS monitoring.

The tons per year limit language has been updated to clarify that the compliance value is a 12-month total and not an average.

Condition C1.6 – Total Reduced Sulfur (TRS): PSD 01-03, Amendment 3 and 40 CFR Part 60, Subpart BB

TRS limit compliance is determined through the use of CEMS. The tons per year limit language has been updated to clarify that the compliance value is a 12-month total and not an average.

Lime Kiln 3 is used to combust non-condensable gases (NCGs). 40 CFR Part 60, Subpart BB requires that a temperature greater or equal to 1200 degrees Fahrenheit be maintained with a retention time of 0.5 seconds in the lime kiln when burning NCGs from affected units.

Condition C1.7 – Carbon Monoxide (CO): PSD 01-03, Amendment 3

CO limit compliance is monitored annually/monthly using an EPA Reference Method 10 source test. Source testing frequency must be increased from annually to monthly if a single source test exceeds 75% of the limit. The tons per year limit language has been updated to clarify that the compliance value is a 12-month total and not an average.

Language has been added requiring the submittal of stack test reports to Ecology.

Condition C1.8 – Nitrogen Oxides (NO_x): PSD 01-03, Amendment 3

NO_x limit compliance is monitored annually/monthly using an EPA Reference Method 7 source test. Source testing frequency must be increased from annually to monthly if a single source test exceeds 75% of the limit. The tons per year limit language has been updated to clarify that the compliance value is a 12-month total and not an average.

Language has been added requiring the submittal of stack test reports to Ecology.

Condition C1.9 – Oxygen (O_2): Order 3462-AQ07

O_2 is to be continuously monitored using a continuous emission monitoring system (CEMS).

Condition C1.10 – Operating Limit: PSD 01-03, Amendment 3

PSD 01-03, Amendment 3, Condition 1.57 limits the production of Lime Kiln 3 to 240 tons of lime per day on a monthly average.

Condition C1.11 – Stack Dimensions: PSD 01-03, Amendment 3 and Order 3462-AQ07

Language regarding stack dimensions has been moved from a footnote and is now included in the requirements table.

Condition C1.12 – Total Reduced Sulfur (TRS): WAC 173-405-050

The TRS emission limits in Condition C1.12 are state-only requirements and are not federally enforceable.

Other Notable Changes

The Startup, Shutdown, Malfunction (SSM) exemption and associated plan language was removed from 40 CFR Part 63, Subpart MM as part of the EPA RTR. The SSM language (Condition C3.11 in the AOP which expired on March 1, 2012) has been removed from the proposed AOP.

LIME KILN 4 (Condition C2)

Emissions from Lime Kiln No. 4 are controlled by a modified "hydro-dynamic" scrubber. The scrubber was initially designed to operate with low pressure drop and to rely on a high pressure nozzle to provide the energy for particulate control. The scrubber was retrofitted with a variable position plug which allowed the throat to be controlled more like a traditional venturi scrubber.

Lime Kiln 4 is equipped with CPMS to monitor pressure drop (inches H_2O), scrubber recirculation flow (gallons per minute), and make-up water flow (gallon per minute). Lime Kiln 4 is equipped with CEMS for measurement of total reduced sulfur and oxygen.

Applicable unit specific regulations/orders include: 40 CFR Part 63, Subpart MM (National Emission Standards for Hazardous Air Pollutants for Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-alone Semi-chemical Pulp Mills); 40 CFR Part 64 (Compliance Assurance Monitoring); 173-405 Washington Administrative Code (Kraft Pulping Mills); PSD 01-03, Amendment 3; and Order 3462-AQ07.

Ecology has adopted 40 CFR Part 63 and appendices by reference in WAC 173-400-075.

Ecology has adopted 40 CFR Part 60 and appendices by reference in WAC 173-400-115.

Condition C2.1 – Particulate Matter: PSD 01-03, Amendment 3; WAC 173-405-040(3)(a); and 40 CFR Part 64

The Permittee monitors PM and PM_{10} emission limit compliance with monthly/quarterly source tests. Source test frequency may be reduced to quarterly if 6 consecutive months' tests are below 75% of the limitation.

Language has been added requiring the submittal of stack test reports to Ecology.

The Permittee is required to reasonably assure compliance with these applicable requirements. The Permittee accomplishes this by monitoring emission control device parameters that have been established in the "Emission Control Compliance Demonstration Plan". The plan was developed as a requirement of Order 3462-AQ07. The Permittee monitors the pressure drop (inches water), scrubber recirculation flow (gallons per minute), and make-up water flow (gallons per minute). Any three-hour average deviation from the established operating parameters requires corrective action.

Mass emissions are calculated using the source test data to assure compliance with the 12-month rolling total mass limit. The tons per year limit language has been updated to clarify that the compliance value is a 12-month total and not an average.

Condition C2.2 – PM as a surrogate for HAP Metals: 40 CFR Part 63, Subpart MM

The NESHAP for pulp mill combustion sources (40 CFR Part 63, Subpart MM) was originally proposed in 1998 and promulgated in 2001.

40 CFR Part 63, Subpart MM established a particulate matter emission limit of 0.064 grains per dry standard cubic feet corrected to 10 percent oxygen. The particulate matter emission limit is a surrogate used for determining emissions of HAP metals.

As discussed above, 40 CFR Part 63, Subpart MM required the implementation of MACT which was updated after completion of the RTR that was completed on October 11, 2017.

As a result of the RTR, EPA included periodic source test requirements (every 5 years) for lime kilns to demonstrate compliance with the HAP metals standard. The proposed AOP has been updated to include this updated source test frequency.

Language regarding representative conditions, notification, recordkeeping, on-going compliance, and reporting have also been added.

Condition C2.3 – Opacity: Order 3462-AQ07; WAC 173-405-040(6); and 40 CFR Part 64

Order 3462-AQ07 requires that the Permittee demonstrate compliance with the opacity limit by maintaining emission control parameter hourly average rates at levels specified in the "Emission Control Compliance Demonstration Plan".

The WAC 173-405-040(6) condition has been updated to clarify that the reference test method is EPA RM 9.

Condition C2.4 – Scrubber Operating Limit as a surrogate for HAP Metals: 40 CFR Part 63, Subpart MM

Continuous compliance with the HAP metals standard is assured through the use of CPMS. AOP language has been updated to reflect the language in the federal regulation. Recordkeeping requirements have been included.

Monthly reporting requirements have been added.

The RTR revised the excess emission reporting requirement from quarterly to semi-annual; this change has been reflected in the AOP.

Condition C2.5 – Sulfur Dioxide (SO_2): WAC 173-405-040(11)(a) and PSD 01-03, Amendment 3

SO_2 limit compliance was previously monitored triennially/monthly using an EPA Reference Method 6C source test. The use of a CEMS to demonstrate compliance was approved by Ecology per letter dated September 9, 2008. Periodic source testing is no longer required and has been removed from the AOP and replaced with a requirement for CEMS monitoring.

The tons per year limit language has been updated to clarify that the compliance value is a 12-month total and not an average.

Condition C2.6 – Total Reduced Sulfur (TRS): PSD 01-03, Amendment 3 and 40 CFR Part 60, Subpart BB

TRS limit compliance is determined through the use of a CEMS. The tons per year limit language has been updated to clarify that the compliance value is a 12-month total and not an average.

Lime Kiln 4 is used to combust NCGs. 40 CFR Part 60, Subpart BB requires that a temperature greater or equal to 1200 degrees Fahrenheit be maintained with a retention time of 0.5 seconds in the lime kiln when burning NCGs from affected units.

Condition C2.7 – Carbon Monoxide (CO): PSD 01-03, Amendment 3

CO limit compliance is monitored annually/monthly using an EPA Reference Method 10 source test. Source testing frequency must be increased from annually to monthly if a single source test exceeds 75% of the limit. The tons per year limit language has been updated to clarify that the compliance value is a 12-month total and not an average.

Language has been added requiring the submittal of stack test reports to Ecology.

Condition C2.8 – Nitrogen Oxides (NO_x): PSD 01-03, Amendment 3

NO_x limit compliance is monitored annually/monthly using an EPA Reference Method 7 source test.

Source testing frequency must be increased from annually to monthly if a single source test exceeds 75% of the limit. The tons per year limit language has been updated to clarify that the compliance value is a 12-month total and not an average.

Language has been added requiring the submittal of stack test reports to Ecology.

Condition C2.9 – Oxygen (O_2): Order 3462-AQ07

O_2 is to be continuously monitored using a CEMS.

Condition C2.10 – Operating Limit: PSD 01-03, Amendment 3

PSD 01-03, Amendment 3, Condition 1.63 limits the production of Lime Kiln 4 to 250 tons of lime per day on a monthly average.

Condition C2.11 – Stack Dimensions: PSD 01-03, Amendment 3 and Order 3462-AQ07

Language regarding stack dimensions has been moved from a footnote and is now included in the requirements table.

Condition C2.12 – Total Reduced Sulfur (TRS): WAC 173-405-050

The TRS emission limits in Condition C1.12 are state-only requirements and are not federally enforceable.

Other Notable Changes

The Startup, Shutdown, Malfunction (SSM) exemption and associated plan language was removed from 40 CFR Part 63, Subpart MM as part of the EPA RTR. The SSM language (Condition C4.11 in the AOP which expired on March 1, 2012) has been removed from the proposed AOP.

LIME KILN 5 (Condition C3)

Emission from Lime Kiln No. 5 are controlled by two ESPs (north and south) each with two fields. Lime Kiln 5 is equipped with CEMS for total reduced sulfur, carbon monoxide, nitrogen oxides, sulfur dioxide and oxygen on one of the two stacks. Lime Kiln 5 is equipped with two COMS for measurement of opacity in each stack (north and south). Lime Kiln 5 is authorized to treat non-condensable gases (NCGs) by NOC Order No. 8429, Condition 11. Longview Fibre notified Ecology via letter dated December 20, 2013 of its intent to burn strong NCGs in Lime Kiln 5. Longview Fibre initially burned strong NCGs in Lime Kiln 5 on February 25, 2014 per letter to Ecology dated March 4, 2014.

Lime Kiln 5 exhausts from two stacks. Opacity limits apply to each stack individually. All other limits apply to the total emissions from the combined stacks.

Applicable unit specific regulations/orders include: 40 CFR Part 63, Subpart MM (National Emission Standards for Hazardous Air Pollutants for Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-alone Semi-chemical Pulp Mills); 40 CFR Part 60, Subpart BB (Standards of Performance for Kraft Pulp Mills); 40 CFR Part 64 (Compliance Assurance Monitoring); 173-405 Washington Administrative Code (Kraft Pulping Mills); PSD 01-03, Amendment 3; and Order 3462-AQ07.

Ecology has adopted 40 CFR Part 63 and appendices by reference in WAC 173-400-075.

Ecology has adopted 40 CFR Part 60 and appendices by reference in WAC 173-400-115.

Condition C3.1 – Particulate Matter: PSD 01-03, Amendment 3; 40 CFR Part 60, Subpart BB; 40 CFR Part 64, and WAC 173-405-040(3)(a)

The Permittee monitors PM and PM_{10} emission limit compliance with monthly/quarterly source tests. Source test frequency may be reduced to quarterly if 6 consecutive months' tests are below 75% of the limitation.

Language has been added requiring the submittal of stack test reports to Ecology.

The Permittee is required to reasonably assure compliance with these applicable requirements. The Permittee accomplishes this by monitoring opacity using a COMS. Corrective action is required if the average of ten consecutive 6-minute averages result in a measurement greater than 20 percent opacity.

Language has been added to the NSPS requirement to clarify sampling procedures and calculation methodology.

Mass emission are calculated using the source test data to assure compliance with the 12-month rolling total mass limit. The tons per year limit language has been updated to clarify that the compliance value is a 12-month total and not an average.

Condition C3.2– PM as a surrogate for HAP Metals: 40 CFR Part 63, Subpart MM

The National Emission Standards for Hazardous Air Pollutants (NESHAP) for pulp mill combustion sources (40 CFR Part 63, Subpart MM) was originally proposed in 1998 and promulgated in 2001.

40 CFR Part 63, Subpart MM established a particulate matter emission limit of 0.064 grains per dry standard cubic feet corrected to 10 percent oxygen. The particulate matter emission limit is a surrogate used for determining emissions of hazardous air pollutant (HAP) metals.

40 CFR Part 63, Subpart MM required the implementation of maximum achievable control technology (MACT). The Clean Air Act (CCA) requires that EPA periodically review following the implementation of MACT standards to assess whether residual risk remains and if additional standards are need. This Risk and Technology Review (RTR) was completed on October 11, 2017 for the standards in 40 CFR Part 63, Subpart MM. As a result of the RTR, EPA included periodic source test requirements (every 5 years) for lime kilns to demonstrate compliance with the HAP metals standard. The proposed AOP has been updated to include this updated source test frequency. Language regarding representative conditions, notification, recordkeeping, on-going compliance, and reporting have also been added.

Condition C3.3 – Opacity: Order 3462-AQ07, Modification 1

This condition has been updated to reflect the modification of Order 3462-AQ07 and the updated requirements for opacity.

Condition C3.3 – Opacity: WAC 173-405-040(6) and 40 CFR Part 64

Commented [RA11]: See comments in AOP for this limit

The WAC 173-405-040(6) condition has been updated to clarify that the reference test method is EPA RM 9. Language referring to "excursions" has been updated to read "exceedance".

Condition C3.4 – Opacity as a surrogate for HAP Metals: 40 CFR Part 63, Subpart MM

Continuous compliance with the HAP metals standard is assured through the use of a COMS. As a result of the RTR, EPA revised the violation determination.

A violation now occurs when opacity is greater than 20 percent for 3 percent or more of operating time during a semi-annual period when lime mud is fed; previously the allowance was 6 percent of operating time. Recordkeeping and reporting language has been updated.

The RTR revised the excess emission reporting requirement from quarterly to semi-annual; this change has been reflected in the AOP.

Condition C3.5 – Sulfur Dioxide (SO_2): WAC 173-405-040(9)(a) and PSD 01-03, Amendment 3

SO_2 limit compliance was previously monitored monthly/quarterly using an EPA Reference Method 6C source test. Order 8429 approved the use of a SO_2 CEMS for compliance with the SO_2 limit. The AOP has been updated to reflect this change. The CEMS was put into service on January 8, 2014 per letter to Ecology dated March 4, 2014.

The tons per year limit language has been updated to clarify that the compliance value is a 12-month total and not an average.

Condition C3.6 – Total Reduced Sulfur (TRS): PSD 01-03, Amendment 3 and 40 CFR Part 60, Subpart BB

TRS limit compliance is determined through the use of a CEMS. The tons per year limit language has been updated to clarify that the compliance value is a 12-month total and not an average.

Lime Kiln 5 is used to combust NCGs. ~~40 CFR Part 60, Subpart BB requires that a temperature greater or equal to 1200° F be maintained with a retention time of 0.5 seconds in the lime kiln when burning NCGs from affected units. EPA eliminated temperature monitoring requirements for power boilers, recovery furnaces, and lime kilns on the basis that the flame temperatures and residence times at which these units are expected to operate exceed the 1200° F and ½ second considered necessary for adequate incineration of TRS emissions (see *Kraft Pulp Mills – Background Information for Promulgated Revisions to Standards*; EPA-450/3-82-020). The AOP has been updated to reflect these requirements.~~

Commented [RA12]: Per the draft AOP comments, the temperature and retention time requirements are not applicable to LK5. Note that this is different than saying that monitoring of temperature and retention time is not required.

Condition C3.7 – Carbon Monoxide (CO): PSD 01-03, Amendment 3

CO limit compliance is monitored using a CEMS that conforms to Performance Specification 4, in 40 CFR 60, Appendix B. The tons per year limit language has been updated to clarify that the compliance value is a 12-month total and not an average.

Condition C3.8 – Nitrogen Oxides (NO_x): PSD 01-03, Amendment 3

NO_x limit compliance was previously monitored annually/monthly using an EPA Reference Method 7 source test. Order 8429 approved the use of a NO_x CEMS for compliance with the NO_x limit. The AOP has been updated to reflect this change.

The tons per year limit language has been updated to clarify that the compliance value is a 12-month total and not an average.

Condition C3.9 – Oxygen (O_2): Order 3462-AQ07 and 40 CFR Part 60, Subpart BB

O_2 is to be continuously monitored using a continuous emission monitoring system (CEMS).

Condition C3.10 – Operating Limit: PSD 01-03, Amendment 3

PSD 01-03, Amendment 3, Condition 1.69 limits the production of Lime Kiln 5 to 325 tons of lime per day on a monthly average.

Condition C3.11 – HAPs (Operating Limit): 40 CFR Part 63, Subpart MM

As a result of the RTR, EPA revised 40 CFR Part 63, Subpart MM to include a requirement that facilities maintain proper operation of the electrostatic precipitator's automatic voltage control (AVC). Language has been added to the AOP to reflect this new requirement.

Condition C3.12 – Total Reduced Sulfur (TRS): WAC 173-405-050

The TRS emission limits in Condition C3.12 are state-only requirements and are not federally enforceable.

Other Notable Changes

The Startup, Shutdown, Malfunction (SSM) exemption and associated plan language was removed from 40 CFR Part 63, Subpart MM as part of the EPA RTR. The SSM language (Condition C5.10 in the AOP which expired on March 1, 2012) has been removed from the proposed AOP.

D. NON-CONDENSIBLE GAS AND CONDENSATE SYSTEMS

LOW VOLUME, HIGH CONCENTRATION SYSTEM (Condition D1)

40 CFR Part 63, Subpart S (National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry) requires the capture and control of HAPs from the Low Volume, High Concentration (LVHC) systems at kraft, soda, and semi-chemical pulp and paper mills. LVHC gases are controlled at Lime Kiln 3, Lime Kiln 4, and Lime Kiln 5.

Affected Units

LVHC systems "means the collection of equipment including the digester, turpentine recovery, evaporator, steam stripper systems, and any other equipment serving the same function as those previously listed."

Affected emission units include: #1 Kamyr digester; #2 Kamyr digester; #8 Evaporator System; #9 Evaporator System; #10 Evaporator System; Turpentine System; Steam Stripper System; Spill Tank, and NSSC LVHC system.

The #16, 18, 19, 20, and 21 Batch digester systems (including #3 Blow Tank); #5, 6, 7, 15, 17, 19, 20, and 21 Batch Digester systems (including #7 Blow Tank) were shut down in February 2006 or earlier.

Longview Fibre shut down #5 M&D Digester in March 2001. Longview Fibre shut down # 3 M&D Digester in November 2008 per letter received by Ecology on December 16, 2008. KapStone shut down #5 M&D Digester in March 2001 per letter received by Ecology on October 23, 2008. KapStone shut down #4 M&D Digester on January 9, 2018.

#4, 5, and 6 Evaporator Systems (except #4 and 5 tail water sumps) were shut down per letter from Longview Fibre Company, dated June 6, 2007.

Condition D1.1 through D1.13 – LVHC Collection and Treatment: 40 CFR Part 63, Subpart S

LVHC NCGs are to be collected and treated in accordance with 40 CFR Part 63, Subpart S. This requires the collection and treatment of LVHC NCGs; the inspection and repair/maintenance of the LVHC system; recordkeeping of NCG venting events; and monitoring of thermal oxidizer combustion temperature. LVHC NCG venting for periods in excess of 1% of total operating time are considered violations.

The EPA performed a residual risk and technology review for 40 CFR Part 63, Subpart S. As a result of the review, Subpart S was updated in 2012; the exclusion of startup, shutdown, and maintenance LVHC venting events from the 1% venting allowance previously allowed in 40 CFR 63.443(e) has been removed.

Condition D1.7 through D1.10 – LVHC Collection and Treatment: Order 3463-AQ07

Order No. 3463-AQ07 modified certain LVHC inspection and monitoring requirements. EPA delegated to Ecology the authority to approved minor alternatives to monitoring required by National Emission Standards for Hazardous Air Pollutants (66 FR 35115 and 67 FR 11417).

Ecology approved an alternative frequency (Conditions D1.9 and D1.10) for leak checks for certain areas which posed worker safety concerns related to access, confined space, or other factors.

Ecology also approved a modification which allows for the visual inspections required by Condition D1.7 and D1.8 to occur once each calendar month instead of once every 30 days. EPA has approved similar modifications to Smurfit-Stone Container Corporation, International Paper (Terre Haute Mill), and P.H. Glatfelter Company (Spring Grove Mill).

PULPING PROCESS CONDENSATES (Condition D2)

40 CFR Part 63, Subpart S (National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry) requires the collection and control of HAPs from kraft pulping process condensates.

Affected Units

Pulping process condensates, "means any HAP-containing liquid that results from contact of water with organic compounds in the pulping process. Examples of process condensates include digester system condensates, turpentine recovery system condensates, evaporator system condensates, LVHC system condensates, HVLC system condensates, and any other condensates from equipment serving the same function as those previously listed. Liquid streams that are intended for byproduct recovery are not considered process condensate streams."

Affected emission units include: #1 Kamyr Digester System Foul Condensates; #2 Kamyr Digester System Foul Condensates; #8 Evaporator Surface Condenser, Vacuum System & Vapor Condensates off a Primary Feed Effect; #9 Evaporator Surface Condenser, Vacuum System & Vapor Condensates off a Primary Feed Effect; #10 Evaporator Surface Condenser, Vacuum System & Vapor Condensates off a Primary Feed Effect; Turpentine System; Decanter Underflow Foul Condensates~~#1 Kamyr Digester System Foul Condensates; #2 Kamyr Digester System Foul Condensates; #4 Evaporator Surface Condenser, Vacuum System & Vapor Condensates off a Primary Feed Effect; #5 Evaporator Surface Condenser, Vacuum System & Vapor Condensates off a Primary Feed Effect; #6 Evaporator Surface Condenser, Vacuum System & Vapor Condensates off a Primary Feed Effect; #7 Evaporator Surface Condenser, Vacuum System & Vapor Condensates off a Primary Feed Effect; #8 Evaporator Surface Condenser, Vacuum System & Vapor Condensates off a Primary Feed Effect; #9 Evaporator Surface Condenser, Vacuum System & Vapor Condensates off a Primary Feed Effect; #10 Evaporator Surface Condenser, Vacuum System & Vapor Condensates off a Primary Feed Effect; Turpentine System; Decanter Underflow Foul Condensates; #3 Blow Heat Recovery Accumulator Foul Condensate; Batch Digester Systems Black Liquor Separators; and #6 Blow tank Condenser and After Condenser Condensates~~.

Commented [RA13]: A number of these units have been permanently retired from service. This list is now consistent with the one in the draft AOP Condition D2.

Condition D2.1 through D2.8 – Condensate Collection and Treatment: 40 CFR Part 63,

Subpart S

WestRock Longview collects condensate from the kraft pulping process which are sent to a closed column feed tank. The closed column feed tank sends the condensates to an odor control steam stripping column for removal of some of the terpenes and total reduced sulfur compounds.

The off gasses from the steam stripper are re-condensed into the turpentine recovery system or sent to the LVHC NCG system for incineration. The steam stripper is not designed to remove significant amounts of HAPs. The liquid discharge stream from the steam stripper is collected through a closed collection system and treated. Conditions D2.1 through D2.8 require the inspection/repair/maintenance of the condensate collection system and proper operation and maintenance. Kraft pulping process condensates are destroyed in a UNOX reactor which uses pure oxygen and activated sludge. Daily inlet and outlet DCD samples are collected using 24-hour composite samplers and analyzed for methanol. A daily grab sample of the Return Activated Sludge (RAS) is also collected and analyzed for methanol. The Permittee must demonstrate 6.6 lb/ODTP destruction of total HAPs. Although the DCD/UNOX reactor are not considered "open biological systems," WestRock Longview has chosen to perform quarterly performance tests as specified in 40 CFR 63.453(j)(3). Mass removal is determined according to the requirements in 40 CFR 63.457(l)(2). Ecology has added language to specify the quarterly performance tests.

Ecology has added language to Condition D2.6 stating that the inspection frequency is once per calendar month as approved through Order 3463-AQ07.

HIGH VOLUME, LOW CONCENTRATION SYSTEM (Condition D3)

High Volume, Low Concentration (HVLC) system is defined in 40 CFR Part 63, Subpart S as "the collection of equipment including the pulp washing, knotter, screen, decker, and oxygen delignification systems, and any other equipment serving the same function as those previously listed."

40 CFR Part 63, Subpart S requires the control of HAP emissions from specific: knotters/screen systems, pulp washing systems, and deckers. HVLC gases are controlled by Lime Kiln 3, Lime Kiln 4, and Power Boiler 20.

Affected Units

The Permittee has two Kamyr Digesters (#1 and 2) each with three refiners, two two-stage diffusion washers, diffusion wash filtrate tank, washed pulp intermediate high density storage tank, four low-consistency reject screens, and two deckers.

As discussed previously, the Permittee shutdown the batch digesters and Messing and Durkee continuous sawdust digesters.

HVLC Compliance Determination

The Permittee submitted a compliance determination, "MACT 1, Phase 2 High Volume, Low Concentration and Clean Condensate Alternative Proposal for Longview Fibre Company" dated December 27, 2007. Longview Fibre Company identified systems affected by the 40 CFR Part 63, Subpart S HVLC requirements. The Permittee determined that the diffusion washers for the Kamyr Digesters are capped by a layer of washed pulp therefore do not require additional controls.

Per 40 CFR 63.443(a)(1)(iv), Kamyr decker systems are exempt from the requirement for HVLC collection if they use process water with a total HAP concentration less than or equal to 400 parts per million by weight. At this facility, process water used in the Kamyr digester system deckers is a combination of evaporator combined condensate and/or fresh water. The Permittee provided extensive records demonstrating that the evaporator combined condensate contains less than 400 parts per million by weight of total HAPs and are therefore exempt from the HAP collection requirements.

Clean Condensate Alternative

As an alternative to the collection and treatment requirements for the HVLC system, 40 CFR Part 63, Subpart S allows for alternative collection and treatment of HAPs found in process condensates. This option is call the "clean condensate alternative".

In the "MACT 1, Phase 2 High Volume, Low Concentration and Clean Condensate Alternative Proposal for Longview Fibre Company" dated December 27, 2007, Longview Fibre Company proposed alternative condensate collection and treatment options.

The pulp generated through the batch digestion and continuous sawdust digesters was washed in the No. 6 and 7 washer lines. The Permittee determined that the collection of HVLC gases from these sources was cost prohibitive and therefore the Permittee has chosen to comply with the HVLC collection and treatment requirements through the use of the Clean Condensate Alternative (CCA) provisions in 40 CFR 63.447. The CCA allows for facilities to not collect and destroy HAPs from all or portions of HVLC systems if an equal or greater amount of HAPs are controlled through the use of CCA technologies. On September 13, 2005, Ecology issued Order 2737-AQ05 which mandated enforceable conditions to assure applicable HAP collection requirements are met using the CCA (Conditions D3.1 through D3.4). The Permittee chose to collect additional HAPs from the #9 and 10 evaporators.

Other changes

The SSM Plan requirements were removed by the 40 CFR Part 63, Subpart S amendments published in the Federal Register on September 11, 2012.

Commented [RA14]: WestRock requests to document that washer lines No. 5, 6 and 7 for which these additional collection and destruction requirements were established have been permanently retired from service.

E. NEUTRAL SULFITE SEMI-CHEMICAL PLANT

In the Neutral Sulfite Semi-Chemical (NSSC) process, hardwood chips are impregnated with sulfite and carbonate at a neutral pH, cooked, and then fiberized/refined into pulp.

The NSSC Plant at WestRock Longview was modified as approved by Order No. 95AQI068 in 1995. The project replaced existing secondary pressifiner pulp washers with a new chemi-washer.

The throughput capacity of the new chemi-washer is 400 oven dried tons per day (ODTPD) but the NSSC Plant capacity is limited by the NSSC digester system throughput capacity of 250 ODTPD.

The NSSC Plant was modified in 1996 as approved by Order No. DE 96AQI076 which superseded Order No. 95AQI068. The old process included chip washing, cooking/softening, chemical extraction/pressing, and fiberizing/refining. The improved process included chip washing/separation, cooking/softening, refining, and pulp washing. The improved NSSC plant increased digester system throughput capacity from 250 ODTPD to 400 ODTPD. This order established the VOC emission limit (26.4 tons per year) and other requirements.

Order No. DE 01AQIS-3294 incorporated the NSSC plant requirements from Order No. DE 96AQI076. Order No. DE01AQIS-3294 was then rescinded and replaced by Order No. 3462-AQ07 in 2007.

Condition E1.1 – Volatile Organic Compounds (VOC): Order No. 3462-AQ07

VOC emissions are to be measured on an "as carbon" basis. Emission are limited to 26.4 tons per year. The reporting requirements have been added to Condition E1.1 for clarity. These requirements were previously included in the footnote.

Condition E1.2 – NCG Collection and Treatment: Order 3462-AQ07

The Permittee is required to collect and burn NCGs from the NSSC system.

Condition E1.3 – NSPS Subpart BB Applicability: Order 3462-AQ07

The Permittee must submit information to Ecology and EPA for a NSPS Subpart BB determination prior to changing any material from the kraft process into the NSSC system.

Condition E1.4 – Operations and Maintenance Manual: Order 3462-AQ07

The Permittee is required to follow and maintain an Operations and Maintenance Manual for the NSSC system.

F. DIGESTERS, MULTI-EFFECT EVAPORATORS, BROWNSTOCK WASHERS, AND CONDENSATE STRIPPER SYSTEMS

The requirements in Condition F1 capture requirements at the digester, multi-effect evaporators, brownstock washers, and condensate stripper systems.

Applicable unit specific regulations/orders include: 40 CFR Part 60, Subpart BB (Standards of Performance for Kraft Pulp Mills); 173-405 Washington Administrative Code (Kraft Pulping Mills); PSD 01-03, Amendment 3; Order 3462-AQ07; and Order 9213.

Ecology has adopted 40 CFR Part 60 and appendices by reference in WAC 173-400-115.

Condition F1.1 – Total Reduced Sulfur: 40 CFR Part 60, Subpart BB

Multi-effect Evaporator Set 10, No. 1 Kamyr Digester, and No. 2 Kamyr Digester are NSPS (40 CFR Part 60, Subpart BB) affected units. The NSPS applicability of these units is first documented in Order No. DE 01AQIS-3294 issued December 14, 2001 which was later superseded by Order 3462-AQ07.

Condition F1.2 – NCG Collection and Treatment: WAC 173-405-040 and Order 3462-AQ07

The Permittee must collect and treat NCGs from digesters, evaporators, and condensate stripper systems.

Condition F1.3 – NCG Collection and Treatment: WAC 173-405-040

The Permittee must treat NCGs by thermal oxidation in a lime kiln or equivalent and install a backup system.

Condition F1.4 – Methanol: Order No. 9213

Order No. 9213 establishes a 12-month rolling average methanol limit for the final stage of brownstock washer shower water.

G. POWER BOILERS

Power Boiler 12 (Shut Down)

Power Boiler 12 retired from service December 31, 2012 per letter received by Ecology on January 7, 2013. Retired as part of Order 8429.

Power Boiler 13 (Shut Down)

Power Boiler 13 shutdown as part of Order 8429 on February 7, 2015 per letter to Ecology dated February 13, 2015. The physical connections to Power Boiler 13 were disconnected on April 30, 2015.

Power Boiler 14 (Shut Down)

Power Boiler 15 (Shut Down)

Power Boiler 17 (Shut Down)

Power Boiler 17 was shut down in November 2002 according to Order 3462-AQ07 and correspondence received from Longview Fibre dated October 20, 2008.

POWER BOILER 16 (Shut Down)

Power Boiler 16 was a natural gas fired boiler with no additional controls. Power Boiler 16 was last operated in 2009 and was formally decommissioned during the 2018 cold mill outage. WestRock Longview submitted to Ecology a letter serving as notice of permanent retirement dated September 6, 2019.

POWER BOILER 20 (Condition G1)

Power Boiler 20 (PB 20) was installed at the facility in 1976. PB 20 burns wood fuels (hog fuel, forest biomass, urban wood), oil (including reprocessed fuel oil), paper recycling residuals, primary/secondary sludge from the process wastewater treatment plant, and natural gas. The boiler is a hybrid suspension grate boiler designed to fire wet biomass as defined in 40 CFR Part 63, Subpart DDDDD. PB 20 exhausts from two stacks and~~.~~ is equipped with CEMS for total carbon monoxide, nitrogen oxides, sulfur dioxide and oxygen on one of the two stacks. Opacity limits apply to each stack individually. All other limits apply to the total emissions from the combined stacks.

Emissions from PB20 are controlled using multiclones, four wet scrubbers operating in parallel (replacing original Joy scrubbing system, approved in 2007 under NOC Order 4115-AQ07 and determined to meet RACT), and two wet electrostatic precipitators (installed in 2004). The Power Boiler also uses a selective non-catalytic reduction (SNCR) system to reduce the NOx emissions which was installed as part of Order 8429 which allowed for higher solid fuel firing rate. The modified Power Boiler 20 was placed into operation on October 11, 2014 per a letter from the facility on October 16, 2014.

Applicable unit specific regulations/orders include: 40 CFR Part 60, Subpart D (Standards of Performance for Fossil-Fuel –Fired Steam Generators); 40 CFR Part 60, Subpart Db (Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units); 40 CFR Part 63, Subpart DDDDD (National Emissions Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters); 40 CFR Part 64; 173-405 Washington Administrative Code (Kraft Pulping Mills); PSD 01-03, Amendment 3; and Orders 3462-AQ07, 3466-AQ07, and 8429.

Ecology has adopted 40 CFR Part 63 and appendices by reference in WAC 173-400-075.

Ecology has adopted 40 CFR Part 60 and appendices by reference in WAC 173-400-115.

Condition G1.1 – Particulate Matter: Order 3466-AQ07; PSD 01-03, Amendment 3; Order 8429; 40 CFR Part 60, Subpart Db; 40 CFR Part 64; Order 3462-AQ07; and WAC 173-405-040(5)(a)

The Permittee monitors PM and PM_{10} emission limit compliance with monthly/quarterly source tests. Source testing frequency must be increased from quarterly to monthly if a single source test exceeds 75% of the limit.

Order 8429 has updated source testing frequency which allows for M/Q/A testing. Ecology has chosen to use the streamlining provisions in 40 CFR 70.6(a)(3) to apply the source testing frequency in PSD 01-03 for the requirements in Order 8429 until PSD 01-03 has updated source testing frequency language.

Language has been added requiring the submittal of stack test reports to Ecology.

The project approved through Order 8429 resulted in a pounds per hour increase in emissions of particulate matter. This emissions increase triggered the definition of modification in 40 CFR 60.14 and resulted in PB 20 being subject to the requirements of 40 CFR Part 60 Subpart Db for particulate matter and opacity. The AOP has been updated to include these requirements.

The tons per year limit language has been updated to clarify that the compliance value is a 12-month total and not an average.

Condition G1.2 – PM as a Surrogate for HAP Metals: 40 CFR Part 63, Subpart DDDDD

Power Boiler 20 is considered a hybrid suspension grate boiler designed wet biomass per Boiler MACT. The Permittee must demonstrate HAP metals compliance by an annual source test using EPA RM 5.

Condition G1.3 – Opacity: Order 3462-AQ07; WAC 173-405-040(6); 40 CFR Part 60, Subpart D; 40 CFR Part 60, Subpart Db; 40 CFR Part 64; and WAC 173-405-040(6)

The Permittee must demonstrate compliance with the opacity limit by ~~using a COMS~~meeting the ECCDP limits.

40 CFR Part 60, Subpart Db was triggered by the modification approved in Order 8429. The updated opacity requirement has been included.

Commented [RA15]: WestRock requests to document the PM performance test waiver granted by EPA for NSPS Subpart Db

Commented [RA16]: WestRock requests to document the opacity alternative monitoring approval by EPA for NSPS Subpart Db

The WAC 173-405-040(6) condition has been updated to clarify that the reference test method is EPA RM 9.

Condition G1.4 – Sulfur Dioxide (SO_2): PSD 01-03, Amendment 3; WAC 173-405-040(9)(b); and 40 CFR Part 60, Subpart D

SO_2 limit compliance is monitored using a CEMS that conforms to Performance Specification 2, in 40 CFR Part 60, Appendix B.

The tons per year limit language has been updated to clarify that the compliance value is a 12-month total and not an average.

Condition G1.5 – Total Reduced Sulfur (TRS): PSD 01-03, Amendment 3; and 40 CFR Part 60, Subpart BB

Power Boiler 20 is used to combust NCGs. 40 CFR Part 60, Subpart BB requires that a temperature greater or equal to 1200 °F be maintained with a retention time of 0.5 seconds in PB20 when burning NCGs from affected units. EPA eliminated temperature monitoring requirements for power boilers, recovery furnaces, and lime kilns on the basis that the flame temperatures and residence times at which these units are expected to operate exceed the 1200° F and ½ second considered necessary for adequate incineration of TRS emissions (see *Kraft Pulp Mills – Background Information for Promulgated Revisions to Standards*; EPA-450/3-82-020). The AOP has been updated to reflect this requirement.

Condition G1.6 – Carbon Monoxide (CO): PSD 01-03, Amendment 3 and 40 CFR Part 63, Subpart DDDDD

CO lb/hr limit compliance is monitored annually/monthly using an EPA Reference Method 10 source test. Source testing frequency must be increased from annually to monthly if a single source test exceeds 75% of the limit.

Language has been added requiring the submittal of stack test reports to Ecology.

CO ppm limit compliance (Boiler MACT) requires annual stack testing using EPA Reference Method 10. Oxygen must be monitored continuously using a CEMS and the 30-day rolling average oxygen content must be at or above the lowest hourly average oxygen concentration measured during the annual CO performance test.

The tons per year limit language has been updated to clarify that the compliance value is a 12-month total and not an average.

Condition G1.7 – Nitrogen Oxides (NO_x): PSD 01-03, Amendment 3 and 40 CFR Part 60, Subpart D

NO_x limit compliance is monitored continuously using a CEMS that conforms with Performance Specification 2 in 40 CFR Part 60, Appendix B.

The tons per year limit language has been updated to clarify that the compliance value is a 12-month total and not an average.

The AOP has been updated to clarify that NO_x is to be expressed as NO_2 as prescribed in EPA RM 7 which the reference method cited in the PSD permit and specified in 40 CFR 60.44(a).

Condition G1.8 – Ammonia: Order 8429

The Permittee installed a selective non-catalytic reduction (SNCR) system as part of the project approved by Order 8429. Proper operation of the SNCR system to control NH_3 emissions to ≤25 ppmv at 7% O_2 was determined to be RACT.

Sampling for NH3 is to be conducted annually/monthly using Bay Area Air Quality Management District (BAAQMD) Source Test Procedure ST-1B or alternative approved by Ecology. Source testing frequency must be increased from annually to monthly if a single source test exceeds 75% of the limit.

Language has been added requiring the submittal of stack test reports to Ecology.

Condition G1.9 – Oxygen (O_2): Order 3462-AQ07 and 40 CFR Part 60, Subpart BB

O_2 is to be continuously monitored using a CEMS.

Condition G1.10 – Operating Limit: PSD 01-03, Amendment 3

PSD 01-03, Amendment 3, Condition 1.85 limits the fuel application rate to 900 MMBtu per hour.

Condition G1.11 – Stack Dimensions: Order 3462-AQ07

Language regarding stack dimensions had been moved from a footnote and is now included in the requirements table.

Condition G1.12 through G1.14 – HAP Metals and Mercury: 40 CFR Part 63, Subpart DDDDD

Continuous HAP metals and mercury Boiler MACT compliance is demonstrated by establishing 30-day rolling average operating parameters at the emission control devices during the required HAP metals (PM) and mercury source tests. Established operating parameters must be maintained to demonstrate Boiler MACT compliance. The operating parameters are: electrostatic precipitator total secondary power input, scrubber pressure drop, and scrubber liquid flow rate.

Monthly operating limit reporting requirements have been added.

Condition G1.15– Hydrogen Chloride: 40 CFR Part 63, Subpart DDDDD

The Permittee must demonstrate hydrogen chloride (HCl) compliance by an annual source test using EPA RM 26 or 26A. Continuous compliance demonstrated by keeping monthly fuel records in Condition G1.17.

Condition G1.16 and G1.17 – Mercury: 40 CFR Part 63, Subpart DDDDD

The Permittee must demonstrate compliance with the mercury limit by an annual source test using EPA RM 29, 30A, 30B, or alternate method listed in 40 CFR Part 63, Subpart DDDDD Table 5, Item 4e. Continuous mercury and HCl compliance is demonstrated by keeping monthly fuel use records to ensure equal or lower fuel input of chlorine and mercury than the maximum values calculated during the most recent performance test.

Condition G1.18 – Operating Load: 40 CFR Part 63, Subpart DDDDD

The Permittee must maintain a 30-day rolling average operating load below 110% of the highest hourly average operating load recorded during the most recent performance test.

Monthly reporting requirements have been added.

Condition G1.190 –Work Practice Standards: 40 CFR Part 63, Subpart DDDDD

The Permittee is required perform an annual tune-up and one-time energy assessment.

Condition G1.20 and G1.21 – Startup/Shutdown Work Practice Standards: 40 CFR Part 63, Subpart DDDDD

The Permittee is required follow specific work practice standards during startup and shutdown. The requirements are included in the permit.

Condition G1.22 – Startup/Shutdown Recordkeeping: 40 CFR Part 63, Subpart DDDDD

Boiler MACT startup/shutdown recordkeeping requirements have been included in the permit.

Condition G1.23 – Good Operations and Maintenance: 40 CFR Part 63, Subpart DDDDD

Boiler MACT O&M requirements have been included in the permit.

Condition G1.24 – Boiler MACT Monitoring Data Collection: 40 CFR Part 63, Subpart DDDDD

Boiler MACT monitoring data collection requirements have been included in the permit.

Condition G1.25 – Allowable Fuels: Order 8429

A list of allowable and prohibited fuels has been added to the permit.

Condition G1.26 – Urban Wood Acceptance Program: Order 8429

All urban wood purchased for use in PB20 must meet an acceptance program. Ecology toured the OCC recycle facility on July 17, 2012. After observing the OCC process and the rejects stream, Ecology agreed that the quaternary reject stream met the "processed to remove plastics and metal" criteria in Order 8429. The quaternary reject stream when completely isolated from the other reject streams is allowable for use as PB 20 fuel. This determination was communicated to the Permittee via letter dated July 24, 2012.

Condition G1.27 – Operations and Maintenance Manual: Order 8429

An operations and maintenance manual must be followed for the equipment installed as part of Order 8429.

H. PAPER MACHINES

#1 Paper Machine was shut down in August 2001.

#2 Paper Machine was shut down in November 2007.

#3 Paper Machine was shut down in November 2001.

#4 Paper Machine was shut down in August 2005.

#8 Paper Machine was shut down in January 2008.

The requirements in Condition H1 capture the applicable requirements for the remaining paper machines (#5, 7, 10, 11, and 12). Applicable unit specific regulations/orders include: PSD 01-03, Amendment 3 and Order 9213.

Condition H1.1 – Paper Machine Additives: PSD 01-03, Amendment 3

Ecology originally issued PSD 01-03 to the Longview Fibre Company in December 2001. The PSD permit approved an increase in paper machine primary capacity from approximately 3,000 machine dry tons of paper (MDTP) per day to approximately 3,600 MDTP per day on an annual average basis. BACT for the paper machines was determined to be the use of low-VOC additives.

Condition H1.2 – Paper Machine Additives: PSD 01-03, Amendment 3

Ecology issued Notice of Construction Approval Order 9213 in July 2012. The order approved a project to improve the performance and efficiency of Paper Machines 5, 7, 10, 11, and 12. The approval order limited daily production at the Paper Machines 5, 7, 10, 11, and 12.

I. BOX PLANT PRODUCTION LINES

The requirements in Condition I1 capture requirements associated with the box plant production lines.

Applicable unit specific regulations/orders include: 40 CFR Part 63, Subpart KK (National Emission Standards for the Printing and Publishing Industry) and Order No. 13302.

Ecology has adopted 40 CFR Part 63 and appendices by reference in WAC 173-400-075.

Condition I1.1 – Hazardous Air Pollutants: 40 CFR Part 63, Subpart KK

The box plant production lines are affected units with regards to 40 CFR Part 63, Subpart KK. The standards for "product and packaging rotogravure and web-wide flexographic printing" in 40 CFR 63.825 apply. The mass of HAPs allowed to be applied is limited to 4% of the mass of inks, coatings, varnishes, adhesives, primers, solvents, reducers, thinners, and other materials applied.

Condition I1.2 through I1.8 – Flexo Folder Gluer: Order No. 13302

Ecology approved the addition of a Flexo Folder Gluer (FFG) under Order No. 13302 in September 2016. The project provided additional capacity for the facility to convert sheets of corrugated cardboard into boxes and print labels on them. The specific model approved was the Martin Model 924 with a maximum throughput of 252,692 mean square feet per year.

Ecology modified Order No. 13302 in August 2017 to change the FFG model to a Ward GGX 11500 which has a maximum throughput of 561,725 mean square feet per year.

The Flexo Folder Gluer commenced operation the week of February 26, 2018 per letter to Ecology dated March 15, 2018.

Limits were established for acrylic acid, propylene glycol, and VOCs. Recordkeeping, reporting, and O&M requirements were also included.

J. RECIPROCATING INTERNAL COMBUSTION ENGINES (RICE)

The Permittee has reciprocating internal combustion engines (RICE) which are subject to regulation under 40 CFR Part 60, Subpart IIII and 40 CFR Part 63, Subpart ZZZZ. The requirements for these units have been included in Condition J of the AOP renewal.

The Permittee has four emergency RICE subject to 40 CFR Part 63, Subpart ZZZZ: MWC Fire Pump, OCC Fire Pump, Turbine Room, and IT Server Backup. These requirements are specified under J1.

The Permittee has three emergency RICE subject to 40 CFR Part 60, Subpart IIII: MWC Fire Pump, OCC Fire Pump, and IT Server Backup. These requirements are specified under J2.

The Permittee has three non-emergency RICE subject to 40 CFR Part 63, Subpart ZZZZ: 3 Kiln Auxiliary Drive System Engine, 4 Kiln Auxiliary Drive System Engine, and 5 Kiln Auxiliary Drive System Engine. These requirements are specified under J3.

Table 5. RICE Engine Summary

Engine Name	IT Server Backup	Turbine Room	OCC Fire Pump	MWC Fire Pump	3 Kiln Auxiliary System Engine	4 Kiln Auxiliary System Engine	5 Kiln Auxiliary System Engine
Engine Type (E or N)	Emergency	Emergency	Emergency	Emergency	Non-emergency	Non-emergency	Non-emergency
Engine Size/Rating	150 kW	60 kW	224 HP	305 HP	9~~45~~ BHP	94 BHP	94 BHP
Engine Type (CI or SI)	CI	CI	CI	CI	SI	SI	SI
Fuel Type	ULSD	ULSD	ULSD	ULSD	Propane~~ULSD~~	Propane	Propane
Manufacture Date	2015	2004	2009	2018	Before 1998	Before 1998	Before 1998
Construction/Installation Date	2015	2005	2010	2018	Before 1998	Before 1998	Before 1998

K. MILL WIDE EMISSION LIMITS

Condition K1 captures requirements in PSD 01-03, Amendment 3 and Order 8429 which do not apply to a specific emission unit but apply to the facility as a whole. Notification requirements which were previously included in the 2007 issuance but have since been completed were removed from the AOP. These include requirements from Order 8429, Conditions 12n, 12p, and 13.

Notification regarding the permanent retirement of the #5 Washer Line, Lime Slaker No. 3, and Lime Kiln 3 was received via letter to Ecology dated November 1, 2012.

L. GREENHOUSE GAS (GHG) REPORTING

The Permittee is subject to the Washington GHG reporting requirements (Chapter 173-441 WAC) and the federal GHG reporting requirements (40 CFR Part 98), because GHG emissions from the source operations are above 10,000 metric tons per year (Washington State threshold) and 25,000 metric tons per year (federal threshold). The federal GHG reporting requirements are not "applicable requirements" for the purposes of Title V permits.

The applicable requirements of Chapter 173-441 WAC, a state-only-enforceable requirement, have been incorporated into the permit renewal. For compliance with the state-only Washington GHG reporting regulations, Conditions L1.1 through L1.4 impose requirements under which the GHGs are reported, including emissions calculations, reporting schedule/contents, and recordkeeping.

M. COMPLIANCE ASSURANCE MONITORING (CAM)

To satisfy the Title V and Title VII monitoring requirements for the Clean Air Act (CAA), the U.S. Environmental Protection Agency (EPA) promulgated the Compliance Assurance Monitoring (CAM) rule with an effective date of November 21, 1995. The CAM rule requires facilities to monitor compliance indicators for emission units to provide reasonable assurance for compliance with regulatory emission limitations. When monitoring indicates the occurrence of a parameter excursion or exceedance, the facility is required to take corrective action to restore the monitoring parameter to the value range established as part of a source compliance or performance test. The facility is also required to document/report corrective actions, maintain monitoring records, and provide an annual certification of compliance to the delegated authority that administers the Title V operating permit program.

In accordance with 40 CFR 64.2, the CAM rule applies to Pollutant Specific Emission Units (PSEUs) at major sources that are required to obtain a Part 70 or 71 permit ***and*** that meet ***all*** of the following criteria:

1. The PSEU is subject to an emission limitation or standard for the applicable regulated air pollutant (or surrogate);
2. The PSEU uses a control device to achieve compliance with the emission limit or standard; and
3. The PSEU has potential pre-control device emissions (of the applicable regulated pollutant) equal to or above the major source threshold.

In accordance with 40 CFR 64.2(b), the following are ***exempt*** from the CAM rule:

1. Emission limitation or standards proposed by the Administrator after November 15, 1990 pursuant to section 111 and 112 of the Clean Air Act; and
2. Emission limitations or standards for which a part 70 or 71 permit specifies a continuous compliance determination method.

Plan Content

Pursuant to 40 CFR 64.3, EPA requires the following elements in a facility's CAM Plan:

- Applicability determination for pollutant-specific emission units;
- Monitoring plan, including basis for selection of monitoring parameters and establishment of parameter values and averaging periods, and performance criteria for monitoring systems;

- CAM reporting and recordkeeping requirements.

Monitoring requirements for emission units exempt from the CAM rule are located in the facility's existing Title V operating permit or in federal NSPS or NESHAP requirements proposed since November 15, 1990.

Ecology reviewed the WestRock Longview CAM evaluation submitted as part of the permit renewal application. Emission limitations were reviewed to identify whether the CAM rule applied to individual emission units on a pollutant-by-pollutant basis.

Tables 4 through Table 11 below summarizes the findings of applicability/non-applicability for 40 CFR Part 64. CAM was found to be applicable for Recovery Furnace 19 (PM, opacity), Recovery Furnace 22 (PM, opacity), Smelt Dissolver Tank 19 (PM, opacity), Smelt Dissolver Tank 22 (PM, opacity), Lime Kiln 3 (PM, opacity), Lime Kiln 4 (PM, opacity), Lime Kiln 5 (PM, opacity), and Power Boiler 20 (PM, SO2, opacity). The CAM Plan for each of these CAM applicable PSEUs that did not met one of the exemption criteria was prepared by WestRock Longview and is included in Appendix A.

Table 6. Recovery Furnace 19 CAM Applicability

Pollutant[a]	**Applicable Emission Limit or Standard**[b]	**Federally Enforceable?**	**Use control device to comply w/ limit or standard?**	**Pre-controlled emissions ≥ Major source threshold (tpy)?**	**CAM Applicable?**	**Exemption:** Limit[c] proposed after 11/15/90	**Exemption:** Permit specifies continuous compliance determination method[d]	**CAM required?**
PM	0.040 gr/dscf @ 8% O2	YES	YES	YES	YES	NO	NO	YES
PM	0.044 gr/dscf @8%O2	YES	YES	YES	YES	YES	YES	NO
PM	0.10 gr/dscf @ 8% O2	YES	YES	YES	YES	NO	NO	YES
PM	292 TPY	YES	YES	YES	YES	NO	NO	YES
PM (as opacity)[e]	30%	YES	YES	YES	YES	-	YES	NO
PM (as opacity)[e]	35% (WAC)	YES	YES	YES	YES	NO	NO	YES
SO_2	149 lb/hr & 301 TPY	YES	NO	YES	NO	-	-	NO
SO_2	500 ppm @ 8% O2/hr	YES	NO	YES	NO	-	-	NO
NO_x	95 ppm @ 8% O2/24-hr & 753 TPY	YES	NO	YES	NO	-	-	NO
CO	600 lb/hr & 2,628 TPY	YES	NO	YES	NO	-	-	NO
TRS as H_2S	10.0 ppm @ 8% O2/24-hr & 59 TPY	YES	NO	YES	NO	-	-	NO

(a) For pollutants with multiple limits/standards, CAM is analyzed for each limits/standards. If a pollutant does not have a limit or standard, it is not included in the table because it is not subject to CAM.
(b) Federally-enforceable limits or standards.
(c) Limit proposed by EPA pursuant to section 111 (NSPS) and section 112 (NESHAPs). This exemption does not necessarily apply to limits set by WACs, NOCs, or PSDs.
(d) If the CEMS/COMS are specified compliance methods (demonstration of compliance), the exemption applies. If the CEMS/COMS are considered "indicators of compliance," this exemption does not apply.
(e) EPA maintained that opacity limits are subject CAM evaluation. This position was communicated to Ecology in the renewal process of Boise Wallula air permit in 2018.

Commented [RA17]: Margins on some of the pages with these tables need to be fixed so the full table fits

Table 7. Recovery Furnace 22 CAM Applicability

Pollutant[a]	**Applicable Emission Limit or Standard**[b]	**Federally Enforceable?**	**Use control device to comply w/ limit or standard?**	**Pre-controlled emissions ≥ Major source threshold (tpy)?**	**CAM Applicable?**	**Exemption:** Limit[c] proposed after 11/15/90	**Exemption:** Permit specifies continuous compliance determination method[d]	**CAM required?**
PM	0.027 gr/dscf @ 8% O2	YES	YES	YES	YES	NO	NO	YES
PM	0.044 gr/dscf @8%O2	YES	YES	YES	YES	NO	NO	YES
PM	0.10 gr/dscf @ 8% O2	YES	YES	YES	YES	NO	NO	YES
PM	256 TPY	YES	YES	YES	YES	NO	NO	YES
PM (as opacity)[e]	20% and 35% (NSPS)	YES	YES	YES	YES	YES	-	NO
PM (as opacity)[e]	35% (WAC)	YES	YES	YES	YES	NO	NO	YES
SO_2	295 lb/hr & 1,291 TPY	YES	NO	YES	NO	-	-	NO
SO_2	500 ppm @ 8% O2/hr	YES	NO	YES	NO	-	-	NO
NO_x	95 ppm @ 8% O2/24-hr & 735 TPY	YES	NO	YES	NO	-	-	NO
CO	300 ppm @ 8% O2/8-hr & 1,380 TPY	YES	NO	YES	NO	-	-	NO
TRS as H_2S	3.0 ppm & 5 ppm @ 8% O2/12-hr & 17 TPY	YES	NO	YES	NO	-	-	NO

(a) For pollutants with multiple limits/standards, CAM is analyzed for each limits/standards. If a pollutant does not have a limit or standard, it is not included in the table because it is not subject to CAM.
(b) Federally-enforceable limits or standards.
(c) Limit proposed by EPA pursuant to section 111 (NSPS) and section 112 (NESHAPs). This exemption does not necessarily apply to limits set by WACs, NOCs, or PSDs.
(d) If the CEMS/COMS are specified compliance methods (demonstration of compliance), the exemption applies. If the CEMS/COMS are considered "indicators of compliance," this exemption does not apply.
(e) EPA maintained that opacity limits are subject CAM evaluation. This position was communicated to Ecology in the renewal process of Boise Wallula air permit in 2018.

Table 8. Smelt Dissolver Tank 19 CAM Applicability

Pollutant[a]	Applicable Emission Limit or Standard[b]	Federally Enforceable?	Use control device to comply w/ limit or standard?	Pre-controlled emissions ≥ Major source threshold (tpy)?	CAM Applicable?	Exemption: Limit[c] proposed after 11/15/90	Exemption: Permit specifies continuous compliance determination method[d]	CAM required?
PM	0.12 lb/TBLS	YES	YES	YES	YES	NO	NO	YES
PM	0.30 lb/TBLS	YES	YES	YES	YES	NO	NO	YES
PM	0.20 lb/TBLS	YES	YES	YES	YES	YES	YES	NO
PM	44 TPY	YES	YES	YES	YES	NO	NO	YES
PM (as opacity)[e]	20%	YES	YES	YES	YES	-	NO	YES
PM (as opacity)[e]	35%	YES	YES	YES	YES	NO	NO	YES
SO_2	16 TPY	YES	NO	YES	NO	-	-	NO
SO_2	1,000 ppm/hr	YES	NO	YES	NO	-	-	NO
NO_x	11 TPY	YES	NO	NO	NO	-	-	NO
CO	66 TPY	YES	NO	NO	NO	-	-	NO
TRS as H_2S	114 TPY	YES	NO	YES	NO	-	-	NO

(a) For pollutants with multiple limits/standards, CAM is analyzed for each limits/standards. If a pollutant does not have a limit or standard, it is not included in the table because it is not subject to CAM.
(b) Federally-enforceable limits or standards.
(c) Limit proposed by EPA pursuant to section 111 (NSPS) and section 112 (NESHAPs). This exemption does not necessarily apply to limits set by WACs, NOCs, or PSDs.
(d) If the CEMS/COMS are specified compliance methods (demonstration of compliance), the exemption applies. If the CEMS/COMS are considered "indicators of compliance," this exemption does not apply.
(e) EPA maintained that opacity limits are subject CAM evaluation. This position was communicated to Ecology in the renewal process of Boise Wallula air permit in 2018.
NOTE: Acid gases prior to the scrubber of the smelt dissolving tank are dependent of a variety of factors. In addition, the scrubber efficiencies are quite high for particulate and are relatively low for acid gases. Some of this is related to the effectiveness of the scrubber and some is related to the relatively low inlet concentrations. NCASI TB 895 provides details on the effectiveness of scrubbers on acid gases such as TRS.

The origin of the permit limitation for H2S from 19 SDT is unknown. Test results for TRS from this unit are well below 10 TPY. For this analysis, measured emission rates are used for the calculation of uncontrolled emissions.

Table 5.5 in NCASI TB 895 provides scrubber efficiencies of between 40 and 67% for H2S. This is a reasonable assumption for SO2 due to the relatively low oxidation of sulfur in the smelt. From this the following, pre-controlled emissions have been calculated assuming a scrubber efficiency of 53.5% (average of the efficiencies from TB895). As uncontrolled emissions are less than the major NSR threshold, CAM is not applicable for these compounds.

SO2 (controlled) = 16 TPY SO2 (uncontrolled) = 16/ (1 -0.535) = 34.4 TPY
TRS (controlled) = 10 TPY H2S (uncontrolled) = 10 / (1-0.535) = 21.5 TPY

Table 9. Smelt Dissolver Tank 22 CAM Applicability

Pollutant[a]	Applicable Emission Limit or Standard[b]	Federally Enforceable ?	Use control device to comply w/ limit or standard?	Pre-controlled emissions ≥ Major source threshold (tpy)?	CAM Applicable?	Exemption: Limit[c] proposed after 11/15/90	Exemption: Permit specifies continuous compliance determination method[d]	CAM required?
PM	0.12 lb/TBLS & 0.2 lb/TBLS	YES	YES	YES	YES	NO	NO	YES
PM	0.20 lb/TBLS	YES	YES	YES	YES	YES	YES	NO
PM	0.30 lb/TBLS	YES	YES	YES	YES	NO	NO	YES
PM	44 TPY	YES	YES	YES	YES	NO	NO	YES
PM (as opacity)[e]	20%	YES	YES	YES	YES	-	NO	YES
PM (as opacity)[e]	35%	YES	YES	YES	YES	NO	NO	YES
SO_2	31 TPY	YES	NO	YES	NO	-	-	NO
SO_2	1,000 ppm/hr	YES	NO	YES	NO	-	-	NO
NO_x	11 TPY	YES	NO	NO	NO	-	-	NO
CO	65 TPY	YES	NO	NO	NO	-	-	NO
TRS as H_2S	0.0168 and 0.033 lb/TBLS & 6 TPY	YES	NO	YES	NO	-	-	NO

(a) For pollutants with multiple limits/standards, CAM is analyzed for each limits/standards. If a pollutant does not have a limit or standard, it is not included in the table because it is not subject to CAM.
(b) Federally-enforceable limits or standards.
(c) Limit proposed by EPA pursuant to section 111 (NSPS) and section 112 (NESHAPs). This exemption does not necessarily apply to limits set by WACs, NOCs, or PSDs.
(d) If the CEMS/COMS are specified compliance methods (demonstration of compliance), the exemption applies. If the CEMS/COMS are considered "indicators of compliance," this exemption does not apply.
(e) EPA maintained that opacity limits are subject CAM evaluation. This position was communicated to Ecology in the renewal process of Boise Wallula air permit in 2018.

NOTE: Acid gases prior to the scrubber of the smelt dissolving tank are dependent of a variety of factors. In addition, the scrubber efficiencies are quite high for particulate and are relatively low for acid gases. Some of this is related to the effectiveness of the scrubber and some is related to the relatively low inlet concentrations. NCASI TB 895 provides details on the effectiveness of scrubbers on acid gases such as TRS.

Table 5.5 in NCASI TB 895 provides scrubber efficiencies of between 40 and 67% for H2S. This is a reasonable assumption for SO2 due to the relatively low oxidation of sulfur in the smelt. From this the following, pre-controlled emissions have been calculated assuming a scrubber efficiency of 53.5% (average of the efficiencies from TB895). As uncontrolled emissions are less than the major NSR threshold, CAM is not applicable for these compounds.

SO2 (controlled) = 31 TPY SO2 (uncontrolled) = 31/ (1 -0.535) = 66.7 TPY
TRS (controlled) = 6 TPY H2S (uncontrolled) = 6 / (1-0.535) = 12.9 TPY

Table 10. Lime Kiln 3 CAM Applicability

Pollutant[a]	Applicable Emission Limit or Standard[b]	Federally Enforceable?	Use control device to comply w/ limit or standard?	Pre-controlled emissions ≥ Major source threshold (tpy)?	CAM Applicable?	Exemption: Limit[c] proposed after 11/15/90	Exemption: Permit specifies continuous compliance determination method[d]	CAM required?
PM	0.030 gr/dscf @ 10% O2	YES	YES	YES	YES	NO	NO	YES
PM	0.064 gr/dscf @ 10% O1	YES	YES	YES	YES	YES	NO	NO
PM	0.13 gr/dscf @ 10% O2	YES	YES	YES	YES	NO	NO	YES
PM	34 TPY	YES	YES	YES	YES	NO	NO	YES
PM (as opacity)[e]	25%	YES	YES	YES	YES	NO	NO	YES
PM (as opacity)[e]	35%	YES	YES	YES	YES	NO	NO	YES
SO_2	27 TPY	YES	YES	-	NO	-	YES	NO
SO_2	20 ppm @ 10% O2/3-hr & 500 ppm @ 10% O2/hr	YES	NO	YES	NO	-	-	NO
NO_x	340 ppm @ 10% O2/24-hr & 238 TPY	YES	NO	YES	NO	-	-	NO
CO	133 lb/hr & 581 TPY	YES	NO	YES	NO	-	-	NO
TRS as H_2S	20.0 ppm @ 10% O2/24-hr & 10 TPY	YES	YES	-	NO	-	YES	NO

(a) For pollutants with multiple limits/standards, CAM is analyzed for each limits/standards. If a pollutant does not have a limit or standard, it is not included in the table because it is not subject to CAM.
(b) Federally-enforceable limits or standards.
(c) Limit proposed by EPA pursuant to section 111 (NSPS) and section 112 (NESHAPs). This exemption does not necessarily apply to limits set by WACs, NOCs, or PSDs.
(d) If the CEMS/COMS are specified compliance methods (demonstration of compliance), the exemption applies. If the CEMS/COMS are considered "indicators of compliance," this exemption does not apply.
(e) EPA maintained that opacity limits are subject CAM evaluation. This position was communicated to Ecology in the renewal process of Boise Wallula air permit in 2018.

NOTE: Scrubber efficiencies and uncontrolled emissions of H2S and SO2 from lime kiln scrubbers are highly variable due to the amount of sulfur, degree of mud washing efficiency and sulfur content of scrubbing solution. In addition, the kiln is equipped with TRS and SO2 CEMS so regardless of the level of uncontrolled emissions, these units are exempt from CAM for these pollutants due to the presence of CEMs.

Table 11. Lime Kiln 4 CAM Applicability

Pollutant[a]	Applicable Emission Limit or Standard[b]	Federally Enforceable?	Use control device to comply w/ limit or standard?	Pre-controlled emissions ≥ Major source threshold (tpy)?	CAM Applicable?	Exemption: Limit[c] proposed after 11/15/90	Exemption: Permit specifies continuous compliance determination method[d]	CAM required?
PM	0.030 gr/dscf @ 10% O2	YES	YES	YES	YES	NO	NO	YES
PM	0.064 gr/dscf @ 10% O2	YES	YES	YES	YES	YES	NO	NO
PM	0.13 gr/dscf @ 10% O2	YES	YES	YES	YES	NO	NO	YES
PM	35.6 TPY	YES	YES	YES	YES	NO	NO	YES
PM (as opacity)[e]	25%	YES	YES	YES	YES	NO	NO	YES
PM (as opacity)[e]	35%	YES	YES	YES	YES	NO	NO	YES
SO_2	28 TPY	YES	YES	-	NO	-	YES	NO
SO_2	20 ppm @ 10% O2/3-hr & 500 ppm @ 10% O2/hr	YES	NO	YES	NO	-	-	NO
NO_x	340 ppm @ 10% O2/24-hr & 238 TPY	YES	NO	YES	NO	-	-	NO
CO	138 lb/hr & 605 TPY	YES	NO	YES	NO	-	-	NO
TRS as H_2S	20.0 ppm @ 10% O2/24-hr & 11 TPY	YES	YES	-	NO	-	YES	NO

(a) For pollutants with multiple limits/standards, CAM is analyzed for each limits/standards. If a pollutant does not have a limit or standard, it is not included in the table because it is not subject to CAM.
(b) Federally-enforceable limits or standards.
(c) Limit proposed by EPA pursuant to section 111 (NSPS) and section 112 (NESHAPs). This exemption does not necessarily apply to limits set by WACs, NOCs, or PSDs.
(d) If the CEMS/COMS are specified compliance methods (demonstration of compliance), the exemption applies. If the CEMS/COMS are considered "indicators of compliance," this exemption does not apply.
(e) EPA maintained that opacity limits are subject CAM evaluation. This position was communicated to Ecology in the renewal process of Boise Wallula air permit in 2018.

NOTE: Scrubber efficiencies and uncontrolled emissions of H2S and SO2 from lime kiln scrubbers are highly variable due to the amount of sulfur, degree of mud washing efficiency and sulfur content of scrubbing solution. In addition, the kiln is equipped with TRS and SO2 CEMS so regardless of the level of uncontrolled emissions, these units are exempt from CAM for these pollutants due to the presence of CEMs.

Table 12. Lime Kiln 5 CAM Applicability

Pollutant[a]	**Applicable Emission Limit or Standard[b]**	**Federally Enforceable?**	**Use control device to comply w/ limit or standard?**	**Pre-controlled emissions ≥ Major source threshold (tpy)?**	**CAM Applicable?**	**Exemption:** Limit[c] proposed after 11/15/90	**Exemption:** Permit specifies continuous compliance determination method[d]	**CAM required?**
PM	0.035 gr/dscf @ 10% O2 & 0.060 gr/dscf @ 10% O2	YES	YES	YES	YES	NO	NO	YES
PM	0.066 gr/dscf @ 10% O2 & 0.13 gr/dscf @ 10% O2	YES	YES	YES	YES	NO	NO	YES
PM	69 TPY	YES	YES	YES	YES	NO	NO	YES
PM (as opacity)[e]	25%	YES	YES	YES	YES	-	YES	NO
PM (as opacity)[e]	35%	YES	YES	YES	YES	NO	NO	YES
SO_2	28 TPY	YES	NO	YES	NO	-	YES	NO
SO_2	20 ppm @ 10% O2/3-hr & 500 ppm @ 10% O2/hr	YES	NO	YES	NO	-	YES	NO
NO_x	275 ppm @ 10% O2/24-hr & 262 TPY	YES	NO	YES	NO	-	YES	NO
CO	64 lb/hr & 282 TPY	YES	NO	YES	NO	-	-	NO
TRS as H_2S	8 ppm @ 10% O2/12-hr & 6 TPY	YES	NO	YES	NO	-	YES	NO

(a) For pollutants with multiple limits/standards, CAM is analyzed for each limits/standards. If a pollutant does not have a limit or standard, it is not included in the table because it is not subject to CAM.
(b) Federally-enforceable limits or standards.
(c) Limit proposed by EPA pursuant to section 111 (NSPS) and section 112 (NESHAPs). This exemption does not necessarily apply to limits set by WACs, NOCs, or PSDs.
(d) If the CEMS/COMS are specified compliance methods (demonstration of compliance), the exemption applies. If the CEMS/COMS are considered "indicators of compliance," this exemption does not apply.
(e) EPA maintained that opacity limits are subject CAM evaluation. This position was communicated to Ecology in the renewal process of Boise Wallula air permit in 2018.

Table 13. Power Boiler 20 CAM Applicability

Pollutant[(a)]	Applicable Emission Limit or Standard[(b)]	Federally Enforceable?	Use control device to comply w/ limit or standard?	Pre-controlled emissions ≥ Major source threshold (tpy)?	CAM Applicable?	Exemption: Limit[(c)] proposed after 11/15/90	Exemption: Permit specifies continuous compliance determination method[(d)]	CAM required?
PM	0.025, 0.030, 0.048, 0.2, 0.089, 0.083, 0.081 gr/dscf @ 7% O2	YES	YES	YES	YES	NO	NO	YES
PM	234 tpy and 365 tpy, 12-month rolling average	YES	YES	YES	YES	NO	NO	YES
PM	Boiler MACT STANDARD	YES	YES	YES	YES	YES	NO	NO
PM	NSPS STANDARD	YES	YES	YES	YES	YES	NO	NO
PM	0.2 gr/dscf @ 7% O2 & 0.10 lb/MMBtu	YES	YES	YES	YES	NO	NO	YES
PM	234 and 365 TPY	YES	YES	YES	YES	NO	NO	YES
PM (as opacity)[(e)]	20%	YES	YES	YES	YES	-	NO	YES
PM (as opacity)[(e)]	20% (WAC)	YES	YES	YES	YES	NO	NO	YES
SO_2	0.80 lb/MMBtu & 946 TPY	YES	YES	YES	YES	-	YES	NO
SO_2	100 and 1,000 ppm @ 7% O2/hr	YES	YES	YES	YES	-	YES	NO
NO_x	0.20 and 0.30 lb/MMBtu/3-hr & 1,183 TPY	YES	NO	YES	NO	-	YES	NO
CO	900 lb/hr & 3,942 TPY	YES	NO	YES	NO	-	-	NO

(a) For pollutants with multiple limits/standards, CAM is analyzed for each limits/standards. If a pollutant does not have a limit or standard, it is not included in the table because it is not subject to CAM.
(b) Federally-enforceable limits or standards.
(c) Limit proposed by EPA pursuant to section 111 (NSPS) and section 112 (NESHAPs). This exemption does not necessarily apply to limits set by WACs, NOCs, or PSDs.
(d) If the CEMS/COMS are specified compliance methods (demonstration of compliance), the exemption applies. If the CEMS/COMS are considered "indicators of compliance," this exemption does not apply.
(e) EPA maintained that opacity limits are subject CAM evaluation. This position was communicated to Ecology in the renewal process of Boise Wallula air permit in 2018.

NOTE: Scrubber efficiencies for SO2 removal is not known but regardless of the level of uncontrolled emissions, this unit is exempt from CAM due to the presence of a CEMs for SO2.

6.0 MISCELLANEOUS EMISSION UNITS AND REGULATIONS

Risk Management Plan (40 CFR Part 68)

40 CFR Part 68, Chemical Accident Provisions, requires submittal of a Risk Management Plan if the facility stores a regulated material above the applicable concentration and threshold values. Since the Permittee does not presently store a regulated material above the threshold quantity, the facility is presently only subject to the General Duty Clause requirements and must review materials as purchased to verify if additional requirements must be met. This requirement is included as Facility-Wide General Requirement 13.

7.0 INSIGNIFICANT EMISSION UNITS

The facility-wide general requirements apply to the whole facility, including insignificant emission units and activities (IEUs), as required by Ecology's Operating Permit Regulation rule. However, the rule states that IEUs are not subject to monitoring requirements unless the generally applicable requirements in the State Implementation Plan (SIP) impose them per WAC 173-401-530(2) . The Washington SIP does not impose any specific monitoring-related requirements for the facility-wide requirements for IEUs at this source. The permit, therefore, does not require any testing, monitoring, reporting, or recordkeeping for insignificant emission units or activities.

An updated list of IEUs was provided by WestRock Longview and is provided in Appendix B.

8.0 OPERATIONAL FLEXIBILITY

Ecology does not specify a time period for bringing operating parameters to predetermined values. Individual exceptions may require a shorter or longer time period than could be foreseen by the permit. By specifying a definite time period, one would be lengthening the required time in certain cases. In other cases, the Permittee may need more time to respond to unforeseen breakdown. Therefore, Ecology's project officer is given the flexibility to determine the definition of the shortest period of time on a case-by-case basis when all the facts are known for each individual exception using the company's incident report on the occurrence.

9.0 CHANGES TO PERMIT

This section documents any substantial changes in this permit renewal. Minor changes, such as references, reformatting, or typos, are not included.

This Air Operating Permit renewal removed emission units which have been shut down and are no longer operational. These emission units include: Recovery Furnace 15, Recovery Furnace 18, Smelt Dissolving Tank 15, Smelt Dissolving Tank 18, Lime Kiln 1, Lime Kiln 2, Power Boiler 12, Power Boiler 13, Power Boiler 16, Cogen 23, and NSSC Sulfur Buner (SCMS). The remaining emission units and associated conditions were reorganized and assigned different alpha/numeric designations.

Recovery Furnace 19

- Condition A1.1 (formerly A3.1) incorporated footnote A3F.1 into the body of the table. Compliance Assurance Monitoring (CAM) language was also added.

  The reporting timeline requirements have been updated to be consistent with the underlying requirement and to require the submittal of full stack test reports.

- Condition A1.2 is a new requirements that resulted from the 40 CFR Part 63, Subpart MM RTR. Performance testing for HAP metals compliance is required once every 5 years.
- Condition A1.3b (formerly A3.2) has been updated to reflect that the method of compliance determination for WAC 173-405-040(6) is EPA Method 9.
- Condition A1.4 has been updated to reflect changes from the 40 CFR Part 63, Subpart MM RTR. A violation occurs if opacity is greater than 35% for 2% or more of operating time in a semiannual period. Previously this allowance was 6%. Recordkeeping and reporting language has been updated to clarify the requirements.
- Condition A1.7 has been updated to make the reporting requirement timeline consistent with the underlying requirement. The AOP has been updated to require the submittal of the stack test report to Ecology.
- Condition A1.8 has been updated to make the reporting requirement timeline consistent with the underlying requirement. The AOP has been updated to require the submittal of the stack test report to Ecology.
- Condition A1.11 is a new requirement that resulted from the 40 CFR Part 63, Subpart MM RTR. Performance testing for HAP metals compliance is required once every 5 years.
- Condition A1.12 has been updated to make the reporting requirement timeline consistent with the underlying requirement.
- Former Condition A3.11 regarding SSM plans has been removed. The SSM plan is no longer a requirement as a result of the 40 CFR Part 63, Subpart S RTR.

Recovery Furnace 22

- Condition A2.1 (formerly A4.1) was modified to incorporate footnote A4F.1 into the body of the table. CAM language was also added. The reporting timeline has been updated to be consistent with the underlying requirement. The reporting requirements have been updated to require the submittal of stack test reports. The NSPS requirement has been updated to reflect the applicable requirements in 40 CFR Part 60. Sample time and volume requirements have been added for the NSPS PM requirement. The NSPS opacity requirement has also been added to this section (previously included with the other opacity requirements), as it is a surrogate for PM compliance.
- Condition A2.2 is a new requirements that resulted from the 40 CFR Part 63, Subpart MM RTR. Stack testing for HAP metals compliance is required once every 5 years.
- Condition A2.3b (formerly A4.2) has been updated to reflect that the method of compliance determination for WAC 173-405-040(6) is EPA Method 9.
- Condition A2.4 (formerly A4.9) has been updated to reflect changes from the 40 CFR Part 63, Subpart MM RTR. A violation occurs if opacity is greater than 35% for 2% or more of operating time in a semiannual period. Previously this allowance was 6%. Recordkeeping and reporting language has been updated. The excess emission reporting requirement has been updated to a semiannual frequency.
- Condition A2.6 (formerly A4.4) has been updated to clarify the monitoring and reporting requirements.

- Condition A2.8 has been updated to make the reporting requirement timeline consistent with the underlying requirement. The AOP has been updated to require the submittal of the stack test report to Ecology.
- Condition A2.9 (formerly A4.7) has been updated to clarify to calculation methodology and to require the submittal of the stack test reports to Ecology. The reporting requirement timeline has been updated to be consistent with the underlying requirement.
- Condition A2.11 is a new requirement that resulted from the 40 CFR Part 63, Subpart MM RTR.
- Former Condition A4.10 regarding SSM plans has been removed. The SSM plan is no longer a requirement as a result of the 40 CFR Part 63, Subpart S RTR.

Smelt Dissolver Tank 19

- Condition B1.1 (formerly B3.1) has been updated to include CAM language. The reporting requirement timeline has been updated to be consistent with the underlying requirement. The AOP has been updated to require the submittal of stack test reports to Ecology.
- Condition B1.2 is a new requirements that resulted from the 40 CFR Part 63, Subpart MM RTR. Performance testing for HAP metals compliance is required once every 5 years.
- Condition B1.3b (formerly B3.2) has been updated to reflect that the method of compliance determination for WAC 173-405-040(6) is EPA Method 9.
- Condition B1.4 (formerly B3.8) has been moved to be with the other scrubber operating limits. The language has been updated to be consistent with the language in 40 CFR Part 63, Subpart MM. Monthly operating limit reporting has been added. The excess emission reporting requirement has been updated to a semiannual frequency.
- Condition B1.5 has been updated to remove a duplicative requirement regarding a 1-hr SO_2 requirement. This requirement is already in the AOP in the facility-wide general conditions section.
- Condition B1.6 has been updated to require the submittal of stack test reports to Ecology and the make the reporting timeline consistent with the underlying requirement.
- Condition B1.7 has been updated to require the submittal of stack test reports to Ecology and to make the reporting timeline consistent with the underlying requirement.
- Condition B1.8 has been updated to require the submittal of stack test reports to Ecology and to make the reporting timeline consistent with the underlying requirement.
- Former Condition B3.9 regarding SSM plans has been removed. The SSM plan is no longer a requirement as a result of the 40 CFR Part 63, Subpart S RTR.

Smelt Dissolver Tank 22

- Condition B2.1a (formerly B4.1) has been updated to include CAM language, make the reporting timeline consistent with the underlying requirements, and require the submittal of stack test reports to Ecology.
- Condition B2.1c has been updated to further clarify the NSPS requirements for the performance testing and monitoring. Reporting language has been updated to require the submittal of stack test reports to Ecology.

- Condition B2.2 is a new requirement that resulted from the 40 CFR Part 63, Subpart MM RTR. Stack testing is required once every five years.
- Condition B2.3b (formerly B4.2) has been updated to reflect that the method of compliance determination for WAC 173-405-040(6) is EPA Method 9.
- Condition B2.4 (formerly B4.8) has been updated to reflect changes from the 40 CFR Part 63, Subpart MM RTR. Recordkeeping and reporting language has been updated. Monthly operating limit reporting has been added. The excess emission reporting requirement has been updated to a semiannual frequency.
- Condition B2.5 has been updated to require the submittal of stack test reports to Ecology.
- Condition B2.6 has been updated to make the reporting timeline consistent with the underlying requirement and to require the submittal of stack test reports to Ecology.
- Condition B2.7 has been updated to require the submittal of stack test reports to Ecology and make this consistent with the timeline in the underlying requirement.
- Condition B2.8 has been updated to require the submittal of stack test reports to Ecology and make this consistent with the timeline in the underlying requirement.
- Former Condition B4.9 regarding SSM plans has been removed. The SSM plan is no longer a requirement as a result of the 40 CFR Part 63, Subpart S RTR.
- Other Condition B changes. Semiannual excess emission reporting for compliance with 40 CFR Part 60, Subpart BB has been removed. Excess emissions from smelt dissolver tanks are not required to be reported by 40 CFR 60.284(d).

Lime Kiln 3

- Condition C1.1 (formerly C3.1) has been updated to include CAM language. Reporting timeline has been updated to make it consistent with the underlying requirement. Reporting language has been updated to require the submittal of stack test reports to Ecology.
- Condition C1.2 is a new requirement that resulted from the 40 CFR Part 63, Subpart MM RTR. Stack testing is required once every five years.
- Condition C1.3b (formerly C3.2) has been updated to reflect that the method of compliance determination for WAC 173-405-040(6) is EPA Method 9.
- Condition C1.4 (formerly C3.10) has been updated to reflect changes from the 40 CFR Part 63, Subpart MM RTR. Recordkeeping and reporting language has been updated. Monthly operating limit reporting has been added. The excess emission reporting requirement has been updated to a semiannual frequency.
- Condition C1.5 has been updated to require the submittal of stack test reports to Ecology. The stack testing requirement has been removed per Ecology letter, see description in body of the SOB.
- Condition C1.7 has been updated to make the reporting timeline consistent with the underlying requirement and to require the submittal of stack test reports to Ecology.
- Condition C1.8 has been updated to make the reporting timeline consistent with the underlying requirement and to require the submittal of stack test reports to Ecology.

- Former Condition C3.11 regarding SSM plans has been removed. The SSM plan is no longer a requirement as a result of the 40 CFR Part 63, Subpart S RTR.

Lime Kiln 4

- Condition C2.1 (formerly C4.1) has been updated to include CAM language. Reporting has been updated to make the timeline consistent with the underlying requirement to include the submittal of stack test reports to Ecology.
- Condition C2.2 is a new requirement that resulted from the 40 CFR Part 63, Subpart MM RTR. Stack testing is required once every five years.
- Condition C2.3b (formerly C4.2) has been updated to reflect that the method of compliance determination for WAC 173-405-040(6) is EPA Method 9.
- Condition C2.4 (formerly C4.10) has been updated to reflect changes from the 40 CFR Part 63, Subpart MM RTR. Recordkeeping and reporting language has been updated. Monthly operating limit reporting has been added. The excess emission reporting requirement has been updated to a semiannual frequency.
- Condition C2.5 (formerly C4.3) has been updated to include CAM language. The condition has been updated to remove the stack testing requirement as it has been replaced with a requirement for monitoring with a CEMS.
- Condition C2.7 has been updated to make the reporting timeline consistent with the underlying requirement and to require the submittal of stack test reports to Ecology.
- Condition C2.8 has been updated to make the reporting timeline consistent with the underlying requirement and to require the submittal of stack test reports to Ecology.
- Former Condition C4.11 regarding SSM plans has been removed. The SSM plan is no longer a requirement as a result of the 40 CFR Part 63, Subpart S RTR.

Lime Kiln 5

- Condition C3.1 (formerly C5.1) has been updated to include CAM language. The NSPS PM requirement has been updated to clarify test methodology. Reporting language has been updated make the reporting timeline consistent with the underlying requirement and to require the submittal of stack test reports to Ecology.
- Condition C3.2 is a new requirement that resulted from the 40 CFR Part 63, Subpart MM RTR. Stack testing is required once every five years.
- Condition C3.3b (formerly C5.2) has been updated to reflect that the method of compliance determination for WAC 173-405-040(6) is EPA Method 9.
- Condition C3.4 (formerly C5.9) has been updated to reflect changes from the 40 CFR Part 63, Subpart MM RTR. Recordkeeping and reporting language has been updated. The excess emission reporting requirement has been updated to a semiannual frequency.
- Condition C3.5 has been updated to remove the stack testing requirement as it has been replaced with a requirement for monitoring with a CEMS.
- ~~Conditions C3.6 (formerly C5.4) has updated monitoring and reporting language. Incineration temperature and retention time language regarding the NSPS requirement for burning of NCGs has also been added.~~

Commented [RA18]: As mentioned, this condition needs to be removed

- Condition C3.8 has been updated to remove the stack testing requirement as it has been replaced with a requirement for monitoring with a CEMS.
- Condition C3.11 is a new requirement that resulted from the 40 CFR Part 63, Subpart MM RTR.
- Former Condition C5.10 regarding SSM plans has been removed. The SSM plan is no longer a requirement as a result of the 40 CFR Part 63, Subpart S RTR.

NCG and Condensate Systems

- The conditions regarding the collection and treatment of HAPs in NCGs and condensates have been moved (formerly Conditions K, L, and M; now Condition D1 through D3) in this permit renewal. These conditions have been included with the other emission units from the kraft mill instead of at the end of the permit.

LVHC System

- The list of affected units at the start of Condition D1 has been updated to remove units which have been shut down. The NSSC LVHC system has been added to the affected units list.
- Conditions D1.1 and D1.5 (formerly K.1 and K.5) have been updated to allow for the burning of NCGs in Lime Kiln 5 and Power Boiler 20. The allowance to burn NCGs in PB12 and 13 has been removed since these units are shut down.
- Condition D1.13 (formerly K.13) has been updated to remove language regarding a SSM period exemption. This language was removed as part of the 40 CFR Part 63, Subpart S RTR.
- Former Condition K.14 (LVHC System) was removed. The requirement to develop and follow SSM plans was removed as part of the 40 CFR Part 63, Subpart S RTR.

Pulping Process Condensates

- The list of affected units at the start of Condition D2 has been updated to remove units which have been shut down.
- Condition D2.6 (formerly L.6) has been updated to include language regarding the monthly inspection frequency. This language was included in Order 3463-AQ07 but was not previously included in the AOP.

HVLC System

- Requirements of 40 CFR Part 63, Subpart S were previously included in the permit with a high-level reference. Ecology has removed the high-level reference and included applicable language to help clarify the requirements.

Digester, Multi-Effect Evaporators, Brownstock Washers, and Condensate Stripper Systems

- Condition F1.2 (formerly G1.2) has been updated to include Lime Kiln 5 and Power Boiler 20 as units designated to burn NCGs.

Power Boiler 20

- Condition G1.1 (formerly D4.1) has been updated. The 40 CFR Part 60, Subpart D requirement has been removed and replaced with the 40 CFR Part 60, Subpart Db requirement. The PM, PM_{10}, and $PM_{2.5}$ requirements from Order 8429 have been added.

Reporting requirements have been updated to make the reporting timeline consistent with the underlying requirement and to require the submittal of stack test reports to Ecology.

- Condition G1.3b (formerly D4.2) has been updated to reflect that the method of compliance determination for WAC 173-405-040(6) is EPA Method 9.
- The opacity requirement in 40 CFR 60.42(a)(2) has been replaced with 40 CFR 60.43b(f). This change occurred as a result of the modifications in Order 8429.
- Conditions G1.5 has been updated to require the submittal of stack test reports to Ecology and to include Boiler MACT language for compliance with CO.
- Condition G1.6 has been updated to make the reporting timeline consistent with the underlying requirement.
- Condition G1.7 has been updated to remove the stack testing requirement as it has been replaced with a requirement for monitoring with a CEMS.
- Conditions G1.2, G1.12 through G1.24 have been added to the AOP to incorporate Boiler MACT requirements.
- Condition G1.16b has been added to the AOP to incorporate the requirements of 40 CFR Part 61, Subpart E.

Paper Machines

- Condition H1.2 has been added to the AOP to incorporate requirements from Order No. 9213 which was issued in 2012.

Box Plant Production Lines

- Condition I1.2 through I1.8 have been added to the AOP to incorporate requirements from Order No. 13302 which was issued in 2016 and modified in 2017.

Reciprocating Internal Combustion Engines (RICE)

- Conditions J1.1 through J1.6 and J3.1 through J3.2 have been added to the AOP to incorporate requirements of 40 CFR Part 63, Subpart ZZZZ.
- Condition J2 have been added to the AOP to incorporate requirements of 40 CFR Part 60, Subpart IIII.

Greenhouse Gas Reporting

- Conditions L1.1 through L1.4 have been added to the AOP to incorporate requirements of the Greenhouse Gas Reporting Rule in 173-441 WAC.

Facility-wide General Requirements

- Requirements for "New Source Review", "Replacement or Substantial Alternation of Emission Control Technology", and "Nonroad Engines" have been added.
- Requirement for "Representative Conditions" during source tests has been added (Condition 22).
- "Continuous Emission Monitoring System Operating Requirements" have been added in Condition 26. These are new requirements that were established in Washington Administrative Code in 2011.

- "CMS Data Recovery" requirements have been added (Conditions 27 and 28) to cover NSPS and MACT CMS using 40 CFR 70.6(c)(1) as the basis.
- "Notification of Planned Source Test" requirement has been added (Condition 37).
- "Source Testing Results" requirements have been added to Condition 38. This requirements specifies source test reporting timeframes and how the source tests must be reported to Ecology.
- "CEMS and COMS Data Assessment Report" requirements have been added (Condition 41) for CEMS and COMS subject to 40 CFR Part 60.

Appendix A

- PSD 01-03 allows for variable source test frequencies based on the performance of the emission unit. Language has been added to clarify how the permittee is to transition to monthly source testing following a source test which exceeds 75% of the limitation.

Former Appendix B

- Appendix B from the previous version of the AOP has been removed. The requirements in the appendix were incorporated into other parts of the AOP, under the specific emission unit and requirement or in the facility-wide general conditions. References to former Appendix B have been removed.

SSM Plan, Recordkeeping, and Reporting

- SSM requirements have been removed from the AOP.

Commented [RA19]: See specific comments for these conditions in the draft AOP comments

Appendix A – Compliance Assurance Monitoring (CAM) Plan

Appendix B – Insignificant Emission Units

Insignificant Emission Unit(s)	Basis for Designation
Turpentine Recovery – Decanter Storage	WAC 173-401-532, categorical exemption
Paint operations	WAC 173-401-532, categorical exemption
Fugitives, transfer and storage	WAC 173-401-532, categorical exemption
Roads and parking	WAC 173-401-532, categorical exemption
Portable Drums and totes	WAC 173-401-532, categorical exemption
Comfort air conditioning	WAC 173-401-532, categorical exemption
Paper trimmers/binders	WAC 173-401-532, categorical exemption
Food preparation for human consumption including cafeterias, kitchen facilities	WAC 173-401-532, categorical exemption
Bathroom and toilet vents	WAC 173-401-532, categorical exemption
Air compressors, pneumatically operated equipment, systems and hand tools	WAC 173-401-532, categorical exemption
Steam leaks	WAC 173-401-532, categorical exemption
Steam vents and safety relief valves not emitting process chemicals	WAC 173-401-532, categorical exemption
Recovery boiler blow-down tank	WAC 173-401-532, categorical exemption
Continuous digester chip feeders	WAC 173-401-532, categorical exemption
Weak liquor and filter tanks	WAC 173-401-532, categorical exemption
Process water and white water storage tanks	WAC 173-401-532, categorical exemption
Demineralizer tanks	WAC 173-401-532, categorical exemption
Clean Condensate tanks	WAC 173-401-532, categorical exemption
Broke beaters, repulpers, pulp and repulping tanks, stock chests and pulp handling	WAC 173-401-532, categorical exemption
Lime mud filtrate tank	WAC 173-401-532, categorical exemption
Hydrogen peroxide tanks	WAC 173-401-532, categorical exemption
Lime mud and water	WAC 173-401-532, categorical exemption
Lime mud filter	WAC 173-401-532, categorical exemption
Liquor clarifiers and storage tanks and associated pumping, piping, and handling	WAC 173-401-532, categorical exemption
Lime grit washers, filters and handling	WAC 173-401-532, categorical exemption
Lime silos and feed bins	WAC 173-401-532, categorical exemption
Paper forming	WAC 173-401-532, categorical exemption
Dryers	WAC 173-401-532, categorical exemption
Vacuum systems exhaust	WAC 173-401-532, categorical exemption
Stock cleaning and pressurized pulp washing	WAC 173-401-532, categorical exemption
Sludge dewatering and handling	WAC 173-401-532, categorical exemption
Sewer manholes, junction boxes, sumps, and lift stations associated with wastewater treatment systems	WAC 173-401-532, categorical exemption
Firefighting and similar safety equipment (fire pump)	WAC 173-401-532, categorical exemption

Insignificant Emission Unit(s)	Basis for Designation
Operation, loading and unloading of storage tanks and storage vessels with less than a 260-gallon capacity (35 cubic feet), with lids or other closure and heated only to the minimum extent necessary to avoid solidification – Miscellaneous chemical totes in Longview mill	WAC 173-401-533, size and production rate basis
Operation, loading and unloading of volatile liquid storage with 10,000-gallon capacity or less, with lids or other closure and storing liquid with a vapor pressure not greater than 80 millmeters (mm) of mercury (Hg) at 21 degrees Celsius – Chemical totes in Longview mill	WAC 173-401-533, size and production rate basis
Operation, loading, and unloading of butane, propane, or liquefied petroleum gas (LPG) storage tanks with vessel capacity under 40,000 gallons – Propane tanks in Longview mill	WAC 173-401-533, size and production rate basis
Combustion source less than five million Btu/hr exclusively using natural gas, butane, propane and/or LPG – Mobile jitneys, forklifts and barbeques that fire propane in Longview mill	WAC 173-401-533, size and production rate basis

Appendix C - Response to Comments

Issuance Date: DRAFT
Effective Date: DRAFT
Expiration Date: DRAFT

AIR OPERATING PERMIT 0000078

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

WestRock Longview, LLC
P.O. Box 639
Longview, Washington 98632

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

Issued by:

State of Washington
Department of Ecology
P.O. Box 47600
Olympia, Washington 98504-7600

Shingo Yamazaki, P.E. Environmental Engineer Solid Waste Management Program	James DeMay, P.E. Industrial Section Manager Solid Waste Management Program

Table of Contents

INTRODUCTION AND LEGAL AUTHORITY

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

WestRock Longview, LLC (WestRock Longview) requires a Title V Air Operating Permit because it emits, or has the potential to emit, 100 tons per year or more of one or more air pollutants (WAC 173-401-300(1)).

During the drafting of this permit, Ecology has attempted to incorporate requirements using the exact language of the law, regulation, or order. In some cases, this has not been possible. 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 applicable requirement cited in the "Applicable Requirements" column of the tables and the citations contained in brackets at the end of each requirement. Any conflict between the permit and an underlying requirement will be resolved by referring to the cited applicable 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.

The Title V Air Operating Permit consists of all parts of this assembled document including all footnotes and Appendices, but does not include the accompanying Statement of Basis or the Title V permit application materials submitted by the facility.

The definitions of terms contained in WAC 173-401-200 and as defined in all referenced regulations, apply to this permit unless otherwise defined in the permit.

Any federal test method referenced, unless specifically stated otherwise within the body of the permit, is that which is contained in 40 CFR Part 60, Appendix A. Any state test method referenced, unless specifically stated otherwise within the body of the permit, is that which is contained in the "Ecology Source Test Manual" as of July 12, 1990.

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

WestRock Longview requires a Title V Air Operating Permit because it emits or has the potential to emit, 100 tons per year (tpy) or more of one or more air pollutants (WAC 173-401-300(1)). The emission units identified in Conditions A through J are subject to the emission unit specific requirements set forth in Conditions A through J. Monitoring is required only when the emission unit is operating. These units are also subject to the facility-wide applicable requirements and the mill wide emission limits in Condition K, as applicable. The associated monitoring, recordkeeping, and reporting requirements for these limits are in the Facility-Wide section of this permit or in Condition K. Unless specified otherwise, the basis of authority for the type and frequency of monitoring imposed in Conditions A through K is WAC 173-401-615.

The reference test method (RM) or compliance determination algorithm is identified under the column titled, "Monitoring and Reporting." The identified reference test method or compliance determination algorithm is the compliance determination method which is intended to be the default or absolute determinant of compliance. It may or may not also be the method by which ongoing compliance is indicated.

Insignificant emission units (IEUs) are subject to the applicable requirements contained in the Facility-Wide section, however they are not subject to testing, monitoring, recordkeeping, reporting requirements unless the generally applicable requirements in the State Implementation Plan (SIP) impose them. [WAC 173-401-530(2)(c)]

Appendix A contains the emission estimate algorithms. These algorithms set forth the manner by which emissions are calculated for those requirements for which the RM itself does not directly result in an emission estimate. Unless otherwise required by the applicable requirement, minor modifications to the test method may be used with the advanced approval of Ecology. In addition, the Permittee may use an equivalent alternative method with written approval from Ecology. Failure to obtain prior written approval for any test changes may invalidate the use of the test result(s) for Title V compliance purposes.

The permitted facility includes emission units that are subject to EPA's New Source Performance Standards (NSPS) including 40 CFR Part 60, Subparts A, D, Db, BB, and IIII Emission units subject to NSPS requirements cross-reference the specific applicable NSPS standards.

The permitted facility includes emission units that are subject to EPA's National Emission Standards for Hazardous Air Pollutants (NESHAP) including 40 CFR Part 61 Subpart E and 40 CFR Part 63, Subparts A, S, KK, MM, ZZZZ, and DDDDD. Emission units subject to NESHAP requirements cross-reference the specific applicable NESHAP standards.

A1. RECOVERY FURNACE 19 (RF19)

The emission unit shall comply with the General Requirements of 40 CFR Part 63 as listed in Table 1 of Subpart MM.

RF19	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
A1.1a	PM & PM_{10}	0.040 gr/dscf @ 8% O_2, 1-hr average	*Performance Testing:* Sample M/Q using RM 5 (see Appendix ApA.2). During source tests for PM and PM_{10} on all recovery furnaces, primary voltage, primary current, opacity, and spark rate for the electrostatic precipitator shall be recorded for each field once during each source test. In addition, secondary voltage and secondary current data shall also be collected once during each source test when available. All precipitator data shall be maintained on file with corresponding test data. Precipitator data shall be submitted to Ecology when the PM and PM_{10} source test results exceed the permit limit. The department may modify or waive this requirement. *Reporting:* Submit source test results in the monthly air report. See Facility-wide General Requirement, Condition 38 for source test report requirements. *Compliance Assurance Monitoring:* The Permittee shall comply with the general CAM requirements in Condition M. The Permittee shall comply with requirements in Condition A1.4. The Permittee shall implement corrective action if the average of ten consecutive 6-minute averages result in a measurement greater than 20 percent opacity. CAM reporting required on at a minimum semiannual basis.	PSD 01-03, Amendment 3, Condition 1.15 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping

RF19	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
A1.1b	PM	0.10 gr/dscf @ 8% O_2, 1-hr average	Same as for previous limit. CAM demonstration same as previous limits.	WAC 173-405-040(1)(a) 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping
A1.1c	PM & PM_{10}	292 tons per year, 12 month rolling total	Calculate per Appendix ApA.3. Report monthly. CAM demonstration same as previous limits.	PSD 01-03, Amendment 3, Condition 1.15 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping
A1.2	HAP metals (PM as surrogate)	0.044 gr/dscf @ 8% O_2	*Performance Testing:* Sample every 5 years using EPA RM 5. First periodic performance test must be conducted by October 13, 2020 and within 5 years thereafter following the previous performance test. The sampling time and sample volume for each run shall be at least 60 minutes and 0.90 dscm (31.8 dscf). Water shall be used as the cleanup solvent instead of acetone in the sample recovery procedure. *Representative Conditions:* Performance tests shall be conducted based on representative performance during the period being tested. The owner/operator must record the process information that is necessary to document operating conditions during the test and include such record and explanation to support that such conditions represent normal operation. Upon request, the owner/operator shall make	40 CFR 63.862(a)(1)(i)(A) for standard 40 CFR 63.863(c)(1) for 5-year periodic performance test compliance date 40 CFR 63.865 for performance testing requirements 40 CFR 63.9(e) and 40 CFR 63.7(b) for

RF19	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
			available such records as may be necessary to determine the operating conditions during the performance test. *60-day notification:* The Permittee must notify Ecology in writing of his or her intention to conduct a performance test at least 60 calendar days before the performance test is initially scheduled to begin. *Recordkeeping:* The Permittee must maintain records of: 1) All results of performance tests; 2) The process information that is necessary to document operating conditions during the test and include in such record an explanation to support that such conditions represent normal operation; 3) Documentation of supporting calculations for compliance determinations made under 40 CFR 63.865(a) through (d); 4) For each failure to meet the emission limit, the number of failures, the date, start time, and duration of each event; 5) For any failure to meet the emission limit, record an estimate of the quantity of each regulated pollutant emitted over the emission limit and a description of the method used to estimate the emissions. *On-going compliance:* On-going compliance demonstrated through Condition A1.4. *Reporting:* Report failures to meet the applicable standard in the *Semi-Annual Excess Emissions and Continuous Monitoring Systems Performance* or *Summary Report* in accordance with to 40 CFR 63.10(e)(3) and 40 CFR 63.867(c)(4), delivered or postmarked by the 30th day following the end	performance test notification 40 CFR 63.866 for recordkeeping 40 CFR 63.867(c)(4) for excess emission reporting and (d) for electronic reporting

RF19	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
			of each calendar half (or on a more frequent basis in accordance with the criteria in 40 CFR 63.10(e)(3)~~as determined necessary by Ecology~~). Submit source test results in the monthly air report. See Facility-wide General Requirement, Condition 38 for source test report requirements.	
A1.3a	Opacity	Opacity greater than 30% for 2% or more of operating time during a semiannual period	*Monitoring:* Monitoring continuously using a COMS that conforms to 40 CFR Part 60, Appendix F and Appendix B, PS 1. See Facility-wide General Requirement, Condition 26 for continuous emission monitoring system operating requirements. *Exceedances:* An exceedance has occurred when the average of ten consecutive 6-minute averages result in a measurement of greater than 20 percent opacity. The Permittee must implement corrective action following an exceedance. *Violation Determination:* A violation occurs when opacity is greater than 30 percent for 2 percent or more of operating time during a semi-annual period while spent pulping liquor is fed. *Reporting:* Report daily maximum six-minute average opacity, daily maximum hourly average opacity, and exceedances monthly. Semi-annually report percent of operating time during a semi-annual period that opacity exceeded 30 percent.	Order 3462-AQ07, Modification 1, Appendix A

Commented [RA1]: Global comment:
The sentence in parentheses could also be removed as the reference to 40 CFR 63.10(e)(3) would be already included earlier in the paragraph. Some of the conditions with this similar language such as Condition A1.4 already include the reference to 40 CFR 63.10(e)(3) in the main paragraph.

RF19	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
A1.3b	Opacity	35% average for more than 6 consecutive minutes in any 60-minute period.	EPA Reference Method 9 is the reference test method. Monitor continuously using a COMS that conforms to 40 CFR Part 60, Appendix F and Appendix B, Performance Specification 1. See Facility-wide General Requirement, Condition 26 for continuous emission monitoring system operating requirements. The Permittee is required to implement corrective action if the average of ten consecutive 6-minute averages result in a measurement greater than 20 percent opacity. A violation occurs when opacity is greater than 35 percent for 2 percent or more of operating time during a semiannual period while spent pulping liquor is fed. Report daily maximum six-minute average opacity, daily average opacity, and exceedances monthly. The Permittee shall comply with the general CAM requirements in Condition M. CAM reporting required on at a minimum semiannual basis.	WAC 173-405-040(6) WAC 173-401-615 for monitoring 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping
A1.4	HAP Metals (Opacity as surrogate) Operating Limit	Opacity greater than 35% for 2% or more of operating time during a semiannual period.	*Monitoring:* Monitor opacity using a COMS which is installed, calibrated, maintained, and operated in accordance with Performance Specification 1 (PS-1) in Appendix B to 40 CFR Part 60 and the provisions in §63.6(h) and 63.8 and §63.864(d)(3) and (4). See Facility-wide General Requirement, Condition 28 for CMS data recovery requirements. *Monitoring Exceedances:*	40 CFR 63.864 for monitoring requirements 40 CFR 63.864(k) for ongoing compliance and violation determination 40 CFR 63.866 for recordkeeping requirements

RF19	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
			The Permittee is required to implement corrective action if the average of ten consecutive 6-minute averages result in a measurement greater than 20 percent opacity. *Violation Determination:* A violation of the underlying particulate matter standard in Condition A1.2 occurs when opacity is greater than 35 percent for 2 percent or more of operating time during a semiannual period while spent pulping liquor is fed. *Recordkeeping:* The Permittee must maintain records of: 1) Black liquor solids firing rates in units of Mg/d or ton/d; 2) Any occurrence when corrective action is required and when a violation is noted; 3) For each failure to meet the opacity operating limit, the number of failures, the date, start time, and duration of each event; 4) For each failure to meet the operating limit, an estimate of the quantity of each regulated pollutant emitted over the emission limit and a description of the method used to estimate the emissions; 5) Record actions taken to minimize emissions in accordance with §63.860(d) and any corrective actions taken to return the affected unit to its normal or usual manner of operation. *Reporting:* Report exceedances monthly to Ecology. The Permittee must submit a *Semi-Annual Excess Emissions and Continuous Monitoring Systems Performance* or *Summary Report* in accordance with 40 CFR 63.10(e)(3) and 40 CFR 63.867(c), delivered or postmarked by the 30th day following the end of each calendar half (or on a more frequent basis in	40 CFR 63.867(c) for excess emission reporting requirements

RF19	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
			accordance with the criteria in 40 CFR 63.10(e)(3)~~as determined necessary by Ecology~~).	
A1.5a	SO_2	149 lb/hr, 3-hr average	Monitor continuously using a Continuous Emission Monitoring System (CEMS) that conforms to 40 CFR Part 60, Appendix F and Appendix B, Performance Specification 2 (PS-2). See Facility-wide General Requirement, Condition 26 for continuous emission monitoring system operating requirements. Report 3-hr average concentrations, monthly average concentration, maximum monthly 3-hr average concentration, and exceedances monthly.	PSD 01-03, Amendment 3, Condition 1.16
A1.5b	SO_2	500 ppm @ 8% O_2, 1-hr average	Same as for previous limit. Report maximum monthly 1-hr average concentration in ppm corrected to 8% O_2 monthly.	WAC 173-405-040(9)(a)
A1.5c	SO_2	301 tpy, 12-month rolling total	Calculate per Appendix ApA.3. Report monthly.	PSD 01-03, Amendment 3, Condition 1.16
A1.6a	TRS (as H_2S)	10.0 ppmdv @ 8% O_2, 24-hr average	Monitor continuously using a CEMS that conforms to 40 CFR Part 60, Appendix F and Appendix B, Performance Specification 5 (PS-5). See Facility-wide General Requirement, Condition 26 for continuous emission monitoring system operating requirements. Report daily maximum concentrations, 24-hr average concentrations, monthly average concentrations, maximum monthly 24-hr concentrations, and exceedances monthly.	PSD 01-03, Amendment 3, Condition 1.19

RF19	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
A1.6b	TRS (as H_2S)	59 tpy, 12-month rolling total	Calculate per Appendix ApA.3. Report monthly.	PSD 01-03, Amendment 3, Condition 1.19
A1.7a	CO	600 lb/hr, 8-hr average	Sample A/M using RM 10 (see Appendix ApA.2). Submit source test results in the monthly air report. See Facility-wide General Requirement, Condition 38 for source test report requirements.	PSD 01-03, Amendment 3, Condition 1.17
A1.7b	CO	2,628 tpy, 12-month rolling total	Calculate per Appendix ApA.3. Report monthly.	PSD 01-03, Amendment 3, Condition 1.17
A1.8a	NO_x	95 ppmdv @ 8% O_2, 24-hr average	Sample A/M using RM 7 (see Appendix ApA.2). Submit source test results in the monthly air report. See Facility-wide General Requirement, Condition 38 for source test report requirements.	PSD 01-03, Amendment 3, Condition 1.18
A1.8b	NO_x	753 tpy, 12-month rolling total	Calculate per Appendix ApA.3. Report monthly.	PSD 01-03, Amendment 3, Condition 1.18
A1.9	O_2	No limit – required for O_2 correction	Monitor continuously using a CEMS that conforms to 40 CFR Part 60, Appendix F and Appendix B, Performance Specification 3 (PS 3). See Facility-wide General Requirement, Condition 26 for continuous emission monitoring system-operating requirements.	Order 3462-AQ07, Modification 1, Appendix A

RF19	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
A1.10	Operating Limit	2,000 tons of black liquor solids (TBLS)/day, monthly average	Report average daily (black liquor solids) BLS production in tons in monthly report (See Appendix ApA.1).	PSD 01-03, Amendment 3, Condition 1.14
A1.11	HAPs	N/A	The Permittee must maintain proper operation of the electrostatic precipitator's automatic voltage control (AVC). The Permittee must maintain records demonstrating compliance with the requirement to maintain proper operation of an electrostatic precipitator AVC.	40 CFR 63.864(e)(1) for AVC requirement 40 CFR 63.866(c)(8) for recordkeeping
A1.12	VOC (as carbon)	1,020 tpy, 12 month rolling total	Sample triennially using RM 25A (see Appendix ApA.2). Calculate per Appendix ApA.3. Submit source test results in the monthly air report. See Facility-wide General Requirement, Condition 38 for source test report requirements. Report 12-month total monthly.	PSD 01-03, Amendment 3, Condition 1.20

RF19	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
A1.13	Annual Heat Input	Fossil fuel annual heat input <10% potential annual heat input from all fuels.	The annual heat input from fossil fuels shall be less than 10 percent of the potential annual heat input from all fuels. Compliance shall be determined by procedures in 40 CFR 60.45b. Fuel oil with a sulfur content greater than 0.5 percent may not be burned except during emergency conditions, such as a malfunction in the natural gas supply line serving the area of the mill. During such conditions oil with a sulfur content greater than 0.5 percent shall only be burned during startups, shutdowns, or to burnout a high bed. When oil is burned under non-emergency conditions then the Permittee shall demonstrate low sulfur oil content firing by keeping a record of the times, volumes, sulfur content, and fuel receipts from the fuel supplier which certify that the oil meets the fuel sulfur limit. Tall oil with sulfur content not to exceed 0.5 percent sulfur by weight may be substituted for fuel oil.	Order 3462-AQ07, Modification 1, Condition 3

RF19	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
A1.14	Exhaust Gas Flow Equation Update	N/A	At least annually, the Permittee shall update equations for calculation of exhaust gas flow. 1) The equations shall correlate exhaust stack flows to process rate from the emissions unit. The correlation shall be based on linear regression analysis. 2) By January 31 or each year, the Permittee shall submit the updated equations, the data on which they are based, and the regression analyses to Ecology for approval. 3) The Permittee may submit proposed updates more frequently at its option. An update for an emissions unit shall have occurred only when new data are submitted. 4) For emissions units operated 6,000 hour or more since the last update, each update shall include at least 12 hours of new data, and drop an equal amount of the oldest data. For emission unity operated less than 6,000 hour since the last update, the minimum hours of new data (and dropped oldest data) shall be: (Hours of operation since last update) x 12 ÷ 6,545, rounded to the nearest whole number. The updated equations shall take effect upon approval from Ecology.	PSD 01-03, Amendment 3, Condition 2

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

RF19	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
A1.15	TRS	17.5 ppmdv @ 8% O_2, daily average	Monitor continuously using a CEMS that conforms to 40 CFR Part 60, Appendix F and Appendix B, PS-5. Report exceedances monthly. See Facility-wide General Requirement, Condition 26 for continuous emission monitoring system-operating requirements.	WAC 173-405-040(1)(b)

A2. RECOVERY FURNACE 22 (RF22)

The emission unit shall comply with the General Requirements of 40 CFR Part 63 as listed in Table 1 of Subpart MM.

The emission unit shall comply with the requirements of 40 CFR Part 60, Subpart BB. The source shall also comply with the General Requirements of 40 CFR Part 60, including:

40 CFR 60.7(b) & (f) concerning recordkeeping,
40 CFR 60.7(c), (d), & (e) concerning reporting,
40 CFR 60.11(d) concerning operation and maintenance,
40 CFR 60.12 concerning concealment,
40 CFR 60.13 concerning monitoring,
40 CFR 60.19 concerning notification and reporting.

RF22	Parameter	**Limit** (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
A2.1a	PM & PM_{10}	0.027gr/dscf @ 8% O_2, 1-hr average	*Performance Testing:* Sample M/Q using RM 5 (see Appendix ApA.2). During source tests for PM and PM_{10} on all recovery furnaces, primary voltage, primary current, opacity, and spark rate for the electrostatic precipitator shall be recorded for each field once during each source test. In addition, secondary voltage and secondary current data shall also be collected once during each source test when available. All precipitator data shall be maintained on file with corresponding test data. Precipitator data shall be submitted to Ecology when the PM and PM_{10} source test results exceed the permit limit. The department may modify or waive this requirement. Submit source test results in the monthly air report. See Facility-wide General Requirement, Condition 38 for source test report requirements. *Compliance Assurance Monitoring:* The Permittee shall comply with the general CAM requirements in Condition M. The Permittee must comply with the monitoring and corrective action requirements in Condition A2.5. The Permittee shall implement corrective action if the average of ten consecutive 6-minute averages result in a measurement greater than 20 percent opacity. CAM reporting required on at a minimum semiannual basis.	PSD 01-03, Amendment 3, Condition 1.22 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping

RF22	Parameter	**Limit** (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
A2.1b	PM	0.10 gr/dscf @ 8% O_2, 1-hr average	Same as for previous limit. CAM demonstration same as previous limits.	WAC 173-405-040(1)(a) 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping

RF22	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
A2.1c	PM	0.044 gr/dscf @ 8% O_2	*Performance Testing:* Sample M/Q using EPA RM 5 in accordance with 40 CFR 60.8 except as provided below. The sampling time and sample volume for each run shall be at least 60 minutes and 0.90 dscm (31.8 dscf). Water shall be used as the cleanup solvent instead of acetone in the sample recovery procedure. The particulate concentration shall be corrected to the appropriate oxygen concentration according to 40 CFR 60.284(c)(3). Emission rate to be calculated using the procedures in 40 CFR 60.285(c). *30-day Notification:* The Permittee shall provide Ecology at least 30 days prior notice of any performance test. *Reporting:* Submit source test results in the monthly air report. See Facility-wide General Requirement, Condition 38 for source test report requirements. *Compliance Assurance Monitoring:* The Permittee shall comply with the general CAM requirements in Condition M. The Permittee shall comply with requirements in Condition A2.5. CAM reporting required on at a minimum semiannual basis.	40 CFR 60.282(a)(1)(i) for standards 40 CFR 60.285(b)(1) for test method and procedures 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping

RF22	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
A2.1d	PM & PM_{10}	256 tons per year, 12 month rolling total	Calculate per Appendix ApA.3. Report monthly. The Permittee shall comply with the general CAM requirements in Condition M. The Permittee comply with the monitoring and corrective action requirements in Condition A2.5. The Permittee shall implement corrective action if the average of ten consecutive 6-minute averages result in a measurement greater than 20 percent opacity. CAM reporting required on at a minimum semiannual basis.	PSD 01-03, Amendment 3, Condition 1.22 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping
A2.2	HAP Metals (PM as surrogate)	0.044 gr/dscf @ 8% O_2	*Performance Testing:* Sample every 5 years using EPA RM 5. First periodic performance test must be conducted by October 13, 2020 and within 5 years thereafter following the previous performance test. The sampling time and sample volume for each run shall be at least 60 minutes and 0.90 dscm (31.8 dscf). Water shall be used as the cleanup solvent instead of acetone in the sample recovery procedure. *Representative Conditions:* Performance tests shall be conducted based on representative performance during the period being tested. The owner/operator must record the process information that is necessary to document operating conditions during the test and include such record and explanation to support that such conditions represent normal operation. Upon request, the owner/operator shall make available such records as may be necessary to determine the conditions of performance test. *60-day notification:*	40 CFR 63.862(a)(1)(i)(A) for standard 40 CFR 63.863(c)(1) for 5-year periodic performance test compliance date 40 CFR 63.865 for performance testing requirements 40 CFR 63.9(e) and 40 CFR 63.7(b) for performance test notification 40 CFR 63.866 for recordkeeping 40 CFR 63.867(c)(4) for excess emission reporting

RF22	Parameter	**Limit** (shall not exceed)	**Monitoring, Reporting, Recordkeeping**	**Applicable Requirements**
			The Permittee must notify Ecology in writing of his or her intention to conduct a performance test at least 60 calendar days before the performance test is initially scheduled to begin. *Recordkeeping:* The Permittee must maintain records of: 1) All results of performance tests; 2) The process information that is necessary to document operating conditions during the test and include in such record an explanation to support that such conditions represent normal operation; 3) Documentation of supporting calculations for compliance determinations made under 40 CFR 63.865(a) through (d); 4) For each failure to meet the emission limit, the number of failures, the date, start time, and duration of each event; 5) For any failure to meet the emission limit, record an estimate of the quantity of each regulated pollutant emitted over the emission limit and a description of the method used to estimate the emissions. *On-going compliance:* On-going compliance demonstrated through Condition A2.5. *Reporting:* Report failures to meet the applicable standard in the *Semi-Annual Excess Emissions and Continuous Monitoring Systems Performance* or *Summary Report* in accordance with 40 CFR 63,10(e)(10) and 40 CFR 63.867(c)(4), delivered or postmarked by the 30th day following the end of each calendar half (or on a more frequent basis in accordance with the criteria in 40 CFR 63.10(e)(3)~~as determined necessary by Ecology~~).	and (d) for electronic reporting

RF22	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
			Submit source test results in the monthly air report. See Facility-wide General Requirement, Condition 38 for source test report requirements.	
A2.3a	Opacity	Opacity greater than 20% for 2% or more of operating time during a semiannual period	*Monitoring:* Monitoring continuously using a COMS that conforms to 40 CFR Part 60, Appendix F and Appendix B, PS 1. See Facility-wide General Requirement, Condition 26 for continuous emission monitoring system-operating requirements. *Exceedances:* An exceedance has occurred when the average of ten consecutive 6-minute averages result in a measurement of greater than 20 percent opacity. The Permittee must implement corrective action following an exceedance. *Violation Determination:* A violation occurs when opacity is greater than 20 percent for 2 percent or more of operating time during a semi-annual period while spent pulping liquor is fed. *Reporting:* Report daily maximum six-minute average opacity, daily maximum hourly average opacity, and exceedances monthly. Semi-annually report percent of operating time during a semi-annual period that opacity exceeded 20 percent.	Order 3462-AQ07, Modification 1, Appendix A

RF22	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
A2.3b	Opacity	35% average for more than 6 consecutive minutes in any 60-minute period.	EPA Method 9 is the reference test method. Monitor continuously using a COMS that conforms to 40 CFR Part 60, Appendix F and Appendix B, Performance Specification 1. See Facility-wide General Requirement, Condition 26 for continuous emission monitoring system-operating requirements. The Permittee is required to implement corrective action if the average of ten consecutive 6-minute averages result in a measurement greater than 20 percent opacity. A violation occurs when opacity is greater than 35 percent for 2 percent or more of operating time during a semiannual period while spent pulping liquor is fed. Report daily maximum six-minute average opacity, daily average opacity, and exceedances monthly. The Permittee shall comply with the general CAM requirements in Condition M. CAM reporting required on at a minimum semiannual basis.	WAC 173-405-040(6) WAC 173-401-615 for monitoring 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping

RF22	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
A2.4	PM (Opacity as surrogate)	35% opacity (six minute average) for six percent of total possible contiguous periods of excess emission in quarter	*Monitoring:* Monitor continuously using a COMS that conforms to 40 CFR Part 60, Appendix F and Appendix B, PS-1. Span of the system shall be set at 70 percent opacity. See Facility-wide General Requirement, Condition 27 for CMS data recovery requirements. *Violation Determination:* The percent of the total number of possible contiguous periods of excess emissions in a quarter (excluding periods of startup, shutdown, or malfunction and periods when the facility is not operating) during which excess emissions occur exceeding six percent of average opacities is indicative of a violation of §60.11(d). *Reporting:* The Permittee must submit a *Semi-Annual Excess Emissions and Continuous Monitoring Systems Performance* or *Summary Report* in accordance with 40 CFR 60.7(c) and 40 CFR 60.284(d), postmarked by the 30th day following the end of each six-month period (or on a more frequent basis as in accordance with the criteria in 40 CFR 63.10(e)(3)~~determined necessary by Ecology~~). Excess emissions are 6-minute average opacities which exceed 35%.	40 CFR 60.282(a)(1)(ii) for opacity limit 40 CFR 60.284(a)(1) for monitoring 40 CFR 60.284(e) for determining compliance with §60.11 40 CFR 60.284(d) for semiannual reporting of excess emissions
A2.5	HAP Metals (Opacity as surrogate)	Opacity greater than 35% for 2% or more of operating time during	*Monitoring:* Monitoring opacity using a COMS which is installed, calibrated, maintained, and operated in accordance with PS-1 in Appendix B to 40 CFR Part 60 and the provisions in §63.6(h) and 63.8 and §63.864(d)(3) and (4).	40 CFR 63.864 for monitoring requirements 40 CFR 63.864(k) for ongoing compliance and violation determination

RF22	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
	Operating Limit	a semiannual period.	See Facility-wide General Requirement, Condition 28 for CMS data recovery requirements. *Monitoring Exceedances:* The Permittee is required to implement corrective action if the average of ten consecutive 6-minute averages result in a measurement greater than 20 percent opacity. *Violation Determination:* A violation of the underlying particulate matter standard in A2.2 occurs when opacity is greater than 35 percent for 2 percent or more of operating time during a semiannual period while spent pulping liquor is fed. *Recordkeeping:* The Permittee must maintain records of: 1) Black liquor solids firing rates in units of Mg/d or ton/d; 2) Any occurrence when corrective action is required and when a violation is noted; 3) For each failure to meet the opacity operating limit, the number of failures, the date, start time, and duration of each event; 4) For each failure to meet the operating limit, an estimate of the quantity of each regulated pollutant emitted over the emission limit and a description of the method used to estimate the emissions; 5) Record actions taken to minimize emissions in accordance with §63.860(d) and any corrective actions taken to return the affected unit to its normal or usual manner of operation. *Reporting:* Report exceedances monthly to Ecology.	40 CFR 63.866 for recordkeeping requirements 40 CFR 63.867(c) for excess emission reporting requirements

RF22	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
			The Permittee must submit a *Semi-Annual Excess Emissions and Continuous Monitoring Systems Performance* or *Summary Report* in accordance with 40 CFR 63.10(e)(3) and 40 CFR 63.867(c), delivered or postmarked by the 30th day following the end of each calendar half (or on a more frequent basis as determined necessary by Ecology).	
A2.6a	SO_2	295 lb/hr, 3-hr average	Monitor continuously using a CEMS that conforms to 40 CFR Part 60, Appendix F and Appendix B, PS-2. See Facility-wide General Requirement, Condition 26 for continuous emission monitoring system-operating requirements. Report 3-hr average concentrations, monthly average concentration, maximum monthly 3-hr average concentration, and exceedances monthly.	PSD 01-03, Amendment 3, Condition 1.23
A2.6b	SO_2	500 ppm @ 8% O_2, 1-hr average	Same as for previous limit. Report maximum monthly 1-hr average concentration in ppm corrected to 8% O_2 monthly.	WAC 173-405-040(9)(a)
A2.6c	SO_2	1,291 tpy, 12-month rolling total	Calculate per Appendix ApA.3. Report monthly.	PSD 01-03, Amendment 3, Condition 1.23
A2.7a	TRS (as H_2S)	3.0 ppmdv @ 8% O_2, 12-hr average	Monitor continuously using a CEMS that conforms to 40 CFR Part 60, Appendix F and Appendix B, PS-5. See Facility-wide General Requirement, Condition 26 for continuous emission monitoring system-operating requirements. Report daily maximum concentrations, 12-hr average concentrations, monthly average concentrations, maximum monthly 12-hr concentrations, and exceedances monthly.	PSD 01-03, Amendment 3, Condition 1.26

RF22	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
A2.7b	TRS (as H_2S)	5 ppmdv @ 8% O_2 (12-hr average) for more than one percent of the total possible contiguous periods of excess emissions in a quarter	Same as above. CEMS span to be set to 30 ppm TRS. See Facility-wide General Requirement, Condition 27 for CMS data recovery requirements. Calculate and record on a daily basis 12-hour average TRS and oxygen (pursuant to Condition A2.10) 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 using the following equation: $C_{corr} = C_{meas} \times (21 - X)/(21 - Y)$ *where:* C_{corr} = *the concentration corrected for oxygen.* C_{meas} = *the concentration uncorrected for oxygen.* *X = the volumetric oxygen concentration in percentage to be corrected to (8 percent for recovery furnaces and 10 percent for lime kilns, incinerators, or other devices).* *Y = the measured 12-hour average volumetric oxygen concentration.* Periods of excess emissions reported under paragraph (d) of 40 CFR 60.284 are not indicative of a violation of §60.11(d) provided that the percent of the total number of possible contiguous periods of excess emissions in a quarter (excluding periods of startup, shutdown, or malfunction and periods when the facility is not operating) during which excess emissions occur does not exceed one percent for TRS emissions. *Reporting:*	40 CFR 60.284 for monitoring requirements 40 CFR 60.284(e) for determining compliance with §60.11 40 CFR 60.284(d) for semiannual reporting of excess emissions

RF22	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
			The Permittee must submit a *Semi-Annual Excess Emissions and Continuous Monitoring Systems Performance* or *Summary Report* in accordance with 40 CFR 60.7(c) and 40 CFR 60.284(d), postmarked by the 30th day following the end of each six-month period (or on a more frequent basis in accordance with the criteria in 40 CFR 60.7(c)~~as determined necessary by Ecology~~). Excess emissions are 12-hr averages of TRS concentrations above 5 ppm by volume corrected to 8% O_2.	
A2.7c	TRS (as H_2S)	17 tpy, 12-month rolling total	Calculate per Appendix ApA.3. Report monthly.	PSD 01-03, Amendment 3, Condition 1.26
A2.8a	CO	300 ppmdv @ 8% O_2, 8-hr average	Monitor continuously using a CEMS that conforms to 40 CFR Part 60, Appendix F and Appendix B, PS-4. See Facility-wide General Requirement, Condition 26 for continuous emission monitoring system operating requirements. Report 8-hr average concentrations, monthly average concentration, maximum monthly 8-hr average concentration, and exceedances monthly.	PSD 01-03, Amendment 3, Condition 1.24
A2.8b	CO	1,380 tpy, 12-month rolling total	Calculate per Appendix ApA.3. Report monthly.	PSD 01-03, Amendment 3, Condition 1.24

Commented [RA2]: The sentence in paratheses could be removed as the reference to 40 CFR 60.7(c) is already included earlier in the paragraph.

RF22	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
A2.9a	NO_x	95 ppmdv @ 8% O_2, 24-hr average	Monitor continuously using a CEMS in accordance with 40 CFR Part 60, Appendix F and Appendix B, PS-2. See Facility-wide General Requirement, Condition 26 for continuous emission monitoring system operating requirements. Report 24-hr average concentrations, monthly average concentration, maximum monthly 24-hr average concentration, and exceedances monthly.	PSD 01-03, Amendment 3, Condition 1.25
A2.9b	NO_x	735 tpy, 12-month rolling total	Calculate per Appendix ApA.3. Report monthly.	PSD 01-03, Amendment 3, Condition 1.25
A2.10	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 F and Appendix B, PS-3. See Facility-wide General Requirement, Condition 26 for continuous emission monitoring system-operating requirements. Calculate and record on a daily basis 12-hour average oxygen concentrations for the two consecutive periods of each operating day.	Order 3462-AQ07, Modification 1, Appendix A 40 CFR 60.284(a)(2) for monitoring requirement 40 CFR 60.284(c)(2) for recording requirement
A2.11	Operating Limit	1,950 TBLS/day, monthly average	Report average daily BLS production in tons in monthly report (See Appendix ApA.1).	PSD 01-03, Amendment 3, Condition 1.21

RF22	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
A2.12	HAPs	N/A	The Permittee must maintain proper operation of the electrostatic precipitator's automatic voltage control (AVC). The Permittee must maintain records demonstrating compliance with the requirement to maintain proper operation of an electrostatic precipitator AVC.	40 CFR 63.864(e)(1) for AVC requirement 40 CFR 63.866(c)(8) for recordkeeping
A2.13	Annual Heat Input	Fossil fuel annual heat input <10% potential annual heat input from all fuels.	The annual heat input from fossil fuels shall be less than 10 percent of the potential annual heat input from all fuels. Compliance shall be determined by procedures in 40 CFR 60.45b. Fuel oil with a sulfur content greater than 0.5 percent may not be burned except during emergency conditions, such as a malfunction in the natural gas supply line serving the area of the mill. During such conditions oil with a sulfur content greater than 0.5 percent shall only be burned during startups, shutdowns, or to burnout a high bed. When oil is burned under non-emergency conditions then the Permittee shall demonstrate low sulfur oil content firing by keeping a record of the times, volumes, sulfur content, and fuel receipts from the fuel supplier which certify that the oil meets the fuel sulfur limit. Tall oil with sulfur content not to exceed 0.5 percent sulfur by weight may be substituted for fuel oil.	Order 3462-AQ07, Modification 1, Condition 3

RF22	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
A2.14	Exhaust Gas Flow Equation Update	N/A	At least annually, the Permittee shall update equations for calculation of exhaust gas flow. 1) The equations shall correlate exhaust stack flows to process rate from the emissions unit. The correlation shall be based on linear regression analysis. 2) By January 31 or each year, the Permittee shall submit the updated equations, the data on which they are based, and the regression analyses to Ecology for approval. 3) The Permittee may submit proposed updates more frequently at its option. An update for an emissions unit shall have occurred only when new data are submitted. 4) For emissions units operated 6,000 hour or more since the last update, each update shall include at least 12 hours of new data, and drop an equal amount of the oldest data. For emission unity operated less than 6,000 hour since the last update, the minimum hours of new data (and dropped oldest data) shall be: (Hours of operation since last update) x 12 ÷ 6,545, rounded to the nearest whole number. The updated equations shall take effect upon approval from Ecology.	PSD 01-03, Amendment 3, Condition 2

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

RF22	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
A2.15	TRS	5.0 ppmdv @ 8% O_2, daily average	Monitor continuously using a CEMS that conforms to 40 CFR Part 60, Appendix F and Appendix B, PS-5. Report exceedances monthly. See Facility-wide General Requirement, Condition 26 for continuous emission monitoring system-operating requirements.	WAC 173-405-040(1)(c)

B1. SMELT DISSOLVER TANK 19 (SDT19)

The emission unit shall comply with the General Requirements of 40 CFR Part 63 as listed in Table 1 of Subpart MM.

Opacity limits apply to each stack individually. All other limits apply to the total emissions from the combined stacks.

SDT19	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
B1.1a	PM & PM_{10}	0.12 lb/TBLS, 1-hr average	*Performance Testing:* Sample M/Q using RM 5 (see Appendix ApA.2). *Reporting:* Submit source test results in the monthly air report. See Facility-wide General Requirement, Condition 38 for source test report requirements. *Compliance Assurance Monitoring:* The Permittee shall comply with the general CAM requirements in Condition M. The Permittee shall implement corrective action when any 3-hr average of a level specified in the "Emission Control Compliance Demonstration Plan" in Appendix B is not met. CAM reporting required on at a minimum semiannual basis.	PSD 01-03, Amendment 3, Condition 1.40 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping
B1.1b	PM	0.30 lb/TBLS, 1-hr average	Same as for previous limit.	WAC 173-405-040(2) 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping

SDT19	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
B1.1c	PM & PM_{10}	44 tons per year, 12 month rolling total	Calculate per Appendix ApA.3. Report monthly. CAM demonstration same as previous limits.	PSD 01-03, Amendment 3, Condition 1.40 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping
B1.2	HAP Metals (PM as surrogate)	0.20 lb/TBLS (0.10 kg/Mg of black liquor solids fired)	*Performance Testing:* Sample every 5 years using EPA RM 5. First periodic performance test must be conducted by October 13, 2020 and within 5 years thereafter following the previous performance test. The sampling time and sample volume for each run shall be at least 60 minutes and 0.90 dscm (31.8 dscf). Water shall be used as the cleanup solvent instead of acetone in the sample recovery procedure. *Representative Conditions:* Performance tests shall be conducted based on representative performance during the period being tested. The owner/operator must record the process information that is necessary to document operating conditions during the test and include such record and explanation to support that such conditions represent normal operation. Upon request, the owner/operator shall make available such records as may be necessary to determine the conditions of the performance test. *60-day notification:* The Permittee must notify Ecology in writing of his or her intention to conduct a performance test at least 60 calendar days before the performance test is initially scheduled to begin.	40 CFR 63.862(a)(1)(i)(B) for standard 40 CFR 63.865 for performance testing requirements 40 CFR 63.9(e) and 40 CFR 63.7(b) for performance test notification 40 CFR 63.866 for recordkeeping 40 CFR 63.867(c)(4) for reporting excess emissions and (d) for electronic reporting

SDT19	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
			Recordkeeping: The Permittee must maintain records of: 1) All results of performance tests; 2) The process information that is necessary to document operating conditions during the test and include in such record an explanation to support that such conditions represent normal operation; 3) Documentation of supporting calculations for compliance determinations made under 40 CFR 63.865(a) through (d); 4) For each failure to meet the emission limit, the number of failures, the date, start time, and duration of each event; 5) For any failure to meet the emission limit, record an estimate of the quantity of each regulated pollutant emitted over the emission limit and a description of the method used to estimate the emissions. *On-going compliance:* On-going compliance demonstrated through Condition B1.4. *Reporting:* Report failures to meet the applicable standard in the *Semi-Annual Excess Emissions and Continuous Monitoring Systems Performance* or *Summary Report* in accordance with 40 CFR 63.10(e)(3) and 40 CFR 63.867(c)(4), delivered or postmarked by the 30th day following the end of each calendar half (or on a more frequent basis in accordance with the criteria in 40 CFR 63.10(e)(3)~~as determined necessary by Ecology~~). Submit source test results in the monthly air report. See Facility-wide General Requirement, Condition 38 for source test report requirements.	

SDT19	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
B1.3a	Opacity	20 % average for more than 6 consecutive minutes in any 60 minute period (limit is applicable to each stack individually)	Emission control parameter monitoring is required when exhaust gases are being emitted from the smelt dissolving tank vent during combustion in the associated recovery furnace. Maintain emission control parameters at levels specified in the "Emission Control Compliance Demonstration Plan" (see Appendix B). Continuously monitor parameters specified in the plan. Continuously monitor the explosion dampers. Check explosion dampers and spout box doors at least once per shift to assure they are closed. Whenever any 3-hr average of a level specified in the "Emission Control Compliance Demonstration Plan" is not met, corrective action must be initiated within 24 hours. Failure to initiate corrective action within 24 hours is a violation of WAC 173-405-040(8) and may be a violation of the underlying applicable requirement. Report deviations from these operating parameters that last longer than 3 hours and corrective action in the monthly report. Compliance may also be determined by RM 9.	Order 3462-AQ07, Modification 1, Appendix A 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping
B1.3b	Opacity	35% average for more than 6 consecutive minutes in any 60 minute period (limit applies to each stack individually)	EPA Method 9 is the reference test method. Continuous monitoring same as above. The Permittee shall comply with the general CAM requirements in Condition M. CAM reporting required on at a minimum semiannual basis.	WAC 173-405-040(6) 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping

SDT19	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
B1.4	HAP Metals (Scrubber Operating Limit as surrogate)	Five monitoring parameter values for either pressure drop across the scrubber or scrubbing liquid flowrate below the minimum operating limits during any semiannual reporting period	*Monitoring:* The Permittee must calibrate, maintain, and operate a continuous parametric monitoring system (CPMS) that can be used to determine and record the pressure drop across the scrubber and the scrubbing liquid flow rate at least once every successive 15-minute period using the procedures in 40 CFR 63.8(c), as well as the procedures in 40 CFR 63.864(e)(10)(i) and (ii). The Permittee must establish operating limits for pressure drop across the scrubber and the scrubbing liquid flow rate based on performance testing in accordance with 40 CFR 63.864(j). Operating limits for pressure drop and scrubber flow rate have been established/specified in the "Emission Control Compliance Demonstration Plan" (Appendix B). See Facility-wide General Requirement, Condition 28 for CMS data recovery requirements. *Monitoring Exceedances:* The Permittee is required to implement corrective action when any 3-hr average parameter value is below the minimum operating limit established during times when spent pulping liquor is fed, with the exception of pressure drop during startup and shutdown. *Violation Determination:* A violation of the underlying particulate matter standard in Condition B1.2 occurs when six or more 3-hour average parameter values within any 6-month reporting period are below the minimum operating limits established, with the exception of pressure drop during startup and shutdown. For purposes of determining the number of monitoring exceedances, no more than one exceedance will be attributed to any given 24-hour period.	40 CFR 63.864 for monitoring requirements 40 CFR 63.864(j) for determination of operating limits 40 CFR 63.864(k) for ongoing compliance and violation determination 40 CFR 63.866 for recordkeeping requirements 40 CFR 63.867(c) for excess emission reporting requirements

SDT19	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
			Recordkeeping: The Permittee must maintain records of: 1) Any occurrence when corrective action is required and when a violation is noted; 2) Records of parameter monitoring data required under §63.864, including any period when the operating parameter levels were inconsistent with the levels established during the performance test, with a brief explanation of the cause of the monitoring exceedance, the time the monitoring exceedance occurred, the time corrective action was initiated and completed, and the corrective action taken; 3) Records of parameter operating limits established for each affected source or process unit; 4) For each failure to meet the operating limits, the number for failures, date, start time, and duration of each event; 5) For each failure to meet an operating limit, maintain sufficient information to estimate the quantity of each regulated pollutant emitted over the emission limit. This information must be sufficient to provide a reliable emissions estimate if requested by the Administrator. 6) Record actions taken to minimize emissions in accordance with §63.860(d) and any corrective actions taken to return the affected unit to its normal or usual manner of operation; *Reporting:* Report ~~minimum daily 3-hour average pressure drop, minimum daily 3-hour average scrubbing liquid flow, and~~ monitoring exceedances monthly to Ecology. The Permittee must submit a *Semi-Annual Excess Emissions and Continuous Monitoring Systems Performance* or *Summary Report* in accordance with 40	

SDT19	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
			CFR 63.10(e)(3) and 40 CFR 63.867(c), delivered or postmarked by the 30th day following the end of each calendar half (or on a more frequent basis in accordance with the criteria in 40 CFR 63.10(e)(3)~~as determined necessary by Ecology~~).	
~~B1.5a~~	~~SO_2~~	~~1,000 ppm, 1-hr average~~	~~Sample T/M using RM 6C.~~ ~~Submit source test results in the monthly air report. See Facility-wide General Requirement, Condition 38 for source test report requirements.~~	~~WAC 173-405-040(9)(b)~~
B1.5	SO_2	16 tpy, 12-month rolling total	Same as previous limit. Calculate per Appendix ApA.3. Report monthly.	PSD 01-03, Amendment 3, Condition 1.41
B1.6	TRS (as H_2S)	114 tpy, 12-month rolling total	Sample T/M using RM 16 (see Appendix ApA.2). Submit source test results in the monthly air report. See Facility-wide General Requirement, Condition 38 for source test report requirements. Calculate per Appendix ApA.3. Report monthly.	PSD 01-03, Amendment 3, Condition 1.44
B1.7	CO	66 tpy, 12-month rolling total	Sample T/M using RM 10 (see Appendix ApA.2). Submit source test results in the monthly air report. See Facility-wide General Requirement, Condition 38 for source test report requirements. Calculate per Appendix ApA.3. Report monthly.	PSD 01-03, Amendment 3, Condition 1.42
B1.8	NOx	11 tpy, 12-month rolling total	Sample T/M using RM 7 (see Appendix ApA.2). Submit source test results in the monthly air report. See Facility-wide General Requirement, Condition 38 for source test report requirements. Calculate per Appendix ApA.3. Report monthly.	PSD 01-03, Amendment 3, Condition 1.43

SDT19	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
B1.9	Operating Limit	2,000 TBLS/day, monthly average	Report average daily BLS production in tons in monthly report (See Appendix ApA.1).	PSD 01-03, Amendment 3, Condition 1.39

B2. SMELT DISSOLVER TANK 22 (SDT22)

The emission unit shall comply with the General Requirements of 40 CFR Part 63 as listed in Table 1 of Subpart MM.

This source shall comply with the requirements of 40 CFR Part 60, Subpart BB. The source shall also comply with the General Requirements of 40 CFR Part 60, including:

40 CFR 60.7(b) & (f) concerning recordkeeping,
40 CFR 60.7(c), (d), & (e) concerning reporting,
40 CFR 60.11(d) concerning operation and maintenance,
40 CFR 60.12 concerning concealment,
40 CFR 60.13 concerning monitoring,
40 CFR 60.19 concerning notification and reporting.

SDT22	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
B2.1a	PM & PM_{10}	0.12 lb/TBLS, 1-hr average	*Performance Testing:* Sample M/Q using RM 5 (see Appendix ApA.2). *Reporting:* Submit source test results in the monthly air report. See Facility-wide General Requirement, Condition 38 for source test report requirements. *Compliance Assurance Monitoring:* The Permittee shall comply with the general CAM requirements in Condition M. The Permittee shall implement corrective action when any 3-hr average of a level specified in the "Emission Control Compliance Demonstration Plan" is not met. CAM reporting required on at a minimum semiannual basis.	PSD 01-03, Amendment 3, Condition 1.40 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping
B2.1b	PM	0.30 lb/TBLS, 1-hr average	Same as for previous limit.	WAC 173-405-040(2) 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping

B2.1c	PM	0.2 lb/TBLS (dry weight), 1-hr average	*Performance Testing:* Sample M/Q using RM 5 in accordance with 40 CFR 60.8 except as provided in 40 CFR 60.285. The sampling time and sample volume for each run shall be at least 60 minutes and 0.90 dscm (31.8 dscf). Water shall be used as the cleanup solvent instead of acetone in the sample recovery procedure. The particulate concentration shall be corrected to the appropriate oxygen concentration according to 40 CFR 60.284(c)(3). Emission rate to be calculated using the procedures in 40 CFR 60.285(c). *30-day Notification:* The Permittee shall provide Ecology at least 30 days prior notice of any performance test. *Reporting:* Submit source test results in the monthly air report. See Facility-wide General Requirement, Condition 38 for source test report requirements. *Monitoring:* The Permittee must install a monitoring device for the continuous measurement of pressure loss of the gas stream through the control equipment and scrubbing liquid supply pressure in accordance with 40 CFR 60.284(b)(2). The Permittee must record, once per shift, measurements obtained from continuous monitoring devices required by 40 CFR 60.284(b)(2). *Compliance Assurance Monitoring:* The Permittee shall comply with the general CAM requirements in Condition M. The Permittee shall comply with requirements in Condition B2.4. CAM reporting required on at a minimum semiannual basis.	40 CFR 60.282(a)(2) for standards 40 CFR 60.285(b)(1) for test method and procedures 40 CFR 60.284(b)(2) for continuous monitoring requirement 40 CFR 60.284(c)(4) for recordkeeping requirements 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping

SDT22	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
B2.1d	PM & PM_{10}	44 tons per year, 12 month rolling total	Calculate per Appendix ApA.3. Report monthly. The Permittee shall comply with the general CAM requirements in Condition M. The Permittee shall implement corrective action when any 3-hr average of a level specified in the "Emission Control Compliance Demonstration Plan" is not met. CAM reporting required on at a minimum semiannual basis.	PSD 01-03, Amendment 3, Condition 1.46 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping
B2.2	HAP Metals (PM as a surrogate)	0.20 lb/TBLS (0.10 kg/Mg of black liquor solids fired)	*Performance Testing:* Sample every 5 years using EPA RM 5. First periodic performance test must be conducted by October 13, 2020 and within 5 years thereafter following the previous performance test. The sampling time and sample volume for each run shall be at least 60 minutes and 0.90 dscm (31.8 dscf). Water shall be used as the cleanup solvent instead of acetone in the sample recovery procedure. *Representative Conditions:* Performance tests shall be conducted based on representative performance during the period being tested. The owner/operator must record the process information that is necessary to document operating conditions during the test and include such record and explanation to support that such conditions represent normal operation. Upon request, the owner/operator shall make available such records as may be necessary to determine the conditions of the performance test. *60-day notification:*	40 CFR 63.862(a)(1)(i)(B) for standard 40 CFR 63.865 for performance testing requirements 40 CFR 63.9(e) and 40 CFR 63.7(b) for performance test notification 40 CFR 63.866 for recordkeeping 40 CFR 63.867(c)(4) for excess emissions reporting and (d) for electronic reporting

SDT22	Parameter	**Limit** (shall not exceed)	**Monitoring, Reporting, Recordkeeping**	**Applicable Requirements**
			The Permittee must notify Ecology in writing of his or her intention to conduct a performance test at least 60 calendar days before the performance test is initially scheduled to begin. *Recordkeeping:* The Permittee must maintain records of: 1) All results of performance tests; 2) The process information that is necessary to document operating conditions during the test and include in such record an explanation to support that such conditions represent normal operation; 3) Documentation of supporting calculations for compliance determinations made under 40 CFR 63.865(a) through (d); 4) For each failure to meet the emission limit, the number of failures, the date, start time, and duration of each event; 5) For any failure to meet the emission limit, record an estimate of the quantity of each regulated pollutant emitted over the emission limit and a description of the method used to estimate the emissions. *On-going compliance:* On-going compliance demonstrated through Condition B2.4. *Reporting:* Report failures to meet the applicable standard in the *Semi-Annual Excess Emissions and Continuous Monitoring Systems Performance* or *Summary Report* in accordance with 40 CFR 63.10(e)(3) and 40 CFR 63.867(c)(4), delivered or postmarked by the 30th day following the end of each calendar half (or on a more frequent basis in accordance with the criteria in 40 CFR 63.10(e)(3)~~as determined necessary by Ecology~~).	

SDT22	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
			Submit source test results in the monthly air report. See Facility-wide General Requirement, Condition 38 for source test report requirements.	
B2.3a	Opacity	20 % average for more than 6 consecutive minutes in any 60 minute period	Emission control parameter monitoring is required when exhaust gasses are being emitted from the smelt dissolving tank vent during combustion in the associated recovery furnace. Maintain emission control parameter hourly average rates at levels specified in the "Emission Control Compliance Demonstration Plan" (see Appendix B). Continuously monitor parameters specified in the plan. Continuously monitor the explosion dampers. Check explosion dampers and spout box doors at least once per shift to assure they are closed. Whenever any 3-hr average of a level specified in the "Emission Control Compliance Demonstration Plan" is not met, corrective action must be initiated within 24 hours. Failure to initiate corrective action within 24 hours is a violation of WAC 173-405-040(8) and may be a violation of the underlying applicable requirement. Report deviations from these operating parameters that last longer than 3 hours and corrective action in the monthly report. Compliance may also be determined by RM 9.	Order 3462-AQ07, Modification 1, Appendix A 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping

SDT22	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
B2.3b	Opacity	35% average for more than 6 consecutive minutes in any 60-minute period.	EPA Method 9 is the reference test method. Continuous monitoring same as above. The Permittee shall comply with the general CAM requirements in Condition M. CAM reporting required on at a minimum semiannual basis.	WAC 173-405-040(6) 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping
B2.4	HAP Metals (Scrubber Operating Limit as a surrogate)	Five monitoring parameter values for either pressure drop across the scrubber or scrubbing liquid flowrate below the minimum operating limits during any semiannual reporting period	*Monitoring:* The Permittee must calibrate, maintain, and operate a CPMS that can be used to determine and record the pressure drop across the scrubber and the scrubbing liquid flow rate at least once every successive 15-minute period using the procedures in 40 CFR 63.8(c), as well as the procedures in 40 CFR 63.864(e)(10)(i) and (ii). The Permittee must establish operating limits for pressure drop across the scrubber and the scrubbing liquid flow rate based on performance testing in accordance with 40 CFR 63.864(j). Operating limits for pressure drop and scrubber flow rate have been established/specified in the "Emission Control Compliance Demonstration Plan" (Appendix B). See Facility-wide General Requirement, Condition 28 for CMS data recovery requirements. *Monitoring Exceedances:* The Permittee is required to implement corrective action when any 3-hr average parameter value is below the minimum operating limit established during times	40 CFR 63.864 for monitoring requirements 40 CFR 63.864(j) for determination of operating limits 40 CFR 63.864(k) for ongoing compliance and violation determination 40 CFR 63.866 for recordkeeping requirements 40 CFR 63.867(c) for excess emission reporting requirements

SDT22	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
			when spent pulping liquor is fed, with the exception of pressure drop during startup and shutdown. *Violation Determination:* A violation of the underlying particulate matter standard in Condition B2.2 occurs when six or more 3-hour average parameter values within any 6-month reporting period are below the minimum operating limits established, with the exception of pressure drop during startup and shutdown. For purposes of determining the number of monitoring exceedances, no more than one exceedance will be attributed to any given 24-hour period. *Recordkeeping:* The Permittee must maintain records of: 1) Any occurrence when corrective action is required and when a violation is noted; 2) Records of parameter monitoring data required under §63.864, including any period when the operating parameter levels were inconsistent with the levels established during the performance test, with a brief explanation of the cause of the monitoring exceedance, the time the monitoring exceedance occurred, the time corrective action was initiated and completed, and the corrective action taken; 3) Records of parameter operating limits established for each affected source or process unit; 4) For each failure to meet the operating limits, the number for failures, date, start time, and duration of each event; 5) For each failure to meet an operating limit, maintain sufficient information to estimate the quantity of each regulated pollutant emitted over the emission limit. This information must be sufficient to provide a reliable emissions estimate if requested by the Administrator.	

SDT22	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
			6) Record actions taken to minimize emissions in accordance with §63.860(d) and any corrective actions taken to return the affected unit to its normal or usual manner of operation; *Reporting:* Report ~~minimum daily 3-hour average pressure drop, minimum daily 3-hour average scrubbing liquid flow, and~~ monitoring exceedances monthly to Ecology. The Permittee must submit a *Semi-Annual Excess Emissions and Continuous Monitoring Systems Performance* or *Summary Report* in accordance with 40 CFR 63.10(e)(3) and 40 CFR 63.867(c), delivered or postmarked by the 30th day following the end of each calendar half (or on a more frequent basis in accordance with the criteria in 40 CFR 63.10(e)(3)~~as determined necessary by Ecology~~).	
~~B2.5a~~	~~SO_2~~	~~1,000 ppm, 1-hr avg~~	~~Sample T/M using RM 6C.~~ ~~Submit source test results in the monthly air report. See Facility-wide General Requirement, Condition 38 for source test report requirements.~~	~~WAC 173-405-040(9)(b)~~
B2.5b	SO_2	31 tpy, 12-month rolling total	Same as previous limit. Calculate per Appendix ApA.3. Report monthly.	PSD 01-03, Amendment 3, Condition 1.47
B2.6a	TRS (as H_2S)	0.0168 lb/TBLS, 24-hr average	Sample T/M using RM 16 (see Appendix ApA.2). Submit source test results in the monthly air report. See Facility-wide General Requirement, Condition 38 for source test report requirements.	PSD 01-03, Amendment 3, Condition 1.50
B2.6b	TRS (as H_2S)	0.033 lb/TBLS	Same as for previous limit.	40 CFR 60.283(a)(4)

SDT22	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
B2.6c	TRS (as H_2S)	6 tpy, 12-month rolling total	Calculate per Appendix ApA.3. Report monthly.	PSD 01-03, Amendment 3, Condition 1.50
B2.7	CO	65 tpy, 12-month rolling total	Sample T/M using RM 10 (see Appendix ApA.2). Calculate per Appendix ApA.3. Report monthly. Submit source test results in the monthly air report. See Facility-wide General Requirement, Condition 38 for source test report requirements.	PSD 01-03, Amendment 3, Condition 1.48
B2.8	NO_x	11 tpy, 12-month rolling total	Sample T/M using RM 7 (see Appendix ApA.2). Calculate per Appendix ApA.3. Report monthly. Submit source test results in the monthly air report. See Facility-wide General Requirement, Condition 38 for source test report requirements.	PSD 01-03, Amendment 3, Condition 1.49
B2.9	Operating Limit	1,950 TBLS/day, monthly average	Report average daily BLS production in tons in monthly report (See Appendix ApA.1).	PSD 01-03, Amendment 3, Condition 1.45

C1. LIME KILN 3 (LK3)

The emission unit shall comply with the General Requirements of 40 CFR Part 63 as listed in Table 1 of Subpart MM.

LK3	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
C1.1a	PM & PM_{10}	0.030 gr/dscf @ 10% O_2, 1-hr average	*Performance Testing:* Sample M/Q using RM 5 (see Appendix ApA.2). *Reporting:* Submit source test results in the monthly air report. See Facility-wide General Requirement, Condition 38 for source test report requirements. *Compliance Assurance Monitoring:* The Permittee shall comply with the general CAM requirements in Condition M. The Permittee shall implement corrective action when any 3-hr average of a level specified in the "Emission Control Compliance Demonstration Plan" is not met. CAM reporting required on at a minimum semiannual basis.	PSD 01-03, Amendment 3, Condition 1.58 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping
C1.1b	PM	0.13 gr/dscf @ 10% O_2, 1-hr average	Same as previous limit.	WAC 173-405-040(3)(a) 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping

LK3	Parameter	**Limit** (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
C1.1c	PM & PM_{10}	34 tpy, 12-month rolling total	Calculate per Appendix ApA.3. Report monthly. CAM demonstration same as previous limits.	PSD 01-03, Amendment 3, Condition 1.58 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping
C1.2	HAP Metals (PM as a surrogate)	0.064 gr/dscf (0.15 g/dscm) @10% O_2	*Performance Testing:* Sample every 5 years using EPA RM 5. First periodic performance test must be conducted by October 13, 2020 and within 5 years thereafter following the previous performance test. *Representative Conditions:* Performance tests shall be conducted based on representative performance during the period being tested. The owner/operator must record the process information that is necessary to document operating conditions during the test and include such record and explanation to support that such conditions represent normal operation. Upon request, the owner/operator shall make available such records as may be necessary to determine the conditions of the performance test. *60-day notification:* The Permittee must notify Ecology in writing of his or her intention to conduct a performance test at least 60 calendar days before the performance test is initially scheduled to begin. *Recordkeeping:* The Permittee must maintain records of: 1) All results of performance tests;	40 CFR 63.862(a)(1)(i)(C) for standard 40 CFR 63.865 for performance testing requirements 40 CFR 63.9(e) and 40 CFR 63.7(b) for performance test notification 40 CFR 63.866 for recordkeeping 40 CFR 63.867(c)(4) for excess emissions reporting and (d) for electronic reporting

LK3	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
			2) The process information that is necessary to document operating conditions during the test and include in such record an explanation to support that such conditions represent normal operation; 3) Documentation of supporting calculations for compliance determinations made under 40 CFR 63.865(a) through (d); 4) For each failure to meet the emission limit, the number of failures, the date, start time, and duration of each event; 5) For any failure to meet the emission limit, record an estimate of the quantity of each regulated pollutant emitted over the emission limit and a description of the method used to estimate the emissions. *On-going compliance:* On-going compliance demonstrated through Condition C1.4. *Reporting:* Report failures to meet the applicable standard in the *Semi-Annual Excess Emissions and Continuous Monitoring Systems Performance* or *Summary Report* in accordance with 40 CFR 63.867(c)(4), delivered or postmarked by the 30th day following the end of each calendar half (or on a more frequent basis in accordance with the criteria in 40 CFR 63.10(e)(3)~~as determined necessary by Ecology~~). Submit source test results in the monthly air report. See Facility-wide General Requirement, Condition 38 for source test report requirements.	

LK3	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
C1.3a	Opacity	25% average for more than 6 consecutive minutes in any 60 minute period	Emission control parameter monitoring is required when exhaust gasses are being emitted as a result of combustion in the unit or the unit ID fan is being operated as part of the cool down process for unit shutdown. Maintain emission control parameter hourly average rates at levels specified in the "Emission Control Compliance Demonstration Plan" (see Appendix B). Continuously monitor parameters specified in the plan. Whenever any 3-hr average of a level specified in the "Emission Control Compliance Demonstration Plan" is not met, corrective action must be initiated within 24 hours. Failure to initiate corrective action within 24 hours is a violation of WAC 173-405-040(8) and may be a violation of the underlying applicable requirement. Report deviations from these operating parameters that last longer than 3 hours and corrective action in the monthly report. Compliance may also be determined by RM 9.	Order 3462-AQ07, Modification 1, Appendix A 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping
C1.3b	Opacity	35% average for more than 6 consecutive minutes in any 60-minute period.	EPA Method 9 is the reference test method. Continuous monitoring same as above. The Permittee shall comply with the general CAM requirements in Condition M. CAM reporting required on at a minimum semiannual basis.	WAC 173-405-040(6) 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping
C1.4	HAP Metals (Scrubber Operating	Five monitoring parameter values below for either the pressure drop	*Monitoring:* The Permittee must calibrate, maintain, and operate a CPMS that can be used to determine and record the pressure drop across the scrubber and the scrubbing liquid flow rate at least once every successive 15-	40 CFR 63.864 for monitoring requirements

LK3	Parameter	**Limit** (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
	Limit as a surrogate)	across the scrubber or the scrubber liquid flow rate the minimum operating limits during any semiannual reporting period	minute period using the procedures in 40 CFR 63.8(c), as well as the procedures in 40 CFR 63.864(e)(10)(i) and (ii). The Permittee must establish operating limits for pressure drop across the scrubber and the scrubbing liquid flow rate based on performance testing in accordance with 40 CFR 63.864(j). Parameter values for pressure drop and scrubber flow rate have been established/specified in the "Emission Control Compliance Demonstration Plan" (Appendix B). See Facility-wide General Requirement, Condition 28 for CMS data recovery requirements. *Monitoring Exceedances:* The Permittee is required to implement corrective action when any 3-hr average parameter value is below the minimum operating limit established during times when lime mud is fed, with the exception of pressure drop during startup and shutdown. *Violation Determination:* A violation of the underlying particulate matter standard in Condition C1.2 occurs when six or more 3-hour average parameter values within any 6-month reporting period are below the minimum operating limits established, with the exception of pressure drop during startup and shutdown. For purposes of determining the number of monitoring exceedances, no more than one exceedance will be attributed to any given 24-hour period. *Recordkeeping:* The Permittee must maintain records of:	40 CFR 63.864(j) for determination of operating limits 40 CFR 63.864(k) for ongoing compliance and violation determination 40 CFR 63.866 for recordkeeping requirements 40 CFR 63.867(c) for excess emission reporting requirements

LK3	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
			1) CaO production rates in units of Mg/d or ton/day; 2) Any occurrence when corrective action is required and when a violation is noted; 3) Records of parameter monitoring data required under §63.864, including any period when the operating parameter levels were inconsistent with the levels established during the performance test, with a brief explanation of the cause of the monitoring exceedance, the time the monitoring exceedance occurred, the time corrective action was initiated and completed, and the corrective action taken; 4) Records of parameter operating limits established for each affected source or process unit; 5) For each failure to meet the operating limits, the number for failures, date, start time, and duration of each event; 6) For each failure to meet an operating limit, maintain sufficient information to estimate the quantity of each regulated pollutant emitted over the emission limit. This information must be sufficient to provide a reliable emissions estimate if requested by the Administrator. 7) Record actions taken to minimize emissions in accordance with §63.860(d) and any corrective actions taken to return the affected unit to its normal or usual manner of operation; *Reporting:* Report ~~minimum daily 3-hour average pressure drop, minimum daily 3-hour average scrubbing liquid flow, and~~ monitoring exceedances monthly to Ecology. The Permittee must submit a *Semi-Annual Excess Emissions and Continuous Monitoring Systems Performance* or *Summary Report* in accordance with 40 CFR 63.10(e)(3) and 40 CFR 63.867(c), delivered	

LK3	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
			or postmarked by the 30th day following the end of each calendar half (or on a more frequent basis in accordance with the criteria in 40 CFR 63.10(e)(3)~~as determined necessary by Ecology~~).	
C1.5a	SO_2	20 ppmdv @ 10% O_2, 3-hr average	Monitor continuously using a CEMS that conforms to 40 CFR Part 60, Appendix F and Appendix B, PS-2. See Facility-wide General Requirement, Condition 26 for continuous emission monitoring system-operating requirements. Report 3-hr average values monthly.	PSD 01-03, Amendment 3, Condition 1.59
C1.5b	SO_2	500 ppm @ 10% O2, 1-hr average	Same as previous limit.	WAC 173-405-040(9)(a)
C1.5c	SO_2	27 tpy, 12-month rolling total	Calculate per Appendix ApA.3. Report monthly.	PSD 01-03, Amendment 3, Condition 1.59
C1.6a	TRS (as H_2S)	20 ppmdv @ 10% O_2, 24-hr average	Monitor continuously using a CEMS that conforms to 40 CFR Part 60, Appendix F and Appendix B, PS-5. See Facility-wide General Requirement, Condition 26 for continuous emission monitoring system-operating requirements. Report daily maximum concentrations, 24-hr average concentrations, monthly average concentrations, maximum monthly 24-hr concentrations, and exceedances monthly.	PSD 01-03, Amendment 3, Condition 1.62

LK3	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
C1.6b	TRS (as H_2S)	Temperature ≥1,200°F and retention time ≥ 0.5 seconds when burning NCGs	Monitor unit operation, flame safety interlocks, and interlock connections to NCG valves. Report NCG venting per Condition F1.2.	40 CFR 60.283(a)(1)(iii)
C1.6c	TRS (as H_2S)	10 tpy, 12-month rolling total	Calculate per Appendix ApA.3. Report monthly.	PSD 01-03, Amendment 3, Condition 1.62
C1.7a	CO	133 lb/hr, 8-hr average	Sample A/M using RM 10 (see Appendix ApA.2). Calculate per Appendix ApA.3 without dividing by CaO production. Submit source test results in the monthly air report. See Facility-wide General Requirement, Condition 38 for source test report requirements.	PSD 01-03, Amendment 3, Condition 1.60
C1.7b	CO	581 tpy, 12-month rolling total	Calculate per Appendix ApA.3. Report monthly.	PSD 01-03, Amendment 3, Condition 1.60
C1.8a	NO_x	340 ppmdv @ 10% O_2, 24-hr average	Sample A/M using RM 7 (see Appendix ApA.2). Submit source test results in the monthly air report. See Facility-wide General Requirement, Condition 38 for source test report requirements.	PSD 01-03, Amendment 3, Condition 1.61
C1.8b	NO_x	238 tpy, 12-month rolling total	Calculate per Appendix ApA.3. Report monthly.	PSD 01-03, Amendment 3, Condition 1.61

LK3	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
C1.9	O_2	No limit – required for O_2 correction	Monitor continuously using a CEMS in accordance with 40 CFR Part 60, Appendix F and Appendix B, PS-3. See Facility-wide General Requirement, Condition 26 for continuous emission monitoring system-operating requirements.	Order 3462-AQ07, Modification 1, Appendix A
C1.10	Operating Limit	240 tons CaO/D, monthly average	Report average daily CaO production in tons in monthly report (see Appendix ApA.1).	PSD 01-03, Amendment 3, Condition 1.57
C1.11	Stack Dimensions	N/A	Certify stack dimensions meet discharge characteristics presented in the PSD 01-03 application (certification complete). Report any changes to stack diameter or height after stack dimensions are certified.	Order 3462-AQ07, Modification 1, Appendix A

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

LK3	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
C1.12a	TRS	20 ppm @ 10% O_2, 24-hr average	Same as Condition C1.6a.	WAC 173-405-040(3)(c)
C1.12b	TRS	80 ppm H_2S @ 10% O_2 for more than 2 consecutive hours	Same as Condition C1.6a. Report exceedances monthly. All TRS monitored is considered H_2S for this limit.	WAC 173-405-040(3)(b)

C3. LIME KILN 4 (LK4)

The emission unit shall comply with the General Requirements of 40 CFR Part 63 as listed in Table 1 of Subpart MM.

LK4	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
C2.1a	PM & PM_{10}	0.030 gr/dscf @ 10% O_2, 1-hr average	*Performance Testing:* Sample M/Q using RM 5 (see Appendix ApA.2). *Reporting:* Submit source test results in the monthly air report. See Facility-wide General Requirement, Condition 38 for source test report requirements. *Compliance Assurance Monitoring:* The Permittee shall comply with the general CAM requirements in Condition M. The Permittee shall implement corrective action when any 3-hr average of a level specified in the "Emission Control Compliance Demonstration Plan" is not met. CAM reporting required on at a minimum semiannual basis.	PSD 01-03, Amendment 3, Condition 1.64 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping
C2.1b	PM	0.13 gr/dscf @ 10% O_2, 1-hr average	Same as previous limit.	WAC 173-405-040(3)(a) 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping

LK4	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
C2.1c	PM & PM_{10}	35.6 tpy, 12-month rolling total	Calculate per Appendix ApA.3. Report monthly. CAM demonstration same as previous limits.	PSD 01-03, Amendment 3, Condition 1.64 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping
C2.2	HAP Metals (PM as a surrogate)	0.064 gr/dscf (0.15 g/dscm) @10% O_2	*Performance Testing:* Sample every 5 years using EPA RM 5. First periodic performance test must be conducted by October 13, 2020 and within 5 years thereafter following the previous performance test. *Representative Conditions:* Performance tests shall be conducted based on representative performance during the period being tested. The owner/operator must record the process information that is necessary to document operating conditions during the test and include such record and explanation to support that such conditions represent normal operation. Upon request, the owner/operator shall make available such records as may be necessary to determine the conditions of the performance test. *60-day notification:* The Permittee must notify Ecology in writing of his or her intention to conduct a performance test at least 60 calendar days before the performance test is initially scheduled to begin. *Recordkeeping:* The Permittee must maintain records of:	40 CFR 63.862(a)(1)(i)(C) for standard 40 CFR 63.865 for performance testing requirements 40 CFR 63.9(e) and 40 CFR 63.7(b) for performance test notification 40 CFR 63.866 for recordkeeping 40 CFR 63.867(c)(4) for excess emissions reporting and (d) for electronic reporting

LK4	Parameter	**Limit** (shall not exceed)	**Monitoring, Reporting, Recordkeeping**	**Applicable Requirements**
			1) All results of performance tests; 2) The process information that is necessary to document operating conditions during the test and include in such record an explanation to support that such conditions represent normal operation; 3) Documentation of supporting calculations for compliance determinations made under 40 CFR 63.865(a) through (d); 4) For each failure to meet the emission limit, the number of failures, the date, start time, and duration of each event; 5) For any failure to meet the emission limit, record an estimate of the quantity of each regulated pollutant emitted over the emission limit and a description of the method used to estimate the emissions. *On-going compliance:* On-going compliance demonstrated through Condition C2.4. *Reporting:* Report failures to meet the applicable standard in the *Semi-Annual Excess Emissions and Continuous Monitoring Systems Performance* or *Summary Report* in accordance with 40 CFR 63.10(e)(3) and 40 CFR 63.867(c)(4), delivered or postmarked by the 30th day following the end of each calendar half (or on a more frequent basis in accordance with the criteria in 40 CFR 63.10(e)(3)~~as determined necessary by Ecology~~). Submit source test results in the monthly air report. See Facility-wide General Requirement, Condition 38 for source test report requirements.	

LK4	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
C2.3a	Opacity	25% average for more than 6 consecutive minutes in any 60 minute period	Emission control parameter monitoring is required when exhaust gasses are being emitted as a result of combustion in the unit or the unit ID fan is being operated as part of the cool down process for unit shutdown. Maintain emission control parameter hourly average rates at levels specified in the "Emission Control Compliance Demonstration Plan" (see Appendix B). Continuously monitor parameters specified in the plan. Whenever any 3-hr average of a level specified in the "Emission Control Compliance Demonstration Plan" is not met, corrective action must be initiated within 24 hours. Failure to initiate corrective action within 24 hours is a violation of WAC 173-405-040(8) and may be a violation of the underlying applicable requirement. Report deviations from these operating parameters that last longer than 3 hours and corrective action in the monthly report. Compliance may also be determined by RM 9.	Order 3462-AQ07, Modification 1, Appendix A 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping
C2.3b	Opacity	35% average for more than 6 consecutive minutes in any 60-minute period.	EPA Method 9 is the reference test method. Continuous monitoring same as above. The Permittee shall comply with the general CAM requirements in Condition M. CAM reporting required on at a minimum semiannual basis.	WAC 173-405-040(6) 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping
C2.4	HAP Metals (Scrubber Operating Limit as a surrogate)	Five monitoring parameter values for either pressure drop across the	*Monitoring:* The Permittee must calibrate, maintain, and operate a CPMS that can be used to determine and record the pressure drop across the scrubber and the scrubbing liquid flow rate at least once every successive 15-minute	40 CFR 63.864 for monitoring requirements

LK4	Parameter	**Limit** (shall not exceed)	**Monitoring, Reporting, Recordkeeping**	**Applicable Requirements**
		scrubber or the scrubbing liquid flow rate below the minimum operating limits during any semiannual reporting period	period using the procedures in 40 CFR 63.8(c), as well as the procedures in 40 CFR 63.864(e)(10)(i) and (ii). The Permittee must establish operating limits for pressure drop across the scrubber and the scrubbing liquid flow rate based on performance testing in accordance with 40 CFR 63.864(j). Parameter values for pressure drop and scrubber flow rate have been established/specified in the "Emission Control Compliance Demonstration Plan" (Appendix B). See Facility-wide General Requirement, Condition 28 for CMS data recovery requirements. *Monitoring Exceedances:* The Permittee is required to implement corrective action when any 3-hr average parameter value is below the minimum operating limit established during times when lime mud is fed, with the exception of pressure drop during startup and shutdown. *Violation Determination:* A violation of the underlying particulate matter standard in Condition C2.2 occurs when six or more 3-hour average parameter values within any 6-month reporting period are below the minimum operating limits established, with the exception of pressure drop during startup and shutdown. For purposes of determining the number of monitoring exceedances, no more than one exceedance will be attributed to any given 24-hour period. *Recordkeeping:* The Permittee must maintain records of: 1) CaO production rates in units of Mg/d or ton/day;	40 CFR 63.864(j) for determination of operating limits 40 CFR 63.864(k) for ongoing compliance and violation determination 40 CFR 63.866 for recordkeeping requirements 40 CFR 63.867(c) for excess emission reporting requirements

LK4	Parameter	**Limit** (shall not exceed)	**Monitoring, Reporting, Recordkeeping**	**Applicable Requirements**
			2) Any occurrence when corrective action is required and when a violation is noted; 3) Records of parameter monitoring data required under §63.864, including any period when the operating parameter levels were inconsistent with the levels established during the performance test, with a brief explanation of the cause of the monitoring exceedance, the time the monitoring exceedance occurred, the time corrective action was initiated and completed, and the corrective action taken; 4) Records of parameter operating limits established for each affected source or process unit; 5) For each failure to meet the operating limits, the number for failures, date, start time, and duration of each event; 6) For each failure to meet an operating limit, maintain sufficient information to estimate the quantity of each regulated pollutant emitted over the emission limit. This information must be sufficient to provide a reliable emissions estimate if requested by the Administrator. 7) Record actions taken to minimize emissions in accordance with §63.860(d) and any corrective actions taken to return the affected unit to its normal or usual manner of operation; *Reporting:* Report ~~minimum daily 3-hour average pressure drop, minimum daily 3-hour average scrubbing liquid flow, and~~ monitoring exceedances monthly to Ecology. The Permittee must submit a *Semi-Annual Excess Emissions and Continuous Monitoring Systems Performance* or *Summary Report* in accordance with 40 CFR 63.10(e)(3) and 40 CFR 63.867(c), delivered or postmarked by the 30th day following the end of each calendar half (or	

LK4	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
			on a more frequent basis in accordance with the criteria in 40 CFR 63.10(e)(3)~~as determined necessary by Ecology~~).	
C2.5a	SO_2	20 ppmdv @ 10% O_2, 3-hr average	Monitor continuously using a CEMS that conforms to 40 CFR Part 60, Appendix F and Appendix B, PS-2. See Facility-wide General Requirement, Condition 26 for continuous emission monitoring system-operating requirements. Report 3-hr average values monthly.	PSD 01-03, Amendment 3, Condition 1.65
C2.5b	SO_2	500 ppm @ 10% O_2, 1-hr average	Same as previous limit.	WAC 173-405-040(9)(a)
C2.5c	SO_2	28 tpy, 12-month rolling total	Calculate per Appendix ApA.3. Report monthly.	PSD 01-03, Amendment 3, Condition 1.65
C2.6a	TRS (as H_2S)	20 ppmdv @ 10% O_2, 24-hr average	Monitor continuously using a CEMS that conforms to 40 CFR Part 60, Appendix F and Appendix B, PS-5. See Facility-wide General Requirement, Condition 26 for continuous emission monitoring system-operating requirements. Report daily maximum concentrations, 24-hr average concentrations, monthly average concentrations, maximum monthly 24-hr concentrations, and exceedances monthly.	PSD 01-03, Amendment 3, Condition 1.68

LK4	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
C2.6b	TRS (as H_2S)	Temperature ≥1,200°F and retention time ≥ 0.5 seconds when burning NCGs	Monitor unit operation, flame safety interlocks, and interlock connections to NCG valves. Report NCG venting per condition F1.2.	40 CFR 60.283(a)(1)(iii)
C2.6c	TRS (as H_2S)	11 tpy, 12-month rolling total	Calculate per Appendix ApA.3. Report monthly.	PSD 01-03, Amendment 3, Condition 1.68
C2.7a	CO	138 lb/hr, 8-hr average	Sample A/M using RM 10 (see Appendix ApA.2). Calculate per Appendix ApA.3 without dividing by CaO production. Submit source test results in the monthly air report. See Facility-wide General Requirement, Condition 38 for source test report requirements.	PSD 01-03, Amendment 3, Condition 1.66
C2.7b	CO	605 tpy, 12-month rolling total	Calculate per Appendix ApA.3. Report monthly.	PSD 01-03, Amendment 3, Condition 1.66
C2.8a	NO_x	340 ppmdv @ 10% O_2, 24-hr average	Sample A/M using RM 7 (see Appendix ApA.2). Submit source test results in the monthly air report. See Facility-wide General Requirement, Condition 38 for source test report requirements.	PSD 01-03, Amendment 3, Condition 1.67

LK4	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
C2.8b	NO_x	248 tpy, 12-month rolling total	Calculate per Appendix ApA.3. Report monthly.	PSD 01-03, Amendment 3, Condition 1.67
C2.9	O_2	No limit – required for O_2 correction	Monitor continuously using a CEMS that conforms to 40 CFR Part 60, Appendix F and Appendix B PS-3. See Facility-wide General Requirement, Condition 26 for continuous emission monitoring system-operating requirements.	Order 3462-AQ07, Modification 1, Appendix A
C2.10	Operating Limit	250 tons CaO/D, monthly average	Report average daily CaO production in tons in monthly report (see Appendix ApA.1).	PSD 01-03, Amendment 3, Condition 1.63
C2.11	Stack Dimensions	N/A	Certify stack dimensions meet discharge characteristics presented in the PSD 01-03 application (certification complete). Report any changes to stack diameter or height after stack dimensions are certified.	Order 3462-AQ07, Modification 1, Appendix A

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

LK4	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
C2.12a	TRS	20 ppm @ 10% O_2, 24-hr average	Same as Condition C2.6a.	WAC 173-405-040(3)(c)
C2.12b	TRS	80 ppm H_2S @ 10% O_2 for more than 2 consecutive hours	Same as Condition C2.6a. Report exceedances monthly. All TRS monitored is considered H_2S for this limit.	WAC 173-405-040(3)(b)

C4. LIME KILN 5 (LK5)

The emission unit shall comply with the General Requirements of 40 CFR Part 63 as listed in Table 1 of Subpart MM.

This source shall comply with the requirements of 40 CFR Part 60, Subpart BB. The source shall also comply with the General Requirements of 40 CFR Part 60, including:

40 CFR 60.7(b) & (f) concerning recordkeeping,
40 CFR 60.7(c), (d), & (e) concerning reporting,
40 CFR 60.11(d) concerning operation and maintenance,
40 CFR 60.12 concerning concealment,
40 CFR 60.13 concerning monitoring,
40 CFR 60.19 concerning notification and reporting.

Opacity limits apply to each stack individually. All other limits apply to the total emissions from the combined stacks.

LK5	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
C3.1a	PM & PM10 (while firing natural gas (NG))	0.035 gr/dscf @ 10% O_2, 1-hr average	*Performance Testing:* Sample M/Q using RM 5 (see Appendix ApA.2). *Reporting:* Submit source test results in the monthly air report. See Facility-wide General Requirement, Condition 38 for source test report requirements. *Compliance Assurance Monitoring:* The Permittee shall comply with the general CAM requirements in Condition M. The Permittee is required to implement corrective action if the average of ten consecutive 6-minute averages result in a measurement greater than 20 percent opacity. A violation of the underlying particulate matter standard when opacity is greater than 35 percent for 3 percent or more of operating time during a semiannual period while lime mud is fed. CAM reporting required on at a minimum semiannual basis.	PSD 01-03, Amendment 3, Condition 1.70 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping
C3.1b	PM & PM10 (while firing oil)	0.060 gr/dscf @ 10% O_2, 1-hr average	Same as previous limit.	PSD 01-03, Amendment 3, Condition 1.70 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping

LK5	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
C3.1c	PM (while firing gaseous fossil fuel)	0.066 gr/dscf @ 10% O_2	*Performance Testing:* Sample M/Q using EPA RM 5 in accordance with 40 CFR 60.8 except as provided below. The sampling time and sample volume for each run shall be at least 60 minutes and 0.90 dscm (31.8 dscf). Water shall be used as the cleanup solvent instead of acetone in the sample recovery procedure. The particulate concentration shall be corrected to the appropriate oxygen concentration according to 40 CFR 60.284(c)(3). Emission rate to be calculated using the procedures in 40 CFR 60.285(c). *30-day Notification:* The Permittee shall provide Ecology at least 30 days prior notice of any performance test. *Reporting:* Submit source test results in the monthly air report. See Facility-wide General Requirement, Condition 38 for source test report requirements. CAM demonstration same as previous limits.	40 CFR 60.282(a)(3) for standard 40 CFR 60.285(b)(1) for test method and procedures 40 CFR 60.284(c)(4) for recordkeeping requirements 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping

LK5	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
C3.1d	PM (while firing liquid fossil fuel)	0.13 gr/dscf @ 10% O_2	Same as previous limit. CAM demonstration same as previous limits.	40 CFR 60.282(a)(3) for standard 40 CFR 60.285(b)(1) for test method and procedures 40 CFR 60.284(c)(4) for recordkeeping requirements 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping
C3.1e	PM	0.13 gr/dscf @ 10% O_2, 1-hr average	Same as previous limit. CAM demonstration same as previous limits.	WAC 173-405-040(3)(a) 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping
C3.1f	PM & PM_{10}	69 tpy, 12-month rolling total	Calculate per Appendix ApA.3. Report monthly. CAM demonstration same as previous limits.	PSD 01-03, Amendment 3, Condition 1.70 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping

LK5	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
C3.2	HAP Metals (PM as a surrogate)	0.064 gr/dscf (0.15 g/dscm) @10% O_2	*Performance Testing:* Sample every 5 years using EPA RM 5. First periodic performance test must be conducted by October 13, 2020 and within 5 years thereafter following the previous performance test. *Representative Conditions:* Performance tests shall be conducted based on representative performance during the period being tested. The owner/operator must record the process information that is necessary to document operating conditions during the test and include such record and explanation to support that such conditions represent normal operation. Upon request, the owner/operator shall make available such records as may be necessary to determine the conditions of the performance test. *60-day notification:* The Permittee must notify Ecology in writing of his or her intention to conduct a performance test at least 60 calendar days before the performance test is initially scheduled to begin. *Recordkeeping:* The Permittee must maintain records of: 1) All results of performance tests; 2) The process information that is necessary to document operating conditions during the test and include in such record an explanation to support that such conditions represent normal operation; 3) Documentation of supporting calculations for compliance determinations made under 40 CFR 63.865(a) through (d);	40 CFR 63.862(a)(1)(i)(C) for standard 40 CFR 63.865 for performance testing requirements 40 CFR 63.9(e) and 40 CFR 63.7(b) for performance test notification 40 CFR 63.866 for recordkeeping 40 CFR 63.867(c)(4) for excess emissions reporting and (d) for electronic reporting

LK5	Parameter	**Limit** (shall not exceed)	**Monitoring, Reporting, Recordkeeping**	**Applicable Requirements**
			4) For each failure to meet the emission limit, the number of failures, the date, start time, and duration of each event; 5) For any failure to meet the emission limit, record an estimate of the quantity of each regulated pollutant emitted over the emission limit and a description of the method used to estimate the emissions. *On-going compliance:* On-going compliance demonstrated through Condition C3.4. *Reporting:* Report failures to meet the applicable standard in the *Semi-Annual Excess Emissions and Continuous Monitoring Systems Performance* or *Summary Report* in accordance with 40 CFR 63.10(e)(3) and 40 CFR 63.867(c)(4), delivered or postmarked by the 30th day following the end of each calendar half (or on a more frequent basis in accordance with the criteria in 40 CFR 63.10(e)(3)~~as determined necessary by Ecology~~). Submit source test results in the monthly air report. See Facility-wide General Requirement, Condition 38 for source test report requirements.	

LK5	Parameter	**Limit** (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
C3.3a	Opacity	Opacity greater than 2~~0~~50% for 3% or more of operating time during a semiannual period (limit is applicable to each stack individually)	*Monitoring:* Monitoring continuously using a COMS that conforms to 40 CFR Part 60, Appendix F and Appendix B, PS 1. *Exceedances:* An exceedance has occurred when the average of ten consecutive 6-minute averages result in a measurement of greater than 20 percent opacity. The Permittee must implement corrective action following an exceedance. *Violation Determination:* A violation occurs when opacity is greater than 20 percent for 3 percent or more of operating time during a semi-annual period while lime mud is fed. *Reporting:* Report daily maximum six-minute average opacity and exceedances monthly. Semi-annually report percent of operating time during a semi-annual period that opacity exceeded ~~30~~ 25 percent.	Order 3462-AQ07, Modification 1, Appendix A

LK5	Parameter	**Limit** (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
C3.3b	Opacity	35% average for more than 6 consecutive minutes in any 60 minute period (limit is applicable to each stack individually)	EPA Method 9 is the reference test method. Monitor continuously using a COMS that conforms to 40 CFR Part 60, Appendix F and Appendix B, Performance Specification 1. See Facility-wide General Requirement, Condition 26 for continuous emission monitoring system operating requirements. The Permittee is required to implement corrective action if the average of ten consecutive 6-minute averages result in a measurement greater than 20 percent opacity. A violation occurs when opacity is greater than 35 percent for 3 percent or more of operating time during a semiannual period while lime mud is fed. Report daily maximum six-minute average opacity, daily average opacity, and exceedances monthly. The Permittee shall comply with the general CAM requirements in Condition M. CAM reporting required on at a minimum semiannual basis.	WAC 173-405-040(6) WAC 173-400-615 for monitoring 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping
C3.4	HAP Metals (Opacity as a surrogate)	Opacity greater than 20% for 3% or more of operating time during a semiannual period (limit is applicable to	*Monitoring:* Monitoring opacity using a COMS which is installed, calibrated, maintained, and operated in accordance with PS-1 in Appendix B to 40 CFR Part 60 and the provisions in §63.6(h) and 63.8 and §63.864(d)(3) and (4). See Facility-wide General Requirement, Condition 28 for CMS data recovery requirements. *Monitoring Exceedances:*	40 CFR 63.864 for monitoring requirements 40 CFR 63.864(k) for ongoing compliance and violation determination 40 CFR 63.866 for recordkeeping requirements

LK5	Parameter	**Limit** (shall not exceed)	**Monitoring, Reporting, Recordkeeping**	**Applicable Requirements**
		each stack individually)	The Permittee is required to implement corrective action if the average of ten consecutive 6-minute averages result in a measurement greater than 20 percent opacity. *Violation Determination:* A violation of the underlying particulate matter standard in Condition C3.2 occurs when opacity is greater than 20 percent for 3 percent or more of operating time during a semiannual period while lime mud is fed. *Recordkeeping:* The Permittee must maintain records of: 1) CaO production rates in units of Mg/d or ton/day; 2) Any occurrence when corrective action is required and when a violation is noted; 3) For each failure to meet the opacity operating limit, the number of failures, the date, start time, and duration of each event; 4) For each failure to meet the operating limit, an estimate of the quantity of each regulated pollutant emitted over the emission limit and a description of the method used to estimate the emissions; 5) Record actions taken to minimize emissions in accordance with §63.860(d) and any corrective actions taken to return the affected unit to its normal or usual manner of operation. *Reporting:* Report monitoring exceedances monthly to Ecology. The Permittee must submit a *Semi-Annual Excess Emissions and Continuous Monitoring Systems Performance* or *Summary Report* in accordance with 40 CFR 63.10(e)(3) and 40 CFR 63.867(c), delivered or	40 CFR 63.867(c) for excess emission reporting requirements

LK5	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
			postmarked by the 30th day following the end of each calendar half (or on a more frequent basis in accordance with the criteria in 40 CFR 63.10(e)(3)~~as determined necessary by Ecology~~).	
C3.5a	SO_2	20 ppmdv @ 10% O_2, 3-hr average	Monitor continuously using a CEMS that conforms to 40 CFR Part 60, Appendix F and Appendix B PS-2. See Facility-wide General Requirement, Condition 26 for continuous emission monitoring system-operating requirements. Report 3-hr average concentrations, monthly average concentration, maximum monthly 3-hr average concentration, and exceedances monthly.	PSD 01-03, Amendment 3, Condition 1.71 Order 8429, Modification 1, Condition 3.1
C3.5b	SO_2	500 ppm @ 10% O_2, 1-hr average	Same as previous limit.	WAC 173-405-040(9)(a)
C3.5c	SO_2	28 tpy, 12-month rolling total	Calculate per Appendix ApA.3. Report monthly.	PSD 01-03, Amendment 3, Condition 1.71
C3.6a	TRS (as H_2S)	8 ppmdv @ 10% O_2, 12-hr average	Monitor continuously using a CEMS that conforms to 40 CFR Part 60, Appendix F and Appendix B, PS-5. See Facility-wide General Requirement, Condition 26 for continuous emission monitoring system-operating requirements. Report daily maximum concentrations, 12-hr average concentrations, monthly average concentrations, maximum monthly 12-hr concentrations, and exceedances monthly.	PSD 01-03, Amendment 3, Condition 1.74 for limit

LK5	Parameter	**Limit** (shall not exceed)	**Monitoring, Reporting, Recordkeeping**	**Applicable Requirements**
C3.6b ~~a~~	TRS (as H_2S)	8 ppmdv @ 10% O_2, 12-hr average	*Monitoring:* Monitor continuously using a CEMS that conforms to 40 CFR Part 60, Appendix F and Appendix B, PS-5. See Facility-wide General Requirement, Condition 278 for CMS data recovery requirements. CEMS span to be set to 30 ppm TRS. Calculate and record on a daily basis 12-hour average TRS and oxygen concentrations pursuant to Condition C3.9 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 using the following equation: $C_{corr} = C_{meas} \times (21 - X)/(21 - Y)$ *where:* C_{corr} = *the concentration corrected for oxygen.* C_{meas} = *the concentration uncorrected for oxygen.* *X = the volumetric oxygen concentration in percentage to be corrected to (8 percent for recovery furnaces and 10 percent for lime kilns, incinerators, or other devices).* *Y = the measured 12-hour average volumetric oxygen concentration.* *Excess Emissions:* Periods of excess emission are defined as all 12-hour average TRS concentrations above 8 ppm @ 10% O_2 by volume.	40 CFR 60.283(a)(5) and ~~PSD-01-03, Amendment 3, Condition 1.74 for limit~~ 40 CFR 60.284(a)(2) for monitoring 40 CFR 60.284(d)(2) for excess emission definition 40 CFR 60.284(d) for semiannual reporting of excess emissions

LK5	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
			Ecology will not consider periods of excess emissions under §60.284(d)(2) to be indicative of a violation under §60.11(d) 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. ~~See Facility-wide General Requirement, Condition 26 for continuous emission monitoring system operating requirements.~~ *Reporting:* Report daily maximum concentrations, 12-hr average concentrations, monthly average concentrations, maximum monthly 12-hr concentrations, and exceedances monthly. The Permittee must submit a *Semi-Annual Excess Emissions and Continuous Monitoring Systems Performance* or *Summary Report* in accordance with 40 CFR 60.7(c) and 40 CFR 60.284(d), postmarked by the 30th day following the end of each six-month period (or on a more frequent basis in accordance with the criteria in 40 CFR 60.7(c)~~as determined necessary by Ecology~~). ~~Report NCG venting per condition F1.2.~~	
~~C3.6b~~	~~TRS (as H_2S)~~	~~Temperature ≥1,200°F and retention time ≥ 0.5 seconds when burning NCGs~~	~~Monitoring not required.~~	~~40 CFR 60.283(a)(1)(iii) for standard~~

Commented [RA3]: Looks like a misplace sentence in this condition

LK5	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
C3.6c ~~e~~	TRS (as H_2S)	6 tpy, 12-month rolling total	Calculate per Appendix ApA.3. Report monthly.	PSD 01-03, Amendment 3, Condition 1.74
C3.7a	CO	64 lb/hr, 8-hr average	Monitor continuously using CEMS that conforms to 40 CFR Part 60, Appendix F and Appendix B, PS-4. See Facility-wide General Requirement, Condition 26 for continuous emission monitoring system-operating requirements. Calculate per Appendix ApA.3 without dividing by CaO production. Report 8-hr average concentrations, maximum monthly 8-hr concentration, and exceedances monthly.	PSD 01-03, Amendment 3, Condition 1.72
C3.7b	CO	282 tpy, 12-month rolling total	Calculate per Appendix ApA.3. Report monthly.	PSD 01-03, Amendment 3, Condition 1.72
C3.8a	NO_x	275 ppmdv @ 10% O_2, 24-hr average	Monitor continuously using a CEMS that conforms to 40 CFR Part 60, Appendix F and Appendix B PS-2. See Facility-wide General Requirement, Condition 26 for continuous emission monitoring system-operating requirements. Report 24-hr average concentrations, monthly average concentration, maximum monthly 24-hr average concentration, and exceedances monthly.	PSD 01-03, Amendment 3, Condition 1.73 Order 8429, Modification 1, Condition 3.2
C3.8b	NO_x	262 tpy, 12-month rolling total	Calculate per Appendix ApA.3. Report monthly.	PSD 01-03, Amendment 3, Condition 1.73

LK5	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
C3.9	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 F and Appendix B, PS-3. See Facility-wide General Requirement, Condition 26 for continuous emission monitoring system-operating 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 C3.6a and shall be determined as an arithmetic mean of the appropriate 12 contiguous 1-hour average oxygen concentrations provided by the continuous monitoring system.	Order 3462-AQ07, Modification 1, Appendix A 40 CFR 60.284(a)(2) for monitoring requirement 40 CFR 60.284(c)(2) for recording requirement
C3.10	Operating Limit	325 tons CaO/D, monthly average	Report average daily CaO production in tons in monthly report (see Appendix ApA.1).	PSD 01-03, Amendment 3, Condition 1.69
C3.11	HAPs	N/A	The Permittee must maintain proper operation of the electrostatic precipitator's automatic voltage control (AVC). The Permittee must maintain records demonstrating compliance with the requirement to maintain proper operation of an electrostatic precipitator AVC.	40 CFR 63.864(e)(1) for AVC requirement 40 CFR 63.866(c)(8) for recordkeeping

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

LK5	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
C3.12a	TRS	20 ppm @ 10% O_2, 24-hr average	Same as Condition C3.6a.	WAC 173-405-040(3)(c)
C3.12b	TRS	80 ppm H_2S @ 10% O_2 for more than 2 consecutive hours	Same as Condition C3.6a. Report exceedances monthly. All TRS monitored is considered H_2S for this limit.	WAC 173-405-040(3)(b)

D1. LOW VOLUME HIGH CONCENTRATION (LVHC) SYSTEM

The LVHC systems include: #1 Kamyr digester; #2 Kamyr digester; #8 Evaporator System; #9 Evaporator System; #10 Evaporator System; Turpentine System; Steam Stripper System; Spill Tank, and NSSC LVHC System.

The applicable emission systems shall comply with the General Requirements of 40 CFR Part 63 as listed in Table 1 to Subpart S.

LVHC	Parameter	Limit, Monitoring, Reporting, Recordkeeping	Applicable Requirements
D1.1	HAPs: Collection and Treatment	LVHC non-condensable gas source group emissions shall be enclosed and vented into a closed-vent system and routed to Lime Kiln 3, Lime Kiln 4, and/or Lime Kiln 5.	40 CFR 63.443(c)
D1.2	HAPs: Collection and Treatment	Introduce LVHC gases with the primary fuel or into flame zone of Lime Kiln 3, Lime Kiln 4, and/or Lime Kiln 5.	40 CFR 63.443(d)

LVHC	Parameter	Limit, Monitoring, Reporting, Recordkeeping	Applicable Requirements
D1.3	HAPs: Enclosures	Each enclosure shall maintain negative pressure at each enclosure or hood opening as demonstrated by the procedures in 40 CFR 63.457(e). Each enclosure or hood opening closed during the initial performance test shall be maintained in the closed position at all times except when necessary to open for sampling, inspection, maintenance, or repairs. *Monthly Inspections:* For each enclosure opening, a visual inspection of the closure mechanism shall be performed at least once every 30 days to ensure the opening is maintained in the closed position and sealed. For this condition, 30 days shall be interpreted to mean: at least once per calendar month with no two consecutive inspections occurring within 14 days. *Annual Inspections:* Demonstrate annually that each enclosure opening is maintained at negative pressure as specified in 40 CFR 63.457(e). For locations where safe access is not readily available, the Permittee shall submit a list to Ecology with a brief explanation of safety concerns. Upon Ecology approval: (1) Measurements for detectable leaks at locations specified on the list shall not be required annually, and (2) Measurements for detectable leaks at locations specified on the list shall be required once per five-year interval.	40 CFR 63.450(a) and (b) 40 CFR 63.453(k)(1) and Order 3463-AQ07 for monthly inspections 40 CFR 63.453(k)(4) and Order 3463-AQ07 for annual inspections

LVHC	Parameter	Limit, Monitoring, Reporting, Recordkeeping	Applicable Requirements
D1.4	HAPs: Closed-vent system	Each component of the closed-vent system used to control LVHC non-condensable gas source group emission that is operated at positive pressure and located prior to a control device shall be designed for and operated with no detectable leaks as indicated by an instrument reading of less than 500 ppmv above background, as measured by 40 CFR Part 60, Appendix A, Method 21. *Monthly Inspections:* Each closed vent system (reasonably accessible ductwork, piping, enclosures, and connections to covers in the collection system for the LVHC non-condensable gas source group) shall be visually inspected for visible defects every 30 day or as requested by Ecology. For this condition, 30 days shall be interpreted to mean: at least once per calendar month with no two consecutive inspections occurring within 14 days. *Annual Inspections:* Measure annually components of closed-vent systems under positive pressure for detectable leaks as specified in 40 CFR 63.457(d). For locations where safe access is not readily available, the Permittee shall submit a list to Ecology with a brief explanation of safety concerns. Upon Ecology approval: (1) Measurements for detectable leaks at locations specified on the list shall not be required annually, and (2) Measurements for detectable leaks at locations specified on the list shall be required once per five-year interval.	40 CFR 63.450(c) 40 CFR 63.453(k)(2)and Order 3463-AQ07 for monthly inspections 40 CFR 63.453(k)(3) and Order 3463-AQ07 for annual inspections

LVHC	Parameter	Limit, Monitoring, Reporting, Recordkeeping	Applicable Requirements
D1.5	HAPs: Collection and Treatment	Each bypass line in the closed-vent system that could divert vent streams containing HAPs to the atmosphere without meeting the emission limitations in 40 CFR 63.443 shall comply with either of the following requirements: (1) On each bypass line, the owner or operator shall install, calibrate, maintain, and operate according to the manufacturer's specifications a flow indicator that is capable of taking periodic readings as frequently as specified in §63.454(e). The flow indicator shall be installed in the bypass line in such a way as to indicate flow in the bypass line; or (2) For bypass line valves that are not computer controlled, the owner or operator shall maintain the bypass line valve in the closed position with a car seal or a seal placed on the valve or closure mechanism in such a way that valve or closure mechanism cannot be opened without breaking the seal.	40 CFR 63.450(d)
D1.6	HAPs: Inspection and Monitoring	Install, calibrate, certify, operate, and maintain according to the manufacturer's specifications, a continuous monitoring system (CMS) as specified in 40 CFR 63.453(b) through (l) except as allowed in 40 CFR 63.453(m). The CMS shall include a continuous recorder.	40 CFR 63.453(b) through (m)

LVHC	Parameter	Limit, Monitoring, Reporting, Recordkeeping	Applicable Requirements
D1.7	HAPs: Inspection and Monitoring	If an inspection of the LVHC non-condensable gas collection system identifies visible defects, or if an instrument reading of 500 ppmv or greater above background is measured by 40 CFR Part 60, Appendix A, Method 21 in accordance with the procedures in 40 CFR 63.457(d), or if enclosure openings are not maintained at negative pressure, take the following corrective actions as soon as practicable. Make first effort repair to correct the closed-vent system as soon as practicable but no later than 5 calendar days after the problem is identified. Complete the repair or corrective action no later than 15 days after the problem is identified. Delay of repair or corrective action is allowed if the repair or corrective action is technically infeasible without a process unit shutdown or if the Permittee determines that the emissions resulting from immediate repair would be greater than the emission likely to result from delay of repair. Repair of such equipment shall be completed by the end of the next process shutdown.	40 CFR 63.453(k)(6) and 40 CFR 63.457(d)

LVHC	Parameter	Limit, Monitoring, Reporting, Recordkeeping	Applicable Requirements
D1.8	HAPs: Recordkeeping	For each applicable enclosure opening, closed vent system, and closed collection system, prepare and maintain a site-specific inspection plan, including a drawing or schematic of the components of applicable affected equipment and shall record the following information for each inspection: (1) Date of inspection; (2) Equipment type and identification; (3) Results of negative pressure tests for enclosures; (4) Results of leak detection tests; (5) The nature of the defect or leak and the method of detection; (6) The date the defect or leak was detected and the date of each attempt to repair the defect or leak; (7) Repair methods applied in each attempt to repair the defect or leak; (8) Reason for the delay if the defect or leak is not repaired within 15 days; (9) Expected date of successful repair of the defect or leak if the repair is not completed within 15 days; (10) Date of successful repair of the defect or leak; (11) Position and duration of opening of bypass line valves and the condition of any valve seals; and (12) Duration of the use of manual or computer-controlled bypass valves.	40 CFR 63.454(b)
D1.9	HAPs: Excess Emissions	Records shall be maintained for all periods of excess emissions. Periods of excess emissions from the LVHC non-condensable gas source group are not violations of 63.443(c) and (d) provided that the time of excess emissions divided by the total process operating time in a semi-annual reporting period does not exceed one (1) percent from the computer-controlled bypass valves in the LVHC system.	40 CFR 63.443(e)(1)

D2. PULPING PROCESS CONDENSATES

Pulping process condensates to be collected include: #1 Kamyr Digester System Foul Condensates; #2 Kamyr Digester System Foul Condensates; #8 Evaporator Surface Condenser, Vacuum System & Vapor Condensates off a Primary Feed Effect; #9 Evaporator Surface Condenser, Vacuum System & Vapor Condensates off a Primary Feed Effect; #10 Evaporator Surface Condenser, Vacuum System & Vapor Condensates off a Primary Feed Effect; Turpentine System; Decanter Underflow Foul Condensates.

The applicable systems shall comply with the General Requirements of 40 CFR Part 63 as listed in Table 1 to Subpart S.

Condensates	Parameter	Limit, Monitoring, Reporting, Recordkeeping	Applicable Requirements
D2.1	HAPs: Collection and Treatment	Collect kraft pulping condensate streams such that one of the following collection requirements is satisfied: (1) Kraft pulping condensates are collected from all named condensate streams; (2) Kraft pulping condensates are collected from each HVLC collection system, from each LVHC collection system, and from other named condensate streams that in total contain at least 65 percent of the total HAP mass from the kraft pulping condensate from each digester system, each turpentine recovery system, vapors from the weak black liquor feed stages of each evaporator system, and the evaporator vacuum system for each weak black liquor feed stage; or (3) Kraft pulping condensates collected from named condensate streams contains at least 11.1 pounds of total HAP per oven-dry ton of unscreened brownstock feeding the bleach plant and 7.2 pounds of total HAP per oven-dry ton of unscreened brownstock not intended for bleaching.	40 CFR 63.446(c)
D2.2	HAPs: Collection and Treatment	Transfer collected kraft pulping condensates through a closed collection system. The closed collection system shall meet the requirements of 40 CFR 63.960, 63.961, and 63.962, except for the closed vent systems and control devices shall be designed and operated in accordance with 40 CFR 63.443(d) and 63.450.	40 CFR 63.446(d)(1)

Condensates	Parameter	Limit, Monitoring, Reporting, Recordkeeping	Applicable Requirements
D2.3	HAPs: Collection and Treatment	The Permittee is permitted to install and operate condensate collection tanks (CCT) to collect kraft pulping condensates. The CCT shall be equipped so that the fixed roof and all openings are operated with no detectable leaks, as indicated by an instrument reading of less than 500 ppmdv above background as measured by 40 CFR Part 60, Appendix A, Method 21 in accordance with the procedures in 40 CFR 63.457(d). Each opening will be maintained in a closed, sealed position at all times that the tank contains condensate, except when necessary to use the openings for sampling, removal, or for equipment inspection, maintenance or repair. The CCT shall be equipped with a water seal device on the overflow line. The CCT shall be vented to a closed vent system meeting the requirements in 40 CFR 63.450. CCT vent gases shall be incinerated in lime kiln and/or power boiler.	40 CFR 63.446(d)(2) for CCT 40 CFR 63.962(b)(2)(i)(A) for water seal 40 CFR 63.446(d)(2)(i) for venting to closed collection
D2.4	HAPs: Collection and Treatment	Kraft pulping condensates collected in the CCT shall be transferred in a closed collection system to the UNOX reactor. Kraft pulping condensates shall be treated to demonstrate 6.6 lb/ODTP destruction of total HAPs (with methanol as a surrogate). Discharge the pulping process condensate below the liquid surface of a biological treatment system and treat the pulping process condensates to meet the requirements specified in paragraph (e)(3), (4), or (5) of 40 CFR 63.446, and total HAP shall be measured as specified in §63.457(g).	40 CFR 63.446(e)(2), (3), (4), (5)
D2.5	HAPs: Collection and Treatment	The Permittee shall not be considered in violation of the collection and treatment requirements if the time of excess emissions divided by the total process operating time in a semi-annual reporting period does not exceed 10%.	40 CFR 63.446(g)

Condensates	Parameter	Limit, Monitoring, Reporting, Recordkeeping	Applicable Requirements
D2.6	HAPs: Condensate Collection System Inspections	*Monthly Inspections* The condensate collection system shall be visually inspected every 30 days. Follow the inspection requirements found in 40 CFR 63.964(a)(1)(i)(A), 63.964(a)(1)(v), and 63.964(b)(1) and (2) including: (1) The unburied portion of the collection system piping shall be visually inspection to verify that there are no defects. (2) The inspection shall include verification that appropriate liquid level in the water seals in the CCT are being maintained and identify any other defects that could reduce water seal control effectiveness. For this condition, 30 days shall be interpreted to mean: at least once per calendar month with no two consecutive inspections occurring within 14 days. *Annual Inspections* CCT shall be inspection for detectable leaks annually using the procedures in 40 CFR 63.457(d). *Inspection Corrective Actions* Follow the repair requirements found in 40 CFR 63.964(a)(1)(i)(A), 63.964(a)(1)(v), and 63.964(b)(1) and (2) including: (1) The first effort to repair a defect shall be no later than 5 calendar days after detection. (2) Repair shall be completed as soon as practicable but no later than 15 calendar days after detection unless the repair of the defect requires emptying or temporary removal from service of the collection system. (3) If repair of the defect requires emptying or temporary removal of the condensate collection system from service, the defect will be repaired the next time the process equipment generating the condensate stops operation. The repair of the defect will be completed before the process resumes operation.	Order 3463-AQ07, 40 CFR 63.453(l), 40 CFR 63.964(a)(1)(iii), and 40 CFR 63.964(a)(1)(i)(A) for monthly inspection 40 CFR 63.453(l)(2) for annual inspections 40 CFR 63.453(l)(3) and 63.964(b)(1) and (2) for corrective actions

Condensates	Parameter	Limit, Monitoring, Reporting, Recordkeeping	Applicable Requirements
D2.7	HAPs: Inspection Recordkeeping	For the condensate closed collection system, the Permittee must prepare and maintain a site-specific inspection plan including a drawing or schematic of the components of applicable affected equipment and shall record the following information for each inspection: (1) Date of inspection; (2) The equipment type and identification; (3) Results of leak detection tests; (4) The nature of the defect or leak and the method of detection (i.e., visual inspection or instrument detection); (5) The date the defect or leak was detected and the date of each attempt to repair the defect or leak; (6) Repair methods applied in each attempt to repair the defect or leak; (7) The reason for the delay if the defect or leak is not repaired within 15 days after discovery; (8) The expected date of successful repair of the defect or leak if the repair is not completed within 15 days; and (9) The date of successful repair of the defect or leak.	40 CFR 63.453(l)(1)(i) and 40 CFR 63.454(b)

Condensates	Parameter	Limit, Monitoring, Reporting, Recordkeeping	Applicable Requirements
D2.8	HAPs: Monitoring	The control device shall be operating in a manner consistent with the procedures/values established under 40 CFR Part 63, Subpart S except as provided in 40 CFR 63.453(p), 40 CFR 63.443(e), or 40 CFR 63.446(g). Daily monitoring requirements to demonstrate compliance with the provisions of 40 CFR 63.453(m) and (n) to the liquid stream UNOX DCD operated by the Permittee. Sample DCD inlet and outlet streams daily and analyzed for methanol. The following method of calculation is to be used for the daily methanol samples: Treatment in lbs HAPs / Kraft ODTP = $\frac{\text{Collected lbs/D HAPs - \{lbs/D HAPs at DCD sampler - lbs/D HAPs in RAS\}}}{\text{Kraft ODTP/D}}$ Report daily and 30-day rolling average results in lb/TODP. 30-day rolling average results must meet applicable limits in Section D2.1 and D2.4.	40 CFR 63.446(e)(4) and 63.453(h)
D2.9	HAPs: Performance Testing	Conduct a HAP removal test as specified in §63.457(l) within 45 days after the beginning of each quarter and meet the applicable emission limit in §63.446(e)(2). The test conducted in the first quarter (annually) shall be performed for total HAP as specified in §63.457(g) and meet the mass removal emission limit specified in §63.446(e)(2). The remaining quarterly tests shall be performed in the same manner, except that the permittee may use the applicable methanol procedure in §63.457(l)(2) and the value of r determined during the first quarter test instead of measuring the additional HAP to determine a new value of r. Report results of the performance before the close of business on the 60th day following the completion of the performance test, unless approved otherwise in writing by Ecology.	40 CFR 63.457(g) for testing requirement 40 CFR 63.457(l) for calculation 40 CFR 63.455(h) for reporting

D3. HIGH VOLUME LOW CONCENTRATION (HVLC) SYSTEM

Applies to to following systems: Pulp washing, knotter system, screen system.

The Permittee submitted information to satisfy Clean Condensate Alternative (CCA) criteria in 40 CFR 63.447 which allows use of the CCA to meet HVLC collection and treatment requirements. Ecology issued Order 2737-AQ05 which mandates enforceable conditions to assure applicable HAPs collection requirements are met using CCA.

The applicable systems shall comply with the General Requirements of 40 CFR Part 63 as listed in Table 1 to Subpart S.

HVLC	Parameter	Limit, Monitoring, Reporting, Recordkeeping	Applicable Requirements
D3.1	HAPs: Collection and Treatment	The HVLC system shall be enclosed and vented to Lime Kiln 3, Lime Kiln 4, and/or Power Boiler 20 except for each knotter system that does not exceed 0.1 pounds of HAPs per ODP ton, and each screen system that does not exceed 0.2 pounds HAPs per ODP ton.	40 CFR 63.443(a)(1)(ii)(A) 40 CFR 63.443(a)(1)(ii)(B 40 CFR 63.443(c)
D3.2	HAPs: Collection and Treatment	Introduce HVLC gases with the primary fuel or into flame zone of Lime Kiln 3, Lime Kiln 4, and/or Power Boiler 20.	40 CFR 63.443(d)(4)

HVLC	Parameter	Limit, Monitoring, Reporting, Recordkeeping	Applicable Requirements
D3.3	HAPs: Enclosures	The HVLC system shall maintain negative pressure at each enclosure or hood opening as demonstrated by the procedures specified in 40 CFR 63.457(e). Each enclosure or hood opening closed during the initial performance test specified in 40 CFR 63.457(a) shall be maintained in the same closed and sealed position as during the performance test at all times except when necessary to use the opening for sampling, inspection, maintenance, or repairs. *Monthly Inspections:* For each enclosure opening, a visual inspection of the closure mechanism shall be performed at least once every 30 days to ensure the opening is maintained in the closed position and sealed. For this condition, 30 days shall be interpreted to mean: at least once per calendar month with no two consecutive inspections occurring within 14 days. *Annual Inspections:* Demonstrate annually that each enclosure opening is maintained at negative pressure as specified in 40 CFR Part 63.457(e).	40 CFR 63.450(a) and (b) 40 CFR 63.453(k)(1) for monthly inspections 40 CFR 63.453(k)(4) for annual inspections

HVLC	Parameter	Limit, Monitoring, Reporting, Recordkeeping	Applicable Requirements
D3.4	HAPs: Closed-vent system	Each component of the closed-vent system used to control HVLC non-condensable gas source group emission that is operated at positive pressure and located prior to a control device shall be designed for and operated with no detectable leaks as indicated by an instrument reading of less than 500 ppmv above background, as measured by 40 CFR Part 60, Appendix A, Method 21. *Monthly Inspections:* Each closed vent system (reasonably accessible ductwork, piping, enclosures, and connections to covers in the collection system for the HVLC system) shall be visually inspected for visible evidence of defects every 30 days or as requested by Ecology. For this condition, 30 days shall be interpreted to mean: at least once per calendar month with no two consecutive inspections occurring within 14 days. *Annual Inspections:* Measure annually components of closed-vent systems under positive pressure for detectable leaks as specified in 40 CFR 63.457(d).	40 CFR 63.450(a) and (c) 40 CFR 63.453(k)(2) for monthly inspections 40 CFR 63.453(k)(3) for annual inspections
D3.5	HAPs: Collection and Treatment	Each bypass line in the closed-vent system that could divert vent streams containing HAP to the atmosphere without meeting the emission limitations in §§63.443 shall comply with either of the following requirements: (1) On each bypass line, the Permittee shall install, calibrate, maintain, and operate according to the manufacturer's specifications a flow indicator that is capable of taking periodic readings as frequently as specified in 40 CFR 63.454(e). The flow indicator shall be installed in the bypass line in such a way as to indicate flow in the bypass line (note: monitoring bypass valve position is a satisfactory flow indicator); or (2) For bypass line valves that are not computer controlled, the Permittee shall maintain the bypass line valve in the closed position with a car seal or a seal placed on the valve or closure mechanism in such a way that valve or closure mechanism cannot be opened without breaking the seal	40 CFR 63.450(d)

HVLC	Parameter	Limit, Monitoring, Reporting, Recordkeeping	Applicable Requirements
D3.6	HAPs: Monthly Inspections	The valve or closure mechanism specified in § 63.450(d)(2) shall be inspected at least once every 30 days to ensure that the valve is maintained in the closed position and the emission point gas stream is not diverted through the bypass line. For this condition, 30 days shall be interpreted to mean: at least once per calendar month with no two consecutive inspections occurring within 14 days.	40 CFR 63.453(k)(5) Order 3463-AQ07
D3.7	HAPs: Inspection Corrective Action	If an inspection of the HVLC system identifies visible defects, or if an instrument reading of 500 ppmv or greater above background is measured by 40 CFR 60, Appendix A, Method 21 in accordance with the procedures in 40 CFR 63.457(d), or if enclosure openings are not maintained at negative pressure, take the following corrective action as soon as practicable. Make a first effort to repair or correct the closed-vent system as soon as practicable, but no later than 5 calendar days after the problem is identified. Complete the repair or corrective action no later than 15 days after the problem is identified. Delay of repair or corrective action is allowed if the repair or corrective action is technically infeasible without a process unit shutdown or if the Permittee determines that the emissions resulting from immediate repair would be greater than the emission likely to result from delay of repair. Repair of such equipment shall be completed by the end of the next process shutdown.	40 CFR 63.453(k)(6) 40 CFR 63.457(d)

HVLC	Parameter	Limit, Monitoring, Reporting, Recordkeeping	Applicable Requirements
D3.8	HAPs: Recordkeeping	For each applicable enclosure opening, closed vent system, and closed collection system, prepare and maintain a site-specific inspection plan, including a drawing or schematic of the components of applicable affected equipment and shall record the following information for each inspection: (1) Date of inspection; (2) Equipment type and identification; (3) Results of negative pressure tests for enclosures; (4) Results of leak detection tests; (5) The nature of the defect or leak and the method of detection; (6) The date the defect or leak was detected and the date of each attempt to repair the defect or leak; (7) Repair methods applied in each attempt to repair the defect or leak; (8) Reason for the delay if the defect or leak is not repaired within 15 days; (9) Expected date of successful repair of the defect or leak if the repair is not completed within 15 days; (10) Date of successful repair of the defect or leak; (11) Position and duration of opening of bypass line valves and the condition of any valve seals; and (12) Duration of the use of manual or computer-controlled bypass valves.	40 CFR 63.454(a) and (b)
D3.9	HAPs: Recordkeeping	Records shall be maintained for all periods of excess emissions. Periods of excess emissions from the HVLC system are not violations of 40 CFR 63.443(c) and (d) provided that the time of excess emissions divided by the total process operating time in a semiannual reporting period does not exceed four (4) percent.	40 CFR 63.443(e)(2)

HVLC	Parameter	Limit, Monitoring, Reporting, Recordkeeping	Applicable Requirements
D3.10	HAPs: CCA Collection and Treatment	Collect condensates from the following sources (CCA units) and route them via hard piping to the Dedicated Control Device (DCD) for treatment: #9 Evaporator – "clean" side of the surface condenser, #10 Evaporator – "clean" side of the surface condenser, #10 Evaporator – "clean" side of the 7th effect. For these sources, follow the inspection, repair, and reporting requirements in 40 CFR 63.443(l).	40 CFR 63.447 Order 2737-AQ05, Table 1
D3.11	HAPs: CCA Collection and Treatment	Collect an additional 1.0 lb/ODTP of HAPs as measured at the inlet to the DCD. Compliance shall be demonstrated by collection ≥8.2 lb/ODTP of HAPs based on a 30-day rolling average (this includes the ≥7.2 lb/ODTP amount required to meet the 40 CFR 63.446(c) collection requirements). Washer lines No. 5, 6 and 7 for which these additional collection requirements were established have been permanently retired from service.	40 CFR 63.447 Order 2737-AQ05, Table 1
D3.12	HAPs: CCA Collection and Treatment	Destroy an additional 1.0 lb/ODTP of HAPs as measured at the outlet of the DCD. Compliance shall be demonstrated by destroying ≥7.6 lb/ODTP of HAPs based on a 30-day rolling average (this includes the ≥6.6 lb/ODTP amount required to meet the 40 CFR 63.446(e) treatment requirements). Washer lines No. 5, 6 and 7 for which these additional destruction requirements were established have been permanently retired from service.	40 CFR 63.447 Order 2737-AQ05, Table 1

E1. NEUTRAL SULFITE SEMI-CHEMICAL PLANT (NSSC)

NSSC	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
E1.1	VOC (as carbon)	26.4 tpy	Calculate and report per table footnote below. The VOC emission factors for Hi Density Storage #1, Hi Density Storage #2, Lo Density Storage, Side Hill Screen, and Wash Water Chest shall be updated every fifth year following issuance of Order 3462-AQ07. At least one source test shall be conducted at each emission point to supplement the existing data prior to emission factor recalculation (due to safety considerations, the Hi Density Storage #2 emission factor may be calculated based on the VOC concentration in the Hi Density Storage #1 vent). Data collection for calculation of the VOC emission factors shall conform with EPA RM 25A. See table footnote below for additional information. *Reporting:* The following information for the NSSC shall be included for the previous year in each January monthly report: - Hours of NSSC operation during the calendar year; - NSSC pulp produced during the calendar year as ODTP; and - VOC emitted in tons/year during the calendar year.	Order 3462-AQ07, Modification 1, Appendix A
E1.2	N/A	N/A	Gases from the new chip bin (presteaming bin), refined stock blow tank, and chemi-washer filtrate vent of the NSSC pulping process shall be collected and burned as NCGs.	Order 3462-AQ07, Modification 1, Appendix A

NSSC	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
E1.3	N/A	N/A	Prior to charging any material from the kraft process into the NSSC system, the Permittee shall submit information to Ecology and the EPA Office of Air Quality Planning and Standards (OAQPS) for a determination of New Source Performance Standards (NSPS) for Kraft Pulping Mills (40 CFR Part 60, Subpart BB) applicability. The Permittee shall provide any additional information request to make the determination in a timely manner. Prior to charging material from the kraft process into the NSSC system during the decision making period, the Permittee shall install and operate controls equivalent to those required by 40 CFR Part 60, Subpart BB. After receiving the OAQPS decision, Ecology shall, if necessary, issue an Order to the Permittee concerning compliance with the NSPS rules.	Order 3462-AQ07, Modification 1, Appendix A
E1.4	N/A	N/A	The operation and maintenance manual for the NSSC shall contain a section specifying best management practices necessary to meet toxics and VOC emission rates included in the NOC application. Copies of the manual shall be kept on file at the facility and be available for inspection. Failure to follow the best management practices specified in the manual to meet the toxics and VOC emission rates shall be considered proof of excess emission due to the equipment not being properly operated and maintained in accordance with RCW 70.94.152(7).	Order 3462-AQ07, Modification 1, Appendix A

Footnote:

Compliance with NSSC VOC annual limit shall be calculated as follows:

Tons per year (TPY) of VOC = (TPY of VOC from Hi Density Storage #1) + (TPY of VOC from Hi Density Storage #2) + (TPY of VOC from Lo Density Storage) + (TPY of VOC from Side Hill Screen) + (TPY of VOC from Wash Water Chest)

Tons per year of VOC from the individual emission points shall be calculated as follows during the first five years after the issuance of Order 3462-AQ07.

VOC from Hi Density Storage #1, Hi Density Storage #2, and Lo Density Storage shall be calculated as follows:

$$\frac{ton\ VOC}{yr} = \frac{hrs\ NSSC\ operation}{yr}\ x\ \frac{lb\ C}{hr}\ x\ \frac{ton\ VOC}{2000\ lb\ VOC}$$

Where $\frac{lb\ C}{hr}$ is: 0.035 $\frac{lb\ C}{hr}$ for Hi Density Storage #1

0.090 $\frac{lb\ C}{hr}$ for Hi Density Storage #2

0.004 $\frac{lb\ C}{hr}$ for Lo Density Storage

VOC from the Side Hill Screen and the Wash Water Chest shall be calculated as follows:

$$\frac{ton\ VOC}{yr} = \frac{ODTP\ (NSSC)}{yr}\ x\ \frac{lb\ C}{ODTP}\ x\ \frac{ton\ VOC}{2000\ lb\ VOC}$$

Where lb C/ODTP is: 0.099 $\frac{lb\ C}{ODTP}$ for Side Hill Screen

0.039 $\frac{lb\ C}{ODTP}$ for the Wash Water Chest

The VOC emission factors:

$\frac{lb\ C}{hr}$ for Hi Density Storage #1

$\frac{lb\ C}{hr}$ for Hi Density Storage #1

$\frac{lb\ C}{hr}$ for Lo Density Storage

$\frac{lb\ C}{ODTP}$ for the Side Hill Screen

$\frac{lb\ C}{ODTP}$ for the Wash Water Chest

Shall be updated every fifth year. At least one source test shall be conducted at each emission point to supplement the existing data prior to emission factor recalcualtion (due to safety considerations, the Hi Density Storage #2 emission factor may be calcualted based on the VOC concentration in the Hi Density Storage #1 vent). Data collection for calculation of the VOC emission factors shall conform with RM 25A as defined in the footnotes for Table 1 of the order. The method for recalculation shall be as follows:

Updated Emission Factor = (0.6 x EA) + (0.4 x AF)

Where: EA is the emission factor used for emission calculations, and

AF is the emission factor for data collected during the five year period.

The updated VOC emission factor shall be submitted to Ecology prior to the end of the fifth year after permit issuance, and every five years thereafter. Calculation with the updated VOC emission factors shall commence at the end of the fifth year after permit issuance and every five years thereafter.

F1. DIGESTERS, MULTI-EFFECT EVAPORATORS, BROWNSTOCK WASHERS, AND CONDENSATE STRIPPER SYSTEMS

The Kamyr Digester No.1; Kamyr Digester No. 2; and Mulitple-effects Evaporator Set 10 are NSPS applicable units (40 CFR Part 60, Subpart BB). These sources shall comply with the general requirements of 40 CFR Part 60, including:

40 CFR 60.7(b) & (f) concerning recordkeeping,
40 CFR 60.7(c), (d), & (e) concerning reporting,
40 CFR 60.11(d) concerning operation and maintenance,
40 CFR 60.12 concerning concealment,
40 CFR 60.13 concerning monitoring,
40 CFR 60.19 concerning notification and reporting.

	Parameter	**Limit** (shall not exceed)	**Monitoring, Reporting, Recordkeeping**	**Applicable Requirements**
F1.1	TRS – NSPS units (Kamyr Digester ~~and Washer~~ No.1; Kamyr Digester ~~and Washer~~ No. 2; and Mulitple-effects Evaporator Set 10)	5 ppmv @ 10 % O_2, unless combusted in a lime kiln or equivalent	Monitoring required by conditions C1.6b, C2.6b~~, C3.6a,~~ and G1.5 shall be used to demonstrate compliance with this requirement. Excess emissions and monitoring systems performance reports meeting the requirements of 40 CFR 60.284(d) and (e) shall be submitted semi-annually. Report shall be postmarked by the 30th day following the end of each six-month period.	40 CFR 60.283(a)(1) for emission limit

	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
F1.2	TRS	N/A	All noncondensable gases from the digesters, evaporators, and condensate stripper system shall be continuously treated to reduce the emission of TRS equal to the reduction achieved by thermal oxidation in a lime kiln and/or power boiler. The noncondensable gases shall be burned in one of, or a combination of the following units: LK3, LK4, LK5 and/or PB20. To provide continuous treatment: - The NCG collection and treatment system shall be properly operated and maintained at all times, - Venting shall be minimized, and - Venting necessary for safe/proper system operation and maintenance shall not exceed 10 hours per month. Report venting duration and cause in the monthly air report.	WAC 173-405-040(4) Order 3462-AQ07, Modification 1 and Order 8429, Modification 1, Condition 11

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

	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
F1.3	TRS	Noncondensibles from digesters, multiple-effect evaporators and condensate stripper system shall be treated to ~~Treat noncondensable gases to~~ reduce TRS emissions equal to reduction achieved by thermal oxidation in a lime kiln; install a backup treatment system.	Monitoring required by Condition F1.1 shall be used to demonstrate compliance with this requirement.	WAC 173-405-040(4)
F1.4	Methanol	300 ppm, 12 month rolling average	Collect representative sample monthly (from the final stage brownstock washer shower water) and analyze using NCASI 94.02. Report monthly rest results and 12-month rolling average in monthly report.	Order No. 9213, Condition 1

Commented [RA4]: Edits to better match the rule language in regards to the scope of this requirement

G1. POWER BOILER 20 (PB20)

This source shall comply with the requirements of 40 CFR Part 60, Subpart D for NO_x and SO_2 and Subpart Db for PM and opacity. The source shall also comply with the General Requirements of 40 CFR Part 60, including:

40 CFR 60.7(b) & (f) concerning recordkeeping,
40 CFR 60.7(c), (d), & (e) concerning reporting,
40 CFR 60.11(d) concerning operation and maintenance,
40 CFR 60.12 concerning concealment,
40 CFR 60.13 concerning monitoring,
40 CFR 60.19 concerning notification and reporting.

The emission unit shall comply with the General Requirements of 40 CFR Part 63 as listed in Table 10 of Subpart DDDDD.

Opacity limits apply to each stack individually. All other limits apply to the total emissions from the combined stacks.

PB20	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
G1.1a	PM & PM_{10} - filterable	0.025 gr/dscf @ 7% O_2, 1-hr average	*Performance Testing:* Sample M/Q using RM 5 (see Appendix A). *Reporting:* Submit source test results in the monthly air report. See Facility-wide General Requirement, Condition 38 for source test report requirements. *Compliance Assurance Monitoring:* See Conditions G1.12, G1.13, and G1.14 for compliance assurance monitoring requirements. The Permittee shall comply with the general CAM requirements in Condition M. CAM reporting required on at a minimum semiannual basis.	Order 8429, Modification 1, Condition 5.1 40 CFR 70.6(a)(3) for streamlining of source test frequency requirement with PSD 01-03 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping

PB20	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
G1.1b	PM & PM_{10} - filterable	0.030 gr/dscf @ 7% O_2, 1-hr average	*Performance Testing:* Sample M/Q using RM 5 (see Appendix ApA.2). *Reporting:* Submit source test results in the monthly air report. See Facility-wide General Requirement, Condition 38 for source test report requirements. *Compliance Assurance Monitoring:* See Condition G1.1a for CAM requirements.	Order 3466-AQ07, Condition 1 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping
G1.1c	PM & PM_{10}	0.048 gr/dscf @ 7% O_2, 1-hr average	Same as previous limit.	PSD 01-03, Amendment 3, Condition 1.86 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping
G1.1d	PM	0.2 gr/dscf @ 7% O_2, 1-hr average	Same as Condition G1.1a. CAM demonstration same as previous limits.	WAC 173-405-040(5)(a) 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping

PB20	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
G1.1e	PM	0.085 lb/MMBtu, when firing natural gas, oil, or a mixture of these fuels with solid fuels when combusting greater than 30% wood on an annual basis	Compliance with the limit may be demonstrated using the methods described in 40 CFR Part 60, Subpart Db~~, or alternative monitoring of PM and/or opacity proposed per 40 CFR 60.13(i).~~ in accordance with 40 CFR 60.8. EPA granted a performance test waiver for this limit in accordance with 40 CFR 60.8(b)(4) on December 12, 2012.	40 CFR 60.43b(h)(4) for emission limit
G1.1f	PM – total	0.089 gr/dscf @ 7% O_2, 1-hr average	*Performance Testing:* Sample Q/A using RM 5/RM 202 (see Appendix A). See Condition G2.1c for reporting requirement. See Condition 15 of Order 8429 for additional calculation and reporting requirements. *Reporting:* Submit source test results in the monthly air report. See Facility-wide General Requirement, Condition 38 for source test report requirements. See Condition G1.1a for CAM requirements.	Order 8429, Modification 1, Condition 5.2 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping

PB20	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
G1.1g	PM_{10} - total	0.083 gr/dscf @ 7% O_2, 1-hr average	*Performance Testing:* Sample Q/A using RM 5/RM 202 (see Appendix A). See Condition G1.1c for reporting requirement. See Condition 15 of Order 8429 for additional calculation and reporting requirements. *Reporting:* Submit source test results in the monthly air report. See Facility-wide General Requirement, Condition 38 for source test report requirements. See Condition G1.1a for CAM requirements.	Order 8429, Modification 1, Condition 5.3 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping
G1.1h	$PM_{2.5}$ - total	0.081 gr/dscf @ 7% O_2, 1-hr average	*Performance Testing:* Sample Q/A using RM 5/RM 202 (see Appendix A). See Condition G2.1c for reporting requirement. See Condition 15 of Order 8429 for additional calculation and reporting requirements. *Reporting:* Submit source test results in the monthly air report. See Facility-wide General Requirement, Condition 38 for source test report requirements. See Condition G1.1a for CAM requirements.	Order 8429, Modification 1, Condition 5.4 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping

PB20	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
G1.1i	PM & PM_{10} - filterable	234 tpy, 12-month rolling total	Calculate per Appendix ApA.4. Report monthly. See Condition G1.1a for CAM requirements.	Order 3466-AQ-07, Condition 1 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping
G1.1j	PM & PM_{10}	365 tpy, 12-month rolling total	Same as previous limit. CAM demonstration same as previous limits.	PSD 01-03, Amendment 3, Condition 1.86 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping

PB20	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
G1.2	HAP Metals (PM as a surrogate)	4.4 E-01 lb of PM/MMBtu of heat input (Boiler MACT Emission Limit - hybrid suspension grate boiler designed to fire wet biomass/bio-based solid)	*Performance Testing:* Reference Test Method is EPA RM 5. Performance tests are to be conducted in accordance with the requirements in 40 CFR 63.7520. Conduct tests annually, no more than 13 months after the previous performance test. If performance tests for at least 2 consecutive years show that emissions are at or below 75 percent of the emission limit and there are no changes in the operation of the boiler, performance tests may be performed every third year. Operating limit (see conditions below) must be confirmed or reestablished during performance tests. Develop a site-specific test plan in accordance with 40 CFR 63.7520(a). Upon Ecology request, the Permittee shall submit the site-specific test plan for approval. *60-day Notification:* Notification of Intent to conduct a performance test must be provided to the Administrator 60 days before the performance test is scheduled to begin. *Recordkeeping:* The Permittee must keep records of all performance tests. *Reporting:* Semi-annual compliance reporting in accordance with 40 CFR 63.7550. Submit source test results in the monthly air report. See Facility-wide General Requirement, Condition 38 for source test report requirements.	40 CFR 63.7500(a)(1) and Table 2 (Item 13b) for emission limit 40 CFR 63.7515(a) and (b) for testing frequency 40 CFR 63.7520 and Table 5 (Item 1) for performance testing requirements 40 CFR 63.7540(a)(1), Table 4 (Item 1 and 4), and Table 7 (Items 1a, 1b, and footnote a) for operating limit confirmation/reestablishment 40 CFR 63.7520(a) for site-specific test plan requirement 40 CFR 63.7545(d) for performance test notification 40 CFR 63.7555(a)(2) for recordkeeping 40 CFR 63.7515(f) and 63.7550 for reporting

PB20	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
G1.3a	Opacity	20% average for more than 6 consecutive minutes in any 60 minute period	Emission control parameter monitoring is required when exhaust gasses are being emitted as a result of combustion in the unit or the unit ID fan is being operated as part of the cool down process for unit shutdown. Maintain emission control parameter hourly average rates at levels specified in the "Emission Control Compliance Demonstration Plan" (see Appendix B). Continuously monitor parameters specified in the plan. Whenever any 3-hr average of a level specified in the "Emission Control Compliance Demonstration Plan" is not met, corrective action must be initiated within 24 hours. Failure to initiate corrective action within 24 hours is a violation of WAC 173-405-040(8) and may be a violation of the underlying applicable requirement. Report deviations from these operating parameters that last longer than 3 hours and corrective action in the monthly report. Compliance may also be determined by RM 9. Limit is applicable to each stack individually.	Order 3462-AQ07, Modification 1, Appendix A 40 CFR 64.2 and 64.6 through 64.9 for respective PM CAM monitoring and reporting/recordkeeping

PB20	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
G1.3b	Opacity	20% average for more than 6 consecutive minutes in any 60 minute period, except for emissions due to soot blowing or grate cleaning for up to 15 minutes in 8 consecutive hours	EPA Method 9 is the reference test method. Continuous monitoring same as above. Limit is applicable to each stack individually.	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

PB20	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
G1.3c	Opacity	20 % (6-minute average), except for one 6-minute period per hour of not more than 27% opacity. (Limit is not applicable when only natural gas is fired in PB 20). (PM surrogate)	Compliance with the limit may be demonstrated using the methods described in 40 CFR Part 60, Subpart Db, or alternative monitoring of PM and/or opacity proposed per 40 CFR 60.13(i). ~~Initial notification and performance evaluation results shall be submitted. All reports for PM and opacity must be submitted every 6 month period~~EPA granted approval for alternative opacity monitoring in accordance with 40 CFR 60.13(i)(1) on February 12, 2012. EPA approved monitoring of the scrubbing liquid flow rate, pressure drop of the gas stream across the scrubber and total power to the wet electrostatic precipitator parameters in the Emission Control Compliance Demonstration Plan (ECCDP) applicable to Power Boiler 20 instead of opacity. Emission control parameter monitoring is required when exhaust gasses are being emitted as a result of combustion in the unit or the unit ID fan is being operated as part of the cool down process for unit shutdown. Maintain emission control parameter hourly average rates at levels specified in the "Emission Control Compliance Demonstration Plan" (see Appendix B). Continuously monitor parameters specified in the plan. Whenever any 3-hr average of a level specified in the "Emission Control Compliance Demonstration Plan" is not met, corrective action must be initiated within 24 hours. Report deviations from these operating parameters that last longer than 3 hours and corrective action in the monthly report. The PM and opacity standards shall apply at all times except startup, shutdown, or malfunction. Limit is applicable to each stack individually.	40 CFR 60.43b(f) for emission limit 40 CFR 60.43b(g) for SSM

PB20	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
G1.4a	SO_2	100 ppmdv @ 7% O_2, 3-hr average	Monitor continuously using a CEMS that conforms to 40 CFR Part 60, Appendix F and Appendix B, PS 2 (see Appendix ApA.2). See Facility-wide General Requirement, Condition 26 for continuous emission monitoring system-operating requirements. Report 3-hr average concentrations, monthly average concentrations, maximum monthly 3-hr average concentration, and exceedances monthly.	PSD 01-03, Amendment 3, Condition 1.87
G1.4b	SO_2	1,000 ppm @ 7% O_2, 1-hr average	Same as previous limit.	WAC 173-405-040(9)(b)
G1.4c	SO_2	0.80 lb/MMBtu, 3-hr average	Monitor continuously using a CEMS that conforms to 40 CFR Part 60, Appendix F and Appendix B PS 2 (see Appendix ApA.2). Report 3-hr average concentrations, monthly average concentrations, maximum monthly 3-hr average concentration, and exceedances monthly. The Permittee must submit a *Semi-Annual Excess Emissions and Continuous Monitoring Systems Performance* or *Summary Report* in accordance with 40 CFR 60.7(c) and 40 CFR 60.45(g), postmarked by the 30th day following the end of each six-month period (or on a more frequent basis in accordance with the criteria in 40 CFR 60.7(c)~~as determined necessary by Ecology~~).	40 CFR 60.43(a)(1) for emission limit 40 CFR 60.45(a) for monitoring
G1.4d	SO_2	946 tpy, 12-month rolling total	Calculate per Appendix ApA.4. Report monthly.	PSD 01-03, Amendment 3, Condition 1.87

PB20	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
G1.5	TRS	Temperature ≥1,200°F and retention time ≥ 0.5 seconds when burning NCGs	Monitoring not required.	40 CFR 60.283(a)(1)(iii) for standard
G1.6a	CO	900 lb/hr, 8-hr average	*Performance Testing:* Sample A/M using RM 10 (see Appendix ApA.4). Calculate per Appendix ApA.4 without dividing by fuel applied. *Reporting:* Submit source test results in the monthly air report. See Facility-wide General Requirement, Condition 38 for source test report requirements.	PSD 01-03, Amendment 3, Condition 1.88

PB20	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
G1.6b	CO	3,500 ppm by volume on a dry basis; corrected to 3% O_2 (3-run average) Boiler MACT Emission Limit	*Performance Testing:* Reference Test Method is EPA RM 10. Use a measurement span value 2 times the concentration of the applicable emission limit. Performance tests are to be conducted in accordance with the requirements in 40 CFR 63.7520. Conduct tests annually, no more than 13 months after the previous performance test. If performance tests for at least 2 consecutive years show that emissions are at or below 75 percent of the emission limit and there are no changes in the operation of the boiler, performance tests may be performed every third year. Develop site-specific test plan in accordance with 40 CFR 63.7520(a). Upon Ecology request, the Permittee shall submit the site-specific test plan for approval. *60-day Notification:* Notification of Intent to conduct a performance test must be provided to the Administrator 60 days before the performance test is scheduled to begin. *Recordkeeping:* The Permittee must keep records of all performance tests. *Reporting:* Semi-annual compliance reporting in accordance with 40 CFR 63.7550. Submit source test results in the monthly air report. See Facility-wide General Requirement, Condition 38 for source test report requirements.	40 CFR 63.7500(a)(1) and Table 2 (Item 13a) for emission limit 40 CFR 63.7515(a) and (b) for testing frequency 40 CFR 63.7545(d) for performance test notification 40 CFR 63.7520 and Table 5 (Item 5) for performance testing requirements 40 CFR 63.7520(a) for site-specific test plan requirement 40 CFR 63.7555 for recordkeeping 40 CFR 63.7515(f) and 63.7550 for reporting

PB20	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
G1.6c	CO (oxygen as a surrogate)	Operate an oxygen trim system with the oxygen level set no lower than the lowest hourly average oxygen concentration measured during the most recent CO performance test as the operating limit for oxygen (Boiler MACT Operating Limit)	Semi-annual compliance reporting in accordance with 40 CFR 63.7550.	40 CFR 63.7525(a)(7) 40 CFR 63.7540 for monitoring requirements 40 CFR 63.7500(a)(2) for operating limit 40 CFR 63.7550 and Table 9 for reporting
G1.6d	CO	3,942 tpy, 12-month rolling total	Calculate per Appendix ApA.3. Report monthly.	PSD 01-03, Amendment 3, Condition 1.88

PB20	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
G1.7a	NO_x (when firing only NG)	0.20 lb/MMBtu fuel application rate, 3-hr average (as NO_2)	Monitor continuously using a CEMS that conforms to 40 CFR Part 60, Appendix F and Appendix B, PS 2 (see Appendix ApA.2). See Facility-wide General Requirement, Condition 26 for continuous emission monitoring system-operating requirements. Report 3-hr average concentrations, monthly average concentration, maximum monthly 3-hr average concentration, and excursions monthly.	PSD 01-03, Amendment 3, Condition 1.89
G1.7b	NO_x (when firing only NG)	0.20 lb/MMBtu fuel application rate, 3-hr average (as NO_2)	Same as for previous limit. The Permittee must submit a *Semi-Annual Excess Emissions and Continuous Monitoring Systems Performance* or *Summary Report* in accordance with 40 CFR 60.7(c) and 40 CFR 60.45(g), postmarked by the 30th day following the end of each six-month period (or on a more frequent basis as determined necessary by Ecology).	40 CFR 60.44(a)(1) for emission limit 40 CFR 60.45(a) for monitoring
G1.7c	NO_x (when firing other fuel)	0.30 lb/MMBtu fuel application rate, 3-hr average (as NO_2)	Monitor continuously using a CEMS that conforms to 40 CFR Part 60, Appendix F and Appendix B PS 2 (see Appendix ApA.2). See Facility-wide General Requirement, Condition 26 for continuous emission monitoring system-operating requirements. Report 3-hr average concentrations, monthly average concentration, maximum monthly 3-hr average concentration, and excursions monthly.	PSD 01-03, Amendment 3, Condition 1.89
G1.7d	NO_x (when firing other fuel)	0.30 lb/MMBtu fuel application rate, 3-hr average (as NO_2)	Same as previous limit. The Permittee must submit a *Semi-Annual Excess Emissions and Continuous Monitoring Systems Performance* or *Summary Report* in accordance with 40 CFR 60.7(c) and 40 CFR 60.45(g), postmarked by the 30th day following the end of each six-month period (or on a more frequent basis as determined necessary by Ecology).	40 CFR 60.44(a)(2) for emission limit 40 CFR 60.45(a) for monitoring

PB20	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
G1.7e	NO_x	0.150 lb/MMBtu – 30-day average (as NO_2)	Monitor continuously using CEMS that conforms to 40 CFR Part 60, Appendix F and Appendix B, PS 2 (see Appendix A). Report 24-hr average concentration, 30-day rolling average concentrations, maximum monthly 30-day average concentration, and exceedances monthly. This limit will become effective per the timeline specified in Condition 5, Order 8429.	Order 8429, Modification 1, Condition 5.5
G1.7f	NO_x	1183 tpy, 12-month rolling total (as NO_2)	Calculate per Appendix ApA.4. Report monthly.	PSD 01-03, Amendment 3, Condition 1.89
G1.8	NH_3	25 ppmv @ 7% O_2, 24-hr average	Sample A/M (see Appendix A) using Bay Area Air Quality Management District (BAAQMD) Source Test Procedure ST-1B or alternative method approved by Ecology. Each source test result shall represent a 24-hr average for comparison to the limit. The initial source test shall be conducted when the unit is operating at ≥95% of the maximum hourly rate. Subsequent source tests shall be conducted when the unit is operating at ≥95% of the maximum hourly rate the unit operated since the prior source test. Submit source test results in the monthly air report. See Facility-wide General Requirement, Condition 38 for source test report requirements.	Order 8429, Modification 1, Condition 5.6
G1.9	O_2	No limit – required for O_2 correction	Monitor continuously using a CEMS that conforms to 40 CFR Part 60, Appendix F and Appendix B PS 3.	40 CFR 60.45(a) and Order 3462-AQ07, Modification 1, Appendix A

PB20	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
G1.10	Operating Limit	900 MMBtu/hr fuel application rate	Report average hourly fuel application rate in MMBtu/hr in monthly report (see Appendix ApA.1).	PSD 01-03, Amendment 3, Condition 1.85
G1.11	Stack Dimensions	N/A	The modified or replaced exhaust stacks shall be designed in such a way that modeled exhaust gas dispersion is equal to or better than that indicated for the originally-proposed design in the modeling reported in the application for this PSD permit. Plans for the stack design must be approved in writing by Ecology prior to initiation of construction of the stack. Construction of the modified or replacement stacks shall be consistent with design (approved construction completed). Certify stack dimensions meet discharge characteristics presented in the PSD application (certification completed). Report any changes to stack diameter or height after stack dimensions are certified.	PSD 01-03, Amendment 3, Condition 5 Order 3462-AQ07, Modification 1, Appendix A

G1.12	HAP Metals and Mercury (WESP Operating Limit)	Maintain the 30-day rolling average total secondary electric power input of the electrostatic precipitator at or above the operating limits established during the performance test demonstrating compliance with the PM or Mercury emission limit	*Monitoring:* The Permittee shall install sensors to measure (secondary) voltage and current to the precipitator collection plates. Develop a site-specific monitoring plan in accordance with 40 CFR 63.7505(d). Upon Ecology request, the Permittee shall submit the site-specific monitoring plan for approval. Performance evaluations of the electric power monitoring system must be conducted in accordance with the monitoring plan at the time of each performance test but no less frequently than annually. Continuous compliance demonstrated in accordance with 40 CFR 63.7540 and Table 8 (Item 7) in the subpart. ~~See Facility-wide General Requirement, Condition 28 for CMS data recovery requirements.~~ *Establishing Operating Limit:* Secondary power operating limit to be established according to Table 7 (Item 1b) in the subpart. Operating limit must be confirmed or reestablished during performance tests. Minimum total secondary electric power input must be set at the higher of the minimum values established during the performance tests for HAP metals and mercury. *Recordkeeping:* The Permittee shall keep records of all monitoring data and calculated averages for secondary power. *Reporting:* ~~Report daily 30-day rolling average total secondary electric power input of the electrostatic precipitator in the monthly report.~~ Report operating limit deviations~~exceedances~~ monthly. Semi-annual compliance reporting in accordance with 40 CFR 63.7550.	40 CFR 63.7525(h) 40 CFR 63.7500(a)(2) and Table 4 (Item 4b) for operating limit 40 CFR 63.7540 and Table 8 (Item 7) for monitoring requirements 40 CFR 63.7505(d) for site-specific monitoring plan 40 CFR Part 63, Subpart DDDDD, Table 7 (Item 1b) for establishing operating limit 40 CFR 63.7555 for recordkeeping 40 CFR 63.7550 and Table 9 for reporting

Commented [RA5]: Global:
The specific CMS data recovery requirements for Boiler MACT are included in condition G1.24

PB20	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
G1.13	HAP Metals and Mercury (Scrubber Operating Limit)	Maintain the 30-day rolling average pressure drop at or above the lowest one-hour average pressure drop measured during the performance test demonstrating compliance with the PM or Mercury emission limit	*Monitoring:* Continuously monitor the scrubber pressure drop using a pressure monitoring system according to 40 CFR 63.7525(f). Demonstrate continuous compliance in accordance with 40 CFR 63.7540 and Table 8 (Item 4) of the subpart. Develop a site-specific monitoring plan in accordance with 40 CFR 63.7505(d). Upon Ecology request, the Permittee shall submit the site-specific monitoring plan for approval. ~~See Facility-wide General Requirement, Condition 28 for CMS data recovery requirements.~~ *Establishing Operating Limit:* Pressure drop to be established according to Table 7 (Item 1a) in the subpart. Operating limit must be confirmed or reestablished during performance tests. Minimum pressure drop must be set at the higher of the minimum values established during the performance tests for HAP metals and mercury. *Recordkeeping:* The Permittee shall keep records of all monitoring data and calculated averages for scrubber pressure drop. *Reporting:* Report operating limit deviations ~~daily 30-day rolling average pressure drop in the monthly report. Report exceedances~~ monthly. Semi-annual compliance reporting in accordance with 40 CFR 63.7550.	40 CFR 63.7525(f) 40 CFR 63.7540 and Table 8 (Item 4) for monitoring requirements 40 CFR 63.7500(a)(2) and Table 4 (Item 1) for operating limit 40 CFR 63.7505(d) for site-specific monitoring plan 40 CFR Part 63, Subpart DDDDD, Table 7 (Item 1) for establishing operating limit 40 CFR 63.7555 for recordkeeping 40 CFR 63.7550 and Table 9 for reporting

PB20	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
G1.14	HAP Metals and Mercury (Scrubber Operating Limit)	Maintain the 30-day rolling average liquid flow rate at or above the lowest one-hour average liquid flow rate measured during the performance test demonstrating compliance with the PM or mercury emission limit	*Monitoring:* Continuously monitor the scrubber liquid flow rate using a flow monitoring system according to 40 CFR 63.7525(e). Demonstrate continuous compliance in accordance with 40 CFR 63.7540 and Table 8 (Item 4) of the subpart. Develop a site-specific monitoring plan in accordance with 40 CFR 63.7505(d). Upon Ecology request, the Permittee shall submit the site-specific monitoring plan for approval. ~~See Facility-wide General Requirement, Condition 28 for CMS data recovery requirements.~~ *Establishing Operating Limit:* Scrubber liquid flow rate to be established according to Table 7 (Item 1) in the subpart. Operating limit must be confirmed or reestablished during performance tests. Minimum liquid flow rate must be set at the higher of the minimum values established during the performance tests for HAP metals and mercury. *Recordkeeping:* The Permittee shall keep records of all monitoring data and calculated averages for scrubber flow rate. *Reporting:* Report operating limit deviations ~~daily 30-day rolling average scrubber liquid flow rate in the monthly report. Report exceedances~~ monthly. Semi-annual compliance reporting in accordance with 40 CFR 63.7550.	40 CFR 63.7525(e) 40 CFR 63.7540 and Table 8 (Item 4) for monitoring requirements 40 CFR 63.7500(a)(2) and Table 4 (Item 1) for operating limit 40 CFR 63.7505(d) for site-specific monitoring plan 40 CFR Part 63, Subpart DDDDD, Table 7 (Item 1) for establishing operating limit 40 CFR 63.7555 for recordkeeping 40 CFR 63.7550 and Table 9 for reporting

PB20	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
G1.15	HCl	2.2 E-02 lb per MMBtu of heat input (Boiler MACT Emission Limit)	*Performance Testing:* Reference Test Method is EPA RM 26 or 26A. Performance tests are to be conducted in accordance with the requirements in 40 CFR 63.7520. Conduct tests annually, no more than 13 months after the previous performance test. If performance tests for at least 2 consecutive years show that emissions are at or below 75 percent of the emission limit and there are no changes in the operation of the boiler, performance tests may be performed every third year. Operating limit for fuel input (Condition G1.17) must be confirmed or reestablished during performance tests. Develop site-specific test and fuel monitoring plans in accordance with 40 CFR 63.7520(a) and 40 CFR 63.7521(b). Upon Ecology request, the Permittee shall submit the test and monitoring plan for approval. *60-day Notification:* Notification of Intent to conduct a performance test must be provided to the Administrator 60 days before the performance test is scheduled to begin. *Recordkeeping:* The Permittee must keep records of all performance tests. *Reporting:* Semi-annual compliance reporting in accordance with 40 CFR 63.7550. Submit source test results in the monthly air report. See Facility-wide General Requirement, Condition 38 for source test report requirements.	40 CFR 63.7500(a)(1) and Table 2 (Item 1a) for emission limit 40 CFR 63.7515(a) and (b) for testing frequency 40 CFR 63.7545(d) for performance test notification 40 CFR 63.7520 and Table 5 (Item 3) for performance testing requirements 40 CFR 63.7520(a) for site-specific test plan requirement 40 CFR 63.7521(b) for site-specific fuel monitoring plan 40 CFR 63.7555 for recordkeeping 40 CFR 63.7515(f) and 63.7550 for reporting

PB20	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
G1.16a	Mercury	5.7 E-06 lb per MMBtu of heat input	*Performance Testing:* Reference Test Method is EPA RM 29, 30A, 30B, or alternate method listed in 40 CFR Part 63 Subpart DDDDD Table 5, Item 4e. Performance tests are to be conducted in accordance with the requirements in 40 CFR 63.7520. Conduct tests annually, no more than 13 months after the previous performance test. If performance tests for at least 2 consecutive years show that emissions are at or below 75 percent of the emission limit and there are no changes in the operation of the boiler, performance tests may be performed every third year. Operating limit (Condition G.17) must be confirmed or reestablished during performance tests. Develop site-specific test and fuel monitoring plans in accordance with 40 CFR 63.7520(a) and 40 CFR 63.7521(b). *60-day Notification:* Notification of Intent to conduct a performance test must be provided to the Administrator 60 days before the performance test is scheduled to begin. *Recordkeeping:* The Permittee must keep records of all performance tests. *Reporting:* Semi-annual compliance reporting in accordance with 40 CFR 63.7550. Submit source test results in the monthly air report. See Facility-wide General Requirement, Condition 38 for source test report requirements.	40 CFR 63.7500(a)(1) and Table 2 (Item 1b) for emission limit 40 CFR 63.7515(a) and (b) for testing frequency 40 CFR 63.7545(d) for performance test notification 40 CFR 63.7520 and Table 5 (Item 4) for performance testing requirements 40 CFR 63.7540(a)(1) and Table 7 (1a, 1b, and footnote a) for operating limit confirmation/reestablishment 40 CFR 63.7520(a) for site-specific test plan requirement 40 CFR 63.7521(b) for site-specific fuel monitoring plan 40 CFR 63.7555 for recordkeeping

PB20	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
				40 CFR 63.7515(f) and 63.7550 for reporting
G1.16b	Mercury	3.2 kg (7.1 lb) per 24-hour period	Stack sampling must be conducted as specified in 40 CFR 61.53(d), as applicable. Sludge sampling must be conducted as specified in 40 CFR 61.54, as applicable. Monitoring of emissions and operations must be conducted as specified in 40 CFR 61.55(a) as applicable. Records must be maintained as specified in 40 CFR 61.53(d)(6) and 40 CFR 61.54(g), as applicable.	40 CFR 61.52(b) for emission standard 40 CFR 61.53(d) for performance test requirements 40 CFR 61.54 for alternative sludge sampling 40 CFR 61.55(a) for additional performance testing
G1.17	Mercury and HCl	Equal to or lower fuel input of chlorine and mercury than the maximum values calculated during the most recent performance test	Keep records of monthly fuel use, including type(s) of fuel and amount(s) used. Maintain a copy of all calculations and supporting documentation for maximum chlorine and mercury fuel input. Any plans to burn a new fuel or new mixture of fuels requires that the maximum mercury input be recalculated. Compliance reporting in accordance with 40 CFR 63.7550.	40 CFR 63.7540(a)(2)(ii) for continuous compliance demonstration 40 CFR 63.7555(d) for recordkeeping 40 CFR 63.7540(a)(6) for new fuel recalculation 40 CFR 63.7550 for reporting

PB20	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
G1.18	Any pollutant for which compliance is demonstrated by a Boiler MACT performance test (Operating Limit)	Maintain 30-day rolling average operating load ≤ 110 percent of the highest hourly average operating load recorded during the most recent performance test	Collect operating load data or steam generation data every 15 minutes. Reduce the data to 30-day rolling averages. ~~See Facility-wide General Requirement, Condition 28 for CMS data recovery requirements.~~ Report operating limit deviations~~daily 30-day rolling average operating load in the monthly report. Report exceedances~~ monthly. Compliance reporting in accordance with 40 CFR 63.7550.	40 CFR 63.7500(a)(2) and Table 4 (Item 7) for operating limit 40 CFR 63.7520 and Table 7 (Item 5) for establishing operating limit; Table 7 (footnote a) for operating limit confirmation/reestablishment 40 CFR 63.7540 and Table 8 (Item 10) for boiler operating load data collection requirements 40 CFR 63.7550 for reporting
G1.19	Work Practice Standard	Once every five year Tune-up	For a boiler or process heater with a continuous oxygen trim system that maintains an optimum air to fuel ratio, the boiler/process heater tune-up must be performed as specified in 40 CFR 63.7540(a)(12) and Table 3. If the boiler/process heater removes the continuous oxygen trim system, the boiler/process heater tune-up must be performed annually as specified in 40 CFR 63.7540(a)(10) and Table 3. Report in accordance with 40 CFR 63.7550(c)(1).	40 CFR 63.7540(a)(10) and Table 3 (Item 3) for once every five year tune-ups 40 CFR 63.7550(c)(1) for reporting

PB20	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
G1.20	Startup (Work Practice Standard)	The Permittee must comply with all applicable emission limits at all times except for startup periods conforming with this work practice standard	All CMS must be operated during startup. The Permittee must use one or a combination of clean fuel(s) as listed in Table 3 (Item 5.b) during startup. Once firing non-clean fuels during startup, emissions must be vented to the main stack(s) and all emission control devices must be engaged. Monitoring data must be collected during startup, as specified in 40 CFR 63.7535(b). Reporting in accordance with 40 CFR 63.7550.	40 CFR 63.7500(f) and Table 3 (Item 5) 40 CFR 63.7535(b) for monitoring requirements 40 CFR 63.7550 for reporting 40 CFR 63.7575 for definition of startup
G1.21	Shutdown (Work Practice Standard)	The Permittee must comply with all applicable emission limits at all times except for shutdown periods conforming with this work practice standard.	All CMS must be operated during shutdown. While firing non-clean fuels during shutdown, emissions must be vented to the main stack(s) and all emission control devices must be engaged. Monitoring data must be collected during shutdown, as specified in 40 CFR 63.7535(b). Reporting in accordance with 40 CFR 63.7550.	40 CFR 63.7500(f) and Table 3 (Item 6) 40 CFR 63.7535(b) for monitoring requirements 40 CFR 63.7550 for reporting 40 CFR 63.7575 for definition of startup

PB20	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
G1.22	Startup/Shutdown Recordkeeping	N/A	The Permittee must maintain startup/shutdown records regarding the following: 1) The calendar date, time, occurrence and duration of each startup and shutdown; 2) The type(s) and amount(s) of fuels used during each startup and shutdown.	40 CFR 63.7555(d)(9) and (10)

PB20	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
G1.23	Good Operations and Maintenance	N/A	At all times, the Permittee must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. *General Recordkeeping:* The Permittee must maintain records of: 1) The occurrence and duration of each malfunction of the boiler or process heater, or of the associated air pollution control and monitoring equipment; and 2) Actions taken during periods of malfunction to minimize emissions in accordance with the general duty to minimize emissions in §63.7500(a)(3), including corrective actions to restore the malfunctioning boiler or process heater, air pollution control, or monitoring equipment to its normal or usual manner of operation.	40 CFR 63.7500(a)(3) 40 CFR 63.7555(d)(6) and (7) for recordkeeping

PB20	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
G1.24	Monitoring Data Collection	N/A	The Permittee shall operate the monitoring system and collect data at all required intervals at all times that the boiler is operating and compliance is required, except for periods of monitoring system malfunctions or out of control periods (see 40 CFR 63.8(c)(7)), and required monitoring system quality assurance or control activities, including, as applicable, calibration checks, required zero and span adjustments, and scheduled CMS maintenance as defined in your site-specific monitoring plan. A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures that are caused in part by poor maintenance or careless operation are not malfunctions. You are required to complete monitoring system repairs in response to monitoring system malfunctions or out-of-control periods and to return the monitoring system to operation as expeditiously as practicable.	40 CFR 63.7535

PB20	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
G1.25	Fuels	N/A	Allowable fuels for PB20 include: - Wood fuels including hog fuel, forest biomass, urban wood, and burnable rejects from the mill and OCC recycle facility (burnable rejects must be processed to remove plastics and metal before use as fuel), - Oil, including reprocessed fuel oil (RFO), - Primary and secondary sludge from the mill process wastewater treatment plant, and - Natural gas. The following shall not be burned in PB20: - Medical wastes (Note: Order No. 99AQ-I052 which allowed a small amount of medical waste to be burned in PB20 is hereby rescinded), - Mill garbage, and - OCC rejects which have not been processed to remove plastics and metal before use as fuel.	Order 8429, Modification 1, Condition 5
G1.26	Urban Wood Acceptance Program	N/A	All urban wood purchased for use in PB20 must meet an acceptance program included as part of the PB20 O&M manual (AOP Condition G1.27). The acceptance program must include acceptance criteria which at a minimum prohibits wood treated with creosote, pentachlorophenol, or copper-chrome-arsenic; municipal waste, hazardous material contaminants (asbestos, lead, mercury), lead painted items, and plastic coatings. The acceptance program must be incorporated into the O&M manual. Any changes to the acceptance program must be submitted to Ecology prior to instituting the changes.	Order 8429, Modification 1, Condition 5

PB20	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
G1.27	O&M Manual	N/A	Operating and maintenance (O&M) manuals for all equipment added or modified by Order 8429, that has the potential to affect emissions to the atmosphere, shall be developed and followed. Copies of the manuals shall be available to Ecology. Emissions that result from a failure to follow the requirements of the manuals may be considered proof that the equipment was not properly operated and maintained.	Order 8429, Modification 1, Condition 17

H1. PAPER MACHINES

PM	Parameter	Limit (shall not exceed)	Monitoring, Reporting	Applicable Requirements
H1.1	VOCs	N/A	Additives used in the paper-making process on the paper machines shall be "low-VOC". The Permittee shall annually submit a list of additives used in the paper-making process on the paper machines and identify those that are not "low-VOC".	PSD 01-03, Amendment 3, Condition 4 Order No. 9213, Condition 3
H1.2	Daily Production	220 ADTP/hr, daily average	Sum average hourly production (ADTP/hr) at Paper Machine Nos. 5, 7, 10, 11, and 12 daily. Report maximum daily sum for the month and all limit exceedances in monthly report.	Order No. 9213, Condition 2

I1. BOX PLANT PRODUCTION LINES

The emission units shall comply with the General Requirements of 40 CFR Part 63 as listed in Table 1 of Subpart KK.

Box Plant	Parameter	Limit (shall not exceed)	Monitoring & Reporting	Applicable Requirements
I1.1	HAPs	Mass of total HAPs applied must be less than 0.04 times the mass of inks, coatings, varnishes, adhesives, primers, solvents, reducers, thinners, and other materials applied, monthly average	Report mass of material applied, 0.04 times mass of material applied, and mass of HAP applied monthly. Report malfunctions and exceedance semi-annually in accordance with 40 CFR 63.830. Recordkeeping in accordance with 40 CFR 63.829.	40 CFR 63.825(b) and (b)(4) for limit 40 CFR 63.830 for reporting 40 CFR 63.829 for recordkeeping
I1.2	Acrylic Acid (FFG)	0.131 lbs/day	Record the square footage in mean square foot (MSF) produced by the Flexo Folder Gluer (FFG) on a daily basis and the average ink usage factor[a] and weighted average content of acrylic acid in the applied ink products on a monthly basis. Estimate the average daily and maximum daily application of acrylic acid applied at the new FFG[b] and report them in the monthly report. Report any exceedances in the monthly report.	Order No. 13302, Condition 1.b.1
I1.3	Propylene Glycol (FFG)	3.75 lbs/day	Record the square footage in MSF produced by the FFG on a daily basis and the average ink usage factor[a] and weighted average content of propylene glycol in the applied ink products on a monthly basis. Estimate the average daily and maximum daily application of propylene glycol applied at the new FFG[b] and report them in the monthly report. Report any exceedances in the monthly report.	Order No. 13302, Condition 1.b.2

Box Plant	Parameter	Limit (shall not exceed)	Monitoring & Reporting	Applicable Requirements
I1.4	VOCs (FFG)	2.0 tpy	Record the square footage in MSF produced by the FFG on a daily basis and the average ink usage factor and weighted average content of VOCs in the applied ink products on a monthly basis. Ink usage factor is the pounds of ink applied per MSF produced at the Box Plant. Estimate the monthly VOC emissions and the annual VOC emissions, based on a 12-month rolling average, from the FFG and report them in the monthly report. Estimate appilcation of the pollutant using the following equation: (Ink usage factor) x (MSF produced by the FFG) x (weighted average content of applicable pollutant in the applied inks).	Order No. 13302, Condition 1.b.3
I1.5	Recordkeeping (FFG)	N/A	In addition to the monitoring and reporting requirements in Conditions I1.2 through I1.4, the facility must maintain the following records for the Flexo Folder Gluer for a minimum of 5 years: a. Documentation about the inks that are used each month, including, but not limited to, MSDS or SDS for each of the inks, b. The VOC content in each ink and weighted percentage of any VOC that is a HAP or a TAP, and c. An estimate of the average amount of ink used on a daily basis.	Order No. 13302, Condition 2
I1.6	Additional Reporting (FFG)	N/A	The Permittee must submit a TAP emissions report for the Flexo Folder Gluer to Ecology annually. The report must be submitted by January 31st for the previous calendar year. The report must include the following information: a. A list of any new inks that were used during the calendar year. b. A list of any new TAPs associated with the new inks. c. The calculated annual emission rate for any TAPs that were emitted by the Flexo Folder Gluer unit.	Order No. 13302, Condition 3

Box Plant	Parameter	Limit (shall not exceed)	Monitoring & Reporting	Applicable Requirements
I1.7	New Source Review (FFG)	N/A	In accordance with WAC 173-400-110, a modification to the Flexo Folder Gluer, including a change in the method of operation such as the use of new inks, is subject to new source review requirements. Prior to the use of any new inks that will cause the Flexo Folder Gluer to emit either a new TAP or an existing TAP above the new source review exemptions levels, the facility must submit a request to revise this Order, as allowed by WAC 173-400-111(8), to address those increases. The request must include sufficient information for Ecology to assess the items specified by WAC 173-400-111(8)(a).	Order No. 13302, Condition 4
I1.8	Operations and Maintenance	N/A	The operation and maintenance manual for the Box Plant Production Lines must be updated to reflect the addition of the Flexo Folder Gluer. The operation and maintenance manual must be followed. A copy of the manual must be available to Ecology.	Order No. 13302, Condition 5

J1. RECIPROCATING INTERNAL COMBUSTION ENGINES (RICE) - EMERGENCY

The facility has four emergency compression ignition (CI) RICE: MWC Fire Pump, OCC Fire Pump, Turbine Room Backup Generator, and IT Server Backup Generator. 40 CFR Part 63, Subpart ZZZZ regulates these stationary reciprocating internal combustion engines.

40 CFR Part 63 requirements are cited in this permit, as applicable. WAC 173-400-075(6) incorporates 40 CFR Part 63 by reference.

RICE	Monitoring, Reporting, Recordkeeping	Applicable Requirements
J1.1	Change the oil and filter every 500 hours of operation or annually, whichever comes first. An oil analysis program may be used to extend the specified oil change requirement in accordance with 40 CFR 63.6625(i) or (j), as applicable. Inspect the air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	40 CFR Part 63, Subpart ZZZZ, Table 2c
J1.2	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)
J1.3	There is no time limit on the use of emergency stationary RICE in emergency situations. Emergency RICE 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 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)

RICE	Monitoring, Reporting, Recordkeeping	Applicable Requirements
J1.4	Records of the hours of operation of the engine that is recorded through the nonresettable 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 nonemergency 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. Records must be kept and readily available for five (5) years following the date of each occurrence, measurement, maintenance, corrective action report, or record.	40 CFR 63.6655 for recordkeeping. 40 CFR 63.6660 for records retention.
J1.5	The stationary RICE must be operated and maintained according to the manufacturer's emission-related operation and maintenance instructions; or A maintenance plan must be developed and followed which provides to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. 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 must be kept and readily available for five (5) years following the date of each occurrence, measurement, maintenance, corrective action report, or record.	40 CFR Part 63 Subpart ZZZZ, Table 6 40 CFR 63.6655 for recordkeeping. 40 CFR 63.6660 for records retention.
J1.6	Beginning January 1, 2015, existing emergency compression ignition (CI) stationary RICE with a site rating of more than 100 brake hp and a displacement of less than 30 liters per cylinder that uses diesel fuel, and operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii), or that operates for the purpose specified in §63.6640(f)(4)(ii), must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to January 1, 2015, may be used until depleted.	40 CFR 63.6604(b)

J2. RECIPROCATING INTERNAL COMBUSTION ENGINES (RICE) – NEW SOURCE PERFORMANCE STANDARDS

The facility has three emergency compression ignition (CI) RICE for which new source performance standards in 40 CFR Part 60, Subpart IIII apply: MWC Fire Pump, OCC Fire Pump, and IT Server Backup Generator.

40 CFR Part 60 requirements are cited in this permit, as applicable. WAC 173-400-115 incorporates 40 CFR Part 60 by reference.

RICE	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
J2.1	NMHC + NOx	4.0 g/kW-hr	Compliance must be demonstrated by keeping records of engine manufacturer data indicating compliance with the standards.	40 CFR 60.4205(b) and 40 CFR 89.112 for IT Server Backup Generator 40 CFR 60.4205(c) for fire pumps
J2.2	CO	3.5 g/kW-hr	Compliance must be demonstrated by keeping records of engine manufacturer data indicating compliance with the standards. Limit not applicable to OCC Fire Pump and MWC Fire Pump	40 CFR 60.4205(b) and 40 CFR 89.112 for IT Server Backup Generator
J2.3	PM	0.2 g/kW-hr	Compliance must be demonstrated by keeping records of engine manufacturer data indicating compliance with the standards.	40 CFR 60.4205(b) and 40 CFR 89.112 for IT Server Backup Generator 40 CFR 60.4205(c) for fire pumps
J2.4	Operations	N/A	In order for the engines to be considered an emergency stationary ICE under this 40 CFR Part 60, Subpart IIII, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (1) through (3) of this condition, is prohibited. If you do not operate the engine	40 CFR 60.4211(f)

RICE	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
			according to the requirements in paragraphs (1) through (3) of this condition, the engine will not be considered an emergency engine and must meet all requirements for non-emergency engines. (1) There is no time limit on the use of emergency stationary ICE in emergency situations. (2) You may operate your emergency stationary ICE for any combination of the purposes specified in paragraphs (i) through (iii) of this condition for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph (3) of this condition counts as part of the 100 hours per calendar year allowed by this paragraph (2). (i) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year. (ii) Emergency stationary ICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §60.17), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.	

RICE	Parameter	Limit (shall not exceed)	Monitoring, Reporting, Recordkeeping	Applicable Requirements
			(iii) Emergency stationary ICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency. (3) Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. Except as provided in paragraph (f)(3)(i) of this section, the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.	
J2.5	Operations and Maintenance	N/A	The Permittee must: operate and maintain the stationary CI internal combustion engines and control devices according to the manufacturer's emission-related written instructions; change only those emission-related settings that are permitted by the manufacturer; and meet the requirements of 40 CFR parts 89, 94 and/or 1068, as applicable.	40 CFR 60.4211(a)
J2.6	Fuel Requirements	N/A	The Permittee must use diesel fuel that has a maximum sulfur content of 15 ppm and a minimum cetane index of 40 or a maximum aromatic content of 35 percent by volume.	40 CFR 60.4207(b) for fuel requirements

J3. RECIPROCATING INTERNAL COMBUSTION ENGINES (RICE) – NON-EMERGENCY

NESHAP Subpart ZZZZ regulates stationary reciprocating internal combustion engines. The facility has three non-emergency spark ignintion (SI) RICE: 3 Kiln Auxiliary Drive System Engine, 4 Kiln Auxiliary Drive System Engine, and 5 Kiln Auxiliary Drive System Engine.

40 CFR Part 63 requirements are cited in this permit, as applicable. WAC 173-400-075(6) incorporates 40 CFR Part 63 (MACT) by reference.

RICE	Monitoring, Reporting, Recordkeeping	Applicable Requirements
J3.1	Change the oil and filter every 1,440 hours of operation or annually, whichever comes first. An oil analysis program may be used to extend the specified oil change requirement in accordance with 40 CFR 63.6625(i) or (j), as applicable. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	40 CFR Part 63, Subpart ZZZZ, Table 2c
J3.2	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)
J3.3	The stationary RICE must be operated and maintained according to the manufacturer's emission-related operation and maintenance instructions; or A maintenance plan must be developed and followed which provides to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. 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 must be kept and readily available for five (5) years following the date of each occurrence, measurement, maintenance, corrective action report, or record.	40 CFR Part 63 Subpart ZZZZ, Table 6 40 CFR 63.6655 for recordkeeping. 40 CFR 63.6660 for records retention.

K1. MILLWIDE EMISSION LIMTS

Mill Wide	Parameter	Limit (shall not exceed)	Monitoring & Reporting	Applicable Requirements
K1.1	PM and PM_{10}	698.5 tpy, 12-month rolling total	Report 12-month rolling total in monthly report (see Appendix ApA.5).	PSD 01-03, Amendment 3, Condition 1.98
K1.2	SO_2	1,885 tpy, 12 month rolling total	Report 12-month rolling total in monthly report (see Appendix ApA.5).	PSD 01-03, Amendment 3, Condition 1.99
K1.3	CO	7,056.5 tpy, 12 month rolling total	Report 12-month rolling total in monthly report (see Appendix ApA.5).	PSD 01-03, Amendment 3, Condition 1.100
K1.4	NO_x	3,028.5 tpy, 12 month rolling total	Report 12-month rolling total in monthly report (see Appendix ApA.5).	PSD 01-03, Amendment 3, Condition 1.101
K1.5	TRS (as H_2S)	263 tpy, 12 month rolling total	Report 12-month rolling total in monthly report (see Appendix ApA.5).	PSD 01-03, Amendment 3, Condition 1.102
K1.6	VOCs	1,674 tpy, 12 month rolling total	Report 12-month rolling total in monthly report (see Appendix ApA.5).	PSD 01-03, Amendment 3, Condition 1.103
K1.7	Kraft Pulp Production	2,800 machine dried tons (MDT)/day, 12 month rolling average	Report 12-month rolling average in monthly report (see Appendix ApA.5).	PSD 01-03, Amendment 3, Condition 1.96
K1.8	Total Primary Production	3,600 MDT/day, 12 month rolling average	Report 12-month rolling average in monthly report (see Appendix ApA.5).	PSD 01-03, Amendment 3, Condition 1.97

Mill Wide	Parameter	Limit (shall not exceed)	Monitoring & Reporting	Applicable Requirements
K1.9	Steam Production @ main header	2.6 million lb/hr @ 800 psig, 1-hr average	Report maximum hourly steam production for each day in monthly report (see Appendix ApA.5).	PSD 01-03, Amendment 3, Condition 1.104
K1.10	N/A	N/A	The following units shall no longer be operated: #5 Washer Line, Lime Slaker No.3, and Lime Kiln 2.	Order 8429, Condition 8
K1.11	Acid Rain Applicability	N/A	The Permittee must request EPA to make an applicability determination to determine if Acid Rain Program regulations (40 CFR Part 72) apply to this project. A copy of the original request cover letter and the EPA determination must be submitted to Ecology. The Permittee must comply with the EPA determination.	Order 8429, Condition 6

L1. GREENHOUSE GAS (GHG) REPORTING

The following **state-only** GHG requirements are not enforceable under the federal Clean Air Act.

L1.1 GHG Reporting Schedule

Permittee must submit the report required under Chapter 173-441 WAC to Ecology no later than March 31 of each calendar year for GHG emissions in the previous calendar year.

Reporting requirements begin for Calendar Year 2012 and each subsequent calendar year.

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.

Submit a revised annual GHG report within 45 days of discovering that an annual GHG report previously submitted contains one or more substantive errors.

[WAC 173-441-050(2), WAC 173-441-070, WAC 173-441-050(7)]

L1.2 Report Content

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

Each GHG emission report and any other submission under Chapter 173-441 WAC shall be certified, signed, and submitted by the designated representative or any alternate designated representative.

(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.*"

All requests, notifications, and communications to Ecology pursuant to Chapter 173-441 WAC, other than submittal of the annual GHG report, shall be submited to the following address:

Greenhouse Gas Report
Air Quality Program
Department of Ecology
PO Box 47600
Olympia, WA 98504-7600

[WAC 173-441-050(3), WAC 173-441-060(5)]

L1.3 Emissions Calculations

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

Calibration and accuracy requirements: 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 Chapter 173-441 WAC 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 C.F.R. Part 75 to calculate CO_2 mass emissions.

[WAC 173-441-050(4), WAC 173-441-050(8)]

L1.4 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)]

M1. COMPLIANCE ASSURANCE MONITORING (CAM)

The Permittee is required to submit a CAM Plan per 40 CFR Part 64. WestRock Longview's CAM Plan submitted with the 2011 AOP renewal permit application (updated in October 2019) and included in this permit's statement of basis shall satisfy the CAM Plan submittal requirement. CAM is applicable to the following pollutant-specific emission units (PSEUs): Recovery Furnace 19 (PM), Recovery Furnace 22 (PM), Smelt Dissolver Tank 19 (PM), Smelt Dissolver Tank 22 (PM), Lime Kiln 3 (PM), Lime Kiln 4 (PM), Lime Kiln 5 (PM), and Power Boiler 20 (PM). The following general CAM requirements apply to the aforementioned units and the associated limits that are subject to CAM, as identified in the permit conditions above.

General CAM requirements:

M1.1 Obligation to monitor and data availability requirement.

Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable.

The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions. [40 CFR 64.7(c)]

M1.2 Excursions.

The Permittee shall report excursions as defined in the unit specific monitoring requirements. An excursion does not necessarily indicate an exceedence of the applicable particulate emission standards referenced above, nor does evidence of an excursion precluded the Permittee from certifying continuous compliance as provided in Facility Wide Condition 39 of this permit if the Permittee has other data on which to base a determination of compliance during the reporting period in which the excursion occurred. (40 CFR 64.6(c)(2)(10/22/97); 40 CFR 70.6(c)(iii)(C) (6/27/03)

M1.3 Response to an excursion.

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. [40 CFR 64.7(d)]

M1.4 Quality Improvement Plan (QIP).

If Ecology or U.S. EPA Region 10 determines, based on the frequency of excursions reported, review of operation and maintenance procedures and records, and reports on corrective action taken in response to an excursion, that the Permittee's corrective action procedures are not consistent with good air pollution control practice for minimizing emissions, Ecology or U.S. EPA Region 10 may require the Permittee to develop and implement a Quality Improvement Plan. (40 CFR 64.8 and 64.6(c)(3) (10/22/97))

M1.5 Reporting.

A monitoring report required by this section shall submitted at a minumum semiannually and shall include:

(a) Summary information on the number, duration and cause (including unknown cause, if applicable) of each excursion and the corrective action taken;

(b) 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; and

(c) A description of the actions taken to implement a QIP during the reporting period, if required. Upon completion of a QIP, the Permittee shall include in the next monthly report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions occurring. [40 CFR 64.9(a)]

M1.6 Recordkeeping.

The recordkeeping required by this section shall include records of the monitoring data described in this section, corrective actions taken pursuant to this section, any QIP prepared under Condition M1.4, and any activities taken to implement a QIP. Instead of paper records, the Permittee may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review. (40 CFR 64.9(b) and 64.6(c)(3) (10/22/97))

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 to paved areas and debris piles as necessary to control fugitive dust or the timely removal or coverage of material piles. [WAC 173-400-040(9)(a)]
6. Fallout. 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 of the property upon which the material is deposited. [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 emissions unit other than a kraft recovery furnace, smelt dissolver tank, or lime kiln, which has an average opacity greater than twenty percent for more than six consecutive minutes in any sixty minute period. The emissions unit shall comply with the alternative visible emission standard for:

(i) Soot blowing or grate cleaning in WAC 173-400-040 (2)(a);
(ii) Hog fuel or wood fired boiler in operation before January 24, 2018, in WAC 173-400-040 (2)(e); and/or
(iii) Furnace refractory in WAC 173-400-040 (2)(f).
(iv) There shall be no more than one violation notice issued in any sixty minute period.
(v) These provisions (of WAC 173-405-040(6)) shall not apply when the presence of uncombined water is the only reason for the opacity of the plume to exceed the applicable maximum.

[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 excluding holidays and weekends. 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]
12. Operation and Maintenance. 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 that may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. [40 CFR 60.11(d), 40 CFR 63.6(e)(1), WAC 173-405-040(8)]
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. Ozone Protection.

    a. The Permittee shall comply with the applicable standards for recycling and emissions reductions 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 Section 82.156.
        ii. Equipment used during the maintenance, service, repair, or disposal must comply with standards for recycling and recovery equipment pursuant to Section 82.158.
        iii. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to Section 82.161.
        iv. Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with recordkeeping requirements pursuant to Section 82.166. ("MVAC-like appliance" is defined at Section 82.152.)
        v. Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to Section 82.156.
        vi. Owners/operators of appliances normally containing 50 or more pounds, or refrigerant purchased and added to such appliances must do so in compliance with Section 82.166.

    b. Permittee may switch from any ozone-depleting substance to any alternative approved pursuant to the Significant New Alternatives Program (SNAP), 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 70.94.970(2), 970(4)]
    e. Compliance with this term and condition will be demonstrated by using a certified contractor or employee.

15. Volatile Organic Liquid Storage Vessels. The Permittee shall keep records showing the dimensions and capacities of all storage vessels having capacities greater than or equal to 75 cubic meters 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.

    The requirement above does not apply to storage vessels with a capacity greater than or equal to 151 cubic meters storing a liquid with a maximum true vapor pressure less than 3.5 kilopascals (kPa), or with a capacity greater than or equal to 75 cubic meters but less than 151 cubic meters storing a liquid with a maximum true vapor pressure less than 15.0 kPa.

The Permittee shall maintain a record of volatile organic liquid stored, the period of storage, and the maximum true vapor pressure of the volatile organic liquid during the storage period. [40 CFR 60.116b (a) and (b)]

16. 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. The requirements of RCW 70.94.610(1) do not apply to used oil burned in emission units regulated under this AOP, because such emission units are "facilities permitted by the department" per RCW 70.94.610(2). [RCW 70.94.610]

17. Asbestos. The Permittee must comply with 40 CFR sections 61.145 and 61.150 and WAC 173-400-075 if asbestos-containing material is present above specified quantities in a facility being demolished or renovated. [WAC 173-400-075; 40 CFR Part 61, Subpart M]

18. New Source Review. The Permittee shall not construct new sources or make modifications required to be reviewed under WAC 173-400-110, WAC 173-400-560, WAC 173-400-720, WAC 173-400-820, or WAC 173-460-040 before the Permittee obtains written final approval from Ecology in accordance with those regulations, pays the appropriate fees required by WAC 173-455-120, and pays the cost of public notice described in WAC 173-400-171. [WAC 173-400-110; WAC 173-400-171; WAC 173-400-560; WAC 173-400-720; WAC 173-400-820; 173-460-040]

19. Replacement or Substantial Alteration of Emission Control Technology. Prior to replacing or substantially altering emission control technology subject to review under WAC 173-400-114, the Permittee shall file for a notice of construction application with Ecology according to that regulation. The Permittee shall pay the appropriate fees required by WAC 173-455-100(4) prior to commencing construction. [WAC 173-400-114]

20. Nonroad Engines. Prior to installation or operation of a nonroad engine, as defined in WAC 173-400-030(59), the Permittee shall meet the requirements of WAC 173-400-035. If the nonroad engine(s) has a cumulative maximum rated brake horsepower greater than 500, a notification of intent to operate must be submitted to Ecology. If the nonroad engine(s) has a cumulative maximum rated break horsepower greater than 2,000, the Permittee must not operate the engine(s) unless Ecology issues written approval to operate. [WAC 173-400-035] Subject to Ecology's approval, the Permittee can submit notifications at the beginning of the calendar year to accommodate future potential emergency situations that could require the use of nonroad engine(s) with a cumulative maximum rated break horsepower greater than 2,000 in that calendar year.

Commented [RA6]: WestRock suggest to leave the text in this general condition unchanged from the language in the current Title V permit as it is more explicit about what is allowed and what requirements related to used oil burning do not apply to the facility

Commented [RA7]: Suggest to add this language to acccomodate for this special case

MONITORING, RECORDKEEPING & REPORTING

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

21. 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]

22. Representative Conditions. The Permittee must conduct stack tests during representative operating conditions unless required operating conditions during testing is otherwise specified. [40 CFR 60.8(c), 40 CFR 63.7(e), WAC 173-401-630(1), 40 CFR 70.6(c)(1)]

23. Unavoidable Excess Emissions. This portion of the condition is applicable until WAC 173-400-109 becomes effective. This condition applies, where applicable, to excess emissions that are claimed to be unavoidable pursuant to WAC 173-400-107. 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 not subject to penalty. [WAC 173-400-107]

    This portion of the condition is applicable upon the effective date of WAC 173-400-109. This condition applies, where applicable, to excess emissions that are claimed to be unavoidable pursuant to 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]

24. 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 that 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.

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

26. Continuous Emission Monitoring System Operating Requirements. Continuous emission monitoring systems (CEMS) required under an order, PSD permit, or regulation issued by a permitting authority and not subject to CEMS performance specifications and data recovery requirements imposed by 40 CFR Parts 60, 61, 62, 63, or 75 must meet the following CEMS performance specifications:

a. The owner or operator shall recover valid hourly monitoring data for at least 95 percent of the hours that the equipment (required to be monitored) is operated during each calendar month except for periods of monitoring system downtime, provided that the owner or operator demonstrated that the downtime was not a result of inadequate design, operation, or maintenance, or any other reasonable preventable condition, and any necessary repairs to the monitoring system are conducted in a timely manner.

b. The owner or operator shall install a continuous emission monitoring system that meets the performance specification in 40 CFR Part 60, Appendix B in effect at the time of its installation, and shall operate this monitoring system in accordance with the quality assurance procedures in Appendix F of 40 CFR Part 60 in effect on May 1, 2012, and the U.S. Environmental Protection Agency's "Recommended Quality Assurance Procedures for Opacity Continuous Monitoring Systems" (EPA) 340/ 1-86-010.

c. Monitoring data commencing on the clock hour and containing at least forty-five minutes of monitoring data must be reduced to one hour averages. Monitoring data for opacity is to be reduced to six minute block averages unless otherwise specified in the order of approval or permit. All monitoring data will be included in these averages except for data collected during calibration drift tests and cylinder gas audits, and for data collected subsequent to a failed quality assurance test or audit. After a failed quality assurance test or audit, no valid data is collected until the monitoring system passes a quality assurance test or audit.

d. Except for system breakdowns, repairs, calibration checks, and zero and span adjustments required under subsection (a) of this section, all continuous monitoring systems shall be in continuous operation.

    i. Continuous monitoring systems for measuring opacity shall complete a minimum of one cycle of sampling and analyzing for each successive ten second period and one cycle of data recording for each successive six minute period.

    ii. Continuous monitoring systems for measuring emissions other than opacity shall complete a minimum of one cycle of sampling, analyzing, and recording for each successive fifteen minute period.

e. The owner or operator shall retain all monitoring data averages for at least five years, including copies of all reports submitted to the permitting authority and records of all repairs, adjustments, and maintenance performed on the monitoring system.

f. The owner or operator shall submit a monthly report (or other frequency as directed by terms of an order, air operating permit or regulation) to the permitting authority within thirty days after the end of the month (or other specified reporting period) in which the data were recorded. The report required by this section may be combined with any excess emission report required by WAC 173-400-107 or -108, whichever is in effect at the time of the excess emissions. This report shall include:

i. The number of hours that the monitored emission unit operated each month and the number of valid hours of monitoring data that the monitoring system recovered each month;

ii. The date, time period, and cause of each failure to meet the data recovery requirements of (a) of this subsection and any actions taken to ensure adequate collection of such data;

iii. The date, time period, and cause of each failure to recover valid hourly monitoring data for at least 90 percent of the hours that the equipment (required to be monitored) was operated each day [Note: A CEM must provide valid data for all but two hours per day (ninety percent standard)];

iv. The results of all cylinder gas audits conducted during the month; and

v. A certification of truth, accuracy, and completeness signed by an authorized representative of the owner or operator.

[WAC 173-400-105(7)]

27. NSPS CMS Data Recovery. Except for system breakdowns, repairs, calibration checks, and zero and span adjustments required under 40 CFR 60.13(d), all continuous monitoring systems shall be in continuous operation and shall meet minimum frequency of operation requirements as follows:
    a. All continuous monitoring systems referenced by 40 CFR 60.13(c) for measuring opacity of emissions shall complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.
    b. All continuous monitoring systems referenced by paragraph 40 CFR 60.13(c) of this section for measuring emissions, except opacity, shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.

~~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 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. [40 CFR 70.6(c)(1)]

Commented [RA8]: It seems better to remove this condition from the general condtions as all the applicable sections to NSPS sources in regards to CMS requirements are already referenced in the specific permit conditions for those sources. This condition is only citing some of the applicable text in the NSPS general conditions.

28. MACT CMS Data Recovery. Except for system breakdowns, out-of-control periods, repairs, maintenance periods, calibration checks, and zero (low-level) and high calibration drift adjustments, all CMS, including COMS and CEMS shall be in continuous operation and shall meet minimum frequency of operation requirements as follows:
    a. All COMS shall complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.
    b. All CEMS for measuring emissions other than opacity shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.

    [40 CFR 63.8(c)(4)]

    Records of daily calibration, zero and span checks shall be kept for a period of five Records of daily calibration, zero and span checks shall be kept for a period of five Records of daily calibration, zero and span checks shall be kept for a period of five Records of daily calibration, zero and span checks shall be kept for a period of five Records of daily calibration, zero and span checks shall be kept for a period of five Records of daily calibration, zero and span checks shall be kept for a period of five years and made available upon request to Ecology. [40 CFR 70.6(c)(1)]

Commented [RA9]: It seems better to remove this condition from the general condtions as all the applicable sections to NESHAP sources in regards to CMS requirements are already referenced in the specific permit conditions for those sources. This condition is only citing some of the applicable text in the NESHAP general conditions.

Recordkeeping Requirements

29. 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 was performed;
    c. The company or entity that performed the analysis;
    d. The analytical techniques or methods used;
    e. The results of such analysis;
    f. Inspector sign name;
    g. The operating conditions existing at the time of sampling or measurement. [WAC 173-401-615(2)(a)]
30. 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)]

31. 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 173-401-724(5)]

32. Records Retention. The Permittee shall retain records of all required monitoring data and support information for a period of five (5) years from the date of monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. [WAC 173-401-615(2)(c)]

33. 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]

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

35. 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)]

36. Monthly Reporting. Monthly 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]. All reports must clearly identify all instances of deviations from permit requirements. [WAC 173-401-615(3)(a)]

37. Notification of Planned Source Test. The Permittee must notify Ecology of all source tests at least 30 days prior to the planned date of the test, unless otherwise specified in applicable regulations or approved by Ecology. Notification must include the unit to be tested, parameter(s) to be tested, date(s) of testing, and test methods to be used during the testing, at a minimum. The Permittee must provide a copy of the source test plan for review upon Ecology request. [WAC 173-400-105(4), WAC 173-401-630(1), 40 CFR 70.6(c)(1)]

38. Source Testing Reports. Source test reports must be submitted to Ecology within 60 days of completion of each source test. [WAC 173-405-072]

    Source test reports must be submitted to Ecology electronically via EPA's Compliance and Emissions Data Reporting Interface (CEDRI). EPA's Electronic Reporting Tool (ERT) may be used for reporting source testing results in CEDRI. Alternate submittal format may be used upon Ecology approval.

39. 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)]

40. Emission Inventory. Submit an inventory of emissions from the source each year no later than April 15th after the end of the calendar year. If April 15th falls on a weekend, then the deadline to file shall be the next business day.; Mmaintain

Commented [RA10]: This language is part of WAC 173-400-105(1) to accommodate for weekend situations and should be included in this requirement

records of information necessary to substantiate any reported emissions. [WAC 173-400-105(1)]

41. CEMS and COMS Data Assessment Report. For CEMS and COMS subject to 40 CFR Part 60, submit a Data Assessment Report (DAR) quarterly (postmarked by April 15th, July 15th, October 15th, and January 15th) with the Monthly Air Monitoring Report. Include data for the previous three calendar months. The report must contain:
    a. Identification and location of monitors in the CEMS or COMS.
    b. Manufacturer and model number of each monitor in the CEMS or COMS.
    c. Assessment of CEMS data accuracy and date of assessment as determined by the RATA, RAA, or CGA; the RA for the RATA; the A for the RAA or CGA; the RM results, the cylinder gas certified values; the CEMs responses, and calculations. If results show the CEMS to be out-of-control, report both the audit results showing the CEMS to be out-of-control and the results of the audit following corrective action.
    d. Assessment of COMS data accuracy as determined by the quarterly performance audit or annual zero alignment, COMS responses, and calculations. If results show the COMS to be out-of-control, report both the audit results showing the COMS to be out-of-control and the results of the audit following corrective action.
    e. A summary of all corrective actions taken when CEMS or COMS was determined to be out-of-control. [40 CFR Part 60 Appendix F].
42. Permit Deviations and Excess Emissions. The Permittee shall promptly submit a report of any deviations from permit conditions. [WAC 173-401-615(3)(b)]
    a. For purposes of this permit, submitting a report "promptly" means the following: (a) 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; (b) 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. [WAC 173-401-615(3)]. The Permittee may include in its reports demonstrations that excess emissions were unavoidable, consistent with the requirements of WAC 173-400-107 or -109, whichever is in effect at the time of the excess emissions.
43. Certification of truth, accuracy, and completeness. Any application form, report, or compliance certification required to be submitted by this permit or by Chapter 173-401 WAC shall contain certification by a responsible official of truth, accuracy, and completeness. This certification 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]

44. Report Address. All reports and renewal applications required by this permit shall be submitted to:

    Department of Ecology
    Industrial Section
    PO Box 47600
    Olympia, WA 98504-7600

45. Compliance Certification. The Permittee shall submit a report to the Department of Ecology and to EPA Region 10 by February 15th, certifying compliance with the terms and conditions contained in this permit for the year the certification covers. The certification shall describe the following:

    a. The permit term or condition that is the basis of the certification;
    b. the compliance status;
    c. whether compliance was continuous or intermittent; and
    d. the methods used for determining compliance.

    [WAC 173-401-630(5)]

    Where a permit does not require testing, monitoring, recordkeeping, and reporting for insignificant emission units or activities, the Permittee may certify continuous compliance if there were no observed, documented, or known instances of noncompliance during the reporting period. [WAC 173-401-530(2)(d)]

STANDARD TERMS & CONDITIONS

46. Duty to Comply. The Permittee must comply with all conditions of this 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)]

47. 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)]

48. 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)]

49. Reopening for Cause. This permit shall be reopened and revised under any of the following circumstances:

    a. Additional applicable requirements become applicable to a major Chapter 401 source with a remaining permit term of three or more years. Such a reopening shall be completed not 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 to an affected source under the acid rain program. Upon approval by the administrator, excess emissions offset plans shall be deemed to be incorporated into the permit;

    c. The permitting authority or the administrator 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. The administrator or the permitting authority 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]

50. Property Rights. This permit does not convey any property rights of any sort, or any exclusive privilege. [WAC 173-401-620(2)(d)]

51. 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 EPA 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)]

52. Permit Fees. The Permittee shall pay fees as a condition of this permit in accordance with the permitting authority'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)]

53. 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)]

54. Severability. 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)]

55. Permit Appeals. This permit or any conditions in it may be appealed only by filing an appeal with the Pollution Control Hearings Board and serving it on the permitting authority within 30 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)]

56. Permit Continuation. This permit is issued for a 5-year term; however, 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. An application shield granted pursuant to WAC 173-401-705(2) shall remain in effect until the renewal permit has been issued or denied if a timely and complete application has been submitted. [WAC 173-401-620(2)(j)]

57. 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) and (2)]

58. Inspection and Entry. Upon consent of the Permittee or upon presentation of credentials and other documents as may be required by law, the Department of Ecology or an authorized representative shall be allowed to:

a. Enter the source;

b. Have access to and copy at reasonable times any records that must be kept under this permit;

c. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this 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 other applicable requirements. [WAC 173-400-105(3); WAC 173-401-630(2)]

59. 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]

60. 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(8) and 40 CFR 70.11(a)]

MISCELLANEOUS REQUIREMENTS

61. Ecology may approve alternate compliance test methods that are of equivalent stringency for any air pollutant. [PSD 01-03, Amendment 3 and Order 3462-AQ-07]

62. Compliance monitoring frequency may be adjusted by Ecology depending on compliance history. [Order 3462-AQ-07]

63. Sampling ports and platforms must be provided for each affected source after the final pollution control device. The ports must meet the requirements of Reference Method 1 of 40 CFR, Part 60, Appendix A. Other arrangements may be acceptable if approved by Ecology prior to installation. Adequate permanent and safe access to the test ports must be provided. [Order 3462-AQ-07]

64. Ecology may require the continuous emission monitoring quality assurance plans submitted to Ecology on July 26, 1991 and December 22, 1995 to be periodically updated. The updates shall satisfy 40 CFR Part 60, Appendix F. [PSD 01-03, Amendment 3 and Order 3462-AQ07]

65. Data required to demonstrate compliance with emission limits in Order 3462-AQ07 Modification 1 Appendix A shall be reported in written form to the Washington State Department of Ecology Industrial Section or its authorized representative at least monthly (unless a different testing and reporting schedule has been approved by Ecology). The report shall be submitted in conformance with the time requirements included in 173-405 WAC, but in no case later than thirty days after the end of the calendar month being reported. The report shall be in a format approved by Ecology. Report contents shall include but not be limited to the following:

Commented [RA11]: It needs to be specified that this Appendix A reference is specific to Order 3462-AQ07 Modification 1 and not Appendix A of this Title V permit. The condition comes from Order 3462-AQ07 Modification 1

a. The average daily production of machine dried unbleached pulp.
b. Process or control equipment operating parameters.
c. The information specified for individual limits, in units of the limit, for each pollutant monitored.
d. The duration and nature of any monitor downtime.
e. Results of any monitor audits or accuracy checks.
f. Results of any stack test using approved Ecology or RPA test methods with acceptable QA/QC.

For each occurrence of monitored emissions or process parameters in excess of the standard the report shall include the following:

g. The time of the occurrence.
h. Magnitude of the emission or process parameter excess.
i. The duration of the excess.
j. The probable cause.
k. Any corrective actions taken or planned.
l. Any other agency contacted.
m. Signature of responsible person.

[PSD 01-03, Amendment 3 and Order 3462-AQ07]

66. ~~Operating and maintenance manuals for all equipment that has the potential to~~ Operating and maintenance manuals for all equipment that has the potential to

~~67.~~66. Operating and maintenance manuals for all equipment that has the potential to affect emissions to the atmosphere shall be developed and followed. Copies of the manuals shall be available to Ecology. Emissions that result from a failure to follow the requirements of the manuals may be considered proof that the equipment was not properly operated and maintained. [PSD 01-03, Amendment 3 and Order 3462-AQ07]

68.67. Any activity that is undertaken by the Permittee or others, in a manner which is inconsistent with the application and this determination, shall be subject to Ecology enforcement under applicable regulations. Nothing in this determination shall be construed so as to relieve the Permittee of its obligations under any state, local, or federal laws or regulations. [PSD 01-03, Amendment 3]

PERMIT SHIELD

Pursuant to WAC 173-401-640(1), compliance with the terms and conditions of this permit is deemed to constitute compliance with applicable requirements as contained in this permit on which the term or condition is based, as of the date the permit is issued. 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), the Department of Ecology has determined that the requirements listed below do not apply to the facility, as of the date the permit is issued, for the reasons specified.

CITE	BRIEF DESCRIPTION	REASON
WAC 173-400-040(1)	No visible emissions over 20% opacity for 3 minutes in any one hour, with 4 exceptions.	Opacity standards in the Kraft Pulping Mill regulations (WAC 173-405) take precedence over the general emission standards of WAC 173-400. WAC 173-405-040.
WAC 173-400-040(3)(b)	Emissions unit identified as a significant contributor to nonattainment must use reasonable and available control methods to control emissions of contaminants for which area is designated nonattainment.	No emissions units at the facility have been identified as a significant contributor to nonattainment.
WAC 173-400-040(6)	General limit of 1,000 ppmdv SO_2.	SO_2 standards for emission units at kraft pulping mills in the Kraft Pulping Mill regulations (WAC 173-405) take precedence over the general emission standards of WAC 173-400. WAC 173-405-040.
WAC 173-400-040(8)(b)	Sources of fugitive dust identified as significant contributors to a PM-10 nonattainment area must use RACT to control fugitive dust emissions.	Facility not located near a PM-10 nonattainment area.

CITE	BRIEF DESCRIPTION	REASON
WAC 173-400-050(1)	No particulate emissions in excess of 0.1 grain/dscf from combustion units, except no particulate emissions in excess of 0.2 grain/dscf from units combusting wood derived fuels for production of steam.	Particulate standards for combustion sources in the Kraft Pulping Mill regulations (WAC 173-405) take precedence over the general emission standards of WAC 173-400. WAC 173-405-040.
WAC 173-400-060	No particulate emissions in excess of 0.1 grain/dscf in general process units.	Inapplicable for smelt dissolving tanks #19. & #22. Particulate standards in the Kraft Pulping Mill regulations (WAC 173-405) take precedence over the general emission standards of WAC 173-400. WAC 173-405-040.
WAC 173-400-070(2)(a)	Hog fuel boilers must meet requirements of WAC 173-400-040 & -050(1), with exceptions.	Specific emission standards for combustion sources in the Kraft Pulping Mill regulations (WAC 173-405) take precedence over the general emission standards of WAC 173-400. WAC 173-405-040.
WAC 173-400-100	Registration required for listed sources, excluding sources subject to the operating permit program, after EPA grants interim or final approval to the state program.	Facility is subject to the operating permit program; EPA has granted interim approval for the state program.
WAC 173-400-105(5)(a)	Continuous opacity & SO_2 monitoring & recording required for fossil fuel-fired steam generators that are not subject to an NSPS, except where capacity is <250 million BTU/hr heat input or where there is an annual avg. capacity factor of ≥30%.	Inapplicable to power boiler #20 Power Boiler which is subject to NSPS requirement. WAC 173-400-105(5)(g)(i).

CITE	BRIEF DESCRIPTION	REASON
WAC 173-400-105(5)(d)	Continuous opacity monitoring & recording required for wood residue fuel-fired steam generators w/ capacity of ≥100 million BTU/hr heat input that are not subject to an NSPS.	Inapplicable to power boiler #20 Power Boiler which is subject to NSPS requirement. WAC 173-400-105(5)(g)(i).
WAC 173-400-105(6)	Submittal required for raw material or fuel change resulting in SO_2 increase ≥40 T/yr. Applies to sources that are not subject to operating permit program.	Facility is subject to the operating permit program.
WAC 173-400-151	Retrofit requirements for visibility protection. BART required for sources to which significant visibility impairment of a Class 1 area is reasonably attributable.	Facility has not been identified as a source impacting a Class I area.
WAC 173-405-040(7) *[STATE ONLY, NOT FEDERALLY ENFORCEABLE]*	Continuously employ best practicable operation and maintenance procedures for recovery furnaces or lime kilns with an alternative opacity limit.	Facility does not have any alternative opacity limits for recovery furnace or lime kiln.
WAC 173-405-077	Provisions of WAC 173-400-105(5) (Report of startup, shutdown, etc.) apply.	Old WAC 173-400-105(5) has been deleted from state regulations and the SIP.
WAC 173-407	Greenhouse gas mitigation requirements and emissions perofrmace standards for Power Plant	Inapplicable to mill

Commented [RA12]: Mistankenly identified in the SOB as applicable to the site

CITE	BRIEF DESCRIPTION	REASON
Chapter 173-410 WAC	Sulfite pulping mill regulations.	Inapplicable to mill with the exception of the NSSC facility.
WAC 173-410-040(1)(a)	SO_2 emission limits for incineration of spent sulfite liquor.	Spent sulfite liquor not incinerated in NSSC system.
WAC 173-410-040(1)(e)	SO_2 emission limits for sulfite recovery systems.	Chemical recovery not conducted in NSSC system.
WAC 173-410-040(2)(a)&(b)	Particulate emission limits for sulfite recovery systems.	Chemical recovery not conducted in NSSC system.
WAC 173-410-040(2)(c)(i)&(ii)	Particulate emission limits for units combusting wood for steam at sulfite mills.	Steam production not conducted in NSSC system.
WAC 173-410-040(5)	TRS emission limits for sulfite recovery systems.	Chemical recovery not conducted in NSSC system.
WAC 173-410-067	Provisions of WAC 173-400-105(5) (Report of startup, shutdown, etc.) apply.	Old WAC 173-400-105(5) has been deleted from state regulations and the SIP.
Chapter 173-433 WAC	Solid fuel burning device regulations. Applies to wood stoves and fireplaces.	Facility does not operate such devices.
Chapter 173-435 WAC	Air emergency episode plan including source emission reduction plan (SERP) requirements.	Inapplicable except for 040, 050(2), and 060(5).
Chapters 173-470, 474, 475, 480, 481 WAC	Ambient air quality standards.	WAC 173-401-200(4)(a)(xii) states that NAAQS are applicable requirements only as they would apply to temporary sources permitted pursuant to 173-401-635.

CITE	BRIEF DESCRIPTION	REASON
Chapter 173-490 WAC	Emission standards and controls for sources of VOCs.	Applies only to facility types specified in the regulation; pulp and paper mills are not specified.
40 CFR Part 60 Subpart Db	NSPS for steam generators constructed after June 19, 1984 with a heat input rating >100 mmBtu/hr.	Inapplicable to Power Boiler #20 (all limits except PM and opacity are inapplicable to PB20) and Recovery Furnaces #18 & #19 which were constructed prior to the applicability date. Since then, there was no occurrence of a physical change or change in method of operation which increased pollutants to which a standard applied. Per Order 8429, PB 20 has undergone a physical modification with respect to PM and opacity.
40 CFR Part 60 Subpart Dc	NSPS for steam generators constructed after June 9, 1989, with design heat input rating of >10 mmBtu/hr and <100 mmBtu/hr.	Facility has no units this size.
40 CFR 60.43(a)(2)	SO_2 emission limits for subpart D facilities that combust solid fossil fuel, alone or with wood residue fuel.	Facility does not combust solid fossil fuel.
40 CFR 60.44(a)(3)	NOx emission limits for to subpart D facilities that combust solid fossil fuel, alone or with wood residue fuel.	Facility does not combust solid fossil fuel.
40 CFR 60.44(a)(4)&(5)	NOx emission limits for to subpart D facilities that combust lignite, alone or with wood residue fuel.	Facility does not combust lignite.

CITE	BRIEF DESCRIPTION	REASON
40 CFR 60.284(b)(1)	Applies to units burning emissions from digester systems, brownstock washer systems, multiple-effect evaporator systems, or condensate stripper systems in an incinerator.	Facility does not burn in an incinerator.
40 CFR 60.284(b)(2)	Requirement for scrubber monitoring at NSPS lime kiln.	Inapplicable at Lime Kiln 5 because a scrubber is not used.
40 CFR 60 Subpart K	NSPS for petroleum storage vessels constructed or modified after 6/11/73 and prior to 5/19/78.	Products stored at the facility do not contain petroleum products as defined in Section 60.111a(b).
40 CFR 60 Subpart Ka	NSPS for petroleum storage vessels constructed or modified after 5/18/78 and prior to 7/23/84.	Products stored at the facility do not contain petroleum products as defined in Section 60.111a(b).
40 CFR 60 Subpart Kb	NSPS for petroleum storage vessels constructed or modified after 7/23/84.	Product vapor pressure below volatile organic liquid threshold.
40 CFR 60 Subpart IIII	NSPS for Stationary Compression Ignition Internal Combustion Engines, for units constructed after July 11, 2005	Inapplicable to turbine room diesel emergency generator onsite as the unit was constructed prior to July 11, 2005.

Appendix A – Monitoring and Calculation Specifications

APA.1: OPERATING LIMIT CALCULATIONS

Compliance with the operating limit for each emission unit shall be made by recording and reporting the quantities from number (3), below:

(1) Record the number of hours of operation of the emissions unit since the last report.

(2) Record the total production through the emissions unit since the last report.

(3) Average production rates:

(a) For Power Boilers, divide the quantity from (2) by the quantity from (1) to get the average hourly production.

(b) For Recovery Furnaces, Smelt Dissolving Tanks, and Lime Kilns, divide the quantity from (2) by the quantity from (1), and multiply by twenty-four to get the average (24-hr) daily production.

(4) Total primary production is the total paper and board saleable product from the paper machines. All trim and cull go back into pulp furnish to the paper machines.

(a) Record daily total primary production.

(b) Total for the days since end of the last reporting period.

(c) Add to annual total in last report.

(d) Subtract the amount of the corresponding period from the immediately previous year.

[PSD 01-03]

APA.2: MONITORING TERMINOLOGY AND GENERAL SOURCE TEST REQUIREMENTS

Test method abbreviations:

RM 5: Determination of Particulate Emissions from Stationary Sources
Reference Method 5 of 40 CFR, Part 60, Appendix A, or an alternative approved by Ecology, under the assumption that all of the particulate collected is PM10. [PSD 01-03].

RM 6C: Determination of Sulfur Dioxide Emissions from Stationary Sources

Reference Method 6C of 40 CFR, Part 60, Appendix A, or an alternative approved by Ecology. For SO_2 source tests conducted on a stack with a continuous TRS monitor, the test may be conducted using Longview Source Test Method 201, a modification of Method 6C which uses the TRS monitor in an SO_2 monitoring mode. Longview Source Test Method No. 311 which uses a certified portable SO_2 emission monitor may be used as an approved test procedure. [PSD 01-03]

RM 7: Determination of Nitrogen Oxide Emissions from Stationary Sources

Reference Method 7 of 40 CFR, Part 60, Appendix A, or an alternative approved by Ecology. Longview Source Test Method No. 311 which uses a certified portable SO_2 emission monitor may be used as an approved test procedure. [PSD 01-03]

RM 9: Visual Determination of the Opacity of Emissions from Stationary Sources

Reference Method 9 of 40 CFR, Part 60, Appendix A; or Ecology Method 9B as found in the 'Source Test Manual - Procedures for Compliance Testing', 1983, or an alternative approved by Ecology. [Order 3462-AQ07]

RM 10: Determination of Carbon Monoxide Emissions from Stationary Sources

Reference Method 10 of 40 CFR, Part 60, Appendix A, or an alternative approved by Ecology. Longview Source Test Method No. 311 which uses a certified portable SO_2 emission monitor may be used as an approved test procedure. [PSD 01-03]

RM 16: Semicontinuous Determination of Sulfur Emissions from Stationary Sources

Reference Method 16 of 40 CFR, Part 60, Appendix A, and measured as H_2S, or an alternative approved by Ecology. Longview Source Test Method 202, which captures gas in a Tedlar bag for analysis, may be used to test smelt dissolving tank TRS emissions. [PSD 01-03]

RM 25A: Determination of Total Gaseous Organic Concentration using Flame Ionization analyzer

Reference Method 25A of 40 CFR, Part 60, Appendix A, and measured as C, or an alternative approved by Ecology. [PSD 01-03]

PS 1: Performance Specification 1 of 40 CFR, Part 60, Appendix B, "Specification and Test Procedures for Opacity Continuous Emissions Monitoring Systems in Stationary Sources.". [Order 3462-AQ07]

PS 2: Performance Specification 2 of 40 CFR, Part 60, Appendix B, "Specification and Test Procedures for SO_2 and NO_X Continuous Emissions Monitoring Systems in Stationary Sources." [PSD 01-03]

PS 3: Performance Specification 3 of 40 CFR, Part 60, Appendix F and Appendix B, "Specification and Test Procedures for O_2 and CO_2 Continuous Emissions Monitoring Systems in Stationary Sources." [Order 3462-AQ07]

PS 4: Performance Specification 4 of 40 CFR, Part 60, Appendix B, "Specification and Test Procedures for Carbon Monoxide Continuous Emissions Monitoring Systems in Stationary Sources." [PSD 01-03]

PS 5: Performance Specification 5 of 40 CFR, Part 60, Appendix B, "Specification and Test Procedures for TRS Continuous Emissions Monitoring Systems in Stationary Sources." [PSD 01-03]

Test and reporting frequency abbreviations: [PSD 01-03]

A/M: means source test is to be performed annually. If any single source exceeds 75% of the limitation, source testing shall be performed monthly (see qualification, below) until 6 consecutive month's tests are below 75% of the limitation, at which time testing may return to an annual schedule. Monthly source testing shall commence within 60 days of the source test which exceeded 75% of the limitation.

M/Q: means source test is to be performed monthly (see qualification, below). Source testing may be reduced to quarterly (see qualification, below) if 6 consecutive month's tests are below 75% of the limitation. If any single source exceeds 75% of the limitation, source testing shall revert to monthly until 6 consecutive month's tests are below 75% of the limitation. Monthly source testing shall commence within 60 days of the source test which exceeded 75% of the limitation.

T/M: means source test is to be performed triennially. If any single source test exceeds 75% of the limitation, source testing shall be performed monthly (see qualification, below) until 6 consecutive month's tests are below 75% of the limitation, after which source testing may return to triennially. Monthly source testing shall commence within 60 days of the source test which exceeded 75% of the limitation.

Qualification:

"Monthly" test cycle: A source test must be performed in any month wherein the unit was operated more than 216 hours. A source test must be performed prior to the emissions unit having been operated a total of 720 hours since the end of the month of the last source test.

"Quarterly" test cycle: A source test must be performed in any quarter wherein the unit was operated more than 648 hours. A source test must be performed prior to the emissions unit having been operated a total of 2,160 hours since the end of the quarter of the last source test.

"Annual" test cycle: A source test must be performed in any calendar year wherein the unit was operated more than 2,628 hours. A source test must be performed prior to the emissions unit having been operated a total of 8,640 hours since the end of the calendar year of the last source test.

A: relative to reporting frequency, means annually
C: means testing is continuous by virtue of the CEM.
M: relative to reporting frequency, means monthly.
Q: relative to reporting frequency, means quarterly.
T: relative to reporting frequency, means triennially.

General source test requirements - compliance determination using source testing shall be as follows: [PSD 01-03]

During all emissions testing (source testing) runs, the concurrent process rate of the emission unit shall be recorded in units of measurement characteristic of the emission unit, and submitted with the source test data.

An emissions unit with one stack: The arithmetic mean of three or more runs of at least one hour each in duration.

NOTE: Compliance may be demonstrated for NO_x and SO_2 emission concentration limit on Lime Kiln 5 and for the CO emission concentration limit on Power Boiler 20 by applying this three-run protocol on one of their two respective stacks.

An emissions unit with two stacks: The arithmetic mean of runs made on both stacks. Two or more runs of at least one hour each in duration must be made on each stack.

Any test runs Longview believes to be invalid due to procedural error may be dropped from the arithmetic mean calculation. Results of such "invalid" runs are to be included in the monthly report with an explanation of the "invalid" determination.

ApA.3: RF, SDT, & LK Mass Rate Limit Calculations

Compliance with the mass rate limit for the recovery furnaces, smelt dissolving tanks, and lime kilns shall be monitored as follows: [PSD 01-03]

(1) **Emission Factor**: Pounds pollutant per ton process quantity for each emissions unit.

(a) **Using source test data**: Use source test data for emissions units and pollutants not having CEMS. From the most recent source test results, convert the emission concentration, corresponding stack gas flow rate and emission unit process rate for each run to the equivalent pounds of pollutant emission per process unit of measurement, such as lbs. SO_2/lb. black liquor solids.

Example 1: {[*source test* ppmdv SO_2] × (10^{-6}) × [*source test* dscfm] × (60 min./hr.) × (64 lb. SO_2)}÷ [(385 scf SO_2) × (*source test* tons BLS /hr.)] = lbs. SO_2/TBLS

The same equation may be used for CO, NO_X, H_2S/TRS, and VOCs by making the following respective substitutions for the term "64 lb. SO_2:"

28 lb. CO, 46 lb. NO_X, 34 lb. H_2S/TRS, and 12 lb. VOCs as carbon.

Example 2: {[*source test* gr/dscf PM_{10}] × (1b./7,000 gr) × [*source test* dscfm] × (60 min./hr.) ÷ (*source test* tons BLS /hr.)] = lbs. PM_{10}/ TBLS

Example 3, Dry kilns: {[*source test* ppmdv SO_2] × (10^{-6}) × [*source test* dscfm] × (60 min./hr.) × (64 lb. SO_2)}÷ [(385 scf SO_2) × (*source test* tons CaO /hr.)] = lbs. SO_2/ ton CaO

The equation may be used for CO, NO_X, and H_2S/TRS by making the following respective substitutions for the term "64 lb. SO_2:"

28 lb. CO, 46 lb. NO_x, and 34 lb. H_2S/TRS

Example 4, Dry kilns: {[*source test* gr/dscf PM_{10}] × (1b./7,000 gr) × [*source test* dscfm] × (60 min./hr.) ÷ (*source test* tons CaO/hr.)] = lbs. PM_{10}/ ton CaO

Calculate the arithmetic mean of the source test runs for each pollutant and each emission unit as described in ApA.2 of this AOP.

(b) **Using CEMS data**: Use CEMS data for applicable emissions units and pollutants.

(i) Determine the average daily process throughput for each emissions unit: Recovery furnaces – tons black liquor solids per hour (TBLS/hr.). Lime kilns – tons calcium oxide per hour (CaO/hr.).

(ii) From each average daily process throughput, calculate the related stack exhaust flow. Use the equations relating process throughput to stack exhaust flow currently approved by Ecology (see ApA.6 of this AOP).

(iii) Determine the daily average emission concentration for each emissions unit and pollutant having a related CEMS.

(iv) Calculate the emissions factors for the reporting period. The examples in (1)(a), above may be used by substituting the corresponding quantities from (1)(b)(i), (ii), and (iii) for the "*source test*" quantities.

(2) **Tons per year**:

(a) Amount processed through the emissions unit since the closing date of the last report.
(i) For recovery furnaces and smelt dissolving tanks: Determine the total tons BLS processed through the emission unit since the closing date of the last report.
(ii) For the lime kilns: Determine the total tons CaO processed through the emission unit since the closing date of the last report.

(b) For each pollutant and emissions unit, multiply the emission factor from (1) by the quantity processed [(2)(a)(i) for the recovery furnaces and smelt dissolving tanks or (2)(a)(ii) for the lime kilns], and divide by 2,000 lbs./ton. The result should be the tons of each pollutant that have been emitted from each emissions unit since the closing date of the last report. Add up the analogous quantities calculated for sufficient contiguous prior periods to total one year's worth of pollutant emissions for each emissions unit. Each such quantity must be less than the corresponding limit (TPY) in this AOP to demonstrate compliance.

APA.4: PB MASS RATE LIMIT CALCULATIONS

Compliance with mass rate limits for the power boilers: [PSD 01-03]

(1) **Emission Factor**, Pounds pollutant per ton process quantity for each emissions unit: Convert each emission concentration, corresponding stack gas flow rate, and power boiler fuel application rate to the equivalent pounds of pollutant emission per million Btu (lb./mmBtu). In the examples below,

(a) If continuous emissions monitoring (CEM) has been installed: Apply the examples in this appendix (ApA.4), below. Pollutant "*concentration*" is the average daily concentration. "*Exhaust gas flow*" may be calculated from the appropriate "F-factor(s)" from 40 CFR Part 60, Appendix A, Method 19 if not otherwise known. "*Fuel applied*" is to be determined from the average daily fuel composition. Exclude boiler downtime from all calculations.

(b) If CEM data are not available, the pollutant *concentration*, *exhaust gas flow*, and *fuel applied* are from the most recent source test run results. Where source test data are used, apply the examples in this table note, below, to each of the source test runs for each pollutant and each power boiler. Calculate the arithmetic mean as described in ApA.2 of this AOP.

(c) For Power Boiler 16, calculate SO_2 emissions (lbs. SO_2/MMBtu) from the purchase records and vendor's reports on fuel sulfur content for the fuel applied during the reporting period.

Example 1: {[SO_2 *concentration* ppmdv] × (10^{-6}) × [*exhaust gas flow* dscfm] × (60 min./hr.) × (64 lb. SO_2)} ÷ [(385 scf SO_2) × (*fuel applied* mmBtu/hr.)] = lbs. SO_2/MMBtu

The equation may be used for CO and NO_X by making the following respective substitutions for the term "64 lb. SO_2:"

28 lb. CO, and 46 lb. NO_X.

Example 2: {[PM_{10} *concentration* gr/dscf] × (1b./7,000 gr) × [*exhaust gas flow* dscfm] × (60 min./hr.) ÷ (*fuel applied* mmBtu/hr.)]
= lbs. PM_{10}/ mmBtu

(2) **Tons per year**:

(a) Determine the total fuel applied to each power boiler since the closing date of the last report in mmBtu.

(b) For each pollutant and each power boiler, multiply the respective quantities from (1) and (2)(a), and divide by 2,000 lbs./ton. The result should be the tons of each pollutant emitted from each power boiler since the closing date of the last report. Add this quantity to the analogous quantities calculated for sufficient contiguous prior periods to total one year's worth of emissions for each power boiler. This quantity must be less than the corresponding limit (TPY) in this AOP to demonstrate compliance.

ApA.5: Plant Wide Limit Calculations

Compliance determination for plant wide limits: [PSD 01-03]

(1) Report daily Kraft and total machine production in tons. Add sufficient contiguous periods including the current reporting period to give a twelve month total.

(2) For PM & PM_{10}, SO_2, CO, and NO_X: For each pollutant, add the emissions calculated for the period since the close of the last report from the recovery furnaces (19 and 22), the smelt dissolving tanks (19 and 22), the lime kilns (3 through 5), and the power boilers (20) to the analogous quantities calculated for sufficient contiguous prior periods to total one year's worth of emissions concluding with the close of the current reporting period.

(3) For VOCs:

(a) Determine the total tons of black liquor solids processed through each recovery furnace and all smelt dissolving tanks for the one year period ending with the close of the reporting period.

(b) Determine the total tons of CaO produced by each lime kiln for the one year period ending with the close of the reporting period.

(c) Determine the average fuel application rate for each power boiler (mmBtu/hr.) for the one year period ending with the close of the reporting period. Add them together.

(d) Kraft digesters, brownstock washer, and knotter, Primary black liquor oxidizer, Paper machines, and Cooling tower:

(i) Abbreviations:
B = Batch Kraft digester, MDTP
CT = Cooling tower, MDTP
K1 = #1 Kamyr digester, MDTP
K2 = #2 Kamyr digester, MDTP
M&D = Continuous Kraft digester, MDTP
OxMDTP = Primary black liquor oxidizer, MDTP
PPMP = Primary paper machines, MDTP

(ii) Determine the sum of the tons of black liquor solids processed through recovery furnaces 18 and 19 tanks for the one year period ending with the close of the reporting period.

(iii) Determine the sum of the tons of black liquor solids processed through recovery furnaces 18, 19, and 22 tanks for the one year period ending with the close of the reporting period.

(iv) Divide the number from (ii) by the number from (iii).

(v) Determine the production in MDTP from each of K1, K2, B, and M&D tanks for the one year period ending with the close of the reporting period.

(vi) Sum K1 + K2 + B + M&D from (v).

(vii) Multiply the number from (iv) by the number from (vi) to give OxMDTP for the one year period ending with the close of the reporting period.

(viii) Multiply the sum of K1 and K2 from (v) by 0.992 to give the pounds of VOCs for the one year period ending with the close of the reporting period from Kamyr digesters #1 and #2.

(ix) Multiply the sum of B and M&D from (v) by 0.96 and add the product of B times 0.136 to give the pounds of VOCs for the one year period ending with the close of the reporting period from the Batch and Continuous Kraft digesters.

(x) Multiply OxMDTP from (vii) by 0.355 to give the pounds of VOCs for the one year period ending with the close of the reporting period from the Primary black liquor oxidizer.
(xi) Multiply the total primary production from (1) by 1.075 to give the pounds of VOCs for the one year period ending with the close of the reporting period from the Primary paper machines and Cooling tower.
(xii) Sum the quantities from (viii), (ix), (x) and (xi) to give the plant wide pounds of VOCs for the one year period ending with the close of the reporting period.

(e) Multiply the quantity from (3)(a) by 0.21 to give the pounds of VOCs during the past twelve months from recovery furnaces and smelt dissolving tanks.
(f) Multiply the quantity from (3)(b) by 0.026 to give the pounds of VOCs during the past twelve months from the lime kilns and related lime recovery equipment.
(g) Multiply the quantity from (3)(c) by 117.4 to give VOCs from the power boilers.
(h) Add the quantities from (3)(d) through (3)(g), and divide the result by 2,000 to give tons per year (TPY) VOCs, plant wide.

(4) For daily maximum steam production: Divide the daily total steam production by 24, and report the result in units of the limit.

APA.6: EXHAUST STACK FLOW CORRELATIONS

[PSD 01-03]

Exhaust stack flow correlations: At least annually, the Permittee shall update equations for calculation of gas flow from each recovery furnace and lime kiln exhaust stack. [PSD 01-03: Condition 2]

The equations shall correlate exhaust stack gas flows to process rate from the emissions units. The correlation shall be based on linear regression analysis.

By January 31st of each year, the Permittee shall submit the updated equations, the data on which they are based, and the regression analyses to Ecology for approval. The Permittee may submit proposed updates more frequently at its option. An update for an emissions unit shall have occurred only when new data are submitted.

For emission units operated 6,000 hours or more since the last update, each update shall include at least 12 hours of new data, and drop an equal amount of the oldest data. For emission units operated less than 6,000 hours since the last update, the minimum hours of new data (and dropped oldest data) shall be

(Hours of operation since last update) × 12 ÷ 6,545, rounded to the nearest whole number.

The updated equations shall take effect upon approval from Ecology.

Specific calculations to determine exhaust stack gas flow correlations shall be as follows: [PSD 01-03: Appendix 2]

1. **Recovery Furnaces**: Where exhaust stack flow is not directly measured, for compliance purposed it may be calculated from the following general form.

Exhaust stack flow (dscfm @ 8% O_2) = a + b × (BLS production rate, lb./hr.)

At the time of issuance of PSD 01-03 and until updated in accordance with procedures in this appendix (ApA.6), the coefficients in the above equation shall be:

a = 19,631
b = 1.3758

2. **Lime Kilns**: Exhaust stack flow from lime kilns is the sum of combustion exhaust and carbon dioxide generated by the calcine reaction. Where exhaust stack flow is not directly measured, for compliance purposed it may be calculated from the following general form.

Combustion exhaust flow (dscfm @ 10% O_2) = 1.917♣ × (F-factor♦, dscf/mmBtu)
× (lime kiln economy, Btu/ton CaO)
× CaO production rate, tons/hr.)
÷ (60 min./hr.)

At the time of issuance of PSD 01-03 and until updated in accordance with procedures in this appendix (ApA.6), the coefficients in the above equation shall be:

F-factor = 8,740 dscf/mmBtu
Lime kiln economy = 10 × 10^6 Btu/ton CaO for lime kilns #3 and #4
6.5 × 10^6 Btu/ton CaO for lime kiln #5

Calcine exhaust flow (dscfm @ 10% O_2) = 1.917♣ × (13,750♥ dscf @ 10% O_2 per ton CaO)
× CaO production rate, tons/hr.)
÷ (60 min./hr.)

Add Combustion exhaust flow and **Calcine exhaust flow** for **total Lime Kiln exhaust flow**.

♣ This coefficient adjusts to 10% O_2.
♦ From 40 CFR Part 60, Appendix A, Method 19.
♥ Assuming ideal gas behavior, and based on the standard calcine reaction product

Appendix B – Emission Control Compliance Demonstration Plan

The Permittee maintains an "Emission Control Compliance Demonstration Plan" specifying emission control parameter levels to demonstrate compliance with 40 CFR Part 63 - Subpart MM, 40 CFR Part 64 - CAM, and opacity requirements for several sources. Changes to the plan can be made by submitting revisions along with justification for the revisions as part of a monthly report. The revision submission must include an updated summary table including all current emission control parameter levels in effect after the revision. A revision is accepted and in effect unless Ecology notifies the Permittee in writing that the revision is rejected. If a revision is rejected, the emission control parameter level in effect prior to the revision request remains in effect.

The summary table including all current emission control parameter levels in effect at the time of the AOP renewal is included as follows:

Permittee Emission Control Compliance Demonstration Plan - Parameter Summary Table

PM, PM10, and Opacity Parameters (Order 3462-AQ07):

Unit	Fuel [1]	Loading Rate (TCaO/D)	Pressure Drop (inches H_2O)	Scrubber Recirculation Flow (gpm)	Make-up Water Flow (gpm)
Lime Kiln 3	Gas	≤240	≥15	≥250	≥60
Lime Kiln 3	Oil	≤130	≥26	≥250	≥200

Unit	Fuel	Loading Rate (TCaO/D)	Pressure Drop (inches H_2O)	Hi Pressure Flow (gpm)	Hi Pressure H_2O Pressure (psig)
Lime Kiln 4	Gas	≤250	≥10	≥375	≥500
Lime Kiln 4	Oil	*~~≤170~~	≥20	≥375	≥500

*[TCaO/D + % oil substitution (heat input basis)] ≤215, and oil substitution ≤50% (heat input basis).

Unit	Pressure Drop (inches H_2O)	Venturi Scrubber Flow (gpm)	Packed Tower Flow (gpm)
Smelt Dissolver Tank 19 [2]	≥6	≥80	≥60
Smelt Dissolver Tank 22	≥6	≥80	≥60

Unit	Pressure Drop (inches H_2O)	Scrubber Flow (gpm)	Normal Condition Wet ESP Total Power (kW)	Field Down Wet ESP Total Power (kW)
Power Boiler 20 N [3]	>0	≥100	≥50	≥70 [4]
Power Boiler 20 S [3]	>0	≥100	≥50	≥70 [4]

1. Fuel types for this appendix: *Gas* means natural gas. *Oil* means oil including reprocessed fuel oil (RFO).

2. Parameters apply to both stacks.

3. Scrubber flow rate applies to each scrubber.

4. Unit may only operate by firing natural gas when both N and both S wet ESP rectifier units are out of service. When burning wood and/or oil, if one field goes down in the PB20 N stack and cannot be restarted within 30 minutes, then boiler rate must be cut to a maximum of 50% nominal capacity and all flow routed through PB20 S stack until the field is repaired or wood and/or oil burning is discontinued. When burning wood and/or oil, if one field goes down in the PB20 S stack and cannot be restarted in 30 minutes, then boiler rate must be cut to a maximum of 50% nominal capacity and all flow routed through PB20 N stack until the field is repaired or wood and/or oil burning is discontinued. Nominal capacity is 600,000 pounds per hour of 800 psig steam, 50% steam from wood firing and 50% steam from fossil fuel firing. Minimum power requirements do not apply when firing natural gas only.

Appendix C – Applicable Permits and Orders

The specific applicable elements of these documents have been incorporated into the permit itself. The documents in entirety are kept on file and available for public review by contacting Ecology's Industrial Section.

Order No. 2737-AQ05

PSD 01-03 (No. 01-03, Third Amendment Final Approval of Prevention of Significant Deterioration Application)

NOC Order No. 3462-AQ07, Modification 1

Order No. 3463-AQ07

NOC Order No. 3466-AQ07

NOC Order 8429, Modification 1

NOC Order 9213

Order No. 13302, Modification 1