

**WASHINGTON DEPARTMENT OF ECOLOGY
MAIL STOP 47600
OLYMPIA, WASHINGTON 98504**

IN THE MATTER OF AIR EMISSIONS FROM:

| | | |
|----------------------------|---|-------------------------------------|
| WestRock Longview |) | NOC ORDER No. 8429, Modification 1) |
| 300 Fibre Way (PO Box 639) |) | |
| Longview, WA 98632 |) | |

DESCRIPTION

WestRock Longview, LLC (WestRock Longview) owns and operates a kraft pulp and paper mill located in Longview, WA.

The Washington State Department of Ecology (Ecology) initially issued Notice of Construction (NOC) Order No. 8429 on June 2, 2011 to approve a project to modify mill infrastructure intended to improve mill operations. Since the original approval, WestRock Longview decided not to implement several of the proposed changes approved in the Order. This modified Order revises the original Order No. 8429 to reflect only those changes that were actually constructed at the mill, to simplify permit language by removing one-time requirements that have already been completed, and to make additional minor changes to clarify and improve compliance and enforceability.

Revised Project Scope

The following discussion reflects the revised project scope as actually constructed by the Permittee. The following elements of the original NOC Order No. 8429 are no longer planned and are removed from this modified Order:

- New steam turbine generating capacity
- Modification of Recovery Furnace 19 (RF19)
- Operational changes at Smelt Dissolving Tank 19 (SDT19)
- Modification of Recovery Furnace 22 (RF22)
- Modification of Lime Kiln 5 (LK5) and Lime Slaker 6 (LS6)
- New Heavy BLS Tank
- New Cooling Tower

The revised project consists of the following changes to the mill:

NCG Combustion - Different units will be used to combust non-condensable gases (NCGs).

Power Boiler 20 (PB20) - The unit was physically modified with a modern overfire air system combined with better material distribution on the travel grate. Induced draft fan speed, forced draft fan speed, and wood conveyor capacities were also increased to support the higher solid fuel firing rate.

This increased the boiler's capacity to fire solid fuel. The rated wood burning capacity of PB20 was increased from 300,000 lbs steam per hour to 380,000 lbs steam per hour (850 psig and 900°F steam). PB20 heat input capacity did not increase from the current maximum limit of 900 MMBtu/hour.

PB20 continues to combust wood fuels (hog fuel, forest biomass, and urban wood), wastewater treatment plant (WWTP) sludge, oil, and natural gas. The modification to PB20 also allowed for the backup firing of weak NCGs. Old corrugated container (OCC) rejects which have not been processed to remove plastics and metal, medical waste, and mill garbage will no longer be fired in PB20.

Emission control improvements included replacement of the mechanical dust collector to accommodate the increased fly ash loading. Also, a selective non-catalytic reduction (SNCR) system was installed on PB20 to reduce NOx emissions.

Tons per year (T/yr) emissions increases of particulate matter (PM), particulate matter 10 micrometers and smaller in diameter (PM10), particulate matter 2.5 micrometers and smaller in diameter (PM2.5), sulfur dioxide (SO2), nitrogen oxides (NOX), volatile organic compounds (VOC), carbon monoxide (CO), and sulfuric acid (H2SO4) from PB20 are associated with this project. There are increases in the short term emission rates of PM, PM10, PM2.5, VOC, and CO from PB20 associated with this project.

Units shut down - Several emission sources have been shut-down as part of the project. Units previously shut-down or shut down as part of the project include:

- #5 Washer Line,
- Lime Slaker No. 3,
- Lime Kiln 2,
- Power Boiler 12 (PB12),
- Power Boiler 13 (PB13),
- Recovery Furnace 18 (RF18),
- Smelt Dissolving Tank 18 (SDT18), and the
- OCC rejects handling feed system to PB20.

Several additional units have also been shut-down contemporaneous to this project, as identified in NOC Order No. 9213:

- Paper Machine #2
- Paper Machine #6
- Paper Machine #8
- Paper Machine #9
- #3 Cooker

The Ecology Air Quality Program determined a Prevention of Significant Deterioration (PSD) Permit was not required for the original project scope and is also not required for the updated project scope. Ecology determined the changes in mill operation necessary to complete the original project required an NOC Order.

The original NOC Order limited project emissions and scope to that described in the application submitted by the Permittee. The change in scope of the project was significant enough to require that the original Order be updated to accurately reflect the revised project scope and emissions.

Air emissions by the Permittee are currently regulated by several orders and permits. Conditions or limits in some of those orders and permits address units with changes completed as part of the mill infrastructure project. Those include:

- Order No. DE 99AQ-I052 - regulates how much medical waste can be burned in PBs 12, 13, and 20.
- PSD 01-03 Permit (No. 01-03, Third Amendment Final Approval of Prevention of Significant Deterioration Application) - applies limits for numerous units and parameters throughout the mill.
- NOC Order No. 3462-AQ07 - regulates opacity and contains certain other requirements for numerous units throughout the mill.
- NOC Order No. 3466-AQ07 - regulates PM & PM10 emissions from PBs 12, 13, and 20.
- Air Operating Permit 000007-8 - identifies all applicable air emission requirements that the Permittee must comply with in order to be allowed to operate.

The remaining orders include conditions or limits that address units that are not within the scope of this mill infrastructure project. Those include:

- Order No. 2737-AQ05 - regulates application of the clean condensate alternative (CCA) for control of hazardous air pollutants (HAPs) per 40 CFR Part 63 Subpart S.
- Order No. 3463-AQ07 - clarifies certain monitoring requirements specified by 40 CFR Part 63 Subpart S.

The requirements of these existing orders and permits will remain in effect unless a change is specifically noted in this NOC Order.

This NOC Order does not relax any requirements found in PSD 01-03 (No. 01-03, Third Amendment Final Approval of Prevention of Significant Deterioration Application). Any portions of the project requiring relaxation of any requirements in PSD 01-03 (No. 01-03, Third Amendment Final Approval of Prevention of Significant Deterioration Application) must be made by amending the PSD Permit.

Authority for this Order comes from several sources:

- WAC 173-400-110 - New source review (NSR),
- WAC 173-400-111(8) – Change of conditions or revisions to orders of approval,
- WAC 173-400-114 - Requirements for replacement or substantial alteration of emission control technology at an existing stationary source, and
- RCW 70.94.141(3) which authorizes Ecology to issue such orders as may be necessary to effectuate the purpose of RCW 70.94.

FINDINGS

Pursuant to New Source Review (NSR) regulations in the Washington Administrative Code (WAC) 173-400-110, 173-400-111(8), 173-400-114, and based upon the complete Notice of Construction Application submitted by the Permittee and the technical analysis performed by Ecology, Ecology finds the following:

1. A Notice of Construction (NOC) Application dated November 2010 was submitted by Trinity Consultants for the Permittee. The application was initially received by Ecology's Industrial Section via e-mail on November 5, 2010. The Dispersion Modeling Analysis portion of the application was submitted separately and was initially received by Ecology via e-mail on January 25, 2011. Paper copies of the application documents were also submitted to Ecology. Additional information was submitted to support the application in response to Ecology requests. The application was determined to be complete on April 5, 2011. The original order was issued on June 2, 2011.
2. Ecology received an initial request to modify NOC Order No. 8429 on December 19, 2017. The modification request was made to update the scope of the project as described in the Introduction Section of this Order. Ecology received an NOC application regarding the modification on March 20, 2018. Following the request for and receipt of additional information via email on November 26, 2018, Ecology determined the application for modification to be complete on December 28, 2018.
3. Proposed changes described in the 2017 modification request include the following portions of the project that have been removed from the scope of the original project because they were not completed/withdrawn:
 - Modifications to RF 19 and planned use of the unit as the primary recovery furnace;
 - Construction of a new heavy BLS tank to serve RF19;
 - Increased actual throughput at SDT19 due to increased actual use of RF19;
 - Modification to the RF22 heat collection system to improve steam quality;
 - Modifications to LK5 to allow increased throughput;
 - Installation of new steam turbine capacity and new cooling tower.
4. Principal changes made to the mill as part of the project which may affect air emissions include:
 - Modifications to PB20 to allow increased steam production while burning wood, and
 - Removing PB12, PB13, RF18, SDT18, and the OCC rejects handling feed system to PB20 from service.

Changes to the hog fuel handling systems and haul roads are not planned. Changes in fugitive emissions due to these activities are not expected.

5. With respect to the change of conditions or revisions to orders of approval, WAC 173-400-111(8)(a) states that “[t]he owner or operator may request, at any time, a change in the conditions of an approval order and the permitting authority may approve the request provided the permitting authority finds that: (i) The change in conditions will not cause the source to exceed an emissions standard set by regulation or rule; (ii) No ambient air quality standard will be exceeded as a result of the change; (iii) The change will not adversely impact the ability of the permitting authority to determine compliance with an emissions standard; (iv) The revised order will continue to require BACT for each new source approved by the order except where the Federal Clean Air Act requires LAER; and (v) The revised order meets the requirements of WAC 173-400-111, 173-400-112, 173-400-113, 173-400-720, 173-400-830, and 173-460-040, as applicable.

Ecology has reviewed the application request to modify NOC Order No. 8429 (received March 20, 2018) and the supplemental information provided. Based on this information, Ecology has determined that the requirements in WAC 173-400-111(8)(a) have been met.

6. The Permittee has the potential to emit greater than 100 tons per year (T/yr) for at least one Prevention of Significant Deterioration (PSD) pollutant. The mill is therefore classified as a major stationary source under the PSD permitting program and is subject to PSD permitting consideration under Washington Administrative Code (WAC) 173-400-720 and 40 CFR 52.21.

A PSD Permit is required if the project is a “major modification,” (i.e., if the net emissions increase resulting from the modification is greater than the PSD Significant Emission Rate (SER) threshold for any regulated pollutant). Long term emission changes (T/yr) for listed pollutants are calculated and compared to the appropriate SER. The Permittee included a PSD applicability analysis in their original application, along with an updated analysis received by Ecology on October 16, 2015 for the revised project scope, aggregated with the contemporaneous Paper Machine Project. These analyses concluded a PSD Permit is not required for the projects.

The Ecology Air Quality Program reviewed the October 16, 2015 analysis by the Permittee and concluded in a January 19, 2016 letter from Chris Hanlon-Meyer, Ecology, to Patrick Ortiz with the Permittee: We find this project does not trigger PSD review. Thus, a PSD Permit is not necessary for the project.

7. Emission limits and most monitoring currently required for Lime Kiln 5 (LK5) are not changed by this Order modification. The following monitoring requirements were changed previously by NOC Order No. 8429. The monitoring changes were made in accordance with PSD 01-03, Condition 6:
 - A SO₂ CEMS is required in response to the change allowing NCGs to be burned in the unit; and
 - A NO_x CEMS is required to acknowledge current monitoring practices at the unit.

Otherwise, the unit will continue to operate under current limits found in AOP 0000078.

8. The source test reporting requirements have been updated in Order 8429, Modification 1. The source test reporting specifies that the results and the source test report must be submitted to Ecology within sixty days of completion of each source test. This update will make the reporting requirement consistent with revisions to chapter 173-405 WAC.
9. The source testing frequency in Condition 5.1 has been updated to be consistent with Ecology Industrial Section established guidance. Source testing is to be performed on a monthly/quarterly/annual basis as described in Appendix A.
10. Language in the original order which referenced “excursions” has been updated to “exceedances” in Order 8429, Modification 1.
11. Conditions 5.6 and 15 specifies the compliance requirements with respect to NH₃ emissions from the Power Boiler 20. The condition establishes operating conditions which must be maintained during source tests. The condition has been updated in Modification 1. The previous language required that sources tests be conducted at $\geq 95\%$ of the maximum hourly operating rate since the last source test. Because of the variable nature of the boiler operations and because the emission limit is based on a 24-hour averaging period, the operating rate language has been updated to required that sources tests be conducted at $\geq 95\%$ of the maximum daily hourly average since the last source test. This updated language is more consistent with boiler operation and with the compliance averaging period.
12. Condition 15 has been updated in order 8429, Modification 1 to provide clarity regarding the method of compliance determination with the particulate matter limits at PB20 (specifically the calculation methodology for limits related to RM 202 source testing). Annual source testing is now required at least 8 months from the previous source test, changed from 10 months. This will allow for more flexibility in source test timing while maintaining representative sampling.
13. PB20 has been modified as part of this project. Ecology was notified via letter dated October 16, 2014 that the modified PB20 was placed into operation on October 11, 2014. As a result of the modification, PB20 emissions are expected to increase from baseline to projected actual amounts on a T/yr basis as shown in the table below. These emission estimates have been updated from those in the 2011 Order to reflect the more up-to-date emissions used in the 2015 PSD applicability analysis:

| PB20 emissions (tons per year) | PM | PM ₁₀ | PM _{2.5} | SO ₂ | NO _x | VOC | CO | TRS/ H ₂ S | H ₂ SO ₄ |
|--------------------------------|------|------------------|-------------------|-----------------|-----------------|-----|-------|--------------------------|--------------------------------|
| Baseline | 47.7 | 44.2 | 43.0 | 90.0 | 412.4 | 1.8 | 233.8 | 0.0 | 0.8 |
| Project Actual | 55.1 | 45.7 | 42.3 | 33.6 | 311.3 | 2.1 | 509.6 | 0.0 | 0.5 |

| PB20 emissions (tons per year) | PM | PM ₁₀ | PM _{2.5} | SO ₂ | NO _x | VOC | CO | TRS/ H ₂ S | H ₂ SO ₄ |
|--------------------------------|-----|------------------|-------------------|-----------------|-----------------|-----|------|--------------------------|--------------------------------|
| Pre-Project Limit | 234 | 234 | | 946 | 1183 | | 3942 | | |

PM, PM₁₀, PM_{2.5} baseline and project actual values are total (filterable + condensable). All pre-project limits are PTE for the respective pollutant. PM and PM₁₀, pre-project limit values are filterable.

Maximum short term emissions rates of SO₂, NO_x, and H₂SO₄ are not expected to increase. BACT analysis per WAC 173-400-113(2) is not required for SO₂, NO_x, and H₂SO₄ emissions from PB20.

Maximum short term emissions rates of PM, PM₁₀, PM_{2.5}, VOC, and CO are expected to increase as a result of the project. Therefore, BACT analysis per WAC 173-400-113(2) was performed for PM, PM₁₀, PM_{2.5}, VOC, and CO emissions from PB20. The analysis concluded:

- a. BACT for PM, PM₁₀, and PM_{2.5} is the existing wet scrubber - wet ESP system.
- b. BACT for VOC and CO is proper O&M.

Proper O&M of PB20 to control VOC and CO emissions will be required.

As a result of the BACT analysis PM, PM₁₀, PM_{2.5} limits were established as follows:

| | |
|--------------------------------------|------------------------------------|
| PM and PM ₁₀ – filterable | 0.025 gr/dscf at 7% O ₂ |
| PM – total | 0.089 gr/dscf at 7% O ₂ |
| PM ₁₀ – total | 0.083 gr/dscf at 7% O ₂ |
| PM _{2.5} - total | 0.081 gr/dscf at 7% O ₂ |

The project includes a new selective non-catalytic reduction (SNCR) system that was installed to control PB20 NO_x emissions. A SNCR capable of controlling NO_x emission levels to ≤0.150 lb/MMBtu has been determined to be RACT. An emissions limit of ≤0.150 lb/MMBtu - 30 day rolling average with appropriate monitoring will continue to be included in this modified Order.

The SNCR system will require the addition of ammonia (NH₃) to the PB20 exhaust stream for NO_x control. Proper operation of the SNCR system to control NH₃ emissions from PB20 to ≤25 ppmv at 7% O₂ has been determined to be RACT. An emissions limit of ≤25 ppmv at 7% O₂ will continue to be included in this modified Order.

Emission limits and monitoring currently required for PB20, unless otherwise discussed in this Order, are not changed by this Order. The unit will continue to operate under current limits found in AOP 0000078 along with the additional requirements found in this Order.

14. The current maximum firing rate of 900 MMBtu/hr for PB20 remains the same after the project. The boiler previously had the capacity to produce 300,000 lbs/hr steam from solid fuels. Following the modification, the steam production capacity of the boiler has been increased to 380,000 lbs/hr steam from solid fuels.
15. PB20 will continue to burn the following fuel types which were burned prior to this project:
 - 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 metals before use as fuel). Ecology does not currently classify these wood fuels as solid waste.
 - o Wood fuels do not include wood treated with creosote, pentachlorophenol, or copper-chrome-arsenic or municipal waste.
 - o Forest biomass is the by-product of current forest management activities, current forest protection treatments authorized by the appropriate agency, or the by-product of forest health treatment prescribed or permitted under applicable forest health law. Forest biomass does not include lumber products or wood treated with preservatives. Forest biomass is not wood from old growth forests which is required to be left on site under the state forest practices rules. Also, forest biomass does not include municipal solid waste.
 - o Urban wood is purchased wood fuel meeting an acceptance program which prohibits wood treated with creosote, pentachlorophenol, or copper-chrome-arsenic; municipal waste; hazardous material contaminants (asbestos, lead, mercury); lead painted items; and plastic coatings.
 - Oil, including reprocessed fuel oil (RFO).
 - Primary and secondary sludge from the mill's process wastewater treatment plant.
 - Natural gas.

A condition requiring the Permittee to maintain a suitable urban wood acceptance program will continue to be included in this Order. Any additional fuel types will be subject to New Source Review rules and regulations prior to use.

PB20 has ceased burning the following materials which were burned prior to this project:

- Medical wastes. The relatively small quantities allowed per Order No. DE 99AQ-I052 will be properly disposed of offsite. Order No. 99AQ-I052 will be rescinded.

- Mill garbage which will be properly disposed of offsite. For the purposes of this Order, mill garbage is defined as solid waste per the current (12/22/03) update of WAC 173-434 which is:
 - o "Solid waste" means all putrescible and nonputrescible solid and semisolid wastes, including but not limited to garbage, rubbish, ashes, industrial wastes, swill, demolition and construction wastes, abandoned vehicles or parts thereof, discarded commodities, septage from septic tanks, dangerous waste, refuse derived fuel, solid waste derived fuel, problem wastes, and all materials which are not primary products of public, private, industrial, commercial, mining, and agricultural operations.
 - o As per WAC 173-434, solid waste does not include wood waste or sludge from waste water treatment plants.
- OCC rejects which have not been processed to remove plastics and metal - they will be properly disposed of offsite.

A condition prohibiting these materials will continue to be included in this Order. Also, portions of any previously issued Orders specifically approving any of these materials as acceptable fuel for PB20 will be invalidated.

16. PB20 will continue to be subject to 40 CFR Part 60 (NSPS) Subpart D - *Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction Is Commenced After August 17, 1971* for SO₂ and NO_x emissions. The modifications proposed to PB20 will not increase the hourly mass emission rates of SO₂ and NO_x for which standards apply under 40 CFR Part 60.

PB20 became subject to 40 CFR Part 60 (NSPS) Subpart Db - *Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units* for PM emissions and opacity. The modifications completed for PB20 increased the hourly mass emission rate of PM and opacity for which a standard applies under 40 CFR Part 60. PB20 will no longer be subject to 40 CFR Part 60 (NSPS) Subpart D standards for PM and opacity.

PB20 will not be reconstructed within the meaning of 40 CFR 60.15.

17. The PSD applicability determination for the original project included a netting analysis. As a result of the netting analysis, this Order requires the following units to be permanently retired from use.

- #5 Washer Line,
- Lime Slaker No. 3,
- Lime Kiln 2,
- Power Boiler 12,
- Power Boiler 13,
- Recovery Furnace 18,
- Smelt Dissolving Tank 18, and the
- OCC rejects handling feed system to PB20.

18. A comparison of actual annual emissions to emission calculations found in the NOC application will continue to be required by this Order to verify that SERs listed in 40 CFR 52.21 are not exceeded. The comparison is required for the first 10 years after project completion, which occurred in 2015 when the facility stopped work on the project.
19. Units designated for combustion of Non-Condensable Gases (NCGs) changed as a result of this project. The modified Order will continue to require NCGs to be burned in LK3, LK4, LK5, and/or PB20.
20. Sulfuric acid (H_2SO_4) emissions will not increase as a result of the project. The SO_2 emissions controls at individual units will also adequately control H_2SO_4 emissions.
21. Fossil fuel consumption and wood fuel consumption are expected to decrease as a result of the project.

Fossil fuel was used in PB12, PB13, and PB20 prior to the project. Fossil fuels used were oil (including reprocessed fuel oil - RFO) and natural gas. Fuel selection was based primarily on fuel costs. PB20 continues to be capable of burning oil, gas, or a combination of the two fuels. As part of the project, PB12 and PB13 were permanently retired and are no longer being used.

Wood fuel, in addition to fossil fuels, was used in PB12, PB13, and PB20 prior to the project. The rate at which PB20 is capable of burning wood fuel has increased as part of the project. As stated above, PB12 and PB13 have been permanently retired. PB20 is now the only unit burning wood fuel.

22. Emissions of toxic air pollutants (TAPs) were evaluated for the initially proposed project. Emission increases due to the project were calculated and compared to the "small quantity emission rate" (SQER) and de minimis levels found in WAC 173-460-150. Those TAPs exceeding the SQER level were analyzed using the SCREEN3 model. All TAPs modeled were found to be at levels less than the acceptable source impact level (ASIL) in WAC 173-460-150.

Because all TAPs emissions were projected and continue to be projected to be less than the SQER or to have impacts less than the ASIL based on SCREEN3 modeling and tBACT continues to be required, there are no further requirements for TAPs as a result of the analysis. Toxic effects are not expected at the emission rates projected for the project.

23. Air quality modeling to address new PM_{2.5}, SO₂, and NO₂ National Ambient Air Quality Standards (NAAQS) was performed for the initially proposed project. The modeling found expected impacts to be in compliance with the standards. The modified scope of the project results in a decrease in these pollutants, therefore additional modeling is not needed to demonstrate compliance with the NAAQS.
24. Changes to emissions control devices and monitoring are being made as part of this project.

Review of compliance with 40 CFR Part 64 - Compliance Assurance Monitoring regulations will be required to be conducted as part of the current AOP permit renewal process.

25. Terms and conditions of this Order are considered "federally enforceable" for Title V Air Operating Permit (AOP) purposes, unless specifically identified as a "state only" term or condition.
26. An environmental checklist was submitted with the original NOC Application which considered environmental impacts of the project as required by the State Environmental Policy Act (SEPA - see chapter 43.21C RCW). The Cowlitz County Department of Building & Planning reviewed the checklist and made a Determination of Nonsignificance (DNS) which was issued on January 14, 2011. The proposed revised scope is a reduced scope from the original SEPA evaluation and a revised SEPA analysis is not considered to be necessary for this modification.

Therefore, it is ordered that the project, as described in said Notice of Construction Application dated November 2010, as revised in 2017 and 2018, including any additional information submitted to Ecology and on reference thereto, is approved for construction, installation, and operation, provided the following conditions are met.

CONDITIONS

Note: footnotes and clarification of methods are contained in Appendix A.

1. [Reserved. In the original Order No. 8429, this condition applied to construction start notification which has already been fulfilled]
2. [Reserved. In the original Order No. 8429, this condition had applied to proposed modifications to RF19 that have since been withdrawn].
3. The requirements in this condition apply to LK5. The monitoring specified replaces existing monitoring requirements for the limits noted below. The limits, which do not modify previously existing limits, shall be monitored at the monitoring frequency and with the compliance test methods specified. Reporting shall be as specified for each parameter.

| LK5 Condition | Parameter | Limit (shall not exceed) | Monitoring and Reporting |
|---------------|-----------------|---|---|
| 3.1 | SO ₂ | 20 ppmd @ 10% O ₂ , 3-hr average | Monitor continuously using PS 2 (see appendix A). Report 3-hr average concentrations, monthly average concentration, maximum monthly 3-hr average concentration, and exceedances monthly. |

| LK5 Condition | Parameter | Limit (shall not exceed) | Monitoring and Reporting |
|----------------------|------------------|--|---|
| 3.2 | NO _x | 275 ppmdv @ 10% O ₂ , 24-hr average | Monitor continuously using PS 2 (see appendix A). Report 24-hr average concentrations, monthly average concentration, maximum monthly 24-hr average concentration, and exceedances monthly. |

4. [Reserved. In the original Order No. 8429, this condition had applied to proposed modifications to LS6 that have since been withdrawn].
5. The requirements in this condition apply to PB20. The limits specified in this condition shall not be exceeded. The limits shall be monitored at the monitoring frequency and with the compliance test methods specified. Reporting shall be as specified for each parameter.

| PB20 Condition | Parameter | Limit (shall not exceed) | Monitoring and Reporting |
|-----------------------|------------------------------------|--|---|
| 5.1 | PM & PM ₁₀ - filterable | 0.025 gr/dscf @ 7% O ₂ , 1-hr average | Sample M/Q/A using RM 5 (see Appendix A). Results of source testing (including source test report) must be submitted to Ecology within 60 days of completion of each source test. 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. |
| 5.2 | PM – total | 0.089 gr/dscf @ 7% O ₂ , 1-hr average | Sample Q/A using RM 5/RM 202 (see Appendix A). Reporting same as Condition 5.1. See Condition 15 for additional calculation and reporting requirements. |
| 5.3 | PM ₁₀ - total | 0.083 gr/dscf @ 7% O ₂ , 1-hr average | Sample Q/A using RM 5/RM 202 (see Appendix A). Reporting same as Condition 5.1. See Condition 15 for additional calculation and reporting requirements. |
| 5.4 | PM _{2.5} - total | 0.081 gr/dscf @ 7% O ₂ , 1-hr average | Sample Q/A using RM 5/RM 202 (see Appendix A). Reporting same as Condition 5.1. See Condition 15 for additional calculation and reporting requirements. |

| PB20 Condition | Parameter | Limit (shall not exceed) | Monitoring and Reporting |
|-----------------------|------------------|---|---|
| 5.5 | NO _x | ≤0.150 lb/MMBtu - 30 day average | Monitor continuously using PS 2 (see Appendix A). Report 24-hr average concentrations, 30 day rolling average concentrations, maximum monthly 30-day average concentration, and exceedances monthly. |
| 5.6 | NH ₃ | 25 ppmv @ 7% O ₂ , 24-hr average | Test within 60 days of the limit going into effect and A/M (see Appendix A) thereafter, 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 daily hourly average rate the unit operated at since the prior source test. Report source test results (including source test report) within sixty days of completion of each source test. |

PB12, PB13, and the OCC rejects handling feed system to PB20 must be permanently removed from service.

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.

Burning of materials other than those allowed in the unit must be promptly discontinued and the incident reported in the appropriate monthly air report.

All urban wood purchased for use in PB20 must meet an acceptance program included as part of the PB20 O&M manual. 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.

Upon the modified unit being placed in operation, PB20 must comply with *40 CFR Part 60 (NSPS) Subpart Db - Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units* for PM emissions and opacity.

6. [Reserved. In the original Order No. 8429, this condition requiring an EPA determination regarding Acid Rain Program applicability was related to additional steam turbine capacity that has since been withdrawn from the project scope].
7. [Reserved. In the original Order No. 8429, this condition had applied to a new cooling tower that has since been withdrawn from the project scope].
8. The following units shall no longer be operated:
 - #5 Washer Line,
 - Lime Slaker No. 3,
 - Lime Kiln 2, and
 - RF18.
9. [Reserved. In the original Order No. 8429, this condition had applied an emission cap over multiple modified units].
10. For the first 10 full calendar years after the Project is complete or permanently stopping work, the Permittee shall meet the recordkeeping and reporting requirements of WAC 173-400-720(4)(b)(iii)(D)(ii) through (v).
11. NCGs shall be burned in LK3, LK4, LK5, and/or PB20 upon completion of the project. NCGs may be burned in LK5 and/or PB20 on a trial basis during project construction. NCGs may be burned in PB20 on a routine basis after the modified unit is placed in operation. NCGs may be burned in LK5 on a routine basis after the SO₂ CEMS is put into service.
12. [Reserved. The original NOC Order included notification provisions for various events, all of which have either been completed, or have been rendered irrelevant by the updates to the project scope].
13. [Reserved. The condition in the original NOC order was a 1-time reporting condition that has been completed].

14. [Reserved. The condition in the original NOC order was a 1-time reporting condition that has been completed].
15. This condition applies to PB20. Source tests using RM 202 shall be conducted at each of the units on a Q/A schedule as defined in Appendix A. Annual source tests shall be at least 8 months after the prior test.

Source tests shall be conducted when the unit is operating at $\geq 95\%$ of the maximum daily hourly average rate the unit operated at since the previous source test.

A copy of the source test results (including source test report) shall be submitted to Ecology. Calculated emission rates for filterable PM (RM 5), condensable PM (RM 202), PM-total, PM_{2.5}-total, and PM₁₀-total shall be reported with the results, as applicable. For each RM 202 source test, the ratio of condensable PM (RM 202) to filterable PM (RM 5) shall be reported.

The following equations shall be used to determine compliance with the applicable limits:

$$PM\text{-total} = (\text{filterable PM from RM 5}) + (\text{condensable PM from RM 202})$$

$$PM_{2.5}\text{-total} = 0.68 \times (\text{filterable PM from RM5}) + (\text{condensable PM from RM 202})$$

$$PM_{10}\text{-total} = 0.76 \times (\text{filterable PM from RM5}) + (\text{condensable PM from RM 202})$$

When RM 5 testing occurs to satisfy the requirements in Condition 5 and no RM 202 testing is required by the Order, the average ratio of filterable PM to condensable PM from the 3 previous RM 202 source tests shall be used to calculate the condensable PM during the RM 5 source test. The calculated condensable PM shall be used in the above equations to calculate the PM-total, PM_{2.5}-total, and PM₁₀-total values. The average ratio of filterable PM to condensable PM used in the calculations shall be reported to Ecology.

When RM 202 testing is not required by the Order and the calculated PM-total, PM_{2.5}-total, or PM₁₀-total results indicate a potential exceedance of the applicable emission limit(s), the Permittee must perform a RM 5/RM 202 source test within 60 days of discovery of the calculated excursion. A calculated excursion of the limit(s) in Conditions 5.2, 5.3, and/or 5.4 will not be considered a violation of the limit(s) unless the required RM 5/RM 202 source test result exceeds the applicable limit(s).

The Permittee must start an investigation into the cause of any calculated excursion within 3 days of discovery and take corrective actions, as necessary. Findings and corrective actions as a result of calculated excursions must be reported to Ecology in the following monthly air report.

16. Ecology may approve alternate compliance test methods that are of equivalent stringency for any air pollutant. Compliance monitoring frequency may be adjusted by Ecology depending on compliance history.

17. Operating and maintenance (O&M) manuals for all equipment added or modified by this project, 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.
18. Access to the source by the U.S. Environmental Protection Agency (EPA), Ecology, or local regulatory personnel shall be permitted upon request and presentation of proper credentials for the purpose of compliance assurance inspections. Failure to allow access is grounds for revocation of this determination of approval.
19. At all times, including periods of startup, shutdown, and upset, the Permittee shall, to the extent practicable, maintain and operate all equipment that is capable of contributing to air pollution in a manner consistent with good air pollution control practice for minimizing emissions. During periods of upset the Permittee shall take immediate and appropriate corrective action to minimize emissions, including slowing or shutting down the emission unit.
20. Ecology may modify conditions contained herein, pursuant to legal requirements, based on air quality, emissions monitoring results, or upon the request of the Permittee.
21. The Permittee shall retain records of all required monitoring data and support information for a period of 5 years from the date of monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all data from continuous monitoring instrumentation, and copies of all reports required by this order.
22. This approval shall become invalid if construction of the project is not commenced within eighteen (18) months after receipt of final approval, or if construction of the facility is discontinued for a period of eighteen (18) months, unless Ecology extends the 18-month period upon a satisfactory showing that an extension is justified.
23. The Permittee must comply with all applicable requirements of the federal Clean Air Act.
24. Nothing in this Approval Order shall be construed to relieve the Permittee of its obligations under any local, state or federal laws or regulations.

Failure to comply with this Order may result in the issuance of civil penalties or other actions, whether administrative or judicial, to enforce the terms of this Order.

Authorization may be modified, suspended or revoked in whole or part for cause including, but not limited to, the following:

- 1) Violation of any terms or conditions of this authorization.
- 2) Obtaining this authorization by misrepresentation or failure to disclose fully all relevant facts.

The provisions of this authorization are severable and, if any provision of this authorization, or application of any provision of this authorization to any circumstance, is held invalid, the application of such provision to their circumstances and the remainder of this authorization, shall not be affected thereby.

YOUR RIGHT TO APPEAL

You have a right to appeal this Order to the Pollution Control Hearing Board (PCHB) within 30 days of the date of receipt of this Order. The appeal process is governed by Chapter 43.21B RCW and Chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2).

To appeal you must do both of the following within 30 days of the date of receipt of this Order:

- File your appeal and a copy of this Order with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.
- Serve a copy of your appeal and this Order on Ecology in paper form - by mail or in person. (See addresses below.) E-mail is not accepted.

You must also comply with other applicable requirements in Chapter 43.21B RCW and Chapter 371-08 WAC.

Your appeal alone will not stay the effectiveness of this Order. Stay requests must be submitted in accordance with RCW 43.21B.320.

ADDRESS AND LOCATION INFORMATION

| Street Addresses | Mailing Addresses |
|--|---|
| Department of Ecology Attn: Appeals Processing Desk 300 Desmond Drive SE Lacey, WA 98503 | Department of Ecology Attn: Appeals Processing Desk PO Box 47608 Olympia, WA 98504-7608 |
| Pollution Control Hearings Board 1111 Israel Road SW STE 301 Tumwater, WA 98501 | Pollution Control Hearings Board PO Box 40903 Olympia, WA 98504-0903 |

MORE INFORMATION

- **Pollution Control Hearings Board**
www.eho.wa.gov/Boards_PCHB.aspx
- **Chapter 43.21B RCW, Environmental Hearings Office – Pollution Control Hearings Board**
<http://apps.leg.wa.gov/RCW/default.aspx?cite=43.21B>
- **Chapter 371-08 WAC – Practice and Procedure**
<http://apps.leg.wa.gov/WAC/default.aspx?cite=371-08>
- **Chapter 34.05 RCW – Administrative Procedure Act**
<http://apps.leg.wa.gov/RCW/default.aspx?cite=34.05>
- **Chapter 70.94 RCW, Washington Clean Air Act**
<http://apps.leg.wa.gov/RCW/default.aspx?cite=70.94>
- **Air Quality Rules**
<https://ecology.wa.gov/Air-Climate/Air-quality/Business-industry-requirements/Permits-for-burning-industrial>

SIGNATURES

Reviewed by:



Shingo Yamazaki, P.E.
Environmental Engineer
Solid Waste Management Program

December 15, 2020

Date

Signature Authority:



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

December 15, 2020

Date

APPENDIX A – Footnotes

Monitoring is required only when the emission unit is operating.

Test method abbreviations are as follows:

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.

RM 202: 40 CFR 60, Appendix A, Method 202 - Condensable Particulate Matter, or an alternative approved by Ecology.

PS 2: Performance Specification 2 of 40 CFR, Part 60, Appendix B, "Specification and Test Procedures for SO₂ and NO_X Continuous Emissions Monitoring Systems in Stationary Sources."

"In operation" is defined in WAC 173-400-030(44). "In operation" means engaged in activity related to the primary design function of the source.

A/M: for NH₃ testing means a source test is to be performed annually. If any single source exceeds the limit, 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.

M/Q/A: means a source test is to be performed monthly. If monthly source test results are less than or equal to 75% of the emissions limitation for 3 consecutive months, source testing may be performed on a quarterly basis. Quarterly frequency may be further reduced to annual per qualifications below.

Quarterly testing must be conducted each calendar quarter between 45 and 105 days following the previous test, or as otherwise approved by Ecology. Calendar quarters are the respective periods of three consecutive calendar months starting on January 1, April 1, July 1, and October 1. If quarterly source test results are less than or equal to 25% of the emissions limitation for four consecutive quarters, source testing may be performed on an annual basis.

Annual source testing must be conducted each calendar year between 8 and 14 months following the previous test, or as otherwise approved by Ecology. If the permittee is testing on an annual cycle and any single source test exceeds 25% of the emissions limitation, source test frequency shall revert to quarterly. Quarterly source testing must commence the calendar quarter following the source test which exceeded 25% of the emission limit.

If the permittee is testing on an annual or quarterly cycle and any single source test result exceeds 75% of the emissions limitation, the source test frequency shall revert to monthly. Monthly source testing shall commence within 60 days of the source test which exceeded 75% of the emissions limitation.

"Monthly" test cycle: A source test must be performed in any month that the emission unit was operated more than 216 hours. If an emission unit is not operated for more than 216 hours in a month, 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 calendar quarter wherein the unit was operated more than 720 hours. If the unit is not operated more than 720 hours in a calendar quarter, a source test must be performed prior to the emission unit having been operated a cumulative total of 2,160 hours since the most recent source test.

"Annual" test cycle: A source test must be performed in any calendar year wherein the unit was operated more than 1,440 hours unless otherwise approved by Ecology. If the unit was not operated more than 1,440 hours in a calendar year, an annual source test must be performed prior to the emission unit having been operated a cumulative total of 8,640 hours since the most recent source test.