IN THE MATTER OF AIR EMISSIONS FROM:
WestRock CP, LLC  NOC ORDER No. 4153-AQ07, Modification 1
801 Portland Avenue
Tacoma, WA 98421

DESCRIPTION

WestRock CP, LLC (WestRock), previously Simpson Tacoma Kraft Company, operates an integrated pulp and paper mill on approximately 60 acres adjacent to the mouth of the Puyallup River on Commencement Bay in Tacoma, Washington. The mill uses the Kraft process to produce market pulp and paper for linerboard, bags, sacks, and similar food and industrial grade packaging. WestRock operates under Air Operating Permit (AOP) No. 0000850.

Notice of Construction (NOC) Approval Order No. 4153-AQ07 was issued on May 23, 2007 in accordance with RCW 70.94.152, WAC 173-400-110, and WAC 173-460-040. NOC Order No. 4153-AQ07 approved the installation of a 60-MW steam cogeneration unit as well as improvements to Recovery Furnace No.4 and Power Boiler No.7.

On September 30, 2020 WestRock submitted a modification request for revisions to Notice of Construction Order (NOC) No. 4153 – AQ07 in accordance with WAC 173-400-111(8). As detailed below, Ecology made the following changes in this modification:

1. The requirement to operate a continuous opacity monitoring system (COMS) on Power Boiler No.7 has been removed and replaced with a requirement to maintain surrogate monitoring parameters. In 2016, after NOC Order No. 4153-AQ07 was issued, WestRock installed a scrubber on the Power Boiler No.7 Stack. COMS are not suitable monitoring systems for stacks with wet scrubbers.

2. VOC stack testing frequencies, originally required semiannually, have been revised to be required annually.

3. Sulfur content monitoring requirements have been updated to include an option to retain fuel oil analyses for each fuel delivery rather than requiring sampling from facility tankage.

4. Clarified in the “Findings and Descriptions of Changes” section, that this order is a supersedence of Order No. DE 97AQ-I004.

Based upon the NOC Application submitted by WestRock, Ecology finds the following. (Relevant findings from the initial NOC Order have been retained in this document for continuity in the historical findings section below.)
FINDINGS AND DESCRIPTION OF CHANGES

Pursuant to New Source Review (NSR) regulations in the Washington Administrative Code (WAC) 173-400-110 and 173-400-111 and based upon the complete NOC Application, Ecology finds the following:

1. **NOC Application Processing Timeline.** WestRock submitted an NOC Application to Ecology which was received via mail on September 30, 2020. The application requested the modification of NOC Order No. 4153-AQ07. Ecology reviewed the initial application and found it incomplete per WAC 173-400-111 on October 27, 2020. A final amended application was postmarked on November 12, 2020 and received by Ecology. The application was determined to be complete on December 10, 2020.

2. **Administrative Modification.** The modification request is administrative in nature. No additional physical changes to emissions units or operations are proposed in the modification request. This order modification does not approve the emission of additional pollutants.

3. **Replacement of COMS requirement with alternative monitoring.** As requested, the order has been modified to remove COMS requirements. Condition 1 in Appendix A of the original NOC 4153-AQ07 required that the Permittee operate a COMS to show compliance with the opacity limit for Power Boiler No.7. At the time the original order was issued, the emission control device on Power Boiler No.7 was a dry electrostatic precipitator (ESP). On January 4, 2016, WestRock submitted a letter to Ecology to request alternative monitoring at Power Boiler No.7 to show compliance with the opacity requirement in NOC 4153-AQ07. WestRock requested alternative monitoring because they were planning to install an acid gas scrubber after the ESP to comply with Boiler Maximum Achievable Control Technology (MACT) hydrogen chloride limits. The use of a scrubber saturates the exhaust gas leaving the stack with water vapor. COMS are not suitable for measuring opacity in saturated gases. WestRock installed the acid gas scrubber later in 2016.

In the January 4, 2016 letter to Ecology, WestRock proposed that total secondary power be used to show compliance with the opacity limit. Total secondary power is a measure of the total electrical energy spent on the removal of particulates from the exhaust gas stream being treated. Generally, a low total secondary power input indicates lower ESP performance. Note that WestRock is using secondary power to show compliance with an opacity limit rather than a particulate limit. However, there is an inherent relationship between opacity and particulate matter in an exhaust gas: low particulate in an exhaust stream results in a low opacity reading. Ecology found total secondary power to be an acceptable method for showing compliance with the opacity monitoring requirements contained in this Order. Total secondary power as a surrogate for particulate matter limits has been widely accepted by the EPA. For example, EPA
requires monitoring of secondary power for wet stacks in federal Boiler MACT regulations to show compliance with particulate standards.

In a letter dated April 26, 2016, WestRock proposed a minimum operating condition of 8 kW total secondary power on the north side and 8 kW of total secondary power on the south side of the ESP (three-hour average). This is based on historical data the COMS on Power Boiler No.7 recorded during two three-hour block averages on January 19, 2015 (prior to the installation of the scrubber). The data showed that WestRock achieved an opacity of less than 10% at the south precipitator while total secondary power at the south precipitator averaged 8 kW. WestRock also included two other proposals. The first was that the total secondary power requirement should not apply when Power Boiler No.7 is only burning natural gas. The second is that the total secondary power requirement should not apply while steaming rate at the boiler is less than 225 kpph.

In a letter dated May 23, 2016, Ecology approved the requirement to maintain a minimum of 8 kW total secondary power at each side the ESP to show compliance with the opacity limit. Ecology also approved WestRock’s request for the limit to not apply while Power Boiler No.7 is only burning natural gas. There is little potential for a boiler to exceed the opacity limit of 10% while only burning natural gas. For example, federal Boiler MACT regulations do not require any particulate matter testing or particulate matter pollution control devices on boilers that only burn natural gas. Ecology did not approve WestRock’s request that the limit should not apply while steaming rate at the boiler is less than 225 kpph.

4. **VOC Source Testing Frequency.** WestRock requested that the VOC source testing frequency in Appendix A, Condition No.3 for Power Boiler No.7 be reduced from semiannually to annually. Ecology has made this change, adding language to indicate that it is the minimum source test frequency. This addition allows Ecology to require more frequent stack testing in the AOP in the future, if additional information indicates that more frequent source testing should be required. WestRock submitted the information in Table 1 with their NOC modification application. Table 1 below shows that WestRock has operated well below the established limit from 2016 through 2020.

Ecology has added additional language to this condition to specify that alternative test methods to EPA Method 25A must be approved by Ecology.

**Table 1. Historical VOC Testing Data for Power Boiler No.7**

<table>
<thead>
<tr>
<th>Test Date</th>
<th>Test Result (lbs/MMBTU)</th>
<th>Percent of Limit (0.13 lbs/MMBTU)</th>
</tr>
</thead>
<tbody>
<tr>
<td>06/07/2016</td>
<td>0.009</td>
<td>7%</td>
</tr>
<tr>
<td>07/06/2016</td>
<td>0.023</td>
<td>18%</td>
</tr>
<tr>
<td>03/02/2017</td>
<td>0.023</td>
<td>18%</td>
</tr>
<tr>
<td>09/18/2017</td>
<td>0.035</td>
<td>27%</td>
</tr>
</tbody>
</table>
5. **Change in Sulfur Monitoring Method.** Order No. 4153-AQ07 originally required WestRock to take monthly samples of their fuel oil tank and perform sulfur analysis in order to show compliance with sulfur limitations. The modified Order retains that method but adds an additional option. The alternative option is to retain analyses of fuel deliveries to show compliance with the required sulfur content of the fuel. ASTM methods have also been updated in this issuance.

6. **Removal of Minimum Operating Condition for Electrostatic Precipitator.** The original issuance of Order No. 4153-AQ07 contained the following language: “The Permittee may not fire Power Boiler #7 with hogged fuel while both sides of the precipitator are out of service; however, it may fire oil or natural gas subject to all applicable emission units.” This language has been removed, as it could be interpreted as an allowance to only run one side of the ESP while still routing emissions through the side that is out of service. This permit contains language that says that WestRock shall maintain and operate all equipment that is capable of contributing to air pollution in a manner consistent with good air pollution control practices. Running one side of the ESP while still routing emissions through the side that is out of service would not be considered a good air pollution control practice. Additionally, this language was written prior to the issuance of new federal rules for boiler maximum achievable control technology (Boiler MACT) to which Power Boiler No.7 is subject. Boiler MACT requires WestRock to engage all applicable control devices when fuels are fired that are not clean fuels. The type of oil currently burned in Power Boiler No.7 is not considered a clean fuel by the Boiler MACT rules.

The allowance to burn natural gas only with no minimum operating condition at the ESP is retained, as discussed in Finding No.3 above. This allowance has been incorporated into Condition 1 of Appendix A.

Should WestRock wish to have the option to route all emissions through only one side of the ESP, they must conduct a performance test and propose a new set of surrogate monitoring parameters for this operating condition. This requirement is included in Condition 1 of Appendix A.

7. **Supersedence of Order No. DE 97AQ-1004.** Ecology has reviewed the contents of Order No. DE 97AQ-1004 and has determined that it has been superseded by this Order. Order

<table>
<thead>
<tr>
<th>Test Date</th>
<th>Test Result (lbs/MMBTU)</th>
<th>Percent of Limit (0.13 lbs/MMBTU)</th>
</tr>
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<tr>
<td>03/09/2018</td>
<td>0.015</td>
<td>12%</td>
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<tr>
<td>07/11/2018</td>
<td>0.011</td>
<td>8%</td>
</tr>
<tr>
<td>03/05/2019</td>
<td>0.011</td>
<td>8%</td>
</tr>
<tr>
<td>08/15/2019</td>
<td>0.006</td>
<td>5%</td>
</tr>
<tr>
<td>03/05/2020</td>
<td>0.010</td>
<td>8%</td>
</tr>
<tr>
<td>08/27/2020</td>
<td>0.019</td>
<td>15%</td>
</tr>
</tbody>
</table>
No. DE 97AQ-I004 acted as both an administrative order and a notice of construction order. Order No. DE 97AQ-I004 acted as a notice of construction order because it included limits from Order No. DE 91-AQ1089, which approved the construction of Power Boiler No.7. However, all limits which originated from the NOC approval of Power Boiler No.7 have been superseded by Order No. 4153-AQ07 and PSD 06-02 as stated in finding No.11 of the “historical findings” of this Order. The rest of the contents of Order No. DE 97AQ-I004 acted as an administrative order; it was a summary of all state requirements and was issued prior to the finalization of WestRock’s first AOP. The state requirements are now managed in WestRock’s AOP and are not included in Order No. 4153-AQ07 to avoid redundancy. See Appendix B for more information on Order No. DE 97AQ-I004.

8. **SEPA.** The project complies with applicable SEPA requirements. A mitigated determination of nonsignificance (MDNS) was issued for the original project on April 12, 2007. This modification does not change the scope of that original project and does not allow for increases to the emissions from the respective emissions units. As such, Ecology adopted the existing MDNS on date. The adopted MDNS was made available for public comment at the same time as this modified order.

9. **Additional Minor Changes.** The following additional changes were made:

   - The previous order was written for Simpson Tacoma Kraft Company, LLC. The Order has been updated to reflect that the current Permittee is WestRock CP, LLC.
   - Condition No.2 of the original Order issued May 23, 2007 required WestRock to notify Ecology in writing within 30 days of completion of construction. WestRock has already fulfilled this requirements. The condition has been removed.
   - Condition No.7 of the original Order issued May 23, 2007 stated that the approval for construction shall become invalid of construction of the project is not commenced within eighteen (18) months after receipt of the final approval, or if construction of the facility is discontinued for a period eighteen (18) months, unless Ecology extends the 18-month period. WestRock commenced construction of the project within eighteen (18) months after receipt of the final approval. The condition has been removed.
   - Footnote A1 in Appendix A has been updated to define “BDT” as bone dry tons, and to specify the natural gas must be measured at standard conditions.
   - Additional minor changes have been made to make this document meet accessibility requirements under the Americans with Disabilities Act.
HISTORICAL FINDINGS

Pursuant to New Source Review (NSR) regulations in the Washington Administrative Code (WAC) 173-400-110, 173-400-111 and 173-460-040, and based upon the complete NOC Application submitted by WestRock Tacoma and the technical analysis performed by Ecology, Ecology found the following according to the original NOC Order issued on May 23, 2007.

1. Simpson is proposing to install a steam turbine generator driven by steam produced from Recovery Furnace No.4 and Power Boiler No.7 at the pulp and paper mill in Tacoma, WA. The project will allow Simpson to cogenerate and distribute electrical power.

2. The proposed project consists of installation of:
   - A steam turbine and electrical generator rated at up to 60 MW,
   - Power distribution and overload protection equipment,
   - A building to house the turbine/generator,
   - Upgrades to the demineralizer system to produce the higher-quality boiler feedwater required for power generation,
   - A cooling tower to condense the turbine discharge steam that is not used in the process,
   - Boiler improvements to produce the higher pressure and temperature steam required for power generation. These improvements will include adding tube area to Power Boiler No.7’s superheater section, upgrading the pressure rating of Recovery Furnace No.4’s generation bank, new pressure safety valves, and piping changes to handle higher pressure steam, and
   - Upgrades to Power Boiler No.7 to increase its Maximum Continuous Rated steaming capacity from 300,000 pounds/hour (lb/hr) to 340,000 lb/hr. These will include larger forced-draft and induced-draft fan motors, wood fuel feed system improvements, and possibly improvements to the ash handling, electrostatic precipitator and other ancillary systems.

3. Changes to Recovery Furnace No.4 emissions are not expected due to the project. Unit emission limits and monitoring requirements in effect prior to this project will be continued.

4. Emission increases at Power Boiler No.7 due to the project resulted in the need for a Prevention of Significant Deterioration (PSD) Permit for particulate matter less than 10 microns in diameter (PM10), carbon monoxide (CO), and nitrogen oxides (NOx) emission limits.
5. Maximum hourly sulfur dioxide (SO₂) emissions will not increase at Power Boiler No.7 as a result of an enforceable limit. Thus, SO₂ emissions are not subject to state minor new source review (NSR). The enforceable limit is equal to the maximum potential to emit, in pounds per hour (lbs/hr), at boiler capacity prior to this project.

6. Maximum hourly volatile organic compound (VOC) emissions will not increase at Power Boiler No.7 as a result of an enforceable limit. Thus, VOC emissions are not subject to state minor new source review (NSR). The enforceable limit is equal to the maximum potential to emit, in pounds per hour (lbs/hr), at boiler capacity prior to this project.

7. Opacity levels at Power Boiler No.7 are not expected to change as a result of this project. The opacity limit and monitoring requirements in effect prior to this project will be continued.

8. Air toxics, per WAC 173-460 were addressed in the application. The maximum predicted toxic pollutant concentrations were less than acceptable source impact levels (ASILs) for the toxic air pollutants emitted. No limits are necessary.

9. Use of Power Boiler No.6 is not expected to increase. A limit capping steam production from the unit to the maximum annual amount produced during the past ten years is included in this Order.

10. The application included calculations to demonstrate the project will not trigger applicability of federal Acid Rain regulations (40 CFR §72.6).

11. The application resulted in issuance of PSD permit No. 06-02 and this Order. Together the PSD and Order limit emissions from Power Boiler No.7. Therefore, upon Ecology receipt of written notice of project completion:

   - This Order along with PSD permit No. 06-02 supersedes conditions for particulate, opacity, NOₓ, SO₂, CO, and VOC specified for Power Boiler No.7 in Order No.97AQI004, and conditions in Order No.97AQI004 for particulate, opacity, NOₓ, SO₂, CO, and VOC at Power Boiler No.7 are rescinded.

12. A State Environmental Policy Act (SEPA) review was conducted by the City of Tacoma Public Works Department. A Mitigated Determination of Non-Significance (MDNS) was issued on April 12, 2007.

**CONDITIONS**

1. WestRock shall comply with Appendix A of this Order.

2. 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 the department. 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.

3. Access to the source by the U.S. Environmental Protection Agency (EPA), department 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.

4. At all times, including periods of startup, shutdown, and upset, WestRock 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 WestRock shall take immediate and appropriate corrective action to minimize emissions, including slowing or shutting down the emission unit.

5. Ecology may modify conditions contained herein, pursuant to legal requirements, based on air quality, emissions monitoring results, or upon the request of WestRock.

Nothing in this order shall be construed as obviating compliance with any requirement of law other than those imposed pursuant to the Washington Clean Air Act and rules and regulations thereunder.

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

<table>
<thead>
<tr>
<th>Street Addresses</th>
<th>Mailing Addresses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Department of Ecology</strong></td>
<td><strong>Department of Ecology</strong></td>
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<tr>
<td>Attn: Appeals Processing Desk</td>
<td>Attn: Appeals Processing Desk</td>
</tr>
<tr>
<td>300 Desmond Drive SE</td>
<td>PO Box 47608</td>
</tr>
<tr>
<td>Lacey, WA  98503</td>
<td>Olympia, WA  98504-7608</td>
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<tr>
<td><strong>Pollution Control Hearings Board</strong></td>
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<tr>
<td>1111 Israel Road SW</td>
<td>PO Box 40903</td>
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<tr>
<td>STE 301</td>
<td>Olympia, WA  98504-0903</td>
</tr>
<tr>
<td>Tumwater, WA  98501</td>
<td></td>
</tr>
</tbody>
</table>
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

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

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

Date  

Date  
APPENDIX A

The emission limits shall be monitored at the monitoring frequency and with the compliance test methods specified. Averages over the time specified in emission limits shall be determined by the arithmetic mean of measurements taken during the specified time period. Results of test runs found to be invalid shall be eliminated and results of the remaining valid test runs shall be used to find the arithmetic mean and determine compliance.

Power Boiler No.7 Requirements:

<table>
<thead>
<tr>
<th>Order Condition</th>
<th>Parameter</th>
<th>Limit (shall not exceed)</th>
<th>Monitoring &amp; Reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Opacity</td>
<td>10% average for more than 6 consecutive minutes in any 60 minute period.</td>
<td>DOE Test Method 9B is the reference test method. Ongoing compliance demonstrated by maintaining greater than 8 kilowatts of secondary power per side of the ESP, on a 3-hour block average. No secondary power is required when burning only natural gas. Should the Permittee wish to propose an additional set of surrogate monitoring parameters while routing all emissions through one side of the ESP, the Permittee must conduct a performance test from which surrogate monitoring parameters will be established. The Permittee must submit a test plan to Ecology 60 days prior to the date of the proposed test for review and written approval by Ecology. The results of the test plan must be submitted to Ecology 60 days after the date of the test with documentation of the proposed surrogate monitoring parameters. Ecology must approve the proposed surrogate monitoring parameters in writing. Once approved, the Permittee may route all emissions through one side of the ESP as long as the approved surrogate parameter is maintained, on a 3-hour block average. Report exceptions in the monthly report.</td>
</tr>
<tr>
<td>Order Condition</td>
<td>Parameter</td>
<td>Limit</td>
<td>Monitoring &amp; Reporting</td>
</tr>
<tr>
<td>-----------------</td>
<td>-----------</td>
<td>--------</td>
<td>------------------------</td>
</tr>
<tr>
<td>2.a</td>
<td>SO₂</td>
<td>220 lbs/hr – 1 hour average.</td>
<td>Continuously monitor and log fuel use. Calculate the SO₂ emission rate using methods of calculation specified in Footnote A1. Report daily maximum 1 hour averages, monthly maximum 1 hour average, and exceedances monthly.</td>
</tr>
<tr>
<td>2.b</td>
<td>SO₂</td>
<td>383 TPY – 12 month rolling total.</td>
<td>Report monthly total and 12 month rolling total monthly. Use the values calculated from Condition 2.a to calculate 12 month totals</td>
</tr>
<tr>
<td>2.c</td>
<td>SO₂</td>
<td>fuel oil ≤2% sulfur by weight.</td>
<td>Collect a well mixed sample from fuel oil tank(s) monthly. Use ASTM Method D129-118, D1552-16e1, D4057-19, or equivalent to determine %S content. Report result monthly. Alternatively, demonstrate compliance by maintaining fuel receipts which show %S content analyzed using one of the above methods. If demonstrating compliance using fuel records, all fuel delivered within the preceding 30 days (or the most recent delivery, if no fuel was delivered within the preceding 30 days) must contain sulfur analysis or the Permittee must demonstrate compliance via tank sampling. This requirement only applies to periods of time during which oil is fired in Power Boiler No.7.</td>
</tr>
<tr>
<td>3.</td>
<td>VOC</td>
<td>0.13 lbs/MMBTU.</td>
<td>Source test annually, at a minimum, using EPA Method 25A. An alternative method may be used if approved by Ecology. Use the average of 3 one-hour runs.</td>
</tr>
</tbody>
</table>
Order Condition | Operating Requirement for Power Boiler No.7
---|---
4. | Operate a continuous emission monitor for \( O_2 \) that conforms to 40 CFR Pt. 60 Appendix F and Appendix B, Performance Specification 3.

Footnotes:

A1. SO\(_2\) calculation methods:

For wood:

\[
\frac{\text{lbs SO}_2}{\text{hr}} = \frac{\text{Bone Dry Tones (BDT) wood}}{\text{hr}} \times \frac{0.080 \text{ lb SO}_2}{\text{BDT wood}}
\]

For natural gas:

\[
\frac{\text{lbs SO}_2}{\text{hr}} = \frac{1000 \text{ standard cubic feet gas}}{\text{hr}} \times \frac{0.003 \text{ lb SO}_2}{1000 \text{ ft}^3\text{gas}}
\]

For sludge:

\[
\frac{\text{lbs SO}_2}{\text{hr}} = \frac{\text{BDT sludge}}{\text{hr}} \times 22.8 \frac{\text{lb SO}_2}{\text{BDT wood}}
\]

For oil:

\[
\frac{\text{lbs SO}_2}{\text{gal oil}} = \frac{\text{gal oil}}{\text{hr}} \times \frac{\text{lbs oil}}{\text{gal oil}} \times \frac{\% S \text{ in oil}}{100\%} \times \frac{2 \text{ lb SO}_2}{\text{lb S}}
\]

For residual fuel oil density = 7.9 lbs/gal
For reprocessed fuel oil (RFO) density = 7.4 lbs/gal

Total SO\(_2\) (lbs/hr) = sum from all fuel sources.
*use most recent result of fuel oil tank(s) %S test in calculation.

Power Boiler No.6 Requirements:

<table>
<thead>
<tr>
<th>Order Condition</th>
<th>Parameter</th>
<th>Limit (shall not exceed)</th>
<th>Monitoring &amp; Reporting</th>
</tr>
</thead>
</table>
APPENDIX B

History of Order No. DE 97 AQ-I004

Order No. DE 95AQ-I007 was issued on April 7, 1995. It was a consolidation of all NOC orders, consents, and letters issued by Ecology to WestRock to date. The orders which Order No. DE 95AQ-I007 consolidated are as follows: Order 36-4, Order DE 85-668, Order DE 85-761, Order DE 85-787 and all amendments, Order DE 78-109, Order DE 88-347 and all amendments, and Order DE 91-AQI089.

On June 25, 1997, Order DE 97AQ-I004 was issued. This was essentially a reissuance of Order No. DE 95AQ-I007 with minor amendments. Order No. DE 97AQ-I004 was further modified on June 27, 1998 and March 17, 1999.

Order No. 1916-AQ05, issued July 26, 2005, which modified several orders, modified order No. 97AQ-I004 by reference. However, Order No. DE 97AQ-I004 was not concurrently modified and reissued.

Order No. 4153-AQ07, issued May 23, 2007, also rescinded several limits from the March 17, 1999 issuance of Order No. DE 97AQ-I004 by reference. However, Order No. DE 97AQ-I004 was not concurrently modified and reissued.

While several of the orders consolidated by Order No. DE 97AQ-I004 were compliance and administrative orders, Order No. DE 91-AQI089 was a Notice of Construction (NOC) approval order for Power Boiler No.7. As a result, Order No. DE 97AQ-I004 was both a compliance and NOC order. As Order No. 4153-AQ07 has superseded Order DE 97AQ-I004, Order No. 4153-AQ07 continues to act as and documents the initial NOC approval for the construction of Power Boiler No.7.

Information is provided below for each historical order that was consolidated in the original issuance of Order No. DE 97AQ-I004. The previous issuance of this order issued on March 19, 1999 implied that several other historical orders were “amended by” (or consolidated into) DE 97AQ-I004. The language used in the previous issuance of this order was misleading, as several of the orders listed only contained one-time requirements that had been fulfilled or orders that had been superseded. The orders consolidated have become obsolete over time.

Orders consolidated into the original issuance of Order No. DE 97AQ-I004 that remain relevant to this issuance of Order No. 4153-AQ07.

1. **Order 91-AQI089.** This order was issued on November 7, 1991. It approved the NOC application for the boiler which would later be called Power Boiler No.7.

   The Order contains the following information: “At the request of the Department of Ecology, a Notice of Construction was submitted on February 22, 1991, by Simpson for
approval to construct a hog fuel boiler. The boiler is to replace four existing hog fuel boilers and one existing oil fired boiler. Construction of the boiler began in 1989, with Ecology’s approval, and in response to Ecology’s Order No. DE 88-347. This Order was issued on December 29, 1988, and required the company to construct new emission controls and/or a new boiler in order to achieve compliance with the opacity standard of WAC 173-405-040(10). Ecology requested Simpson to submit a Notice of Construction for the nearly completed project in order fulfill the administrative requirements necessary to make the emissions limits on the new boiler subject to federal enforcement authority.

“On September 9, 1991, the Department issued a preliminary determination regarding its intent to approve construction of the new boiler, subject to certain emission limitations and operational requirements. Public notice of the preliminary determination was made on September 30, 1991. No public comments were received.”

This order was incorporated into Order 95AQ-I004, which was later amended and renumbered as 97AQ-I004. As Order No. 4153-AQ07 has superseded Order DE 97AQ-I004, Order No. 4153-AQ07 continues to act as and documents the initial NOC approval for the construction of Power Boiler No.7.

Orders previously “amended” by Order No. DE 97AQ-I004 that are now obsolete. The below list serves both to document the purpose of these historic orders and to explain why they are now obsolete.


2. Order DE 78-109. This order, issued February 28, 1978, was a compilation of all requirements WestRock was subject to in the Washington Administrative Code (WAC) and applicable existing compliance orders. The Order served as a way to summarize the state requirements prior to the issuance of a Title V AOP. The purpose of WestRock’s AOP is to incorporate all requirements, including those from the WAC, to which WestRock is subject. Therefore, this Order is made obsolete by the AOP.

3. Order DE 85-668. This order, issued on September 11, 1985, contained requirements for the operation of Recovery Furnaces No.3 and No.4 while black liquor is being fired. This was a compliance order issued to ensure that the Recovery Furnaces were operated properly during start-up conditions and to avoid the release of uncontrolled emissions. Recovery Furnace No.3 is no longer operating. An operating requirement for Recovery Furnace No.4 to not combust black liquor while both sides of the precipitator are out of service from Order DE 85-668 was included in Order No. DE 97AQ-I004. This was an
attempt to ensure compliance prior to the issuance of WestRock’s first AOP. This operating requirement has been determined to be unnecessary, as it could be interpreted as an allowance to operate consistently with one side of the electrostatic precipitator rather than a protective measure. WestRock’s AOP requires them to maintain their emission control equipment in a manner consistent with good air pollution control practices. Consistently operating with only one side of the electrostatic precipitator functioning is not a good air pollution control practice.

4. **Order DE 85-761.** This order, issued December 3, 1985, required WestRock to repair and inspect leaking values in the noncondensible gas collection system and to discontinue evaporator hot well venting. WestRock has already fulfilled these one-time requirements. WestRock’s noncondensible gas and evaporator hotwell continue to be regulated by 40 CFR Part 63, Subpart S. This requirements have been incorporated into their AOP.

5. **Order DE 85-787.** This order, issued December 10, 1985, required WestRock to complete a study of the noncondensible gas system, complete a study of the hog fuel boiler, and to establish a plan to implement a pollution control system for Power Boiler No.7. WestRock has already fulfilled these one-time requirements.

6. **Order DE 88-347.** This order, issued December 29, 1988, required WestRock to either install a replacement hog fuel boiler or construct new emission controls for the existing hog fuel boilers. This order was issued to bring the Tacoma Tideflats area into attainment with National Ambient Air Quality PM10 standards. After WestRock elected to construct a new boiler, Power Boiler No. 7, the order was amended on June 6, 1989 to include emission limitations for the new boiler. An NOC order for Power Boiler No.7, Order No. DE 91-AQI089 was issued on November 7, 1991. This order contains all of the emission limitations that were in the amended Order DE 88-347. It appears that the intent of the issuance of Order DE 91-AQI089 was that the emission limitations in Order DE 88-347 were to be superseded by Order DE 91-AQI089.

7. **Order DE 95AQ-I007 and DE95AQ-I004.** This order, issued on April 7, 1995, is the original issuance of Order No. 97AQ-I004. It consolidated the orders listed above. It was later amended and renumbered Order No.97AQ-I004.

8. **Order DE 97AQ-I004, Amendments.** On June 12, 1998, and March 17, 1999, Ecology amended the version of DE 97AQ-I004 which was issued on June 25, 1997. The first amendment allowed for a single-pass (run) test to be the minimum number of passes (runs) necessary to complete a stack test for consistency with Order DE 95AQ-1007. The second amendment replaced monthly monitoring frequencies with a tiered stack testing frequency in which stack testing frequency could be increased or decreased based on recent performance. These stack tests were required to show compliance with limits in the Washington Administrative Code (WAC). They were included in Order DE 97AQ-I004
to summarize requirements from the WAC prior to the issuance of WestRock’s first AOP. The WAC limits and required testing frequencies are now managed in WestRock’s AOP and are not included in Order No. 4153-AQ07 to avoid redundancy.

9. **NOC Order No.4153AQ-07.** This Order was issued on May 23, 2003. It approved the installation of a 60-MW steam cogeneration unit as well as improvements to Recovery Furnace No.4 and Power Boiler No.7. It was not identified at the time of issuance as an Order which superseded Order No.97AQ-I004. Ecology has determined in this modification of Order No.4153-AQ07 that it superseded Order No.97AQ-I004. See No.7 to the “findings and descriptions of changes” section of this Order for more information.