IN THE MATTER OF:  

Weyerhaeuser NR Company and  
The North Pacific Paper Corporation  
3401 Industrial Way  
P.O. Box 188  
Longview, WA  98632  

PSD 97-01, AMENDMENT 3  
FINAL APPROVAL  
OF PSD APPLICATION  

Pursuant to the U.S. Environmental Protection Agency (EPA) regulations for the Prevention of Significant Deterioration (PSD) in Title 40, Code of the Federal Regulations (CFR), Part 52.21, the Washington State Department of Ecology (Ecology) general regulations for air pollution sources, Chapter 173-400 Washington Administrative Code (WAC), and based upon the complete PSD Amendment Application submitted by Weyerhaeuser NR Company on May 19, 2010, Ecology now finds the following:

FINDINGS

1. The North Pacific Paper Corporation (NORPAC) facility is a paper manufacturing facility, which consists of three paper machines, a thermo-mechanical pulping (TMP) process, and a de-inking process. NORPAC is located on the same site as Weyerhaeuser NR Company's Kraft Pulping, Liquid Packaging and iLevel Lumber Manufacturing operations, and shares a common Title 5 Air Operating Permit with those operations.

2. The two paper machines and TMP operations that comprise the NORPAC I and II projects are covered under this PSD approval. The No. 3 Paper Machine and de-inking process are part of the NORPAC III project, are not subject to PSD requirements, and are not part of this approval.

3. The NORPAC I and II projects have the ability to produce many grades of paper, including newsprint and writing/book grades, at a combined production rate of 762,850 air-dried metric tons per year. Principal point sources of air contaminant emissions are:
   
   3.1 TMP Decker Exhausts (2);
   3.2 No. 2 (TMP) Spray Condenser Exhaust;
   3.3 Paper Machine No. 1 Vacuum Vent, Wet End Vents and Exhausters, and Dryer Vents, and
   3.4 Paper Machine No. 2 Vacuum Vent, Wet End Vents and Exhausters, and Dryer Vents.

4. In 1977, Ecology issued draft and final environmental impact statements (EIS) concerning the NORPAC I project. NORPAC submitted a Notice of Construction application to the Southwest Air Pollution Control Authority (SWAPCA) on February 1, 1978. On March 16, 1978, SWAPCA issued Order of Approval No. 78-326 allowing construction of the
5. NORPAC II essentially duplicated the NORPAC I project. In July 1979, Ecology issued a declaration of significance in regard to the NORPAC II project, referring to the 1977 EIS for the NORPAC I project. NORPAC submitted a Notice of Construction application to SWAPCA in July 1979. On August 23, 1979, SWAPCA issued Order of Approval No. 79-475 allowing construction of the NORPAC II project. At that time, SWAPCA’s Order of Approval was the only state or local air quality permit or approval required allowing commencement of construction of NORPAC II.

6. PSD 97-01 was issued on December 9, 1997. The emission limits were based upon the combined production of 540,000 Air Dried Metric Tons (ADMT) of newsprint per year. This permit accounted for 515,000 ADMT of normal brightness paper per year and 25,000 ADMT of high brightness paper. These production rates were based on the paper grade production mix anticipated at the time to satisfy future market demand for varying paper basis weight and brightness specifications. Thermo-Mechanical Pulping (TMP) fiber production required to support these paper production levels was projected to be 415,307 Bone Dry Metric Tons (BDMT) of normal brightness TMP pulp and 22,750 BDMT of high brightness TMP pulp per year. The permit effectively limited high brightness pulp and paper production as a percentage of total pulp and paper production, and limited total pulp and paper production based on projected grade basis weight mix.

7. PSD 97-01, Amendments 1 and 2 were issued on March 25, 2004 and April 24, 2004, respectively. PSD 97-01, Amendment 2 was an administrative amendment to PSD 97-01, Amendment 1. The two amendments allowed for operating flexibility to produce increased volumes of high-brightness and high basis weight paper grades. These grades were allowed to represent up to 100% of total production. Annual potential production rates for the highest production rate grades were 542,117 BDMT/year of TMP pulp and 623,685 ADMT/year of paper. Emission limits were based on these maximum potential production rates, rather than on the projected actual production rates for the grade mix anticipated to meet future market demand. Ecology found that the project was not a “major modification” per 40 CFR Part 52.21 because there was no significant net emissions increase of any regulated PSD pollutant. The emissions of all other air pollutants from the project were subjected to new source review by Ecology’s Industrial Section.

8. Today’s permitting action is a change in conditions as follows:

8.1 Update volatile organic compound (VOC) and carbon monoxide (CO) emission factors to incorporate the results of 2008 and 2009 source testing at the NORPAC facility. This round of source testing showed that implementation of various energy conservation projects yielded significant emission reductions.
8.2 Revise VOC and CO emission limits using updated emission factors and revised production projections for thermo-mechanical pulping and paper production. Emission limits for VOC and CO are reduced by more than 60% each from limits in the 2004 amended permit. This equates to a reduction in allowable emissions of about 600 tons per year for VOC and 575 tons per year for CO.

8.3 Revise requirements for source testing for purposes of verifying the reasonableness of emission factors. This revision allows for a reduced testing frequency from once every three years to once every five years if two consecutive source tests indicate emission factor changes within +/- 20% of the 2008-2009 emission rates.

8.4 Update estimated maximum production rates. NORPAC I and II production rates for highest production grades will total up to 748,980 BDMT/year of pulp and 762,850 ADMT/year of paper. This maximum production capacity is based on a calculated daily maximum pulp production rate, 365 day/year operation, and a 95% paper machine operating rate.

9. The Weyerhaeuser NR, Longview mill (consisting of a kraft pulp and paper mill, NORPAC, and wood products manufacturing) qualifies as a major source of air pollutants because it is listed as a major stationary source under Title 40, Code of the Federal Regulations, Part 51, Section 166, paragraph (b)(1)(i)(a) and has the potential to emit more than 100 tons per year of several pollutants.

10. The physical and process changes made to NORPAC I and II since PSD 97-01, Amendment 2 was issued, do not qualify as a “major modification” because the changes did not result in a significant net emissions increase of any regulated PSD pollutant.

11. The requested revisions to PSD 97-01, Amendment 2, were subject to public review and comment because Weyerhaeuser is requesting a relaxation of source testing requirements. A public notice was published in the Daily News newspaper on June 24, 2010. The public comment period closed on July 24, 2010.

12. The site of the project is within an area designated Class II for the purposes of PSD evaluation under 40 CFR 52.21 as amended through January 1, 1995.

13. The site of the project is within an area, which is in attainment for all pollutants regulated by state and national ambient air quality standards.

14. A Best Available Control Technology (BACT) analysis was not performed as part of this amendment because there was no net emissions increase in PSD pollutants or relaxation of any emission limit. The revised permit will continue to require BACT, as defined at the time of the original PSD permit, for each new or modified emission unit approved by the original PSD permit.

15. This permit supersedes PSD 97-01, Amendment 2, issued on April 24, 2004.
16. Visibility impairment will not be perceptibly increased in any Class I area as a result of this
permit revision.

17. Allowable emissions increases and decreases as a result of this permit revision, in
conjunction with all other applicable emissions increases or reductions (including secondary
emissions), will not cause or contribute to air pollution in violation of:

17.1 Any national ambient air quality standard.
17.2 Any applicable maximum allowable increase over the baseline concentration in any
area.

18. No noticeable effect on industrial, commercial, or residential growth in the Longview area is
anticipated due to the project.

19. On June 8, 2010, Ecology was notified by the US EPA that the US EPA has satisfied its
obligations under the Endangered Species and Magnuson-Stevens Acts relative to this
permitting action.

20. Ecology finds that all requirements for approval of the PSD application are satisfied and that
as approved below, the revised permit will continue to comply with all applicable federal
new source performance standards. Approval of the PSD application is granted subject to the
following conditions.
PSD APPROVAL CONDITIONS

1. VOC emissions from NORPAC I and II units shall not exceed 2,007 pounds per day when averaged over 30 consecutive days.

1.1. Compliance with the daily VOC emission limit shall be assured by computing daily VOC emission rates from the NORPAC I and II units.

1.2. Daily VOC emission rates shall be computed by summing daily production rates multiplied by the appropriate daily emission factors contained in Table 1, NORPAC I & II VOC Emission Factors of this permit. Such calculations shall account for all operations at each operating condition during each day of operation.

2. VOC emissions from the NORPAC I and II units shall not exceed 311.0 tons per year when averaged over any consecutive 12-month period.

2.1. Compliance with the annual emissions limit shall be assured by the summation of monthly-calculated emission rates over the calendar year.

2.2. Monthly emissions shall be calculated by multiplying monthly TMP and Paper Machine production values under each operating condition by the appropriate emission factors from Table 1, NORPAC I & II VOC Emission Factors, then summing the products. Such calculations shall account for all operations at each operating condition during the calendar month.

3. CO emissions from the NORPAC I and II units shall not exceed 307.6 tons per year when averaged over any consecutive 12-month period.

3.1. Compliance with the annual emissions limit shall be assured by the summation of monthly-calculated emission rates over the calendar year.

3.2. Monthly emissions shall be calculated by multiplying monthly TMP and paper machines production values under each operating condition by the appropriate emission factors from Table 2, NORPAC TMP I & II CO Emission Factors of this permit, then summing the products. Such calculations shall account for all operations at each operating condition during the calendar month.

4. Weyerhaeuser shall conduct source tests of the NORPAC I and II emission units for VOC and CO. The source testing shall be performed by an independent testing firm.

4.1. The emission points tested shall include those tested in the 2008-2009 emission evaluation program and serve as the basis for the refinement of emission factor summaries in Tables 1 and 2 of this permit.
4.1.1. On a case-by-case basis, Ecology may approve the exclusion of certain emission points from a specific source testing program, based on safety, technical or other emission unit-specific factors.

4.1.2. On a case-by-case basis, Ecology may approve the exclusion from a specific source testing program those emission units with estimated maximum emissions less than 2 tons per year of VOC and less than 5 tons per year of CO, based on results of the most recent source test.

4.1.3. Weyerhaeuser shall demonstrate to the satisfaction of Ecology why some emission points should not be tested during any particular source testing program.

4.2. Further source testing shall be conducted in 2012 and 2015. If either the 2012 or 2015 source testing indicates a significant deviation in the emission factors (± 20% from the 2008-2009 emission factors), additional source testing shall be conducted once every three years commencing in 2018. Otherwise, additional source testing shall be conducted once every five years commencing in 2020.

5. The objective for this source testing is to verify the reasonableness of the emission factors developed in the 2008-2009 emission evaluation program. Should there be a significant deviation in the emission factors developed from subsequent testing (± 20%), either Ecology or Weyerhaeuser may initiate a technical discussion on the need to amend the emission factors presented in Tables 1 and 2 of this permit, or Ecology may require amendment of the emission factors in Tables 1 and 2.

6. All source tests shall be conducted in accordance with the appropriate methods set forth in Title 40 Code of the Federal Regulations, Part 60, Appendix A as amended through July 1, 1996, or later.

6.1. Each performance test shall consist of three separate runs using the applicable test method, with the overall test result to be an arithmetic average of the results of the three test runs, in accordance with 40 CFR 60.8(f).

6.2. A test plan shall be submitted for Ecology’s approval at least 30 days prior to the testing.

6.3. The source tests and test methods shall include, but may not be limited to, the following:

6.3.1. Sampling location and in-stack points as measured by Reference Method 1.
6.3.2. Stack gas velocity and volumetric flow rate as measured by Reference Method 2.
6.3.3. Carbon monoxide as measured by Reference Method 10.
6.3.4. Volatile organic compounds, as measured by Reference Methods 25, 25A, or 25B, modified as necessary to handle high moisture content. Any moisture removed as a result of such modification shall be analyzed for VOCs, which shall be accounted for.
6.4. Any deviation from the above test methods must be agreed to by Ecology in the test plan.

7. Weyerhaeuser shall maintain records of emissions calculations, which will include:

7.1. The quantities of high brightness and normal brightness TMP pulp and paper produced during the month;

7.2. The approximate percentages of wood species types pulped during the month; and

7.3. The appropriate emission factors from Tables 1 and 2.

7.4. Weyerhaeuser shall report to Ecology, in a manner approved by Ecology, the monthly cumulative total VOC and CO emissions, in units of the standard, in the “monthly air report,” in accordance with the requirements of WAC 173-401-615.

8. Each occurrence of calculated emissions in excess of limits contained in this PSD approval shall be reported at least monthly within thirty days of the end of each calendar month to Ecology. The information shall include, but not limited to, the following:

8.1. The time of the occurrence.

8.2. Magnitude of the emission or process parameters excess.

8.3. The duration of the excess.

8.4. The probable cause.

8.5. Any corrective actions taken or planned.

9. Any activity that is undertaken by Weyerhaeuser or others, in a manner that 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 Weyerhaeuser of its obligations under any state, local, or federal laws or regulations.

10. Access to the source by the U.S. Environmental Protection Agency (EPA), Ecology, or local regulatory personnel shall be permitted upon request for the purpose of compliance assurance inspections. Failure to allow access is grounds for action under the Federal Clean Air Act or the Washington Clean Air Act.

11. Weyerhaeuser NORPAC shall maintain and follow an O&M manual for the facility. The O&M manual shall identify operational parameters and practices that will constitute proper operation of each emission unit in NORPAC I or II. The O&M manual shall be available for review by Ecology and EPA. Emissions that result from a failure to follow the requirements of the O&M manual may be considered credible evidence that emission violations have occurred. Ecology shall be notified whenever the manual is updated.
### Table 1 - NORPAC I & II VOC Emission Factors, Daily and Annual Emission Rates

<table>
<thead>
<tr>
<th>Source</th>
<th>Estimated Maximum Production Rate (daily)</th>
<th>Estimated Maximum Production Rate (yearly)</th>
<th>VOC Emission Factor</th>
<th>VOC Emissions (lb/day)</th>
<th>VOC Emissions (tons/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TMP #1 Process Vents</td>
<td>Pulp production, 1080 (BDMT/day)</td>
<td>Pulp production, 374,490 (BDMT/year)</td>
<td>0.340 (lb C/BDMT)</td>
<td>367</td>
<td>63.7</td>
</tr>
<tr>
<td>Reboiler Online</td>
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<tr>
<td>TMP #1 Process Vents</td>
<td>Pulp production, 0 (BDMT/day)</td>
<td>Pulp production, 0 (BDMT/year)</td>
<td>0.319 (lb C/BDMT)</td>
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<td>0</td>
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<td>Reboiler Down</td>
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<td>TMP #2 Process Vents</td>
<td>Pulp production, 1080 (BDMT/day)</td>
<td>Pulp production, 374,490 (BDMT/year)</td>
<td>0.340 (lb C/BDMT)</td>
<td>367</td>
<td>63.7</td>
</tr>
<tr>
<td>Reboiler Online</td>
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<tr>
<td>TMP Pressure Relief</td>
<td>Pulp production, 1080 (BDMT/day)</td>
<td>Pulp production, 149,796 (BDMT/year)</td>
<td>0.124 (lb C/BDMT)</td>
<td>268</td>
<td>9.3</td>
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<td>Valves B&amp;C Open</td>
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<td>PM 1</td>
<td>Gross Product, 1,000 (ADMT/day)</td>
<td>Gross Product, 346,750 (ADMT/year)</td>
<td>0.457 (lb C/ADMT)</td>
<td>457</td>
<td>79.2</td>
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<tr>
<td>PM 2</td>
<td>Gross Product, 1,200 (ADMT/day)</td>
<td>Gross Product, 416,100 (ADMT/year)</td>
<td>0.457 (lb C/ADMT)</td>
<td>548</td>
<td>95.1</td>
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<td>Total NORPAC I &amp; II VOC Emissions</td>
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<td></td>
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<td>2,007</td>
<td>311.0</td>
</tr>
</tbody>
</table>

### Table 2 - NORPAC I & II CO Emission Factors and Annual Emission Rates

<table>
<thead>
<tr>
<th>Source</th>
<th>Estimated Maximum Production Rate (yearly)</th>
<th>CO Emission Factor</th>
<th>CO Emissions (tons/year)</th>
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</thead>
<tbody>
<tr>
<td>TMP 1</td>
<td>Pulp production, 374,490 (BDMT/year)</td>
<td>0.805 (lb/BDMT)</td>
<td>150.7</td>
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<td>TMP 2</td>
<td>Pulp production, 374,490 (BDMT/year)</td>
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<td>PM 1</td>
<td>432 (MMcuf/year)</td>
<td>15.2 (lb/ MMcuFt Natural Gas)</td>
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<tr>
<td>PM 2</td>
<td>385 (MMcuf/year)</td>
<td>15.2 (lb/ MMcuFt Natural Gas)</td>
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<tr>
<td>Total NORPAC I &amp; II CO Emissions (Tons/yr)</td>
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<td></td>
<td>307.6</td>
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