

**WASHINGTON STATE DEPARTMENT OF ECOLOGY
POST OFFICE BOX 47600
OLYMPIA, WASHINGTON 98504-7600**

IN THE MATTER OF:

BP Cherry Point Refinery
4519 Grandview Road
Blaine, Washington 98230

PSD-95-01, FIRST AMENDMENT

PROPOSED APPROVAL OF
PSD APPLICATION

Pursuant to the United States Environmental Protection Agency (EPA) regulations for the Prevention of Significant Deterioration (PSD) set forth in Title 40, Code of Federal Regulations, Part 52 and regulations set forth in the Washington Administrative Code 173-400-141 and based upon the request for this amendment from BP West Coast Products, LLC on July 28, 2008, and the technical analysis performed by the Washington State Department of Ecology (Ecology), Ecology now finds the following:

FINDINGS

1. BP West Coast Products, LLC (BP, formerly British Petroleum) operates a petroleum refinery in Ferndale, Washington formerly owned by ARCO Petroleum Products Co. (ARCO), and known as the BP Cherry Point Refinery.
2. BP Cherry Point Refinery is a major stationary source that emits more than 100 tons of pollutants per year.
3. BP Cherry Point Refinery is located in an area that has been designated Class II for the purposes of PSD evaluation, and is located approximately 80 km from the nearest Class I area.
4. BP Cherry Point Refinery is located in an area that is currently designated as attainment for all national air quality standards and all state air quality standards.
5. ARCO obtained PSD approval to construct and operate a third calciner at the BP Cherry Point Refinery dated December 20, 1984 (PSD-3).
6. That permit was rescinded and reissued on January 30, 1989 to include an increase in the nitrogen oxides emission limit (PSD-89-2).
7. ARCO requested a new PSD permit to include sulfuric acid mist emissions (H₂SO₄) from the calciner. Ecology granted that request in PSD-95-01 (March 15, 1995). PSD-89-2 remained and still remains in effect. PSD-95-01 allowed an increase of up to 80 tons per year of H₂SO₄.
8. In this first amendment to PSD-95-01, BP requests expanding the H₂SO₄ test method to allow using EPA Conditional Test Method 013. In accordance with EPA

guidance, approval of this change is subject to opportunity for permit veto by EPA and public notice and opportunity for comment.¹

9. The emissions of H₂SO₄ are "significant" because they result in a net increase of more than seven tons per year. The permit modification must be treated as a "major modification" under PSD review.
10. A wet scrubber followed by a wet electrostatic precipitator has been selected to be Best Available Control Technology (BACT) for the control of H₂SO₄ mist.
11. The ambient impacts of the proposed increase in emissions were determined with the use of the EPA's Industrial Source Complex Short-Term 2 Model (Version 92062).
12. Modeling results show that there will be an increase of H₂SO₄ of approximately 0.03 micrograms per cubic meter (µg/m³) in the North Cascades National Park and sulfate deposition will increase by 0.2 kilograms per hectare per year (kg/ha/yr).
13. The project will have no significant impact on ambient air quality.
14. The project will not have a noticeable effect on industrial, commercial or residential growth in the Ferndale area.
15. Visibility will not be impaired in any Class I area due to the proposed emissions.
16. Ecology finds that all requirements for PSD have been satisfied. Approval of the PSD application is granted subject to the following conditions.

APPROVAL CONDITIONS

1. Emissions of sulfuric acid mist (H₂SO₄) shall not exceed 18.3 pounds per hour (lb/hr) or 50 milligrams per cubic meter (mg/m³, 24-hour average).
2. BP will participate in a dry deposition study in the North Cascade National Park.
3. Compliance with Approval Condition 1 will be measured by monitoring the performance of the Wet Electrostatic Precipitator (WESP) plus an annual source test (Approval Condition 5). Within 90 days of issuance of this permit, BP shall submit to Ecology for approval a plan for monitoring WESP performance. The plan will include operating ranges for the WESP and will define operating parameters that will be monitored and used to demonstrate compliance.

¹ EPA Technology Transfer Network, Emission Measurement Center, Test Methods, Category D: Historical Conditional Test Methods; <http://www.epa.gov/ttn/emc/tmethods.html#CatB>

4. Within 90 days after Ecology approval of the WESP monitoring plan BP shall source test Calciner Hearth 13 for H₂SO₄ mist. A plan for the source test will be submitted to Ecology for approval prior to testing. The source test plan will include testing the stack for compliance while the WESP is operating in the most limiting condition in the WESP monitoring plan.
5. BP shall perform annual source testing for H₂SO₄ using 40 CFR 60 Appendix A Method 8 or EPA Conditional Test Method 013.
 - 5.1 BP shall perform annual source testing within 11 to 13 months of the anniversary of the previous test.
 - 5.2 An alternate test method may be used if approved in writing, in advance by Ecology.
6. Any activity which is undertaken by the company or others, in a manner which is inconsistent with the application and this determination, shall be subject to enforcement under the applicable regulations.
7. Access to the source by the Environmental Protection Agency, state or local regulatory personnel shall be permitted upon request for the purposes of compliance assurance inspections. Failure to allow such access is grounds for revocation of this determination of approval.

Reviewed by:

Bernard Brady, P.E.
Science and Engineering Section
Air Quality Program
Washington State Department of Ecology

Date

Approved by:

Stuart A. Clark, Program Manager
Air Quality Program
Washington State Department of Ecology

Date