

**SITE CERTIFICATION AGREEMENT**

**BETWEEN**

**THE STATE OF WASHINGTON**

**AND**

**BP WEST COAST PRODUCTS, LLC**



**For the**

**CHERRY POINT COGENERATION PROJECT**

**WHATCOM COUNTY, WASHINGTON**

**Executed December 21, 2004**

**Amendment No. 1: Resolution No. 317, October 10, 2006**

**Amendment No. 2: Resolution No. XXX, XXXXXXXX XX, 2008**

**ENERGY FACILITY SITE EVALUATION COUNCIL**

**OLYMPIA, WASHINGTON**

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FOR THE CHERRY POINT COGENERATION PROJECT  
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## Attachments

- 1 Site Legal Description.
- 2 Legal Description of Wetland Mitigation Property and Deed Restrictions for Wetland Mitigation Areas.
- 3 Prevention of Significant Deterioration/Notice of Construction Permit.
- 4 National Pollutant Discharge Elimination System Permit.
- 5 Wastewater Disposal Permit.
- 6 Amended Stipulation Between the Council for the Environment and BP West Coast Products, LLC dated December 10, 2003.
- 7 BP – Whatcom County Amended Stipulation and Settlement Agreement dated July 27, 2004.
- 8 Council Order No. 803, Findings of Fact, Conclusions of Law, and Order Recommending Approval of Site Certification on Condition, dated September 24, 2004.
- 9 Letter of Understanding (LOU) 66, between Washington State Department of Transportation (WSDOT) and BP Cherry Point Refinery regarding traffic mitigation during construction of the BP Cherry Point Cogeneration Project.
- 10 Council Resolution No. 317: Amendment No. 1, Cherry Point Cogeneration Project Site Certification Agreement.
- 11 Council Resolution No. XXX: Amendment No. 2, Cherry Point Cogeneration Project Site Certification Agreement.

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**SITE CERTIFICATION AGREEMENT  
FOR THE CHERRY POINT COGENERATION PROJECT**

between

**THE STATE OF WASHINGTON**

and

**BP WEST COAST PRODUCTS, LLC.**

This Site Certification Agreement (Agreement) is made pursuant to Chapter 80.50 of the Revised Code of Washington (RCW) by and between the State of Washington, acting by and through the Governor of the State, and BP West Coast Products, LLC, (BP or the Certificate Holder), 4519 Grandview Road, Blaine, Washington, 98230.

BP filed, as required by law, an application with the Energy Facility Site Evaluation Council (EFSEC or Council) for site certification for the construction and operation of a natural gas-fired combined-cycle cogeneration facility to be located in the Cherry Point area of Whatcom County, Washington. The Council reviewed the application, conducted public and adjudicative hearings, and by order, recommended approval of the application by the Governor. On December 21, 2004, the Governor approved the Site Certification Agreement authorizing BP to construct and operate the Cherry Point Cogeneration Project (Project). The Council will administer this Agreement for the State of Washington. On October 10, 2006, the Council approved, by resolution, an amendment to this Agreement allowing an alternative phased construction schedule and project configuration, and other minor changes to this Agreement. On XXXXXX XX, 2008, the Council approved, by resolution, amendment to this Agreement changing the provisions governing the water supply for the Project.

The parties hereby now desire to set forth all terms, conditions, and covenants in relation to such site certification in this Agreement pursuant to Chapter 80.50.100(1) RCW.

The effective date of this Agreement shall be December 21, 2004.

## ARTICLE I: SITE CERTIFICATION

### A. Site Description

1. The Site on which the Cherry Point Cogeneration Project (Project) is to be constructed and operated is located in the Cherry Point area of unincorporated Whatcom County, and is described more particularly in Attachments 1 and 2 to this Agreement.
2. Within thirty (30) days of the effective date of this Agreement, the Certificate Holder shall provide the Council with the legal description of the property to be used for wetland mitigation. This legal description will be added to Attachment 2 of this Agreement. At least sixty (60) days prior to the beginning of site preparation, the Certificate Holder shall provide to EFSEC a copy of fully executed and recorded deed restrictions for the wetland mitigation areas, which shall be included as Attachment 2 of this Agreement.

### B. Site Certification

The State of Washington hereby authorizes the BP West Coast Products LLC (BP or Certificate Holder) to construct and operate the Project, as described in Article I.C. of this Agreement, subject to the terms and conditions set forth in Council Order No. 803, Findings of Fact and Conclusion of Law, And Order Recommending Site Certification on Condition, and this Site Certification Agreement. Such construction and operation shall be located within the areas designated herein and in the Revised Application for Site Certification submitted by BP on April 15, 2003, and as described in Attachments 1 and 2 to this Agreement. In addition, this Agreement incorporates the settlements and stipulated agreements made between BP and parties to the adjudicatory hearings set forth in Attachments 6 and 7 to this Agreement.

This Site Certification Agreement authorizes the Certificate Holder to begin construction of the Project by December 21, 2014; provided, however that the construction schedule that the Certificate Holder submits pursuant to Article IV.L of this Agreement demonstrates its intention and good faith basis to believe, that construction of the Project or Phase I of the Project shall be completed within thirty-three (33) months of beginning construction.

If the Certificate Holder does not begin construction of the Project or of Phase I of the Project as described in section D below, by December 21, 2009, the Certificate Holder shall report to the Council its intention to continue and shall certify that the statements and conditions contained in the Application are still valid and applicable, or identify any changes and propose appropriate resulting changes in the Site Certification Agreement to address changes. Construction may begin only upon prior Council authorization, upon the Council's finding that no changes to the Site Certification Agreement are necessary or appropriate, or upon the effective date of any necessary or appropriate changes to the Site Certification Agreement.

## C. Project Description

The Cherry Point Cogeneration Project will consist of a combined-cycle, Cogeneration Facility (Facility), and of wetlands Compensatory Mitigation and Restoration Areas. Unless the alternative phased configuration outlined in section D below is pursued, the Facility will consist of the three natural gas-fired combustion turbine generators with heat recovery steam generators, steam turbine generator, and associated equipment, buildings and structures. The Facility will have a gross nominal generation capacity of 738 megawatts (MW). Approximately 18 MW will be consumed on site, and 85 MW would be supplied to the BP West Coast Products LLC Refinery.

### 1. Combustion Turbine Generators

The Facility will have three General Electric Model 7FA natural gas-fired combustion turbine generator (CTG) units. Each gas-fired generator is expected to have a nominal power rating of 174 MW at average annual ambient temperatures. The Facility will be fired by natural gas, delivered at an estimated pressure of 550 psig, as measured at the turbine fuel train. Natural gas will be the only fuel fired in the turbines. The combustion turbines will use dry low-NOx technology.

### 2. Heat Recovery Steam Generators

Each CTG will be equipped with a heat recovery steam generator (HRSG) with supplemental duct-firing capability. The high temperature exhaust produced by each CTG will flow directly to an HRSG. Each HRSG will be equipped with Selective Catalytic Reduction and an oxidation catalyst for post-combustion NOx and CO emission reduction. Exhaust gases leaving each HRSG boiler will exit into a 150 foot tall steel stack.

### 3. Steam Turbine Generator and Process Steam

The Facility will be designed as a combined-cycle cogeneration facility. The steam produced by the HRSG will be delivered to the condensing steam turbine generator (STG). In addition, the Facility will be designed to deliver steam to the BP Cherry Point Refinery for use in refinery processes. The STG is rated to produce about 216 MW of electricity when 510,000 lbs/hr of steam is delivered to the refinery.

### 4. Fuel Supply

The Facility will be fueled with natural gas, delivered to the site by a connection to the 16-inch Ferndale Pipeline, which currently delivers natural gas from the West Coast Pipeline system at the United States - Canada border near Sumas, Washington to the BP Cherry Point Refinery and the Alcoa Intalco aluminum smelter. Natural gas may also be provided by a third party pipeline.

The Ferndale Pipeline will deliver gas to the Project site at a pressure of about 250-300 psig. The CGTs require a higher fuel pressure, so new electric-driven natural gas compressors will be installed to raise the pressure to approximately 550 psig at the Project battery limits.

Refinery fuel gas may also be used to fire the Project's duct burners so long as the project is able to comply with the emission limits found in the Prevention of Significant Deterioration/Notice of Construction permit (Attachment 3 of this Agreement).

#### 5. Water Supply System

The Facility will use industrial water provided by Whatcom Public Utility District No. 1 (PUD) pursuant to the PUD's existing water rights. The PUD owns and operates pipelines from its Nooksack River diversion facilities to both the Alcoa Intalco Aluminum Smelter and the BP Refinery. An underground pipe will be installed to transport water to the Facility.

**Deleted:** If the Alcoa Intalco Works aluminum smelter is in operation, the Facility will use recycled once-through cooling water from Alcoa, supplied by Whatcom County PUD.

Potable water required for drinking, personal washing and sanitation will be provided by the PUD or the Birch Bay Water and Sewer District.

#### 6. Water Discharge System

All process wastewater from the Facility will be collected and discharged to the BP Refinery wastewater treatment system pursuant to the conditions of a Wastewater Disposal Permit (WDP), included as Attachment 5 to this Agreement. BP Refinery wastewater is treated and discharged to the Strait of Georgia under National Pollutant Discharge Elimination System (NPDES) permit number WA-002290-0 issued by the Washington Department of Ecology.

Stormwater from the Facility will be collected, treated and discharged pursuant to the conditions of the NPDES permit included as Attachment 4 to this Agreement.

Sanitary wastewater from the Facility will be discharged to the Blaine Water and Sewer District.

#### 7. Cooling Tower

The Facility will use a wet evaporative, multi-cell, counterflow, mechanical draft cooling tower to cool condensed steam prior to entering the hotwell for condensate return and recycling into the boiler feedwater system.

#### 8. Electrical Interconnection

The Facility will provide electricity to the BP Cherry Point Refinery by two

230 kilovolt (kV) transmission lines and a new 230 kV substation located within the refinery.

The Facility will also export electricity to the Bonneville Power Administration system. A new 0.8-mile 230 kV transmission line will connect a new 230 kV switchyard at the Facility to an interconnection point with Bonneville's existing transmission corridor at Kickerville Road.

#### 9. Back-Up Generator

A small diesel-powered emergency generator will also be provided for emergency back up power to critical systems in the event of a total grid power failure. This generator is not expected to be larger than 1500 kW.

#### 10. Fire Water Pump

A small diesel-powered emergency fire water pump will also be provided for emergency fire water in the event of a total grid power failure. The pump is not expected to be larger than 265 hp.

#### 11. Wetlands Compensatory Mitigation and Restoration Areas

The Project includes the restoration of wetland areas.

Approximately 110 acres of degraded wetlands and surrounding uplands located in two Compensatory Mitigation Areas (CMAs) located north of Grandview Road will be restored. CMA1 consists of approximately 50 acres located east of Blaine Road and CMA2 consists of approximately 60 acres located west of Blaine Road. Historic drainage patterns will be restored by rerouting treated stormwater runoff and plugging existing ditches. Non-native invasive plant species, such as reed canary grass, will be removed and suppressed. Native plant communities will be established.

Approximately 4.86 acres of wetland and 4.41 acres of wetland buffers (collectively the "Restoration Area") that will be temporarily impacted by construction activities and equipment laydown will be restored. Wetland hydrology will be restored in the 4.86 acres of wetlands. Both wetland and buffer portions of the Restoration Area will be planted with a variety of forested, scrub-shrub and emergent plant communities dominated by native vegetation.

### **D. Alternative Facility Description – Phased Construction**

As an alternative to the Facility described in section C above, the Certificate Holder is authorized, at its discretion, to construct the Facility in two phases as outlined in this section. Unless specified otherwise below, aspects of the Project Description found in Section C above apply to the Alternative Phased Construction.

#### 1. Phase I

Phase I of the Facility will have two natural gas-fired CTG units, two HSRGs and a STG.

The CTGs will be either General Electric 7FAs, each with a nominal power rating of approximately 173 MW at average annual ambient temperatures, or Siemens SGT6-5000Fs, each with a nominal power rating of 198 MW. Natural gas will be the only fuel fired in the turbines. Natural gas will be delivered at an estimated pressure of 525 psig, as measured at the turbine fuel train. The combustion turbines will use dry low-NO<sub>x</sub> technology.

Each CTG will be equipped with a HRSG with supplemental duct-firing capability. The high temperature exhaust produced by each CTG will flow directly to an HRSG. Each HRSG will be equipped with Selective Catalytic Reduction and an oxidation catalyst for post-combustion NO<sub>x</sub> and CO emission reduction. Exhaust gases leaving each HRSG boiler will exit into a 150-foot tall steel stack.

Phase I will have a STG rated to produce 520-570 MW of electricity when 510,000 lbs/hr of steam is delivered to the refinery, depending on the model of turbine selected. The Facility will be designed as a combined-cycle cogeneration facility. The steam produced by the HRSG will be delivered to the condensing STG. In addition, the Facility will be designed to deliver steam to the BP Cherry Point Refinery for use in refinery process.

## 2. Phase II

Phase II will consist of modifications and additions to the Facility designed to increase its total gross capacity to no more than 738 MW. The Certificate Holder shall notify the Council of the specific modifications and additions, including equipment specifications and ratings, at least 180 days before commencing construction of Phase II. If the Council concludes that the proposed Phase II additions and modifications comply with the conditions set forth in this Agreement, it shall authorize the Certificate Holder to proceed with construction.

If the proposed Phase II construction would increase the Facility's total capacity to more than 738 MW, would not comply with conditions set forth in this agreement, or would result in environmental effects substantially greater than those associated with the originally approved project, the Certificate Holder shall be required to obtain an amendment to this Agreement (pursuant to the Council's rules and regulations) before proceeding with construction.

