memorandum

DATE: November 14, 2006

REPLY TO: KEC-4

ATTN OF: KEC-4

SUBJECT: Supplement Analysis to the BP Cherry Point Cogeneration Project Final Environmental Impact Statement (FEIS) (DOE/EIS 0349/SA-1)

TO: Page Andrews - TEP-CSB-2
Transmission Project Manager

Proposed Action: Proposed revisions to the Proposed BP Cherry Point Cogeneration Project

Proposed by: BP West Coast Products, LLC (BP) and Bonneville Power Administration (Bonneville)

Location: Between Ferndale and Blaine in northwestern Whatcom County, Washington, approximately 15 miles northwest of the town of Bellingham, Washington.

Description of Proposal: BP is proposing to change certain aspects of their approved but not yet constructed BP Cherry Point Cogeneration Project, which will be interconnected with Bonneville’s transmission system. BP has proposed the following changes related to the cogeneration facility itself:

- Allow BP the flexibility to either (1) construct the entire 720 megawatt (MW) project at one time, or (2) construct the facility in two phases, using either GE or Siemens combustion turbines;
- Allow use of treated refinery fuel gas in the Heat Recovery Steam Generator (HRSG) duct burners instead of natural gas;
- Allow the construction period to be lengthened from 27 to 33 months;
- Allow use of aqueous rather than anhydrous ammonia for control of nitrogen oxide (NOx) air emissions;
- Allow BP to determine during final project design whether stack silencers are required to meet established noise limits; and
- Allow the construction of the Ferndale Pipeline compressor facilities at a location near the U.S.-Canada border rather than at BP’s existing Cherry Point Refinery adjacent to the Cogeneration Project site.

The following changes to the interconnection of the cogeneration facility with the Bonneville transmission system have also been proposed:
• Interconnect a maximum of 520 MW (now described as Phase I of the entire 720 MW project) to Bonneville’s Custer/Intalco Transmission Line No. 2;
• Interconnect by only looping the existing 230-kilovolt (kV) Custer/Intalco No. 2 transmission line, rather than building a third circuit to Custer Substation from project;
• Eliminate required formal operating agreement between BP, Bonneville, and Intalco Aluminum Corporation for load-reduction protocol, due to reduction in Cherry Point generation capacity (interconnection of Phase I only);
• Change construction of Cherry Point switchyard at the project site to be done solely by BP, to Bonneville specifications, rather than Bonneville and BP jointly constructing, and
• At the point where the 0.8-mile 230-kV transmission line will enter the cogeneration facility site, realign the line to eliminate the sharp right angle while using only existing tower pads.

**Analysis:** The BP Cherry Point Cogeneration Project was analyzed in the *BP Cherry Point Cogeneration Project Final Environmental Impact Statement (FEIS)* August 2004 (DOE/EIS-0349). The FEIS was jointly written by Bonneville and the Washington State Energy Facility Site Evaluation Council (EFSEC). Washington EFSEC’s role in the project stemmed from its siting jurisdiction over all major energy facilities, such as the project, in the state of Washington. Bonneville’s role in the project involved making a decision whether to allow an interconnection of the project to Bonneville’s transmission system.

In December 2004, the state of Washington approved the project by approving the Site Certification Agreement (SCA) for the project. In November 2004, Bonneville approved the interconnection of the project to Bonneville’s transmission system through a Record of Decision (ROD). In doing so, Bonneville selected the proposed action from among the alternatives considered in the EIS.

In June 2006, BP submitted a request to EFSEC to amend their current SCA with various changes to the cogeneration facility, as described above. At about the same time, BP initiated discussions with Bonneville concerning the proposed changes to the interconnection with Bonneville’s transmission system that are described above.

For the proposed amendments to the BP Cherry Point Cogeneration Project SCA, EFSEC prepared an *Addendum to Final Environmental Impact Statement (EIS) Cherry Point Cogeneration Project*, dated September 11, 2006. The purpose of the Addendum was to 1) evaluate whether the proposed changes would have a probable significant adverse environmental impact on any element of the environment that could not be mitigated, and 2) determine whether the significance of any identified unavoidable adverse impacts has changed from the assessment in the FEIS. A discussion of each of BP’s seven proposed amendments to the SCA is presented in the Addendum and a summary of the analysis for the proposed changes is presented in Table 1 of the Addendum, which is hereby incorporated by reference. In general, the Addendum found the following for each of the seven proposed SCA amendments:

• Phasing and use of either GE or Siemens turbines: Phase I and Phase II would still occupy the same footprint as the originally permitted facility. No changes to construction and operation impacts are anticipated as all mitigation measures would
continue to be implemented for both phases. The use of either GE or Siemens turbines does not impact any resources.

- **Use of treated refinery fuel gas in duct burners:** Using treated refinery fuel gas must comply with the same Prevention of Significant Discharge (PSD) permit emission limitations applicable when operating the duct burners with natural gas. Air emissions from the facility must comply with state and federal control requirements, so any potential differences in using refinery fuel gas in the duct burners must meet the PSD permit requirements. With this requirement in place, there would not be any new or additional significant adverse impacts.

- **33-month construction period:** Temporary impacts from construction would last an additional six months but would not be more adverse. Best Management Practices (BMPs) installed during construction would continue to be installed and maintained for the extended construction period. This change would not result in any new or additional significant adverse impacts.

- **Use of aqueous ammonia for NOx control:** Ammonia emissions are limited through the PSD permit. Using a different type of ammonia will not change the ultimate ammonia emissions limit, because the emissions from the exhaust stack are limited by application of Best Available Control Technology and other state and federal emission limitations. With this requirement in place, there would not be any new or additional significant adverse impacts. Aqueous ammonia poses less risk than anhydrous ammonia when stored and handled, and the overall risk to workers and the population will be lower with the use of aqueous ammonia because the impacts of spill are less adverse.

- **Use of IBC 2003:** Use of the most current building code would ensure that the project is constructed to required specifications, including safety requirements. Implementation of this change would likely reduce safety risks during construction, and would not result in any new additional significant adverse impacts.

- **Determine stack silencer requirements during final project design:** Because BP would be required to meet noise emission conditions established and agreed to with Whatcom County, regardless of whether Phase I or both Phases are constructed, the noise impacts would be less, or the same as originally presented in the FEIS. With this requirement in place, there would not be any new or additional significant adverse impacts.

- **Relocation of the Ferndale Pipeline compressor facilities:** EFSEC’s Addendum reflects that relocation of the compressor facilities removes these facilities from EFSEC jurisdiction, and the Addendum does not provide an analysis of this change. Information on this change has been obtained from BP and reviewed. Under this change, the compressor facilities would be constructed at the head of the existing Ferndale pipeline at the U.S.-Canada border near Sumas, in unincorporated Whatcom County, Washington. The compression facilities would occupy about 4-5 acres including set-backs, and would consist of a compressor station building to house the compressors and a separate control room building. The existing Ferndale pipeline would provide gas to, and receive gas from, the compressor station. The only new piping required would be that needed to connect the compressor station to the Ferndale pipeline.
• All facilities would be located on vacant land that is zoned for agricultural use, but is currently not in productive use. The compressor station would be powered with electricity from an existing Puget Sound Energy 115-kV transmission line. Operation of the station would not result in any air emissions. In addition, the station would be sited to avoid any impacts to wetlands, wildlife habitat, and known cultural resources. Thus, it is expected that this change would not result in any new or additional environmental impacts that have not been already considered.

The overall finding of EFSEC’s analysis in the Addendum is that no new or additional significant adverse environmental impacts are expected from the proposed changes to the cogeneration facility. Accordingly, EFSEC issued a Determination of Nonsignificance under the Washington State Environmental Policy Act (SEPA) for the proposed SCA amendments on September 11, 2006. After holding a public hearing on the matter, EFSEC approved all of the proposed SCA amendments on October 10, 2006.

For the proposed changes to the cogeneration facility interconnection with the Bonneville transmission system, each of these changes was reviewed to determine if there are substantial changes to the proposal or significant new circumstances or information relevant to environmental concerns.

• The interconnection of a maximum of 520 MW (Phase I), rather than the entire 720 MW project into Bonneville’s Custer/Intalco Transmission Line No. 2 would represent a reduction in the amount of power interconnected to Bonneville’s system. No construction beyond that considered in the Cherry Point FEIS would occur as a result of this change. Accordingly, it is expected that this change would not result in any new or additional environmental impacts that have not been already considered.

• Interconnecting the cogeneration facility by only looping the existing 230-kV Custer/Intalco No. 2 transmission line, rather than building a new third circuit to Custer Substation, was considered as an optional approach for interconnection under the proposed action in the Cherry Point FEIS. Thus, this change is considered to be a revision of the alternative that chosen in the Cherry Point ROD, and not the selection of a different alternative from the FEIS. The environmental impacts of the currently proposed interconnection method were fully evaluated in the FEIS, and it is expected that this change would not result in any new or additional environmental impacts that have not been already considered. In fact, implementation of this change would actually result in a likely reduction in environmental impacts because the new third circuit to Custer Substation would not be built.

• Regarding the elimination of the formal operating agreement between BP, Bonneville, and Intalco Aluminum Corporation for load-reduction protocol, this agreement was strictly an operational-type agreement that did not have any associated environmental effects. This change thus would not cause any new or additional environmental impacts that have not been already considered.
• Construction of the Cherry Point switchyard at the project site by BP, to Bonneville specifications, rather than Bonneville and BP jointly constructing, is an administrative change. It is fully expected that the same construction methods would be used under the same standards. Accordingly, this change would not cause any new or additional environmental impacts that have not been already considered.

• Regarding the realignment of the 0.8-mile 230-kV transmission line at the cogeneration facility site, this change reflects a minor change of only a small portion of the transmission line route. Only existing concrete pads would be used for support structures, as was to occur under the original alignment. In addition, the same construction methods would be employed, and no additional ground disturbance would occur. Thus, it is expected that this change would not result in any new or additional environmental impacts that have not been already considered.

Findings: This Supplement Analysis finds that 1) the proposed changes are substantially consistent with the Cherry Point FEIS and ROD; and 2) there are no new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts. Therefore, no further NEPA documentation is required.

/s/ Dawn R. Boorse  
Dawn R. Boorse  
Environmental Lead – KEC-4

CONCUR:

/s/ James M. Kehoe for  
Katherine S. Pierce  
Date: November 14, 2006  
NEPA Compliance Officer – KEC-4