## BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

Docket No. UE-070074
Puget Sound Energy, Inc.'s
Motion to Extend Deferred Accounting

## **EXHIBIT B**

MARCH 19, 2007 LETTER FEDERAL ENERGY REGULATORY COMMISSION

## FEDERAL ENERGY REGULATORY COMMISSION ENERGY PRODUCTION

Office of Energy Projects
Division of Dam Safety and Inspections
Portland Regional Office
101 S.W. Main Street, Suite #905
Portland, Oregon 97204

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In reply refer to: P-2150-WA NATDAM-WA00173

Mr. Edward R. Schild Director, Energy Production and Storage Puget Sound Energy, Inc. P.O. Box 97034, OBC-14N Bellevue, Washington 98009-9734

Re: Eighth Part 12 Report, Upper Baker Development, Baker River Project

Dear Mr. Schild:

We have completed our review of the Eighth 5-year Independent Consultant's Safety Inspection Report (Part 12 Report), the Supporting Technical Information (STI) document, and your corresponding plan and schedule for the Upper Baker Development of the Baker River Project, FERC No. 2150, which were submitted by Puget Sound Energy's October 29, 2004 and December 27, 2004 letters, respectively. The approved consultants, Messrs. Glenn Tarbox and Kim de Rubertis, prepared the inspection report.

We are unable at this time to determine that Upper Baker Dam meets Commission dam safety standards and criteria. Based on the additional investigations required in accordance with your consultants' recommendations, a supplement should be submitted. We concur with your general plan and schedule for providing a Probable Maximum Flood (PMF) supplement to the Part 12 Report. We note that subsequent schedules have been submitted for the PMF analyses. If the new PMF changes significantly, please update to the Supporting Technical Information (STI) appropriately.

We do not concur that the PFMA Report is adequate; the Report did not include any PFMs for a sliding failure of Upper Baker Dam. According to the supplemental report titled Upper and Lower Baker River Dams Seismic Analysis, this concrete gravity dam has a required drain efficiency of 60 percent with a friction angle of 48.5 degrees and no cohesion to meet a factor of safety of 1.5 for normal (static) stability. Some of the gravity blocks have been previously subjected to fairly high uplift, i.e., low drain efficiencies. Although measured drain efficiencies are high (lowest is 80%), there

appears to have been no consideration for blocks where there are no measured piezometers and thus no measured drain efficiencies. It is possible that the dam may have some cohesion. However, this has not been documented and testing to document the cohesion was unsuccessful. In addition, some of the blocks have a significant adverse slope at the dam/foundation interface.

At a minimum, we think that a PFM of a sliding failure along the dam/foundation interface should have been considered, in particular for the potential for blocks with falling drain efficiencies.

There is no discussion of the possibility of increasing monitoring of drains and drain efficiencies. The gravity dam may require more performance monitoring and instrumentation.

We are concerned over the lack of information about a potential failure plane in the phyllite foundation of the left abutment, in particular under Monoliths 17 and 18. This issue was discussed in Appendix H, page 20. We note that several possible PFMs appeared to have been made Other Considerations in the PFMA Report. Since our Engineering Guidelines (Chapter 14) no longer use the Other Considerations category, we believe it would be prudent to reevaluate the PFMs together, on site with the Part 12 Consultants.

This and the issues discussed above will be further discussed in our in our review of draft reports submitted with the 2004 Report, listed below. Therefore, we will not require PSE to address our comments until we have commented on the supplemental report.

We are currently reviewing the following studies submitted with the Part 12 Report and will provide comments to you by separate letters.

Depression Lake Dike Failure Inundation Study
Depression Lake Dike Geotechnical Stability Study
West Pass Dike Seismic Stability Analysis
Upper and Lower Baker Dam Seismic Stability Analyses
Baker River Seismicity Report

We have the following comments about the STI:

1. <u>Section 1.4 "Summary of O & M Status"</u>. This section mentioned three problems, but did not list or discuss them. Section 6 does clarify the issues and these issues are part of the IC's recommendations. Section 1.4 should be clarified.

- 2. <u>Section 5 "Geology and Seismic Considerations"</u>. This section should be revised to include the shear strength and cohesion properties of the foundation.
- 3. Section 6 "Hydrology and Hydraulics". This section should be revised following completion of new PMF study due by the end of 2007. Appropriate updates should be made to the affected STI sections to include any revisions or new findings resulting from the new PMF study.
- 4. <u>Section 9 "Spillway Gates"</u>. This section needs to be revised to include the following information for each spillway gate type:
  - Table of material properties (steel type, trunnion bearing type and friction properties, etc).
  - A summary of the stress analysis computations
  - Graphic of gate model used for stress analysis
  - Table of critical stresses in each member for each load condition.
  - Trunnion, wheel, or other lubrication procedures, schedule, etc.
  - Summary of gate hoist motor load tests to date (line- line voltage, amperage draw, reservoir level, and initial draw if available)
  - Spillway gate detailed inspection report

If this information is provided in the accompanied compact disks, it should be mentioned in Section 9 of the STI.

Three copies of your plan and schedule for addressing the above comments should be submitted to this office within 30 days from the date of this letter. You are reminded that any revision made to the STI should be submitted in triplicate, to this office.

We appreciate your cooperation regarding dam safety matters. If you have any questions regarding this letter, you may contact Messrs. David Lord or Ron Wright of this office at (503) 552-2728 or (503) 552-2736.

Sincerely.

Patrick J. Regan, P.E. Regional Engineer