BEFORE THE STATE OF WASHINGTON
ENERGY FACILITY SITE EVALUATION COUNCIL

In the matter of
Application No. 2002-01
EXHIBIT 43.0 (DG-T)
BP WEST COAST PRODUCTS, LLC
BP CHERRY POINT
COGENERATION PROJECT

WHATCOM COUNTY’S PREFILED TESTIMONY
WITNESS # 43 : Douglas Goldthorp

Q: Please introduce yourself to the Council.
A: My name is Douglas Goldthorp, and I am the County Geologist for Whatcom County. I am a licensed geologist, engineering geologist, and hydrogeologist in Washington State, and I am familiar with the local geology of Whatcom County.

Q: What is the subject of your testimony?
A: I have reviewed those portions of the application and DEIS pertaining to the geology for the project and wish to voice several concerns and offer my opinion as to further geological investigation and mitigation which may be warranted for a project of this nature.

Q: How would you characterize the nature of this project?
A: If the proposed facility is intended to be a significant source of electrical power for our region, the public will no doubt come to rely upon its continued operation to supply its emerging energy needs. It is therefore clear that the facility is one that must be sited and designed to withstand significant seismic events. For those reasons, I think that it is imperative that the Energy Facility Site Evaluation Council (EFSEC) take all reasonable steps to ensure that the facility is appropriately designed and monitored for seismic events.

Q: What concerns do you have about the geology of the site?
A: In general, the seismicity and geology of the site should be better defined utilizing all available data, including the recent research hypothesis of Dr. Don Easterbrook, Professor Emeritus of Geology, Western Washington University, regarding the Sumas Fault and its potential extension to the Cherry Point area. A separate seismic assessment report should include at a minimum, but not limited to: the previously reported information; the existing water well log data, petroleum exploration well and geophysical data, geotechnical data; the known and postulated fault structures that may project through the vicinity, and all other relevant published and electronically available geological and geophysical information within a geologically significant radius.

Although Dr. Easterbrook’s hypothesis is mentioned in the application and DEIS, I am also concerned that to date the project review has not incorporated in a meaningful way the issues which Dr. Easterbrook’s research findings raise in relation to the construction of the project.

Furthermore, as I mentioned in my comments to the DEIS, I am also concerned that the geological investigation performed on the project site did not include a reference or analysis of invaluable depth-to-bedrock, bedrock, and seismic information that has been developed by petroleum explorations over the past several decades near the site.

Q: How do you feel these deficiencies could be addressed?

A: The geologic deficiencies mentioned above could be included in a separate seismic assessment report.

Given the nature of this facility, I believe a Probabilistic Seismic Hazard Assessment (PSHA), that would define the level of construction design necessary for this specific site, should be required as part of the post-approval facility design criteria.

EFSEC faced similar issues in relation to the siting of the Sumas Energy 2 project and recognized in its Council Order No. 768 the value which a PSHA can bring forward during the design phase of a project of this nature. As the geology of the two sites may exhibit commonalities, those prior findings and conclusions may be relevant to the present project action and should be considered in the context of the present application.

Additionally, if the project is permitted, the conditions of its operation should include an ongoing post-construction seismic monitoring program. Such a program would enhance the safety of the facility and its workers, as well as further public assurance of continued energy service.

Q: Would you please briefly describe what you mean by an ongoing post-construction seismic monitoring program?
A: Such a program would require the installation of monitoring devices such as
accelerometers or strain gauges connected to a data acquisition system, which would
provide indications as to how the structure or facility has reacted to observed or measured
seismic events. Should a significant seismic event occur, inspection of the passive
indicators could provide valuable feedback to the facility engineers to determine whether
any remedial structural measures may be warranted as a result of the event. A qualified
structural engineer can easily develop the details of such a monitoring program. Such a
monitoring program should not be too economically burdensome for the applicant, and
can obviously provide valuable feedback to help ensure the integrity of the structure and
the safety of its occupants. A new initiative by the United States Geological Survey
(USGS) is attempting to convince developers to consider seismic instrumentation for new
buildings.

END OF TESTIMONY

I declare under penalty of perjury that the above testimony is true and correct to the best
of my knowledge.

Executed at Bellingham, Washington, on this 6th day of November, 2003.

By: ______________________
Douglas Goldthorp