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3 BEFORE THE STATE OF WASHINGTON  
4 ENERGY FACILITY SITE EVALUATION COUNCIL

5 In the Matter of Application No. 96-1,

6 EXHIBIT \_\_\_\_\_

7 Olympic Pipe Line Company Cross Cascade  
8 Pipeline Project,  
9

10 PREFILED COMBINED TESTIMONY OF  
11 KATHY THORNBURGH AND BILL LEIF

12 ISSUE: LAND USE/ENVIRONMENTAL IMPACT  
13 SPONSOR: SNOHOMISH COUNTY  
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1 **Q: Please state both your names and your employment positions with**  
2 **Snohomish County.**

3 A: My name is Kathy Thornburgh, and I have been a Water Quality Specialist for  
4 Snohomish County Surface Water Management for seven years managing stream  
5 monitoring program.  
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7 My name is Bill Leif, and I am a Water Quality Engineer (currently Engineer III)  
8 for Snohomish County Surface Water Management (1991 to present).  
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10 **Q: Could you please identify your educational background and experience in**  
11 **your professional fields?**

12 A: Kathy Thornburgh: M.S. - University of Washington, College of Fisheries; B.A. -  
13 University of Tennessee. I worked 4.5 years with the Tulalip Tribes managing  
14 water quality laboratory and water quality sampling programs. I worked 3.5 years  
15 with Alaska Department of Fish and Game as a Habitat Biologist, and 3 years with  
16 University of Washington as a Marine Biologist  
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18 Bill Leif: B.S. Geology, 1983, University of Washington; M.S.E., Environmental  
19 Engineering, 1992, University of Washington. My duties for Snohomish County  
20 include managing storm sewer investigation and stormwater monitoring programs;  
21 technical research and assistance on stormwater treatment systems, water resource  
22 code and policy revisions. My previous work experience includes design and  
23 construction inspection of sanitary sewers, municipal wastewater treatment plants,  
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1 roads, and other miscellaneous engineering projects laboratory research. (1980-  
2 1991) I have a Washington Professional Engineer (civil) license #28566.

3 Miscellaneous professional affiliations and activities include:

- 4 • Technical Advisory Committee, development of specific permit requirements  
5 for NPDES industrial stormwater permits issued to vehicle recycling facilities  
6 (Dept. of Ecology).
- 7 • Technical Advisory Committee, revision of stormwater treatment volume of  
8 Stormwater Management Manual (Dept. of Ecology).
- 9 • Co-chair, Stormwater Managers Committee, Washington State Chapter of  
10 American Public Works Association.
- 11 • Co-editor, Stormwater Treatment Northwest quarterly newsletter.
- 12 • Numerous professional conference presentations on stormwater treatment and  
13 stormwater management.
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18 **Q: Could you please comment on the water quality/aquatic habitat impacts of**  
19 **the proposed Project?**

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21 A: Little Bear supports chinook, coho, and sockeye salmon and cutthroat trout.  
22 Anderson, Ricci, Elliott, and the unnamed creeks may also support coho salmon in  
23 the lower reaches. Water quality impacts during construction and operation could  
24 impact salmon and other aquatic life in the streams.  
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1 The Projects greatest potential for impacts to aquatic habitat and aquatic life  
2 in Snohomish County is to Little Bear Creek. Snohomish County has monitored  
3 water quality monthly at two sites in Little Bear Creek since 1993. County  
4 monitoring shows pollution from fecal coliform bacteria, nitrate, and metals.  
5 These pollutants are commonly found in streams with runoff from urban and rural  
6 land uses. A current University of Washington study conducted by the Center for  
7 Urban Water Resources Management has found a general pattern of steady  
8 downstream degradation in Little Bear Creek which correlates to changes in  
9 riparian corridor and land use. This loss of healthy biological condition results  
10 from fragmentation of the riparian corridor. Any proposed activity should  
11 maintain an intact riparian corridor to ensure that habitat remains at current  
12 conditions. The invasive construction methods proposed by OPL would disturb  
13 the riparian corridor as well as the stream channel and banks. Non-invasive  
14 methods could prevent further fragmentation of the riparian corridor.  
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19 Potential water quality concerns from operation and construction of the  
20 pipeline include sediment, leaks and spills of petroleum products, pH changes, and  
21 increased surface and road runoff. Even if impacts occur upstream of salmon  
22 habitat, the water quality effects can be significant downstream.  
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25 Construction effects of turbidity may be alleged to be temporary, but the  
26 effects of sedimentation can be long-term. Sediment may be transported and  
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1 deposited downstream of the project site, extending the range of impacts. Non-  
2 invasive construction methods could substantially reduce the risk of short and long  
3 term impacts to water quality by avoiding in-channel excavation.

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5 The DEIS on page 3-125 states that the majority of the stream crossings  
6 would incur short-term moderate impacts lasting less than three years.<sup>1</sup> No  
7 documentation is given to show that construction impacts to wetlands and riparian  
8 corridors and the resulting scour and sedimentation in stream beds would last less  
9 than three years. The DEIS further states that when multiple crossing within one  
10 watershed occur, the impacts would remain moderate. In Snohomish County,  
11 multiple stream crossings are proposed in the Little Bear and Peoples Creek  
12 watersheds. The DEIS contains no information on why only “moderate” impacts  
13 are expected with the open cutting construction methods proposed by OPL for  
14 these stream channels.  
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18 Reducing recruitment of woody debris by removing trees at stream  
19 crossings, as discussed on page 3-128 in the draft DEIS, should not be considered  
20 a minor impact. Lack of woody debris in streams has been found to be a major  
21 factor in declining salmon habitat in Puget Sound lowland streams. The impacts of  
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25 <sup>1</sup> See, Exhibit RS-5.  
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1 removing riparian vegetation could create more than “minor” impacts on bank  
2 stability.

3 A leak or spill of petroleum products could be detrimental to aquatic life  
4 at the project site and much farther downstream. Field and laboratory evidence  
5 have demonstrated both acute lethal toxicity and long-term sublethal toxicity of  
6 oils to aquatic organisms. Sublethal effects of petroleum products are reported at  
7 10 to 100 ug/l and concentrations as low as 1 ug/l can harm aquatic life. The  
8 discussion on page 3-133 in the DEIS gives no information about water quality  
9 degradation from a leak or spill. The use of single wall pipe has been proposed  
10 for river and wetland crossings. Snohomish County joins EPA in questioning the  
11 decision to use single rather than double wall pipe.<sup>2</sup>  
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23 <sup>2</sup> A standard reference for water quality criteria and impacts to aquatic life and human health is: U.S.  
24 Environmental Protection Agency. 1986. Quality Criteria for Water. EPA 440/5-86-001. The impacts of sediment  
25 to fish and other aquatic life are described in: MacDonald, Lee H., Alan W. Smart, and Robert C. Wissmar. 1991.  
26 Monitoring Guidelines to Evaluate Effects of Forestry Activities on Streams in the Pacific Northwest and Alaska,  
27 EPA Region 10 and University of Washington Center for Streamside Studies, Seattle, WA. 166 pp.