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

4 In the Matter of )  
Application No. 96-1 ) TESTIMONY OF RANDY SANDIN  
5 )  
6 OLYMPIC PIPE LINE COMPANY ) • Land Use  
7 CROSS CASCADE PIPELINE PROJECT ) • Pipeline design and construction  
8 ) • Spill prevention, monitoring and  
response  
9 ) • Stream Crossings  
• Wetland crossings

10 1. I, Randy Sandin, am a Supervising Engineer with the King County Department of  
11 Development and Environmental Services. In that capacity, I am routinely called upon to evaluate  
12 whether various development proposals within unincorporated King County are in compliance with  
13 County land use and zoning requirements pertaining to sensitive areas, clearing and grading,  
14 shorelines and other related zoning and land use regulations. I am also responsible for oversight of  
15 King County's sensitive areas and clearing and grading regulations and issuance of clearing and  
16 grading permits. In this capacity, from time to time, I act as the Department's permit manager for  
17 large, complex projects, which have included such projects as Tacoma Public Utilities Second  
18 Supply Pipeline, and Seattle Public Utility's Tolt Filtration DBO. I am fully familiar with County  
19 land use plans and zoning code provisions bearing on the proposed routing of the Cross Cascade  
20 Pipeline within King County. I have reviewed the likely impacts of the proposed pipeline route  
21 through King County and file this Testimony of my own personal knowledge in support of the  
22 County's position that the currently proposed pipeline is not consistent with County land use plans  
and zoning ordinances and that compliance with standards set forth in such plans and ordinances

1 should be required in any site certification recommendation issued by the Council for this project.

2           2.       Exhibit 1 to this Testimony contains a summary of the information, including  
3 documents, discussions, interviews, and site visits, that I considered during my review of this  
4 application.

5           3.       In addition to the materials included in Exhibit 1, I have specific knowledge of the  
6 types of impacts that can occur as a result of utility construction in sensitive areas, such as geologic  
7 hazard areas, wetlands, streams and flood plains. Utilities were largely unregulated in  
8 unincorporated King County until March of 1990. (see Exhibit 2) This unregulated development  
9 resulted in very significant impacts or problems occurring from installation of utilities in stream  
10 corridors and through geologically hazardous areas. Some examples of such impacts and problems  
11 are noted in the following paragraph.

12           4.       The Madsen Creek Sewer line, located in the Madsen Creek ravine, a tributary of the  
13 Cedar River, has been exposed during five different flood events during the past 24 years. During  
14 the November 1990 floods, approximately 150 lineal feet of the sewer line was exposed and the  
15 pipeline separated, discharging approximately 1.5 million gallons of raw sewage into Madsen  
16 Creek. (see Exhibit 3) This discharge resulted in a fish kill and created a public health hazard. The  
17 January 1990 floods caused significant scour and downcutting in Madsen Creek that exposed  
18 approximately 400 lineal feet of the sewer line and also triggered a landslide that exposed two  
19 natural gas lines. (see Exhibits 3 and 4) The gas lines were abandoned and removed from the  
20 stream corridor in 1996. (see Exhibit 5) To stabilize the stream and prevent future downcutting,  
21 King County has undertaken a number of bank stabilization and flow modification projects. These  
22 past projects have resulted in hardening of the stream and stream bank (see Exhibits 5 and 6). An

1 additional project is proposed for 1999 to further stabilize the streambank, protect the sewer line  
2 from additional downcutting and to provide mitigation for the past activities that have occurred in  
3 the stream corridor. Madsen Creek is just one example of how natural forces can impact utilities, or  
4 conversely, how utility construction in natural hazard areas can accelerate destabilizing forces.  
5 Other recent examples of similar occurrences can be found in Soos Creek (Exhibits 5 and 7),  
6 Issaquah Creek and the Snoqualmie River. (see Exhibit 5) This is a very small sample of the  
7 numerous permits that are issued by DDES annually to either protect utilities that have been  
8 damaged by floods, landsliding or other natural forces or to protect sensitive area features, including  
9 wetlands and streams, from failed utilities.

10         5.         This March 1990 reversal of policy by King County was intended to assure that all  
11 future utility construction was done in accordance with the relevant provisions of King County's  
12 zoning, shorelines and development regulations and to assure that problems such as those described  
13 in the preceding paragraph did not recur. Since 1990, King County has imposed stringent standards  
14 on new utility development to assure that the purposes of King County Codes are met. A  
15 representative sample of these permits is included in Exhibit 8. King County would reasonably  
16 expect that construction of this proposed pipeline project would meet or exceed the same standards  
17 that other utility projects are held to.

18         6.         The proposed route of the Cross Cascades Petroleum Pipeline project crosses through  
19 approximately 40 miles of unincorporated King County, generally east of the cities of Duvall and  
20 Carnation, through the cities of Snoqualmie and North Bend, and then south of I-90 along portions  
21 of the John Wayne Trail and existing state and U.S. Forest Service roads and Bonneville Power  
22 Administration right-of-way. A pump station is proposed to be constructed east of North Bend

1 adjacent to the Cedar Falls Trail.

2           7.       Within King County, the route largely follows existing roads and utility corridors;  
3 however, approximately 3.5 miles of new corridor will be created, and an additional 3.5 miles of  
4 existing corridor will be widened. The corridor crosses eight different zone classifications, and will  
5 cross numerous wetlands and streams. (see Testimony of Gillen and Finney) The proposed corridor  
6 also traverses designated floodways, shorelands, wetlands, and geologic hazard areas that are  
7 mapped and protected by King County shoreline and critical area zoning. (see also Testimony of  
8 Bottheim and Parsons) The right-of-way for the pipeline will be sixty feet wide except where  
9 existing trails and roads are used. In these cases, the corridor will be restricted to the width of the  
10 trail or road. The corridor will be reduced to thirty feet at all wetland and stream crossings that are  
11 not located within existing roads or trails. Thirty feet of the right -of-way will be permanently  
12 maintained to allow for aerial inspections. At wetland and stream crossings, the maintained right-  
13 of-way will be reduced to 10 feet except, again, if the crossing is located within an existing road or  
14 trail. The pipeline would be buried underground except at the proposed crossings of the  
15 Snoqualmie River, South Fork Snoqualmie River, Tokul Creek, Boxley Creek and Change Creek  
16 where the pipeline will be hung from existing bridges. Other than at the bridged stream crossings  
17 and a few road crossings, the balance of the pipeline will be open trenched.

18           8.       King County and the other counties and cities traversed by the proposed pipeline  
19 route objected to EFSEC’s acceptance of Olympic Pipe Line Company’s (“OPL’s”) initial  
20 application for site certification asserting, among other things, that the pipeline application lacked  
21 sufficiently detailed technical analysis for a meaningful evaluation of land use consistency to be  
22 made. Accepting the application without a proper level of detail has had the effect of essentially

1 shifting the burden of proof from the applicant to the cities, counties and state agencies that have a  
2 jurisdictional, regulatory or proprietary interest in this project. Under normal circumstances, it is the  
3 applicant's responsibility to provide a complete design with the necessary supporting documentation  
4 to show how the project conforms to applicable land use and zoning laws.

5 9. King County deferred action on OPL's request for a certificate of land use  
6 consistency until after publication of the DEIS with the expectation the DEIS would contain the  
7 necessary detailed technical analysis that was lacking in OPL's application and which is needed for  
8 a thorough evaluation of land use issues. The DEIS does not include a level of technical analysis  
9 reasonable for proper review of this projects impacts.

10 10.. King County has been closely monitoring the application since it was filed in  
11 February 1996. In March 1996, King County notified EFSEC that it could not properly evaluate  
12 land use consistency issues until more detailed information was provided. The County anticipated  
13 that such detail would be included in the project's draft environmental impact statement (DEIS).  
14 Meanwhile, in October 1996, OPL and the six counties entered into a stipulated agreement for the  
15 purpose of effectuating meaningful discussions on land use consistency issues. Through this  
16 stipulation, OPL agreed to provide relevant environmental information on geology, wetlands,  
17 streams, wildlife, groundwater impacts and related matters regarding the proposal. Reports on  
18 Bridges, Product Spills, Biological Assessments, Fisheries and Aquatic Resources, Cultural  
19 Resources and a draft Alternatives Analysis were provided to King County by the applicant in  
20 March of 1997. On May 23, 1997, a partial-draft screening level pipeline scour evaluation was  
21 provided. The geotechnical evaluation and detailed alternatives analysis that were required  
22 pursuant to the October 1996 stipulated agreement were not provided. Throughout this process

1 King County has made clear that some elements of the proposed project, as currently proposed, are  
2 inconsistent with King County zoning and shorelines regulations. On May 11, 1998, OPL submitted  
3 a revised application to EFSEC.

4 11. OPL has described a number of mitigating measures in the Application for Site  
5 Certification (“ASC”), that, if followed, would partially satisfy some of the requirements of King  
6 County Code. These were summarized in Appendix C to the DEIS. Unfortunately, many of the  
7 mitigating measures are not measures that OPL intends to integrate into the project design. In many  
8 instances, they are merely statements of what could mitigate particular impacts, not a commitment  
9 to implement that particular measure. For instance, on page C-22 , the DEIS lists a number of  
10 measures that could be implemented to reduce potential impacts to groundwater. These include  
11 deeper burials, concrete coating, thicker walled pipe, cathodic protection, and trench lining through  
12 sensitive areas. OPL has made it very clear that, with the exception of cathodic protection, they  
13 have no intention of implementing any of these mitigating measures to protect groundwater  
14 resources in King County. I based this statement on a personal communication I had with Claude  
15 Harshbarger, on October 22, 1998. At page C-8, Protection Measures against Liquefaction, the  
16 DEIS lists five “(e)xamples of accepted construction practices that would be considered.” These are  
17 not mitigation measures, merely observations of what might be. King County has asked OPL, in a  
18 letter dated October 28, 1998 (See Exhibit 9), specifically which of these measures they were  
19 committed to implementing. Olympic has not responded to this request which has frustrated King  
20 County’s efforts to meaningfully evaluate this project for land use consistency and to evaluate the  
21 merits of the DEIS. Similarly, it is difficult to understand how the DEIS can conclude that these  
22 measures will meaningfully mitigate project impacts when the full range of impacts are not

1 disclosed and there is this seeming lack of commitment from OPL to implement many of these  
2 measures. (see Testimony of Gillen and Finney)

3 12. Neither the ASC or the DEIS adequately evaluates alternatives to the proposed  
4 project, either with respect to its location or how it is proposed to be designed and constructed.  
5 There is not a detailed evaluation of alternatives other than the proposed action and the No-Action.  
6 The DEIS does not adequately or objectively analyze or verify information developed by the  
7 applicant for the Application for Site Certification which results in understatement of potential  
8 impacts, over- statement of the benefits of mitigation, in the elimination of alternatives from  
9 detailed review, and in the improper relegation of environmental considerations to a secondary role  
10 as compared with project cost considerations. Finally, the DEIS erroneously concludes that this  
11 proposal is consistent with the King County Comprehensive Plan, Shorelines Master Program and  
12 zoning regulations. As currently proposed, for reasons discussed more fully in the sections which  
13 follow, it is not.

14 13.. The DEIS discussion of project impacts upon King County land use is limited to  
15 three conclusory statements in Table 3.12-3, page 3-232, that are listed below:

16 Zoning Code: Permitted use in all zoning designations.

17 Comprehensive Plan: No specific policies on petroleum pipelines or pump stations  
18 (evaluated against policies for facilities and services, energy and  
telecommunications)

19 Shoreline Master Plan: Permitted use.

20 With these unsupported assertions, the DEIS erroneously concludes on page 3-231 that the proposal  
21 is consistent with the relevant King County plans (including the zoning code, comprehensive plan,  
22 and shoreline master plan). With this same information, the DEIS goes on to conclude, on page 3-

1 229, that the State of Washington Growth Management Act and Shorelines Management Act have  
2 also been satisfied. In reaching these conclusions, the lead agencies have relied solely upon  
3 information provided by the applicant in the Application for Site Certification. The DEIS has not  
4 independently and objectively evaluated land use consistency issues relative to King County's  
5 Comprehensive Plan, Shorelines Master Program, or Zoning Code. (DEIS, page 231, Table 3.12-3,  
6 footnote) The DEIS has not independently or objectively evaluated the merits of the applicant's  
7 information. Furthermore, there was no effort taken to verify, with King County staff, contrary to  
8 the assertion on DEIS Table 3.12-3, that local land use s (DEIS Appendix R-14), information is  
9 correct. By failing to independently evaluate land use consistency matters or to consult with  
10 affected local jurisdictions, the lead agencies have effectively delegated responsibility to the  
11 applicant for determining what plans or codes are "relevant." (DEIS, page 3-223, 3-231) Allowing  
12 the applicant to dictate the contents of the DEIS undermines impartial and unbiased review and  
13 raises serious questions about the integrity of the document. The conclusory assertion on page 3-  
14 231 and on Table 3.12-3 is incorrect and should be amended. This project, as presently proposed,  
15 will significantly conflict with King County's planning, zoning and shorelines requirements.

16 14. The proposed pipeline corridor crosses or adjoins eight different zone classifications  
17 within unincorporated King County. These include Rural Area 2.5, 5 and 10, Agriculture, Mining,  
18 Forestry, Industrial and Regional Business zones. As noted in the attached March 14, 1996 letter  
19 from Greg Kipp, Deputy Director of the Department of Development and Environmental Services,  
20 to Frederick Adair, former EFSEC Chair, only those utility facilities that comply with all applicable  
21 provisions of the zoning code, including the development standards for environmentally sensitive  
22 areas discussed below, are allowed within each of these zone classifications. See Exhibit 10.

1           15.     The following King County Comprehensive Plan Policies provide the general  
2 framework upon which County regulatory controls for reviewing proposed development were  
3 adopted.

4 **NE-104   King County should protect environmental quality and important ecological func-**  
5 **tions and minimize hazards to health and property through development reviews**  
6 **and implementation of land use plans, surface water management plans and**  
7 **programs, and park master plans.  These plans shall also encourage restoration of**  
8 **critical areas as defined in the Growth Management Act.**

9 **NE-106   King County shall use acquisition, enhancement, and incentive programs and**  
10 **appropriate regulations to encourage the protection of lands where development**  
11 **would pose hazards to health, property, important ecological functions or environ-**  
12 **mental quality.  The following natural landscape features are particularly suscepti-**  
13 **ble and should be protected:**

- 14       **a.   Floodways of 100-year floodplains;**
- 15       **b.   Slopes with a grade of 40 percent or more or landslide hazards that cannot be**  
16       **mitigated;**
- 17       **c.   Wetlands and their protective buffers;**
- 18       **d   Streams and their protective buffers;**
- 19       **e   Channel migration hazard areas;**
- 20       **f.   Designated wildlife habitat networks; and**
- 21       **g.   Critical Aquifer Recharge Areas in designated sole source aquifers.**

22 **NE-107   Regulations to prevent unmitigated significant adverse impacts will be based on the**  
importance and sensitivity of the resource.

**NE-108   King County should promote efficient provision of utilities and public   services by**  
exempting minor activities from its critical areas regulations, provided the agency  
has an approved Best Management Practice plan   approved by King County.

16.     Comprehensive planning policies and implementing regulatory controls pertaining to  
1) Wetlands; 2) Geologic Hazard Areas; 3) Floodplain and Seismic Hazard Areas; and 4) Water  
Quality; are summarized in the accompanying Testimony of Gillen, Bottheim, Parsons, Butler and  
Johnson provided by King County. The following Comprehensive Plan policies apply to the siting  
of facilities in and around streams and shoreline areas:

1 **NE-602 Fish and wildlife should be maintained through conservation and enhancement of**  
2 **terrestrial, air, and aquatic habitats.**

3 **NE-603 Habitats for species which have been identified as endangered, threatened, or sensi-**  
4 **tive by the state or federal government shall not be reduced and should be**  
5 **preserved. In the Rural Area and Natural Resource Lands, habitats for**  
6 **“candidate” priority species identified by the County, as well as species identified**  
7 **as endangered, threatened, or sensitive by the state or federal government shall not**  
8 **be reduced and should be preserved.**

9 **NE-604 King County shall designate and protect the following Fish and Wildlife Habitat**  
10 **Conservation Areas found in King County:**

- 11 a. **Habitat for federal or state listed Endangered, or Threatened species.**
- 12 b. **Habitat for Salmon of Local Importance: kokanee/sockeye/red salmon, chum**  
13 **salmon, coho/silver salmon, king/chinook salmon, and pink salmon, coastal**  
14 **resident/searun cutthroat, rainbow trout/steelhead, and pygmy whitefish;**
- 15 c. **Habitat for Raptors and Herons of Local Importance: red-tailed hawk,**  
16 **osprey, black-crowned night heron, and great blue heron;**
- 17 d. **Commercial and recreational shellfish areas;**
- 18 e. **Kelp and eelgrass beds;**
- 19 f. **Herring and smelt spawning areas;**
- 20 g. **Wildlife habitat networks designated by the County, and**
- 21 h. **Riparian corridors.**

22 **King County shall also protect the habitat for "candidate" priority species as listed**  
23 **by the Washington Department of Fish and Wildlife and found in King County out-**  
24 **side of the Urban Growth Area.**

25 **“Candidate” Priority Species of Local Importance are: birds - common loon, harlequin duck,**  
26 **golden eagle, northern goshawk, mountain quail, pileated woodpecker, purple**  
27 **martin, Vaux’s swift, western bluebird, yellow-billed cuckoo; fish - bull trout/Dolly**  
28 **Varden; amphibians - Cascades frog, red-legged frog, spotted frog, Van Dyke’s**  
29 **salamander; invertebrates - Beller’s ground beetle, Hatch’s click beetle, long-**  
30 **horned leaf beetle, Puget blue butterfly, Feder’s soliperlan stonefly; mammals -**  
31 **fisher, Townsend’s big-eared bat, California wolverine, Pacific harbor porpoise.**

32 Existing buffer requirements for streams and wetlands are not intended to, and do not,  
33 always adequately protect wildlife resources in those sensitive areas. Areas with critical  
34 wildlife resources may need larger buffers to protect the resource.

35 **NE-608 Stream and wetland buffer requirements may be increased to protect Endangered,**  
36 **Threatened, and Priority wildlife species, as listed in this chapter, and their**  
37 **habitats, as appropriate. Whenever possible, density transfers and/or buffer**  
38 **averaging should be allowed.**

1  
2 Salmon are particularly important because of their significance to local and regional  
3 character, federally-recognized tribes and the fisheries industry. Several salmon stocks  
4 within King County and other areas of Puget Sound are in a serious state of decline.  
5 Several salmon stocks within King County may be listed under the Endangered Species  
6 Act. The most effective way to protect and enhance native fish populations is through  
7 protection of those river and stream channels, riparian corridors, lakes, wetlands and  
8 watersheds that provide or impact spawning and rearing habitat, food resources and fish  
9 passage. Intermittent streams also can be critical to native fish populations. Fish  
10 enhancement facilities currently are still critical to the maintenance of salmon stocks and  
11 the fisheries industry.

12 **NE-609 King County should protect salmonid habitats by ensuring that land use and  
13 facility plans (transportation, water, sewer, electricity, gas) include riparian and  
14 stream habitat conservation measures developed by the County, cities, tribes,  
15 service providers, and/or state and federal agencies. Development within basins  
16 that contain fish enhancement facilities should consider significant adverse impacts  
17 to those facilities.**

18 **NE-308 Development within designated Shoreline Environments shall preserve the  
19 resources and ecology of the water and shorelines, avoid natural hazards, promote  
20 visual and physical access to the water and preserve archeological, traditional  
21 cultural resources, and navigation rights. Protection of critical areas shall take  
22 priority over visual values and physical access.**

**NE-311 River and stream channels should be preserved, protected and enhanced for their  
hydraulic, ecological and aesthetic functions.**

17. In addition to the Comprehensive Plan stream and habitat provisions identified  
above, the following general provisions of the County's adopted shoreline master program set forth  
criteria for guiding the location of utilities within shorelines:

- Utility construction should be encouraged to locate where water quality will be maintained or improved;
- Utility corridors should be encouraged to consolidate or share rights of way;
- Public access should be encouraged;
- Utility routes should be designed to minimize visual impact from the water and upland areas;

- Utility facilities and rights of way should be selected to preserve the natural landscape and minimize conflicts with present and future land uses; and
- Utility facilities should be located to not require extensive shoreline protection nor to restrict water flow, circulation or navigation.

18. The shoreline policies referenced in paragraph 17 above, and the Comprehensive Plan policies referenced in paragraphs 15 and 16 above, are implemented through zoning code provisions summarized in the Testimony of Don Finney and through the following King County Shoreline Management Code provisions:

- KCC 25.04.030 (A)(No development shall be undertaken unless it is consistent with the provisions of this title and the goals, policies and objectives of the master program.)(general requirement);
- KCC 25.04.050 (When provisions of the shoreline code conflict with the sensitive area code, the provision that provides the greatest environmental protection shall apply.)(general requirement)
- KCC 25.20.110 (Utility facilities may be allowed in a rural environment subject to compliance with the general requirements of KCC 25.20.030 and provisions of KCC 25.16.160.)(rural environment requirement);
- KCC 25.20.030(A)(Non-water related and residential development in the rural environment is not allowed waterward of the OHWM.)(rural environment requirement);
- KCC 25.20.030(C)(Development shall provide adequate surface water retention and sedimentation facilities during the construction period)(rural environment requirement);
- KCC 25.20.030(D)(Development shall maintain the first fifty feet of property abutting a natural environment as required open space.)(rural environment requirement);
- KCC 25.20.030(G)(Regulations are categorized in various sections. Regardless of the categorization, all development must comply with all applicable regulations)(rural environment requirement);
- KCC 25.20.140(A)(Excavation, filling, dredging below the OHWM in the rural environment is subject to compliance with the general requirements of KCC

1 25.24.030 and provisions of KCC 25.16.160.)(rural environment requirement);

- 2 • KCC 25.24.030(A)(Development in the conservancy environment is not allowed
- 3 waterward of the OHWM.)(conservancy environment requirement);
- 4 • KCC 25.24.030(C)(Development shall provide adequate surface water retention
- 5 and sedimentation facilities during construction.)(conservancy environment
- 6 requirement);
- 7 • KCC 25.24.020(D)(Development shall maintain the first fifty feet of property
- 8 abutting natural environment as required open space.)(conservancy environment
- 9 requirement);
- 10 • KCC 25.24.020(G)(Regulations are categorized in various sections. Regardless
- 11 of categorization, all development must comply with all applicable
- 12 regulations.)(conservancy environment requirement);
- 13 • KCC 25.24.140(A)(Excavation below OHWM is allowed in the conservancy
- 14 environment only to mitigate public safety concerns and fisheries
- 15 impacts.)(conservancy environment requirement); and
- 16 • KCC 25.24.140(C)(Excavation or dredging of marshes, bogs or swamps is not
- 17 allowed.)(conservancy environment requirement).

18 19. Shoreline regulations governing development in rural and conservancy environments

19 likewise incorporate, by reference, the following restrictions upon development in the urban

20 shoreline environment:

- 21 • KCC 25.16.160 Utilities and transmission facilities shall:
  - 22 (A)(Avoid disturbance to unique and fragile areas, wildlife spawning, nesting and rearing areas.);
  - (B)(Minimize visual impact, enhance surroundings, and avoid need for shoreline protection);
  - (C)( Minimize scarring of landscape, minimize siltation and erosion., and avoid disruption of critical wildlife stages.)
  - (D)(Site rehabilitation should occur as rapidly as possible utilizing native vegetation.)

1           20.     The following principles concisely summarize the most significant King County  
2 zoning and shoreline development regulations affecting the siting and construction of a utility in a  
3 wetland and/or stream:

- 4           • Utilities may be allowed in a wetland buffer if there are no practical alternatives  
5 but utilities are not allowed within wetlands themselves.
- 6           • Utilities may be allowed in a stream buffer if no practical alternative exists but  
7 utilities are not allowed to cross a Class 1 or 2 stream unless they are laterally  
8 drilled or placed on an existing bridge. Class 3 streams may be open cut when  
9 dry.
- 10          • Exceptions to the provisions of the sensitive area ordinance may be made based  
11 upon a showing that no practical alternative exists with less impact on the  
12 sensitive area and impacts to sensitive areas are minimized. Exceptions from the  
13 shoreline code are not allowed.

14           21.     This proposal has not changed significantly since the application was first filed in  
15 1996. While a few of the stream crossings were moved to take advantage of existing bridges, and  
16 while the alignment was changed in several instances to avoid or minimize impacts to wetlands, as  
17 noted earlier, twenty-two wetlands and twenty-five streams are still proposed to be open trenched.

18           22.     Upon carefully evaluating the project as proposed, King County has determined that  
19 this project is not consistent with King County's land use plans and zoning regulations affecting  
20 streams and wetlands and would be prohibited outright by King County's shoreline regulations.  
21 While provisions are available in King County's zoning regulations to deviate from certain of its  
22 sensitive area development standards if an applicant can demonstrate that there are no practical  
alternatives available with less impact on the sensitive area, the proposal minimizes impacts on  
sensitive areas and project impacts are mitigated, see e.g. KCC 21A.24.070, the County believes  
that practical alternatives and mitigations are available in this case that would preclude use of such  
an exemption. As to the prohibitions set forth in the County's adopted shoreline master program,

1 there is not a mechanism available to deviate from the shorelines code requirements.

2           23. OPL has prepared an alternatives analysis that is included in the application for site  
3 certification . A separate more detailed discussion on alternatives, dated June 15, 1998, was  
4 prepared for the U.S. Army Corps of Engineers. A third discussion on alternatives was included in  
5 OPL's draft Land Use Consistency Determination dated November 20, 1997. These analyses  
6 qualitatively evaluate a variety of alternative construction methodologies and planning principles  
7 that have been employed by OPL to avoid or reduce, where avoidance is not possible, direct and  
8 indirect impacts to riparian areas and aquatics resources. These include micrositing, or realigning  
9 the corridor or realigning the pipeline within the corridor to avoid specific impacts, and alternative  
10 trenchless construction techniques such as horizontal directional drilling (HDD), jack and bore  
11 (J&B) or utilizing existing bridges.

12           24. Generally, a practical alternative is one that is available and is capable of being done  
13 after considering cost, technology and logistics and that meets the purpose and need of the proposal.  
14 For this project, however, purpose and need has been narrowly defined to mean the following:

15           Provide a cost effective, efficient, and environmentally sound means to transport refined  
16 petroleum products from western Washington refineries to eastern Washington.

17 The principle planning principles that have been used by OPL in evaluating micrositing or  
18 construction alternatives, and which are discussed in great detail in all of their alternatives analyses  
19 and in the DEIS, include the following:

- 20           • Utilize areas that have been previously impacted and avoid, to the extent feasible, areas  
21 that have not been previously altered;
- 21           • Utilize existing roads, trails and utility corridors;
- 22           • Avoid sensitive/critical areas to the maximum extent feasible;

- 1 • Where avoidance is not possible, minimize impacts by crossing the least sensitive areas  
2 and reduce impacts by reducing area of direct impact;
- 3 • Avoid high quality wetlands, streams or wildlife habitat;
- 4 • Minimize impacts to streams by utilizing existing bridges;
- 5 • Avoid impacts to existing land uses;
- 6 • Landowner preference; and
- 7 • Cost.

8 25. None of the analyses that have been prepared by OPL for this project provide a  
9 quantitative evaluation of impacts. This is so notwithstanding the fact that, in the October 1996  
10 stipulation between OPL and the counties, OPL agreed to provide the following:

11 Within the preferred route location, a qualitative and quantitative assessment of  
12 construction alternatives. Focus should be on reasonable alternatives that avoid, or  
where avoidance is not possible, minimize direct and indirect impacts upon sensitive  
areas, infrastructure, public and private facilities, and water quality.

13 Because there has not been a general quantification of costs and benefits, it is difficult to determine  
14 how decisions were made by OPL on the various alternatives. The Application for Site  
15 Certification, however, at page 3.4-98, provides some blunt insight into how such decisions may  
16 have been made:

17 This crossing procedure (open cut trenching) was selected because it is a traditional  
18 pipeline construction technique, and the cheapest.

19 26. This is repeatedly illustrated throughout the alternative analyses that OPL has  
20 developed for this project. It is also reflected in the Application for Site Certification, both in terms  
21 of the preferred route OPL has selected and in the manner in which they propose to construct the  
22 pipeline. For example, where non-invasive alternatives to open trenching of wetlands and streams  
are available, they are systematically discounted based upon the determination that open trenching

1 will have less impact than using non-invasive techniques such as jack and bore or horizontal  
2 directional drilling. Where existing bridges are available, OPL is instead proposing to place the  
3 pipe upstream of the existing bridges and to open trench the streams. OPL has not provided a  
4 detailed explanation as to why these bridges are not being used, other than asserting that an exposed  
5 pipeline would be vulnerable to damage. (DEIS page 3-162). OPL has not explained what the  
6 pipeline is vulnerable from, nor have they considered alternatives, besides open trenching, to  
7 decrease this “vulnerability”. Neither the applicant nor the DEIS can explain why, on the one-hand,  
8 using existing bridges is a preferred technique to minimize stream impacts, (DEIS, page 2-48) but  
9 when they are available, they are not used. This type of superficial analysis does not satisfy King  
10 County’s zoning provisions that require an applicant to demonstrate that there are no practical  
11 alternatives with less impact on the sensitive area or that the proposal minimizes impacts on  
12 sensitive areas.

13         27. The DEIS inadequately identified only one alternative to the proposed action for  
14 detailed review: the no-action alternative. The criteria used to determine if an alternative was  
15 reasonable or feasible and met the purpose and need are identified in the DEIS at pages 1-5 and 2-  
16 4,2-5. A number of alternative route alignments, including the Centennial Trail alternative, are  
17 mentioned briefly in the DEIS but were rejected for detailed consideration. (DEIS, page 2-60-62)  
18 These alternatives, were eliminated from further consideration because they were longer, were less  
19 constructible than the proposed route, or were less accessible -- i.e. they would cost more to build  
20 than the proposal put forward by the applicant. (DEIS, page E-10) In addition, the Centennial Trail  
21 alternative was also rejected on grounds that it would purportedly impact more wetlands. In  
22 rejecting these alternatives, the DEIS has relied almost exclusively upon the screening level

1 information provided by the applicant, without an objective evaluation of the merits of the  
2 applicants analysis and without critically evaluating the potential reduction in environmental  
3 impacts that might be achieved. In addition, with respect to the Centennial Trail alternative, there  
4 was no determination made whether the alternative met the purpose and need. (DEIS, page 2-60,62;  
5 E-19, 20, 23) An alternative is not considered to be unfeasible, for purposes of County Code,  
6 simply because it costs more.

7 28. Paragraph 29 provides a brief description of a few of the more sensitive stream  
8 crossings in King County, that includes a more realistic description of project's impacts and an  
9 evaluation of a range of alternatives that are available at each of these locations. We have also  
10 considered the same criteria used by OPL to screen alternatives for cost effectiveness and  
11 constructibility. The purpose of this evaluation is to show that the objectives of King County's  
12 zoning, shorelines and related development regulations can be met and still satisfy the stated  
13 purpose and need of this project. The pipeline route has been separated into two segments to  
14 simplify this evaluation.

15 29. Segment 1 of the pipeline within King County runs from the Snohomish County line  
16 to the City of Snoqualmie.

17 Stream Crossing #18 and 19, Wetland Crossing 260709 – North Fork Cherry Cr.

18 These two streams and the associated wetlands could be crossed by horizontal, directional  
19 drilling (HDD). (See draft LUCD dated 11/20/97, page 29) This would avoid 0.52 acres of  
20 direct wetland impact, 0.28 acres of direct buffer impact and direct impact to two Class 2  
21 streams that are utilized by salmonids. These crossings have been assigned sensitivity  
22 ratings of moderate to high. The impact to upland habitat from the drill pits that would be  
required is minimal since it is all within a maintained BPA right-of-way and outside of  
wetlands, streams and their buffers. The alternative satisfies all of planning principles used  
by OPL to evaluate alternatives and by avoiding direct impacts to wetlands and streams,  
would be consistent with King County zoning and development regulations. This alternative  
is not discussed in the DEIS and is not being proposed by the applicant.

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Stream Crossing #20, Wetland 260716 – Cherry Creek

In addition to the probable impacts identified in the Testimony of Don Finney, OPL has acknowledged in the ASC (page 2.15-28 ), and the DEIS confirms (DEIS, page 3-29), that significant slope stabilization work will be required at this crossing. This will consist of drainage, buttressing and long term monitoring. Because of the relative location of the stream channel to the slide area, significant permanent impacts will be created with any slope stabilization efforts. Conventional buttressing methods, such as construction of a weighted toe, would result in permanent loss in riparian corridor, flood plain impacts through loss of storage and obstruction of flows, and would require moving the stream and constructing it in a new location. Alternatives, such as retaining walls, would result in permanent loss of riparian corridor and would permanently alter the character of the shoreline environment. In addition to being expressly prohibited under King County zoning and shoreline regulations, (see e.g. KCC 25.24.030(A); 25.24.140(A)(C); KCC 25.16.160A(1,2); B(3); and KCC 21A.24.370(G)) open trenching would cause significant short and long-term impacts that have not been considered and for which OPL is not proposing to mitigate. These impacts to Cherry Creek have not been addressed in the DEIS. Because of topographic conditions in the vicinity of the proposed crossing, OPL has concluded that J&B or HDD are not practicable alternatives. The alternatives analysis did not consider micrositing options. It should be noted that there is an existing bridge approximately one mile upstream of the proposed crossing location. See Exhibit 11 for the approximate alignment of this alternative. By following this alternative alignment, direct impacts to one Class 1 stream and one Class 2-s stream (Harris Creek) are avoided and direct impacts to 0.80 acres of wetland and approximately 0.34 acres of wetland buffer are avoided. The cost of this alternative, even with the additional length, would be comparable to OPL’s preferred route after you deduct the additional cost that would be required to mitigate for wetland and stream impacts and the significant additional cost that would be required to evaluate and stabilize the landslide area on the south side of Cherry Creek. This alternative would satisfy all of the planning principles used by OPL to evaluate alternatives and by avoiding direct impacts to streams, wetlands and landslide hazard areas would be consistent with King County’s zoning and shoreline regulations.

Stream Crossing #26 and #27, Wetland Crossing # 250714 – Tolt River

The Tolt River, a Class 1 water, is a gravel bed, fast flowing river that is subject to high risk of rapid stream incision, bank erosion and shifts in the location of the main channel. (see Testimony of Terry Butler) The Tolt Side Channel crosses through a Class 2 forested wetland. Both river channels and riparian corridors are in generally excellent condition and provide spawning and summer rearing habitat for all principal anadromous and resident salmonid species, including Puget Sound Chinook. (see Testimony of Don Finney) Chum salmon were observed spawning at the proposed crossing during a field inspection that was conducted on November 10, 1998. There are mapped landslide hazard areas adjacent to both Tolt River crossings. (see Testimony of Steve Bottheim)

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OPL is proposing to open trench both of the Tolt River channels, the full extent of the floodplain and the landslide hazard areas on each side of the river. In addition to being expressly prohibited under King County zoning and shoreline regulations, (KCC 25.24.030(A); 25.24.140(A)(C); 25.16.160A(1,2);B(3)C(1-5) and KCC 21A.24.370(G)), open trenching will cause significant short and long term impacts that have not been considered and for which OPL is not proposing to mitigate. (see Testimony of Finney, Gillen, Bottheim and Butler) As an example, to dewater the construction corridor, OPL will be diverting water from the main channel to the side channel to install the pipeline through the main channel and will then reverse the diversion to construct the pipeline through the second crossing. To access the diversion point, OPL proposes to ford the river with a track hoe, construct a temporary access road through the spawning gravel on the south side of the main channel. (personal communication with Gordon Easing, OPL, on October 22, 1998). The stream diversions will leave about 3000 feet of each channel dry during construction. During the proposed construction window, (DEIS Table 3.7-3) it is likely that late, winter steelhead eggs or alevin will be present in the substrate and juvenile salmon, including Puget Sound chinook, will be rearing in both reaches of the river. Because of the nature of the substrate in this area and the amount of area that will be dewatered, it is not possible to completely remove fish from these reaches and two significant fish kills can be expected during this process. This has not been considered in the DEIS which is evidenced by the omission of a fish capture program as a required element of project mitigation. In fact, the only discussion of fish mortality related to construction of the facility involves impacts from sedimentation and blasting. (DEIS, page 3-164, 166-167)

Because of topographic conditions in the vicinity of the proposed crossing, OPL has concluded that J&B and HDD are not practicable alternatives. The alternatives analysis OPL performed did not consider micrositing options. The potential impacts to the public and the aquatic resources in the Tolt River are so great that alternative crossing locations or techniques need to be evaluated. King County requested that OPL evaluate alternative routes and methods to cross the Tolt River and other major streams (Exhibit 9) OPL informally responded in part to this request on January 11, 1999 acknowledging that alternative crossing methods could used be at Cherry Creek, Harris Creek and the Tolt River. They have not formally amended their application for site certification to include this new information and, as a result, there is not sufficient information or time to evaluate the merits of OPL's only-recently proposed modifications at these crossings. . It should be noted that two existing bridges cross the Tolt River approximately 2 and 2 ½ miles downstream of the proposed crossing. See Exhibit 11. By following either of these alternative alignments, direct impacts to three Class 1 streams (including Griffin Creek) and 1.78 acres of wetlands are avoided. The cost of this alternative, even with the added length, is comparable to the cost of constructing at OPL's preferred location, after you deduct the additional cost that would be required to mitigate for wetland and stream impacts and the substantial additional cost that would be required to evaluate and stabilize the landslide areas on both sides of the Tolt River and Griffin Creek. (A more detailed discussion on Griffin Creek follows this section). These alternatives would satisfy all of the planning principles used by OPL to

1 evaluate alternatives and, by avoiding impacts to streams, wetlands and landslide hazard  
2 areas, would be consistent with King County zoning and shoreline regulations. In addition,  
3 utilization of non-invasive crossing techniques would improve the chances of this project  
4 proceeding under the expected ESA listing.

#### 5 Stream Crossing #28 – Griffin Creek

6 Griffin Creek, a Class 1 stream, is the major producer of coho salmon in the Snoqualmie  
7 River system. The majority of the coho spawning occurs in the reach of Griffin Creek  
8 starting approximately 0.7 miles upstream of the proposed crossing to a point 1.3 miles  
9 downstream. Steelhead are also known to spawn at the location of the proposed crossing  
10 and the substrate is suitable for Chinook spawning. Even though this crossing is within the  
11 BPA right-of-way and within the Forest Production District, the stream channel and riparian  
12 corridor are undisturbed. This is an excellent low-gradient (less than 2%) stream with a  
13 good balance of pool-riffle-run and excellent in-stream habitat for summer rearing.  
14 Landslide hazards are located on both sides of the proposed stream crossing. Open trenching  
15 of this stream will cause significant short and long-term impacts that have not been  
16 acknowledged and for which OPL is not proposing to mitigate. By following the route  
17 discussed in the preceding section, these impacts are avoided. It should be noted the DEIS  
18 has not accurately described fish utilization within Griffin Creek. For instance, the DEIS  
19 fails to mention that Puget Sound chinook and chum salmon are known to use Griffin Creek  
20 or that steelhead redds have been found immediately downstream of the proposed crossing.  
21 (DEIS page 3-153, see also Williams et.al. 1975, Snohomish 1103) (see Testimony of Don  
22 Finney)

30. In addition to the micrositing alternatives that have been identified that would avoid  
direct impacts to wetlands and streams along the portion of the proposed corridor between the  
Snohomish County line and Snoqualmie Falls, there are a variety of other alternative routes that  
would have the same result. One alternative that warrants detailed consideration is a portion the  
Centennial Trail alternative that is discussed briefly in the DEIS. In 1996, King County suggested  
that OPL consider, as an option, the portion of the trail system that starts at Milepost 9.3 on their  
proposed route to the point where this trail connects with the Cedar Falls Trail near the City of  
Snoqualmie. This alternative, with two possible variations using the West Snoqualmie Valley Road  
and/or State Route 202/203, are briefly described below:

- The Snoqualmie Valley Trail – This trail follows an old railroad grade that parallels SR

1 2032/203 from Duvall to the Snoqualmie City limits where it connects with the Cedar  
2 Falls Trail. The trail corridor has undergone major renovation in recent years. The  
3 railroad corridor continues north from Duvall and intersects the proposed pipeline  
4 corridor at approximately MP 9.3, a distance of approximately 4.7 miles. The segment  
5 of the railroad corridor north of Duvall has not been maintained or reconstructed. It is  
6 possible that some of the existing railroad trestles along this segment may need to be  
7 replaced. Once the trail crosses Griffin Creek, the pipeline could continue up the trail  
8 corridor to its terminus with the Cedar Falls Trail, or a network of private roads and  
9 logging roads could be followed to reconnect with the proposed pipeline corridor. Use  
10 of any of these corridors would not result in direct impacts to streams or wetlands.

- 11 • High Bridge Road/West Snoqualmie River Road – This corridor generally parallels the  
12 trail corridor but is located along the west side of the Snoqualmie River Valley. There  
13 are three alternatives available to cross the Snoqualmie Valley. These include existing  
14 bridges on the Woodinville-Duvall Road, NE 124<sup>th</sup> Street and NE 80<sup>th</sup> Street. The  
15 Woodinville-Duvall Road bridge was seismically retrofitted in 1997 and the NE 80<sup>th</sup>  
16 Street bridge was just replaced. The bridge on NE 124<sup>th</sup> Street is proposed to be replaced  
17 beginning in 1999. Once the Snoqualmie River is crossed, the pipeline could either  
18 follow the Snoqualmie Valley Trail or the SR 202/203 corridor.
- 19 • SR 202/203 – The proposed pipeline intersects SR 203 at approximately MP 9.3. The  
20 SR 203/202 road corridor parallels the proposed pipeline corridor all the way to North  
21 Bend. Use of this corridor would not require any direct impacts to wetlands or streams,  
22 however, because of high traffic volumes, construction within this corridor may be more  
difficult.

14 See Exhibit 11. These alternative corridors to cross the lower Snoqualmie Valley, either individually  
15 or in conjunction with one another, would add approximately 0.6 miles to the length of the project.

16 This recommendation was rejected by OPL as the estimated construction cost for this 22+ mile  
17 portion of the project would exceed the cost along their proposed alignment by approximately  
18 \$7,000,000. (See Exhibit 12) As we will show, this alternative is both economically viable and  
19 technically feasible, avoids invasive crossings of wetlands and streams and meets the stated purpose  
20 and need for this project.

21 31. Using any of these three routes, either alone or in conjunction with one another,  
22 would increase the pipeline length between Snohomish County, generally, to a point above

1 Snoqualmie Falls, from 22.8 to 23.4 miles, a difference of 0.6 miles. The elevation profile  
2 associated with any of these alternatives is vastly superior to OPL's proposed alignment. No less  
3 than thirteen major gains or losses (greater than 200 feet) and fourteen minor elevation changes will  
4 be encountered along OPL's proposed route. None would be expected along any of the available  
5 alternative alignments.

6 32. Since all of these alternative routes provide some level of public transportation and  
7 are easily and directly accessible from a number of public and private roads, accessibility is superior  
8 to OPL's preferred alternative. In addition, because of the continual public use of these corridors,  
9 the probability of third party reporting of a leak or related incident would be higher along any of  
10 these alternative routes than from OPL's preferred alignment. In addition, the risk of third party  
11 damage would be significantly reduced since the right to work within any of these alternative  
12 corridors is restricted. Since all of these alternative routes are either publicly owned or are owned  
13 by one major landowner, right-of-way acquisition costs are reduced considerably over OPL's  
14 preferred route.

15 33. With respect to existing land uses, there are a number of factors that should be  
16 evaluated in more detail in a draft environmental impact statement. Use of any of these alternative  
17 routes would increase short term impacts to recreational users of the Snoqualmie Valley Trail,  
18 would cause short term traffic impacts during construction in any of the road corridors, and because  
19 one or two additional cities would be crossed, impacts to these communities would also be  
20 increased over OPL's preferred alignment. However, potential impacts to the City of Carnation's  
21 water supply would be significantly reduced, if not eliminated, by using any of the alternative  
22 routes. Since fourteen miles of any of these alternative alignments are through or adjacent to large

1 scale existing agricultural operations, the number of private landowners that are potentially  
2 impacted by this project is reduced significantly from OPL's proposed alignment. The remaining  
3 8.6 miles would cross small to intermediate sized agricultural operations, commercial forest lands or  
4 areas under rural development which is comparable to OPL's proposed route.

5 34. The major benefit from these alternatives is that direct impacts to wetlands, wetland  
6 buffers, streams and riparian corridors can be largely avoided and the project could be constructed in  
7 a manner that was consistent with King County zoning, shorelines and related development  
8 regulations. The major, potential difference between OPL's preferred alignment and these  
9 alternatives regards constructibility and cost. As noted previously, OPL estimated that construction  
10 of the pipeline using the Snoqualmie Valley Trail, or a similar alternative, would increase the  
11 project construction costs by over \$7,000,000 along this segment of the project. The primary  
12 reasons cited for the additional cost is the reduced corridor width, proximity of a fiber optics cable  
13 within the trail bed and lack of available access points for construction equipment. Because of these  
14 factors, expected construction progress along this alternative alignment would be approximately  
15 1500 to 2000 feet per day, similar to expected construction rates for the section of the pipeline  
16 located east of the City of Snoqualmie, rather than the 10,000 feet per day that is expected along the  
17 proposed alignment. OPL estimates that the construction costs would increase from \$32.50 per foot  
18 to \$80.25 per foot. By close examination of OPL's proposed corridor, it is clear that the cost  
19 differential and construction differences between these alternatives has been grossly overstated. For  
20 instance, OPL has stated that the Snoqualmie Valley Trail is narrower than the John Wayne Trail  
21 and therefore less constructable. (see Exhibit 14) However, between Duvall and the Griffin Creek  
22 crossing, the Snoqualmie Valley Trail is wider than the John Wayne Trail and is also wider than the

1 miles of forest road OPL intends to use. Between the Griffin Creek crossing and Tokul Road, the  
2 Snoqualmie Valley Trail is comparable in width to the wider segments of the John Wayne Trail and  
3 is slightly wider, on average, than the private forest roads the current proposal follows. (see Exhibit  
4 15)

5 35. From MP 9.3 where the proposed pipeline crosses the trail corridor to where they  
6 would reconnect at MP 32.1, OPL's preferred route is 22.8 miles, or 120,400 feet, long. Between  
7 these same points using the Snoqualmie Valley Trail corridor, the pipeline would be 23.4 miles, or  
8 123,600 feet, long. The OPL route crosses numerous wetlands and streams, areas of steep, unstable  
9 terrain, and for long segments is contained within narrow road corridors. The very factors that  
10 would restrict construction progress in the eastern portions of King County to 2000 feet per day or  
11 less are present along this segment of the proposed corridor. Approximately 86,400 feet of the  
12 proposed route, or 72 percent, would be in this category, and based upon OPL's own estimates  
13 would likely experience construction rates in the vicinity of 2000 feet per day. Approximately  
14 22,750 feet of the proposed route, or 19 percent, could be characterized as moderately flat and  
15 construction rates of 10,000 feet per day may be achievable. The balance of the corridor consists of  
16 moderately, steep slopes and construction rates of 5000 to 6000 feet per day may be expected.

17 36. Using the per unit costs provided by OPL in 1996, the expected average weighted  
18 cost of construction in OPL's preferred location is approximately \$69.00 per lineal foot. The total  
19 estimated base cost of this segment of the pipeline is \$8.3 million. In addition, as noted in the  
20 DEIS, the additional cost of construction at each major river crossing is approximately \$1,000,000.  
21 The total estimated cost, after adjusting for the Tolt River crossing, of constructing this segment of  
22 the project is approximately \$9.3 million. Again, using the per unit costs provided by OPL, the

1 total estimated cost of construction along any of these alternative alignments is 9.9 million. After  
2 you deduct the cost savings that would be realized by not having to mitigate for wetland impacts,  
3 (approximately \$200,000 based upon 8 acres at \$25,000 per acre) the difference in cost between  
4 OPL's preferred route and any of these alternatives is approximately \$400,000. This cost  
5 differential does not reflect the savings in operating costs that would be realized because of the  
6 superior elevation profile that these alternative alignments would have nor does it consider the  
7 additional expenses that will be incurred by OPL to stabilize the landslide hazard areas located  
8 adjacent to the proposed Cherry Creek and Griffin Creek crossings or the costs of HDD at the North  
9 Fork Cherry Creek crossing.

10 37. This is a very conservative estimate that gives considerable deference to some of the  
11 estimates that have been prepared by OPL. For a variety of reasons, however, it is not likely that  
12 OPL will experience production rates in Western Washington that even come close to their expected  
13 rates. With the exception of the Snoqualmie River floodplain and a portion of the pipeline route  
14 that crosses commercial forest properties south of the City of Carnation, none of the proposed  
15 pipeline corridor would be considered flat and easily constructible. Access to large sections of the  
16 corridor is restricted, especially the area south and north of the Tolt River, which will decrease  
17 construction rates. Weather will also be a factor. Based upon the foregoing, it is likely that the  
18 difference in cost between OPL's preferred route and any of the identified alternatives would be  
19 insignificant. Using the cost data provided in the DEIS, (Table 3.16-6) the expected cost differential  
20 between the preferred route and this alternative is approximately \$200,000. After deducting the cost  
21 savings by not having to mitigate for direct wetland impacts, there would be no difference in cost  
22 between the two routes. Even if there is a slight increase in cost, that fact alone is insignificant

1 when compared to the environmental benefit that can be achieved by eliminating direct impacts to  
2 wetlands, streams and aquatic resources.

3 38. Segment 2 of the proposed pipeline route within King County runs between the City  
4 of Snoqualmie and the Snoqualmie Summit. Above Snoqualmie Falls and to the Snoqualmie  
5 Summit, OPL has attempted to use more existing road and trail corridor to take advantage of  
6 existing bridged or culverted crossings. OPL modified the proposed pipeline route in its amended  
7 application so that Tokul Creek could be crossed on an existing bridge. They recently indicated that  
8 an additional route change will be made so that Boxley Creek can also be crossed using an existing  
9 bridge. I base this assertion on a personal communication which I had with Katie Chaney, Dames  
10 and Moore, and with Claude Harshbarger, OPL which occurred on November 10, 1998. With this  
11 recent change, direct impacts to wetlands and streams have generally been avoided through the  
12 portion of the corridor between Mileposts 32 to 34 and Mileposts (MP) 37.5 to 41.5 and  
13 construction of the pipeline in these areas would generally be consistent with King County's zoning  
14 and shoreline regulations affecting wetlands and streams.

15 39. At MP 43.2, the proposed corridor leaves the John Wayne Trail (JWT) and follows  
16 the Homestead Valley Road. In at least two locations along this proposed alignment, the corridor is  
17 within shoreline management jurisdiction. (Crossings 51 and 56) At both of these locations, the  
18 pipeline will be located within a channel migration hazard area. In addition, two Class 2-salmonid  
19 streams (Mine Creek and Hall Creek) are proposed to be open trenched.

20 40. Impacts to both of these streams could be avoided by either utilizing the existing  
21 bridges located immediately downstream of the proposed crossing location, HDD or by relocating  
22 back to the JWT. HDD would not require direct impacts to wetlands and streams since the existing

1 road corridor in this area is wide enough that additional clearing would not be needed to  
2 accommodate the HDD staging areas. The JWT is also a feasible alternative since the Washington  
3 State Parks Department has plans to replace the Hall Creek Trestle. Permits authorizing this work  
4 were issued by King County in September 1998. Under DDES File No. L97G0009 Reconstruction  
5 of the bridge is expected to be completed in February 1999. (see Exhibit 13) The JWT is probably  
6 a preferred alternative since it would also move the pipeline corridor outside of the South Fork  
7 Snoqualmie River channel migration hazard area and further reduce the potential for a potential leak  
8 or rupture resulting from exposure of the pipe from lateral spreading of the river. The need for  
9 future bank stabilization to protect the pipe from exposure, which would be in conflict with the  
10 provisions of King County's shoreline regulations, would also be eliminated. There are numerous  
11 feasible, practicable alternatives that could be utilized that would have less impacts on sensitive  
12 areas and that are more consistent with OPL's stated principles in route selection. Since all of these  
13 alternatives avoid direct impact to wetlands and streams, they would generally be consistent with  
14 King County's zoning and development regulations affecting wetlands and streams. The JWT  
15 alternative would be outside of shoreline jurisdiction and would not be directly regulated under  
16 King County's shorelines code.

17 41. The pipeline corridor rejoins the JWT at approximately MP 46.9 and follows the trail  
18 to approximately MP 49.8. No wetlands or streams will be directly impacted from construction of  
19 this portion of the project. Between MP 49.8 and the tunnel, there are two alternatives that are  
20 being evaluated. OPL's preferred alternative would be to leave the JWT to use the Tinkham road  
21 corridor and then rejoining the JWT west of Humpback Creek in the vicinity of MP 55. In at least  
22 two locations along Tinkham Road, the corridor appears to be within shoreline management

1 jurisdiction. (Crossings 72 and 76-77) At both of these locations, the pipeline will be located within  
2 an active, channel migration hazard area. In addition, OPL proposes to open trench two class 2-s  
3 streams, one class 2 stream and two class three streams.

4 42. Impacts to all of these streams could be avoided by either utilizing existing bridges  
5 located immediately downstream of the proposed crossing location , HDD, in limited circumstances  
6 J&B, or by relocating the corridor back to the JWT. The temporary loss of vegetation from using  
7 HDD is no greater than from open trenching. Additional clearing would not be necessary to  
8 accommodate the HDD staging area by using the existing road. As a result, the impacts to these  
9 streams from open trenching are much greater than HDD. At the same time, OPL has not  
10 demonstrated that the existing bridges are unsafe or are not capable of withstanding flood flows.  
11 There would be no direct impacts to these streams or the riparian corridor if these bridges were  
12 utilized. Notwithstanding these arguments, the JWT alternative has added benefits. There would  
13 be no direct impacts to wetlands or streams from using the JWT. In addition, using the trail would  
14 move the pipeline corridor outside of South Fork Snoqualmie channel migration hazard area and  
15 further reduce the potential for a possible leak or rupture resulting from exposure of the pipe from  
16 lateral spreading of the river. The need for future bank stabilization to protect the pipe from  
17 exposure, which would be in direct conflict with King County's shoreline regulations, would also be  
18 eliminated. Since any of these alternatives avoid direct impact to wetlands and streams, they would  
19 generally be consistent with King County zoning and development regulations affecting wetlands  
20 and streams. The JWT alternative is outside of shoreline management jurisdiction and would not be  
21 directly regulated under King County's shoreline code.

22 43. OPL has already determined that construction progress from the City of Snoqualmie

1 to Snoqualmie Summit will be slow because of the narrow right-of-way, mountainous terrain and  
2 more inclement weather conditions. As a result, any changes in the route through this portion of the  
3 corridor will not have a significant effect upon construction progress or affect constructibility, with  
4 the possible exception of some of the proposed stream crossings. The majority of the streams that  
5 are proposed to be open trenched are located in areas that are subject to extensive scour and  
6 conventional trenching methods will not likely be suitable. In any event, construction at these  
7 streams will be slower than construction of the same streams where they can be placed either over or  
8 under existing culverts.

9 44. Because the majority of this route will be on publicly owned rights-of-way or within  
10 public lands, none of the alternatives that are available that would eliminate direct wetland and  
11 stream impacts will cause an appreciable increase in right-of-way acquisition costs. Access to any  
12 of these alternative corridors is comparable and considering the remote location of this route, in  
13 general, spill response will not be greatly improved or worsened by choosing one alternative over  
14 another. The elevation profile of a route that utilizes the JWT exclusively is vastly superior to the  
15 route proposed by OPL. No less than four major gains or losses and sixteen minor changes in  
16 elevation will be encountered along OPL's proposed route. None would be expected along the  
17 JWT. It appears that the JWT alternative may be approximately one-half mile longer than OPL's  
18 preferred alternative. Even with the added length, the cost to construct the JWT alternative would  
19 be comparable to the cost of construction along OPL's proposed route when you consider that no  
20 new corridor will be required, difficult stream crossings are avoided and mitigation costs for direct  
21 and indirect impacts to wetlands and streams are avoided. If you also consider the reduced  
22 operating costs that would result from the vastly superior elevation profile associated with the JWT

1 alternative, this alternative, overall, may be less costly than OPL's preferred alternative.

2 45. The JWT alternative would satisfy all of the planning principles used by OPL to  
3 evaluate and select alternative routes, meets the stated purpose and need, and by avoiding direct  
4 impacts to wetlands, streams, shorelines and channel migration areas, and by avoiding the need to  
5 create new corridor or widen existing corridor, would generally be consistent with King County's  
6 zoning, shoreline and related development regulations.

7 46. In summary, there are a variety of technically feasible, economically viable and  
8 practicable options available to OPL to site and construct this project in a manner that would avoid  
9 alterations of streams, wetlands and their respective buffers and that would still satisfy the stated  
10 purpose and need of this proposal, but at much reduced environmental cost.

11 47. For these reasons, we have concluded that this project is not consistent with King  
12 County's zoning and shoreline regulations relative to the development or siting of a utility facility in  
13 or near wetlands, streams or shorelines, and that the Council should insist on compliance with such  
14 standards as a condition of any recommendation for site certification.

15 48. If the project application were amended to conform to the conditions or standards  
16 that are summarized in King County Testimony provided by Don Finney, Nick Gillen, Steve  
17 Bottheim, Randall Parsons and Terry Butler; that are set forth in subsequent portions of this  
18 Testimony; and that are identified in Appendix C of the DEIS and as supplemental mitigation  
19 measures proposed by the DEIS, construction and siting of this project would be consistent with  
20 King County wetlands, streams, and shorelines regulations. Absent compliance with these  
21 mitigations, such consistency would not properly be found to exist.

22 49. The following Comprehensive Plan Policies are applicable to all development in

1 unincorporated King County, irrespective of the project's location relative to regulated sensitive  
2 areas.

3 **NE-204 King County should reduce air pollution emissions from construction  
4 and land clearing activities.**

5 **NE-302 Development should occur in a manner that supports continued  
6 ecological and hydrologic functioning of water resources. Development should not  
7 have a significant adverse impact on water quality or water quantity.**

8 **NE-310 Management of stormwater runoff shall occur through a variety of  
9 methods. Stormwater runoff caused by development shall be managed to prevent  
10 unmitigated significant adverse impacts to water resources caused by flow rates,  
11 flow volumes or pollutants to promote ground water recharge, infiltration of  
12 stormwater, when feasible given geological, engineering and water quality  
13 constraints. King County's current practice is to pursue non-structural methods  
14 whenever possible.**

15 **NE-401 Grading and construction activities should implement erosion control  
16 Best Management Practices and other development controls as necessary to reduce  
17 sediment discharge from construction sites to minimal levels.**

18 **NE-503 The use of native plants should be encouraged in landscaping  
19 requirements, erosion control projects, and in the restoration of stream banks,  
20 lakes, shorelines, and wetlands.**

21 50. These land use plan provisions are implemented by the following code provisions: King  
22 County Code (KCC) Titles 9.12 (Surface Water Runoff); Title 14 (Utility construction in  
King County Roads/Property); Title 16 (Building and Construction Standards); and  
Title 21A (Zoning). These regulations establish design standards and construction  
practices that are applicable to all construction activities. In order to comply with King  
County land use and zoning laws, the following requirements, in addition to the  
mitigation measures included in Appendix C of the DEIS, the supplemental mitigation  
proposed by the DEIS, and the conditions or standards that have been identified in the

1 Testimony of Bottheim, Gillen, Finney, Butler, Parsons and Johnson must be implemented:

- 2 • OPL will obtain a right-of-way construction permit under KCC 14.44 before any work is  
3 conducted by OPL on a county owned right-of-way. OPL agrees to comply with any  
4 conditions attached thereto.
- 5 • OPL will obtain a special use permit under KCC 14.30 before any work is conducted by  
6 OPL upon, along, over, under or across any public place in King County. OPL agrees to  
7 negotiate and pay an annual lease as a condition precedent to obtaining the special use  
8 permit. OPL agrees to comply with any conditions attached thereto to mitigate project  
9 impacts to county property or adjoining properties.
- 10 • Work within county owned or maintained road right-of-way or trail corridors work will be  
11 limited to the developed roadway or trail bed. No additional work, including staging or  
12 stockpiling of materials, will be allowed. In addition, no clearing will be allowed, except for  
13 limited limbing, trimming or pruning of vegetation necessary for the safe operation of  
14 equipment. In no event will such limbing, trimming, or pruning be conducted in a manner to  
15 affect the overall health of the tree. .
- 16 • A Level 1 drainage analysis, as provided by KCC 9.12 and described in the King County  
17 Surface Water Design Manual (KCSWDM), will be completed for the North Bend Pump  
18 Station. If this analysis shows that surface water runoff from this development will not  
19 exceed standards contained in the KCSWDM, currently 0.5 cfs, permanent runoff control  
20 will not be required. If runoff control is required, facilities will be designed and constructed  
21 to meet or exceed the current standards of the KCSWDM.
- 22 • No new access roads or permanent maintenance roads will be constructed other than the  
approximately 800 foot long driveway into the North Bend Pump Station.
- The North Bend Pump Station will be enclosed in a building. Buildings and related  
structures proposed for this site will be designed and constructed in conformance with the  
most current, adopted requirements of the UBC, UFC and UMC. Construction of this  
facility will also conform to the relevant provisions of KCC 21A for setbacks, height,  
landscaping, lot coverage, limitation on amount of impervious surface and related  
provisions.
- A detailed, site specific construction and erosion and sediment control plan will be  
developed for this project prior to construction. The extent of all sensitive areas will be  
clearly and accurately delineated on the final construction drawings. Copies of these plans  
will be provided to King County at the same time they are submitted to EFSEC. The 13  
basic requirements for site erosion and sediment control identified in the DOE Stormwater  
Management Manual shall be included in this plan, as appropriate, but will include, at a  
minimum, the following:

- 1 • Clearing Limits – Prior to any site clearing or grading, the boundaries of the clearing shall  
2 be clearly flagged by a continuous length of survey tape. Within sensitive areas, including  
3 buffers, clearing limits will be fenced with highly visible orange plastic NGPE fencing or  
4 stake and wire fencing with orange survey flagging intertwined. During the construction  
5 period, no disturbance beyond the clearing limits will be allowed. The clearing limits shall  
6 be maintained for the duration of construction.
  
- 7 • Perimeter Protection – Perimeter protection to filter sediment from sheet flow will be  
8 provided downslope of all disturbed areas. Approved perimeter protection measures include  
9 vegetated strips, brush barriers as well as more conventional constructed measures such as  
10 silt fence. Perimeter protection shall be installed prior to, or in conjunction with, initial  
11 clearing and grading to minimize transport of sediment to surface waters, drainage systems  
12 or adjacent properties is minimized. For slopes of fifteen percent or less, perimeter  
13 protection may only be used as the sole form of treatment when the flowpath is 200 feet or  
14 less.
  
- 15 • Traffic Area Stabilization –Construction entrances shall be stabilized wherever traffic will  
16 be leaving a construction site and traveling on paved roads or other paved areas within 1000  
17 feet of the site. Stabilized construction entrances shall be constructed at the beginning of  
18 construction and maintained for the duration of the project. Construction entrances shall be  
19 a minimum of 100 feet long by fifteen feet wide and constructed of a minimum of twelve  
20 inches of 4” to 8” quarry spalls over a geotextile fabric. The geotextile shall have a  
21 minimum Grab Tensile Strength of 200 psi, maximum Grab Tensil Elongation of 30%,  
22 Minimum Mullen Burst Strength of 400 psi and an AOS of 20 to 45. If the construction  
entrance is not adequately preventing sediment from being tracked, alternative measures,  
such as wash pads, may be required. Any sediment that is tracked onto pavement shall be  
removed immediately by sweeping. Paved areas shall not be cleaned by washing except  
where sweeping is ineffective and there is a threat to public safety. If washing becomes  
necessary, a sump shall be constructed to collect runoff prior to discharge. Sediment will  
not be washed into existing catch basins or natural or constructed drainage systems. Any  
damage to pavement edges, shoulders, curbs, gutters etc. resulting from street cleaning or  
other construction related activities shall be repaired immediately. OPL agrees to reimburse  
King County for cleanup and restoration of roadways performed by the King County  
Department of Transportation maintenance crews when OPL’s contractor(s) leaves the  
roadway(s) in a hazardous condition and does not have manpower or equipment available to  
do the cleanup in a timely manner. These costs shall include all labor, equipment, materials  
and overtime plus overhead costs for billing and tracking as required by King County Code.
  
- Soil Stabilization – Temporary and permanent cover measures shall be provided to protect  
disturbed areas. Temporary cover shall be installed if an area is to remain unworked for  
more than seven days during the dry season (May 1 to September 30) or two days during the  
wet season (October 1 to April 30). Straw mulch for temporary cover shall be applied at a  
minimum thickness of 2 to 3 inches. Immediately following completion of construction at  
each site or if a site will remain unworked for more than thirty days, the site will be  
revegetated using native, non-invasive species or, where appropriate, hydroseeded using a

1 grass and forb mixture. If seeding is to occur during the wet season, mulch must also be  
2 applied at a minimum thickness of 1 to 2 inches. .

- 3 • Storm Water/Sediment Control - All surface water from disturbed areas shall be intercepted,  
4 conveyed to a sediment pond or trap, and discharged downslope of any disturbed areas.  
5 Conveyance channels shall include rock check dams at sufficient intervals that the elevation  
6 of the toe of the upslope dam is equal to the elevation of the top of the downslope dam.  
7 Required sediment/detention basins will be sized for a minimum 25 year event. An  
8 exception is for areas that have drainage areas small enough to be treated solely with  
9 perimeter protection. Significant sources of upslope surface water that drain onto disturbed  
10 areas shall be intercepted and conveyed to a stabilized discharge point downslope of the  
11 disturbed areas. Any runoff generated by construction site dewatering will be directed into a  
12 sediment trap or otherwise treated prior to off-site discharge. Wells are the preferred  
13 method of dewatering trenches. Water from these wells shall be piped to the nearest defined  
14 drainage channel. Water pumped directly from the trench shall be dispersed over vegetated  
15 areas outside of sensitive areas or the sediment shall be settled in temporary storage  
16 facilities. Discharge shall be monitored to assure that only clean water is leaving the site.
- 17 • Dust Control – Dust Control shall be implemented when exposed soils are dry to the point  
18 that wind transport may impact roadways, drainage ways, surface waters or adjacent  
19 properties. Dust control will consist of watering the right-of-way, reducing speed limits on  
20 the right-of-way during construction to 10 mph, and curtailing construction when high winds  
21 contribute to excessive dust. Water for dust control will not be withdrawn from any streams,  
22 lakes, ponds, wetlands or other naturally occurring surface waters.
- Monitoring/maintenance – ESC facilities in all active construction areas shall be inspected  
daily and maintained to ensure continued proper functioning. As construction progresses  
and unexpected or seasonal conditions dictate, additional sediment control facilities may be  
necessary to ensure complete sediment control on the site to protect adjacent properties and  
water quality of the receiving drainage system. ESC measures will be upgraded as needed to  
address unexpected site conditions or storm events. All ESC facilities will be reviewed  
monthly during the dry season, weekly during the wet season, and within 24 hours of a storm  
with more than 0.5 inches of rain in a 24 hour period or less. OPL shall maintain an on-site  
stockpile of ESC materials in case of an emergency. All ESC facilities will be maintained  
until the construction corridor has been completely and permanently stabilized to control all  
potential erosion which could result from surface water runoff.
- Phasing – Construction activities shall be phased to reduce the amount of area open at any  
given time. Right-of-way clearing will be restricted to no more than 3 days worth of  
average construction progress. Trench excavation will be limited to no more than two days  
worth of the average construction progress. Unfinished right-of-way restoration will be  
restricted to one week’s worth of progress. Any right-of-way that can not be reclaimed and  
revegetated within one week of trench excavation during the dry season or two days during  
the wet season shall be covered with straw mulch. Average construction progress will be

1 determined based upon site conditions and actual construction experience in western  
2 Washington.

- 3 • The pipeline route shall be restored to its original contours. If cut and fill areas are required,  
4 cut and fill slopes shall be designed and constructed to minimize erosion and shall be no  
5 steeper than is safe for the intended use. Finished cut and fill slopes shall not exceed 2 foot  
6 horizontal to 1 foot vertical. Stockpiles of erodible material will be covered and bermed to  
7 control erosion. If covering is not feasible, perimeter control and sediment traps will be used  
8 to prevent off-site movement. .
  
- 9 • Storage areas for hazardous materials, including pesticides, fertilizers, solvents, oils,  
10 petroleum products, etc., will be located a minimum of 100 feet from all wetland and stream  
11 buffers, drainage ways and outside of all floodplain areas. Storage areas will be placed over  
12 an impermeable pad and will include secondary containment sized to collect all potentially  
13 leaked stored material. Spill cleanup materials will be stored and maintained on site in case  
14 of accidental release and on-site employees will be properly trained in spill control  
15 procedures. In the event of a spill, OPL shall take all necessary steps to assure that  
16 contaminated soils or surface or ground water do not enter the existing drainage system or  
17 natural water bodies. If petroleum contaminated soils are to be treated and/or disposed of  
18 off-site they shall be handled in accordance with the “Guidelines for Remediation of Release  
19 from Underground Storage Tanks” published by the Washington State Department of  
20 Ecology and WAC 173-303. If soils with other than petroleum contamination are to be  
21 treated and/or disposed of off-site, they shall be handled in accordance with the appropriate  
22 state regulations. Any contaminated soils stockpiled or stored on site for any length of time  
shall be placed on plastic sheeting (minimum 10 mil) or other appropriate impermeable  
liner, and be entirely covered. Berms shall be constructed around the stockpiles to contain  
runoff.
  
- Water used for hydrostatic testing of the pipeline will not be discharged within King County.
  
- Construction will be generally limited to daylight hours. Permitted construction hours are  
7:00 a.m. to 10:00 p.m., Monday through Friday and 9:00 a.m. to 10:00 p.m. on Saturdays  
during the period May 1 through September 30, and 7:00 a.m. to 7:00 p.m. Monday  
through Friday and 9:00 a.m. to 7:00 p.m. on Saturdays during the period October 1  
through April 30. For specific construction activities, including pipe tie-ins and horizontal  
directional drilling, or where work must proceed expeditiously to minimize impacts to  
sensitive areas, work may occur outside of these times, with prior approval of theSeattle-  
King County health Department.
  
- Surplus excavated material will be spread across the construction corridor in a manner to not  
block or interfere with existing drainage patterns. Surplus material will not be placed within  
any floodplain , stream or wetland or their associated buffers or within steep slope or  
landslide hazard areas. If excess cleared or excavated material is to be hauled off-site, it  
shall be disposed of in an approved, legal dump-site. OPL shall submit a detailed

1 accounting to EFSEC, with a copy to -DDES, of all off-site disposal activities on a bi-weekly  
2 basis. The accounting shall include date, number of trips, quantity and type of material, and  
3 destination with a complete summary for each separate disposal site. OPL will be  
4 responsible for remedying any King County code violations that result from off-site disposal  
5 activities, including, but limited to, applying for all necessary permits and otherwise  
6 complying with all applicable King County code requirements.

- 7 • OPL shall provide a 24 hour hot line to respond to public inquiries and trouble calls. The  
8 hot line shall have a direct link with the site monitors and OPL, state, and independent  
9 inspectors. Signboards shall be conspicuously placed along the construction corridor and  
10 shall include, at a minimum, the project name, contractor and owner name, and the hot line  
11 number. Signboards shall be constructed of plywood, be a minimum of 4 foot by 4 foot in  
12 size with 2 inch black lettering over a white background. The top of the sign should be  
13 seven to nine feet above ground.

14 51. King County strongly recommends that these provisions be included as supplemental  
15 mitigation measures required as part of any site certification for this project.

16 52. Groundwater contamination from a potential spill or leak of the pipeline is an issue  
17 of broad public interest, both with respect to its potential damaging effects on existing supplies of  
18 potable water and existing wetland, stream and aquatic resources, but also because of its potential  
19 debilitating effects on future water supply opportunities for eastern King County and the on-going  
20 and long term efforts to restore depleted stocks of Puget Sound Chinook and other species that are  
21 threatened or on the verge of being listed under the Endangered Species Act. (see Testimony of Ken  
22 Johnson) King County disagrees with the conclusory statements contained in the DEIS that the  
applicant's proposed inspection and line monitoring program qualify this as a "state of the art"  
project (DEIS, page 3-336), and that, as a result, the probability of a spill is small. We likewise do  
not agree that periodic testing that meets or exceeds legal requirements (DEIS, page 3-336) provides  
adequate protection against a spill, will adequately protect ground water resources, or meets the  
legal requirements of KCC 9.12.

53. 49 CFR 195 establishes nationally uniform, minimum standards for the

1 transportation of hazardous liquids by pipeline. (See Pt. 195, App. A) While this project has been  
2 designed, in part, to meet these minimum requirements, there are significant areas where this  
3 project does not meet these minimum standards. For instance Pt. 195.260(e) requires that valves be  
4 placed “(o)n each side of a water crossing that is more than 100 feet wide from highwater mark to  
5 high-water mark,” unless the federal administrator determines that it is not justified. The Tolt  
6 River, Snoqualmie River and at least one crossing of the South Fork Snoqualmie River are greater  
7 than 100 feet across. At the Tolt River, the applicant is proposing to install two block valves, but  
8 they are located approximately a mile and a quarter apart. One block valve is proposed on the north  
9 side of the Snoqualmie River crossing. The next one is proposed at the North Bend Pump Station,  
10 approximately 3 ¼ miles to the east. There are no valves proposed for the Snoqualmie River  
11 crossing in the City of North Bend. Aside from stream crossings, there are no minimum standards  
12 for valve spacing, other than as appropriate to the terrain to minimize damage or pollution.

13 54. The standards that are applicable to the design of these types of facilities are found in  
14 ASME B31.4. As with the federal standards, these are design requirements that are adequate for  
15 public safety under normal conditions. In Section 402, designers are cautioned to provide  
16 reasonable protection to prevent damage to the pipeline from unusual external conditions such as  
17 may be encountered at river crossings and areas of unstable ground. Some of the recommended  
18 measures include encasing the pipe with a pipe of larger diameter (double-walled pipe), concrete  
19 protective coating, and increasing wall thickness. This same design criteria was used in the 1966  
20 version of the B31.4 standard. There are, however, no minimum standards developed to address  
21 construction in these more sensitive areas.

22 55. The National Transportation Safety Board has been critical of the Office of Pipeline

1 Safety, the federal agency responsible for enforcement and implementation of 49 CFR, for not  
2 developing minimum federal standards for improved inspection of pipelines, automatic leak  
3 detection, or remote control valves, especially with respect to controlling impacts to  
4 environmentally sensitive areas. (Evaluation of Accident Data and Federal Oversight of Petroleum  
5 Products Pipelines, NTSB/SIR-96/02) Since the 1970's, NTSB has issued 106 safety  
6 recommendations that were intended to improve the safety of hazardous materials pipelines  
7 including reducing third party damage, improved corrosion control, inspection and testing, leak  
8 detection and line shutdown and improved collection and analysis of accident data. OPS has  
9 responded to a few of these recommendations by implementing a program to reduce third party  
10 damage, but they have not taken affirmative action to develop minimum standards for controlling or  
11 minimizing impacts to sensitive areas. In 1996, OPS conducted a workshop to begin to address this  
12 issue. This workshop was mandated by Congress under 49 U.S.C. 60109, as a result of concerns  
13 raised by NTSB about the effectiveness of federal regulatory programs relating to pipeline safety  
14 subsequent to their investigation of the San Jacinto River incidences of 1994. This workshop  
15 concluded that drinking water resources and significant ecological resources warranted additional  
16 protection above what is provided by existing regulations and that more definitive and restrictive  
17 standards should be developed to protect these areas. No additional work was done to amend or  
18 upgrade these standards. For this very reason, we do not believe that existing federal or state  
19 regulations or 40 year old industry standards are adequate to protect the resources that are important  
20 to this region.

21 56. OPL's documented leak record does little to convince us that the risk of a spill over  
22 these important resources is remote or speculative. Their existing line has a leak frequency of

1 approximately 3.5 incidents per 1000 miles per year. This rate is comparable to the industry average  
2 for California. (California State Fire Marshall, 1993) The applicant and the DEIS have completed a  
3 risk analysis that is based upon the Petroleum Pipeline Leak Detection Study (Mastendrea et.al.  
4 1982) This analysis concludes that the probability of a spill at any location is near zero. It appears,  
5 however, the analysis has understated the probable risk because some of the assumptions used were  
6 not properly applied. I base this statement in part on a personal communication which I had with  
7 John Mastendrea on December 4, 1998. Irrespective, it is a given that leaks will occur and at a  
8 greater frequency than projected in the DEIS. It is also known that while SCADA systems are a  
9 relatively effective tool for detecting most pipeline ruptures, they are not effective for detecting  
10 small leaks, which over a period of time become big leaks. (Borener et.al. 1995)

11 57. The project as proposed does not provide adequate protection to ground water  
12 resources. Based upon the foregoing, we would recommend that the DEIS – and ultimately the  
13 Council -- independently and objectively evaluate optional construction, inspection and leak  
14 detection techniques that are designed to improve the safety of the proposed project and effectively  
15 detect small leaks. In addition, we would recommend that the mitigation measures summarized in  
16 the Testimony of Ken Johnson be incorporated into the DEIS as supplemental mitigation.

17 58. The stated purpose of this project is to provide a more efficient, less expensive  
18 method of shipping petroleum products to eastern Washington. We do not believe that the benefit  
19 this project will provide to the suppliers or transporters of these products, as proposed, should  
20 outweigh the costs that will be borne by the residents of King County, or of the State of Washington  
21 for that matter. The NTSB is on point in their determination of who should bear the costs of these  
22 projects. (NTSB-PSS-81-1)

1 Those at risk from pipeline accidents .... Are members of the  
2 general population who happen to live near a pipeline, or to be near  
3 it by chance. These people may not benefit from a given type of  
4 pipeline transportation, even indirectly. At most, they benefit from  
5 the service only to the same degree as others in the population.  
6 These people do, however, carry the risk for the benefit of the rest  
7 of society. The benefiting groups in society are the natural gas or  
8 liquid fuel users and the profit making institutions which operate  
9 the lines. One way to equalize this risk would be to reduce it to  
10 zero, so that those near the pipeline have the same risk as those  
11 who benefit from the pipeline service. Alternately, since it is not  
12 possible to reduce a risk to zero, funds should be employed to  
13 reduce the risk to a point well below what would be justifiable by  
14 requiring the benefits to match or exceed the costs. Those who are  
15 bearing the risk deserve to be protected by expenditures far beyond  
16 the dictates of cost benefit.

17 In this case, the risk is not just to the public, but to the public's resources and to the environment as  
18 a whole. There has been insufficient, detailed technical analysis provided by the applicant and the  
19 DEIS to adequately identify and mitigate project impacts, and as a result these probable, significant  
20 adverse impacts have been understated and the risk to the public and these resources remain  
21 unknown and, therefore, inadequately mitigated. There is insufficient, detailed discussion of  
22 alternatives to this project to allow proper decision making.

59. It is our recommendation that a supplemental draft environmental impact statement  
be prepared to thoroughly and independently evaluate the issues we have raised. First and foremost,  
a thorough analysis of alternatives including not only routing options, but also construction,  
inspection and monitoring must be prepared. In addition, environmental factors must be given  
equal, if not preferential, consideration over cost and other factors.

60. Finally, the County believes that there is insufficient information to properly review  
this project in the manner King County would conduct its review under ordinary application  
procedures. The application materials submitted, the Draft EIS issued, and the direct testimony filed

1 by the applicant each provide a level of information that is generic, conclusory and of little  
2 assistance in conducting meaningful review. My approach in submitting this testimony has  
3 therefore been to recommend conditions that are intended to address the most fundamental impacts  
4 this project is otherwise likely to generate. This was accomplished by focusing review on the  
5 question of whether this project complies with standards expressed in King County's land use and  
6 zoning laws. The standards set forth in these laws were adopted by King County officials mindful  
7 of the interests of the people of King County and cognizant of the serious impacts that could result  
8 in their absence. Compliance with such standards is especially important given the likely listing of  
9 Puget Sound Chinook and Bull Trout under the Endangered Species Act. Because the specific  
10 standards embodied in King County land use plans and zoning laws discussed above are, in any  
11 event, very similar to and generally overlap with the general criteria considered by the Council in its  
12 adjudicatory decisionmaking role, King County strongly recommends that each of the proposed  
13 mitigations and conditions referenced above and set forth in King County testimony by Steve  
14 Bottheim, Terry Bulter, Don Finney, Nick Gillen, Kenneth Johnson, and Randall Parsons be  
15 imposed as conditions of any site certification.

16 DATED THIS 12<sup>th</sup> day of February, 1999

17  
18 \_\_\_\_\_  
19 RANDY SANDIN  
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