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**BEFORE THE STATE OF WASHINGTON
ENERGY FACILITY SITE EVALUATION COUNCIL**

In the Matter of Application No. 96-1

Olympic Pipe Line Company

Cross Cascade Pipeline Project

**WRITTEN OPENING
STATEMENT
OF THE TULALIP TRIBES**

INTRODUCTION

Good morning. My name is Reid Allison. I represent the Tulalip Tribes of Washington. On behalf of the Tulalip Tribes, I would like to thank the Council for the opportunity to present testimony in these important proceedings.

Some of you may wonder why the Tulalip Tribes have intervened in this case. You will hear evidence that Olympic seeks approval for running the Cross Cascade Pipeline across rivers and streams in the Snohomish basin, in rural King and Snohomish counties. The evidence will show that these aquatic systems represent the principal freshwater Ausual and accustomed fishing grounds of the Tulalip Tribes, and spawning and rearing habitat for salmon and other anadromous fish that are central to the Tribes way of life.

The Tulalip Tribes are a fishing people. The culture and livelihood of its people

1 center on the long term health of salmon and other aquatic species that spawn and rear in
2 the Snohomish basin. The Tribes participate in proceedings where their fishing rights, or
3 the health of the runs or habitat, are placed at risk. The Tribes have intervened in these
4 proceedings to assist the Council in protecting these resources and aquatic habitat from
5 potentially catastrophic project- related consequences.
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7 In the 19th century, the tribes and bands making up the present-day Tulalip Tribes
8 traded their aboriginal home for reservation life, with the promise that the Tribes would
9 retain a right in common with the citizens of Washington territory to take fish. In the
10 1970's, facing a dwindling fisheries resource and encroachment on fish habitat, the Tribes
11 won confirmation from the federal courts for a reserved treaty fishing right of up to one
12 half of the available fish at the tribes= usual and accustomed fishing places, in what has
13 become known as Athe Boldt decision.≡
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15 As wild fish continue in decline, the Tribes continue their quest for a meaningful
16 treaty fishing right. The Tribes work to prevent private and governmental actions that
17 degrade fish habitat to a degree that the tribal allocation falls below the tribes= moderate
18 living needs. It takes a proactive role in salmon recovery on federal, state and local levels.
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20 It participates in international treaty negotiations allocating the take of migrating fish. It
21 conducts stream enhancement work within the Tribes= AU&A≡ to replace and repair
22 degraded habitat. The Tribes intervene in proceedings where its interest in this valuable
23 resource is at risk. As co-managers of the fisheries resource with the State of Washington,
24 the Tribes are helping lead the fight for salmon protection.
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1 The Tribes believe that the Aright≡ to take fish is meaningless if conservation and
2 protective measures fail to protect the wild stocks for future propagation. Recent ESA
3 listings for Puget Sound stocks will result in dramatic changes to everyday life of
4 Washington=s citizens, but may come too late to reverse this trend. The Tribes take a
5 strong position on protection of fish stocks for future generations, and it is in this posture
6 that the Tribes have intervened in these proceedings.
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8 I would like to address one final opening point, which is this. The primary
9 difference between Olympic and the other parties is the level of site-specific detail that
10 should be required on construction methods, pipeline design, crossing locations, fish
11 presence, scour analysis, mass wasting features, mitigation measures, and the like, to
12 adequately assess project impacts. Olympic argues for site certification first, and detail
13 later. Trust us, they say, and we will provide it. This, we say, is flat wrong. You cannot
14 know the impacts without more information. You cannot rely on the intervenor parties to
15 develop this information, since the intervenors do not know these details either. We can
16 demonstrate where data gaps exist. The EFSEC siting law says that Olympic must fill in
17 these gaps, and provide this information. Here=s what our witnesses will say.

18 **TESTIMONY OF TERRY WILLIAMS**

19 You will hear testimony from Terry Williams, an enrolled tribal member, and the
20 Executive Director of Fisheries and Natural Resources for the Tulalip Tribes. His
21 testimony will center on cultural and economic issues as they relate to the Tribes and its
22 enrolled members. He has an impressive list of credentials in his field, including present
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1 commissioner of the Northwest Indian Fisheries Commission, vice-chair of the Southern
2 Panel, U.S.- Canada Pacific Salmon Commission, member of the Timber, Fish and
3 Wildlife Committee, delegate to the Biological Diversity Committee of The United
4 Nations, and co-chair of the Indigenous Committee of the International Association of
5 Impact Assessments. Mr. Williams= former positions include the first director of the
6 American Indian Environmental Office, U.S. EPA, under the Clinton administration, and
7 member of the Puget Sound Water Quality Authority chosen by the governor of
8 Washington to develop the Puget Sound Water Quality Management Plan.

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10 In his testimony, Mr. Williams will describe the social and cultural significance of
11 salmon and fishing to the Tulalip Tribes, and the Tribes= fisheries and natural resource
12 management and enhancement efforts. He will describe how ancestral Puget Sound tribes
13 relied for sustenance on harvest of Puget Sound fish (including shellfish) resources, and the
14 range of fishing places used by its peoples.

15
16 He will describe the impact on Puget Sound native people from the signing of the
17 Treaty of Point Elliott, where in exchange for their aboriginal lands, they received a small
18 compensation and a treaty right to Afish at usual and accustomed grounds≡ and to Ahunt
19 and gather berries and roots on all open an unclaimed lands.≡ Mr. Williams will describe
20 the scope and history of tribal treaty fishing rights, and the determination of the Tulalip
21 Tribes= usual and accustomed fishing grounds. He will describe in particular the
22 freshwater U&A areas as including the Snohomish River system, including forks,
23 tributaries and freshwater lakes, and the Snoqualmie and Skykomish River systems, and
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1 how these systems provide vital habitat for anadromous fish harvested in U&A areas by the
2 Tulalips.

3 He will describe the creation and evolution of the Tulalip Reservation, and the
4 government of its people. He will describe the dimensions of the reservation and its
5 demographics, including the present day enrollment of approximately 3000 tribal members,
6 most of whom live on or near the reservation. He will describe how, despite economic
7 development initiatives on the reservation, many tribal members still rely for their
8 livelihood on commercial fishing and fishing rights related activity.
9

10 Mr. Williams will describe how the tribes share co-management of fisheries with
11 the state of Washington, and the tribes= role in determining the harvestable amount of each
12 stock of salmon, the design of hatchery programs, and the collection and coordination of
13 data. He will describe tribal fishery enhancement, including conservation, hatchery, and
14 restoration activities. He will describe the Tulalip fishery, including harvest of finfish and
15 shellfish for commercial, recreational and ceremonial purposes. He will describe how the
16 Tulalip fleet are individually owned and fished by tribal members, and the parameters of
17 the tribal fishing right under the Tulalip Fishing Ordinance.
18

19 Importantly, Mr. Williams will describe the current fishery for steelhead and
20 chinook, coho, and chum salmon. He will describe how declines in wild salmon have
21 greatly reduced the availability of salmon harvest to Tulalip tribal members in Port
22 Susan/Port Gardner and the Snohomish River system, and how due to these declines, the
23 tribe has not opened the wild chinook salmon fishery since 1984. He will also describe the
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1 Tribes= culturally important ceremonial and subsistence fishery.

2 He will testify how, historically, the tribal harvest has suffered dramatic declines,
3 and how in recent years, the Tulalip tribal catch has decreased from over 550,000 salmon
4 in 1989, to only 100,000 salmon in 1996. He will describe how Tulalip harvests have
5 concentrated on hatchery fish to reduce harvest of wild fish. He will describe how take of
6 hatchery fish has helped preserve wild salmon stocks, but has resulted in a decline in the
7 quality of the fish harvested (and in income to fisherman), and a consequent decline in
8 opportunities available to tribal members.

9 Mr. Williams will describe the role of salmon as an important component of the
10 religion, culture and economy of the Tulalip Tribes. He will describe how the Tribes=
11 culture has developed around annual cycles of natural resources, especially salmon, and
12 how the salmon harvest is critical to the diet, economy, religion, and other aspects of tribal
13 culture. His testimony will describe how increasing reliance on commercial food sources
14 has contributed to increased incidence of diseases such as diabetes, heart disease, and
15 cancer among tribal members. He will describe Tulalip tribal religious practices, including
16 the AFirst Salmon Ceremonies≅ to celebrate salmon returning to the Snohomish River
17 system each spring, and the important role of salmon in tribal weddings, funerals, family
18 gatherings, potlatches, and traditional longhouse ceremonies. He will describe how social
19 problems have increased among tribal members when fishing opportunities are diminished.

20 He concludes that restoration of salmon productivity is critical to elimination of many of
21 the social problems through restoration of predictable, regular fishing opportunity. He
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1 identifies Aspiritual bathing≅ - an essential cultural practice for many Tulalip tribal
2 members - requires clean water in a variety of traditional bathing sites, including many
3 throughout the Snohomish watershed, and how pollution of these waters with petroleum
4 products would render large areas unfit for spiritual bathing.

5
6 Mr. Williams will describe the concept of Acumulative impacts≅ to salmon, and
7 how many small impacts can and do lead to a large loss in the potential for salmon
8 production. He will describe cumulative impacts from land use changes, including
9 increased rates of sedimentation caused by poor logging and development practices. He
10 will describe how survival rates of juvenile chinook are reduced by elevated water
11 temperatures caused by loss of cover, by pollution, bulkheads, and shoreline modifications
12 in the lower Snohomish River and along the shores of Puget Sound. He concludes that
13 additional impacts caused by the Cross Cascade Pipeline project must be evaluated
14 Acumulatively≅, in light of other impacts already occurring.

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16 Mr. Williams concludes with his own assessment of the impact of the Cross
17 Cascade Pipeline project on the culture and economy of the Tulalip Tribes and its
18 members. He will testify that the Tribes= treaty-protected fishing rights are threatened by
19 the potentially devastating effects to the fishery and habitat from pipeline-related oil spills
20 and construction impacts. Further, he will testify about the Tribes= interest in salmon in
21 the Strait of Juan de Fuca, and the Tribes= concern that the pipeline project will result in
22 increased crude oil barge traffic to north Sound refineries. He concludes that the Cross
23 Cascade Pipeline proposal presents a significant threat to the tribal fishery, and an
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1 unreasonable risk to the dwindling wild stocks available to Tulalip fishermen. He further
2 concludes that Olympic's revised Site Certification Application (Application) and
3 DEIS do not adequately describe project risks and impacts to the cultural and economic
4 significance of the fishery resource and habitat to the Tulalip Tribes. He concludes that
5 many proposed stream crossings will occur in areas not currently subject to pipeline
6 construction and operation risk, and that in the context of the cultural and economic
7 interests of the Tribes and tribal members, the project presents a significant risk to
8 degradation of tribal cultural values and the well-being of tribal members.
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10 **TESTIMONY OF KURT D. NELSON**

11 You will also hear testimony from Kurt D. Nelson, Fish and Water Resources
12 Scientist for the Tulalip Tribes. Mr. Nelson is a professional fisheries biologist with 12
13 years' experience in the Snoqualmie and Stillaguamish basins conducting salmon research,
14 habitat restoration and environmental impact reviews. He will present testimony
15 concerning fish and fish habitat within stream systems crossed by the project, and project
16 related impacts to fish and fish habitat.
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19 In the absence of detail in the Application, Mr. Nelson developed a West-Side
20 Stream Crossings, Fisheries and Aquatic Resources Impact Assessment Review. This
21 document forms the basis of his testimony, and represents his professional assessment of
22 project impacts to freshwater aquatic systems west of the Cascade crest, in King and
23 Snohomish counties.
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25 Mr. Nelson will testify that the Application fails to provide adequate, or in some
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1 cases, any information on many subjects that would enable a decisionmaker to render an
2 informed decision on impacts to fisheries and aquatic resources. In particular, he
3 concludes that the Application:

- 4 X Lacks sufficient construction detail to assess physical impacts to stream
5 habitat and fish from construction at stream crossings
- 6 X Lacks necessary information on site conditions
- 7 X Lacks accurate or consistent description of presence of fish and aquatic
8 resources at many proposed stream crossings
- 9 X Lacks detail on mitigation measures, sensitive areas, pipeline design
10 (particularly at crossings and in floodplains), extent of new access roads,
11 hydrostatic testing procedures and discharges, steep slope construction, and
12 the frequency, type, qualifications, performance standards, training, or
13 oversight required for monitoring
- 14 X Contains a questionable Astream sensitivity analysis≅
- 15 X Contains unsupported assumptions on construction impacts, and
- 16 X Contains other significant data gaps, including lack of study of cumulative
17 impacts mass wasting events and potential scour and lateral migration,
18 processes within the hyporheic zone, fish and aquatic resource presence
19 during construction, impacts of bedload transport, turbidity levels during
20 and after construction, fish impacts from removal of vegetation, condition
21 of crossing culverts, blasting effects and acoustic shock, acute and chronic
22 toxicological impacts of product release to fish and habitat, and potential
23 effects on fish from proposed cathodic protection.

24 Mr. Nelson will begin by testifying that project impacts to fish and habitat at a
25 particular stream crossing are directly related to: 1) crossing method; 2) site conditions; 3)
26 fish and aquatic resource presence and sensitivity; 4) mitigation measures and their
27 success, and 5) future flow, sediment, and riparian conditions at the crossing and in the
28 upstream drainage network. He believes Olympic=s proposal does not adequately describe
29 aquatic resource presence and sensitivity, site conditions at crossings, and project
30 construction and operations impacts. He will testify that the Application does not consider

1 the combined effect of project impacts, indirectly minimizing the level of impact to a
2 resource.

3 He will also testify that the Application lacks essential detail in several areas to
4 determine project impacts to fish and habitat. For example, one literature source omitted in
5 Olympic=s review identifies Griffin Creek as one of, if not the most important, coho
6 producing areas within the Snohomish watershed, where between 1984 and 1992, Griffin
7 Creek escapement ranged from 29% to 43% of the total escapement to the Snoqualmie
8 River. He will also testify to Olympic=s failure to evaluate the Cherry Creek crossing as a
9 primary spawning area for steelhead, and that the lower 6 miles of the Tolt River is one of
10 two primary spawning areas for chinook, pink, and steelhead in the Snoqualmie watershed.
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13 Mr. Nelson will testify that the Application does not address the potentially
14 significant threat to fish and habitat from mass wasting events caused by pipeline
15 construction and operations. He will testify to his familiarity with mass wasting potential
16 in western Washington streams, the potential for land use activities to impact mass
17 wasting, and types of mass wasting (including shallow-rapid landslides, debris torrents,
18 large persistent deep-seated failures, and small sporadic deep-seated failures), and their
19 causes and potential effects on fishery resources.
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21 In particular he will testify that South Fork Snoqualmie tributaries are susceptible to
22 debris torrents, bed scour in the steeper locations, and to lateral channel migrations and
23 incision in locations of lower slope. He will testify that the Cherry Creek crossing, the Tolt
24 River crossing, and the South Fork Snoqualmie crossings are in similar in terrain to
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1 landslides that have occurred elsewhere in the Puget Sound Region, and he will provide
2 photographs depicting the damage these slides can do to those fish bearing streams.

3 He will describe how human land use activities contribute to landslides, and how
4 these geologic processes deliver significant sediment loads to a stream or river are
5 attributed to a decrease in salmon production in certain systems. He will testify that stream
6 scour and lateral migration are not adequately discussed in the Application, and present a
7 threat to fish and aquatic resources where exposure of buried pipe to hydraulic and abrasive
8 forces can lead to rupture or leak. He will testify that channel migration can result from
9 natural or man-made alterations to stream flow, increased stream flow, increases in
10 sediment supply, and the removal of riparian vegetation. He will describe that the risk
11 from geologic processes affected by the pipeline are highest during the rainy season when
12 salmon are present in their greatest numbers. A spill caused by lateral migration damage to
13 the pipeline could potentially destroy or seriously impact sensitive species.

14 Mr. Nelson will also testify that the scour evaluation by Olympic to determine scour
15 depth is deficient, and that determination of scour depth is critical to the protection of the
16 pipeline and of fish and aquatic resources, in stream channels and also across the full width
17 of any floodplain. He will identify many of the high risk areas not discussed in the
18 Application that are highly unstable and are susceptible to scour and lateral migration.

19 Mr. Nelson will testify that Olympic does not fully identify the presence of fish and
20 aquatic resources, or describe local or site-specific physical conditions. He will testify that
21 habitat surveys were conducted on only 24 of 83 stream crossings west of Snoqualmie

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1 Pass. Mr. Nelson will demonstrate that, by Olympic=s own admission, fish utilization is
2 unknown in 58 of the first 83 stream crossings.

3 Mr. Nelson will testify concerning the impact to aquatic resources from invasive
4 stream crossing. Some - not all - stream crossing methods have been changed to horizontal
5 directional drill. Among streams still facing invasive crossing techniques is Griffin Creek,
6 and many south fork Snoqualmie tributaries. Some crossings will take place at or below
7 culverts, and Olympic will testify that the project has changed to allow some culverts to be
8 replaced. Nonetheless, construction impacts to fish resources will occur, and they could
9 vary from minor to major. Without sufficient construction detail, fish utilization, culvert
10 analysis, wetland impacts, scour evaluation, mass wasting information, a decisionmaker
11 cannot anticipate project impacts to fish and aquatic habitat.

12 Mr. Nelson will testify that the construction windows identified by Olympic will
13 not avoid chinook or coho spawning or holding, or steelhead presence, in certain rivers.
14 Construction windows will not eliminate impacts, or even reduce impacts to certain fish.

15 He will testify that pipeline construction will result in increased sediment loading to
16 surface waters crossed or adjacent to the pipeline corridor. Overall sediment delivery to
17 streams will be minor to major depending on site conditions, construction methods and
18 timing, and mitigation measures implemented, and maintenance of mitigation measures.
19 The duration of impact could be long term where pipeline construction exacerbates mass
20 wasting activity, mitigation measures do not perform as designed, or where significant
21 channel erosion and / or lateral migration occur.
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1 Mr. Nelson will testify that, by Olympic=s own figures, the anticipated suspended
2 sediment levels or turbidity that can be expected from construction are 2,000 to 3,000 mg/l,
3 which can lead to juvenile mortality, avoidance behavior or reduced growth, and in any
4 case may determine survival later in life.

5 He will testify that impacts from removal of vegetation will be minor to major,
6 depending on crossing types, location and methodology. These impacts will include higher
7 stream temperatures, reduction in bank stability, the loss of overhead cover, a reduction in
8 small organic matter, a reduction in terrestrial insects, and the loss of large woody debris
9 recruitment. He will testify that some of these impacts could result in lower quality habitat
10 and a lowered salmonid production, and that these impacts could be long term.

11 Mr. Nelson will testify that removal of riparian vegetation and large woody debris
12 will reduce an extremely important structural element for salmonid habitat. He will testify
13 that increased losses of woody debris will undermine stream restoration efforts of the
14 Tulalip Tribes and others. He will testify that construction and maintenance activities will
15 contribute to stream widening and other forms of long term degradation. Mr. Nelson will
16 testify that Olympic cannot mitigate bank erosion that occurs quickly or catastrophically,
17 and cannot rectify the effects of lateral migration and / or stream widening.

18 Mr. Nelson will identify unique stream crossing difficulties at Cherry Creek, Tolt
19 River, Griffin Creek, and several south fork Snoqualmie tributaries. The unique conditions
20 in these streams include adjacent mass wasting failures and susceptibility to debris torrents.
21 Important information has been omitted which could describe crossing conditions.

1 Mr. Nelson concludes that overall construction impacts to salmonids and habitat
2 may vary from minor to major. Construction impacts from increased sedimentation
3 include acute mortality to juvenile fry, increased stress response of returning adult salmon
4 during migration leading to mortality before spawning, adult avoidance response, lower
5 production, reduced juvenile rearing habitat, higher emigration rates, reduced growth,
6 decreased feeding efficiency, reduced macro-invertebrate production, and reduced juvenile
7 growth and survival; lost rearing habitat, pool filling, reduced spawning success reduced
8 egg survival, lower egg-to-fry survival, and spawning location and success due to
9 construction taking place after spawning season. Construction related habitat degradation
10 will principally be from sedimentation, but will also be caused by the removal or
11 degradation of in-channel and stream bank features (e.g., trees, undercut banks) which
12 provide, cover, temperature regulation, food, and rearing space.

15 Next, Mr. Nelson addresses Olympic=s assessment of operational and maintenance
16 impacts to fish and aquatic resources. He strongly disagrees with Olympic=s assessment
17 that a product spill would be Aeither short in duration, small in volume, or both.= He
18 identifies the assumptions supporting Olympic=s conclusions, and disagrees with both.
19 The pipeline is at greatest failure risk, he testifies, at remote and geomorphologically active
20 stream crossings and sensitive areas. Unlike a marine spill, where sheens are visibly
21 detectible almost immediately, visual detection and containment in remote reaches will be
22 extremely difficult - particularly for small-volume leaks.
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1 Mr. Nelson will testify how Olympic's leak detection system did not detect the
2 160,000 gallon Cedar River spill, which can have a serious impact on resident trout and
3 coho. He also will describe his personal knowledge of a petroleum products pipeline spill
4 in Camas Creek, Montana, and how visual inspections similar to those proposed for the
5 Cross-Cascade project did not discover that slow leak. He testifies that petroleum leaks in
6 small streams can be devastating, as at Camas Creek, where aquatic resources are still
7 recovering 5 years after the spill. Mr. Nelson testifies that a spill in Griffin Creek during
8 the winter would result in significant mortality to coho eggs and juveniles, several age
9 classes of trout, and potentially four age classes of steelhead. He concludes that Olympic's
10 proposed spill prevention and control measures, which rely heavily on a leak detection
11 system (testified to by other parties) and visual reconnaissance are insufficient to protect
12 fish and habitat.

13 Mr. Nelson will give his opinion on how to minimize impacts from pipeline rupture
14 or leak, including redundant leak detection capabilities, pipeline construction
15 characteristics that prevent rupture or leakage, minimized volumes spilled, avoids sensitive
16 resources, and crosses areas that are easily accessible.

17 Toxicological impacts to fish and aquatic resources from petroleum products spills
18 (short-term and chronic) are not addressed in the Application, according to Mr. Nelson. He
19 will testify to acute toxicity levels to salmonids, other fish, and invertebrates and algae
20 from petroleum products. He will also describe chronic and sublethal effects - not in the
21 Application - including reduced growth, swimming ability, and morphological effects,

1 leading to latent mortality.

2 In his testimony, Mr. Nelson will describe how petroleum releases in the Tolt River
3 (as described in spill scenarios) can result in significant mortality levels for all salmon and
4 trout species and macro-invertebrates. He will testify concerning the presence of adult
5 chinook, pink salmon, adult steelhead, yearling steelhead, steelhead fry, subyearling coho,
6 subyearling chinook, cutthroat adults and juveniles in the Tolt River system and below,
7 how diesel spill concentrations could result in fish kills, how chinook eggs and developing
8 embryos in constructed redds would suffer very high mortality, and how some will suffer
9 sublethal physiological effects. He reaches similar conclusions for mortality and sublethal
10 effects for salmon and resident fish mortality in the Snoqualmie River as well, where the
11 effects may persist over several years. Mr. Nelson concludes that fish mortalities from
12 petroleum product releases could affect the harvest of adults, which in turn would have a
13 significant economic and cultural loss to tribal, sport, and nontribal commercial fisherman.
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15 He concludes that lower future chinook escapement could occur for three years or longer.
16 One reduction, he will testify, will perpetuate the decrease over an indefinite number of
17 cycles.
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1 Mr. Nelson discusses the distribution of Puget Sound wild chinook (recently listed
2 as threatened under the ESA) in the Snohomish Basin. He will testify that approximately
3 75% of the fall chinook escapement spawns in the Snoqualmie drainage, and that a high
4 number of fall chinook juveniles rear for one year in the Snoqualmie River. In a direct
5 challenge to Olympic=s information, Mr. Nelson will describe how chinook do in fact
6 spawn at the Tolt River crossing and possibly at the Cherry and Griffin Creek crossings.
7 He concludes that the pipeline presents a serious risk to the portion of the spawning
8 population that use the Tolt River at and downstream of the crossing, including the
9 Snoqualmie. Spills along the major stream crossings downstream of the Tokul Creek pose
10 a serious threat to fall chinook.
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13 Mr. Nelson will next testify that mitigation measures are not adequate to protect
14 fish and aquatic resources. First, the Application does not clearly identify the mitigation
15 measures. Second, the effectiveness of erosion control measures will depend heavily on
16 crossing methods, construction detail, fish and aquatic resources present, and local site
17 conditions, some or all of which information is unknown at certain locations. For these
18 streams, mitigation cannot be reasonably anticipated. He strongly recommends alternative
19 stream crossing locations or methods (i.e., bridged crossings or horizontal directional
20 drills) for Cherry Creek, Harris Creek, Griffin Creek, and Tolt River crossings. While
21 Olympic may present testimony that crossing methods have changed for some creeks,
22 Griffin Creek and several south fork Snoqualmie tributaries still remain at significant risk.
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25 Mr. Nelson summarizes his construction mitigation proposals which would reduce
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1 (but not eliminate) impacts to salmon resources from construction activities.

2 Construction Mitigation:

- 3 X The construction window should be stream specific.
- 4 X Trees should be planted along the stream corridor in addition to Olympic= proposed revegetation.
- 5 X More elaborate filtration procedures for fine sediment.
- 6 X Fish should be removed before construction begins.
- 7 X The withdrawal and discharge of hydrostatic testing water should not be allowed in small streams. Sources of water and discharge points should be the three sources and discharge points discussed in RA 2.5.
- 8 X Stream habitat should be replaced at a minimum of a 2:1 ratio.
- 9 X All culverts that are undersized should be replaced.
- 10 X Site specific construction plans should be required prior to certification for stream crossings that contain salmon and trout, or at stream crossings where salmon or trout can be found just downstream, as well as at crossings that are sensitive to mass wasting potential and scour.
- 11 X Site specific crossing plans and mitigation measures should be coordinated through state, tribal, and federal agencies. Coordination with the Tulalip Tribes should specifically be required for stream crossings in the Snohomish and Snoqualmie rivers.
- 12 X Riparian losses should be mitigated through the purchase and restoration of streambanks at another location in at least a 2:1 ratio.
- 13 X Stream crossing conditions, fish utilization, nearest fish population, slopes, bed control points, valley wall stability, must be reported.
- 14 X Approaches to stream crossings should be spanned or matted.
- 15 X Concrete coated pipe should be required at all stream crossings and should extend across floodplains.
- 16 X Water that leaves the site should filtered to the point that it does not exceed water quality standards for turbidity.
- 17 X Additional block valves be added in the vicinity of mile post 17, 20, 27.
- 18 X Redudant leak detection systems should be designed into the system

19 Operation and Maintenance Mitigation:

- 20 X The pipeline should be hydrostatically tested in sensitive areas every 2 years.
- 21 X Annual testing using ultrasonic Asmart pigs.≡
- 22 X Scour monitoring using relocatable cross sections and/or scour chains.
- 23 X Weekly visual inspection by walking pipeline route

- X Inspectors should be equipped with hydrocarbon monitoring devices.
- X Independent oversight during construction and operation should be required.

He further concludes that these mitigation measures will not completely eliminate the significant risk of a petroleum product spill release to salmon streams.

Finally, Mr. Nelson presents his overall conclusions with respect to the impacts to western Washington fish and habitat from pipeline construction, operation and maintenance. He will testify that the Application does not present a complete and accurate description of fish and aquatic resources present within the Snohomish/Snoqualmie Basin. It fails to provide enough information on the resources and site conditions present at stream crossings, to meaningfully evaluate project impacts. It does not present a complete picture of the potential types, severity, or magnitude of construction or operational impacts, including its description of the risk of spills. The Application is not organized in such a way as to allow for meaningful evaluation of impacts to fisheries resources and proposed mitigation measures, minimizing the reported level of impact to a resource. It does not discuss cumulative effects or provide meaningful discussion on spill related toxicological impacts. As a result, the proposed project appears to have a minimal impact on fish and aquatic resources when in fact impacts can and will be far more severe than the proposal indicates. It does not identify the types of mass wasting processes present within western Washington, or their proximity to and effects on fish and aquatic resources. Olympic Pipeline has not shown that a pipeline can be constructed in these locations without major impacts to fish and aquatic resources.

1 Thank you again for the opportunity to address the Council.

2 END OF OPENING STATEMENT

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