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	APPLICATION NO. 96-01 **PREFILED TESTIMONY OF RONALD C. DEVITT** **ISSUE: WATER QUALITY COMPLIANCE AND ENFORCEMENT** **SPONSOR: DEPARTMENT OF ECOLOGY**

Q: Please state you name for the record.

A: Ron Devitt

Q: Where do you work?

A: The State of Washington, Department of Ecology.

Q: How long have you worked at Ecology?

A: 20 years.

Q: What is your position?

A: I am a water quality inspector and oversee National Pollutant Discharge Elimination System ("NPDES") general stormwater permits in the King County area.

Q: What are your duties in this position?

A: I deal with water quality complaints associated with stormwater permits, evaluate compliance, provide technical assistance/enforcement to gain compliance and protect surface water quality.

Q: Are you familiar with the Olympic proposed pipeline project?

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A: Yes.

Q: Have you reviewed any documents or materials on the project?

A: Yes. I reviewed the Draft Environmental Impact Statement ("DEIS") and the Application, dated May 1998.

Q: Why does Ecology review this project?

A: A construction project of this magnitude and complexity located in such an extended and sensitive area has major environmental implications. Ecology, as a regulatory authority, is obliged to examine the proposal in detail to ensure that all known, available and reasonable methods are employed to protect the environment.

Q: What area of expertise will you testify about today?

A: Water quality controls and storm water best management practices during construction required or recommended to be implemented.

Q: In general, what are the local conditions that complicate the construction process?

A: **Temperature:** Freezing and thawing conditions can affect the erosion potential of the soils. Winter weather will prevent construction at high elevations.

Precipitation: Rain, snow and rain on snow events can affect the rate of erosion of soils. This is a relatively wet climate. Contractors that do not have experience with local weather and erosion practices are at a significant disadvantage. Contractors from the southwest are especially unprepared for our weather and the potential effects on water quality. Conversely, there would be an advantage to use contractors that have experienced major local projects. Erosion control best management practices ("BMPs") during wet weather are more stringent than during dry weather. Erosion control efforts must be more extensive. Maintenance is necessarily more frequent and costs of control increases during wet weather. Precipitation can also increase streamflow that complicates stream crossing.

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Soil: Different soil types react to construction activities and precipitation differently. Some soils erode more readily than other types. Clay soils that are eroded cause turbidity that is very difficult to reduce by filtration or physical treatment.

Slopes: If other factors are the same, the steeper the slope, the more difficult it is to control erosion. Slopes increase the costs of controlling erosion. Steeper slopes increase the velocity of surface water flows. Steep slopes can complicate the stability and efficiency of construction equipment.

Groundwater table: Saturated soils or a shallow water table increases erosion potential. Shallow groundwater complicates the trenching process. It is necessary to dewater the excavation to be able to install the pipe. Large volumes of dirty water are difficult to treat to the degree that discharge to surface waters does not cause water quality violations. In some locations, the effects of groundwater are somewhat seasonal and may be less of a problem during the dry months of July and August. During dry months, it becomes more feasible to land apply or biofilter the pumpage.

Wetlands: Wetlands are extremely sensitive to construction activities. Construction can result in loss of sensitive species, loss of water storage and flood control. Disruption of local hydraulics can create profound changes in wetlands in and near the construction right-of-way. Erik Stockdale will comment extensively about the potential effects of the proposed project on wetlands.

Fish: Construction within the wetted perimeter of the waterway will destroy habitat including, but not limited to, food sources, spawning areas and rearing areas, and individual specimens. Washington Department of Fish and Wildlife will comment specifically on the effects of the proposal. The DEIS made it obvious that invasive stream crossings will cause unavoidable turbidity and sediment effects downstream of the crossings. There should be an agreed upon mechanism to assess damages to habitat, aquatic organisms and the fish resources. The value of the damages can be estimated.

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Q: What are some of the regulations and policies that help protect water quality from construction activities?

A: Puget Sound Stormwater Management Manual

NPDES Stormwater Permit

County and municipal grading permits

County and municipal stormwater plans

County Stormwater Management Manual

County and municipal sensitive area ordinances

Hydraulic Project Approval

Q: Which of these regulations and policies would apply to this project?

A: This project is of such magnitude and scope that all of these would apply.

Q: What is a water quality issue that will arise with construction of the pipeline?

A: There are several water quality issues associated with the construction. In addition to the turbidity, sediment, and other factors created by excavation, trenching and drilling, the discharge of hydrostatic test water will be an issue.

Q: What are the problems associated with hydrostatic test water?

A: Water is used under pressure to test stretches of installed pipe sections to ensure that there are no leaks. Our experience with pipeline construction - even with the construction of potable water lines - is that the water on completion of the test is contaminated. These contaminants can include: metals, chlorine, solids including debris from welding, settleable solids and suspended solids. Sediment can also originate with soils that can enter the pipe during the construction process. Oils have also been a problem. Toxicity has also been demonstrated with these discharges. This material cannot be discharged into the waterway without violating the water quality standards and potentially causing unacceptable erosion in the streambed.

Q: How should hydrostatic test water be dealt with?

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A: The NPDES General Construction Stormwater Permit does not authorize Discharge of wastewater from this source. The hydrostatic test water is process wastewater that would require a NPDES Waste Discharge Permit. Without the waste discharge permit the hydrostatic test water may not be discharged to surface waters, but can be pretreated and reused; or pretreated and transported to a wastewater treatment plant that is capable of handling this waste. Criteria for reuse for subsequent hydrostatic testing could be determined by the proponent and would not require authorization from environmental regulators. Ecology would support reuse in keeping with a conservation ethic. Disposal at a wastewater treatment facility may require testing to verify compliance with pretreatment requirements, although those requirements may not be difficult to achieve. Larger wastewater treatment facilities would be more receptive to handling large quantities of wastewater than smaller facilities. King County has strongly opposed any potential discharge to surface waters and Ecology would agree that it is hard to understand what wastewater treatment process would be portable enough to treat the hydrostatic test water to meet water quality standards.

Q: Have you reviewed the Application or any other document with regard to the stream crossing issue?

A: I have looked at the DEIS, and Ecology's Doug Pineo will comment on stream crossing methods. The primary regulatory authority for method of stream crossing is the Washington Department of Fish and Wildlife. Impacts on water quality and habitat can be minimized to the degree possible by strict compliance with the conditions of the HPA. Violation of the conditions of the HPA is a criminal offense.

Q: What is your opinion on stream crossings with regard to water quality impacts?

A: There are a number of adverse environmental impacts associated with stream crossing. Specifically, I refer to:

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Trenching: Open trenching destroys salmon habitat, creates water quality violations downstream. For these types of water quality violations, Ecology issues penalties for standards violations (turbidity) and considers resource damage assessments for the habitat loss.

Jacking Method: Installation of the pipe below the bed of the stream does not disturb the habitat and does not cause water quality standards violations. Dewatering excavations on either side of the stream for these processes may violate water quality standards if not disposed of properly. Well points installed below the elevation of the bottom of the jacking pits can extract groundwater in a clean condition. The discharge of clear water is not as complicated as discharging turbid water. The installation of well points is not a free process. There are associated costs. The failure to install well points means that to dewater the jacking pits portable pumps will be used to pump water from the excavation if it is present. This water is likely to be very turbid because of the raw soils that are exposed by excavating the hole. The term "filtration" has been used as a potential method of treating water that is unsuitable for surface discharge. Specific details and engineering plans for the filtration should be provided with data that indicates the efficiency of the treatment process, based on the filter characteristics. If this is a sand filter system, special maintenance provisions should be included for handling the filter backwash. The nature of cartridge filter should be described, if applicable.

Drilling Method: Is considered to be non-invasive and under ideal conditions will not impact the streambed or water quality. Drilling does, however, present a potential problem of discharging drilling lubricants and/or muds to surface waters if all does not go well. Special conditions within the Stormwater Pollution Prevention Plan must include provisions for controlling liquids. A contingency plan, clearly defined and known to the contractor, should describe specific actions if fracture or short circuiting cause visual effects in the stream being crossed.

Wet trenching should not be allowed in any fish bearing stream.

Doug Pineo will elaborate on stream crossing methodology.

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Washington Department of Fish and Wildlife will control work methods below the highwater mark of the channel. BMPs are required to protect water quality and special care is necessary close to surface waters.

Q. What are the environmental implications associated with other construction activities?

A. The presence of heavy construction equipment, vehicle travel, access roads, vegetation removal, trenching and stockpiling excavated soils all expose soil to erosion and destroy habitat. Fuel, oil and chemical spills can occur.

Q. What actions can be taken to minimize these impacts as much as possible?

A. The following actions can be taken:

- Comply with county and affected municipality's sensitive areas ordinances. Special requirements and actions are necessary with defined areas, such as erosion hazard areas, wetlands, riparian areas, and steep slopes.
- Minimize soil exposure. Overly ambitious clearing, grading, and trench excavation can get too far ahead of the pipe and backfill crew if care is not used. The progress must be coordinated so the soil is stabilized as quickly as possible. Weather must be considered. A common problem in linear construction is a tendency for the project to delay hydroseeding or other soil stabilization method to gain the economy of scale. The disturbed soils should be stabilized at the end of the working day, not once or twice a week. Clear criteria for methods of soil stabilization should be defined.
- Reestablish vegetative cover and riparian habitat as soon as possible. Restore stream bed features immediately upon completion of work in stream bed.
- Conduct construction activities during periods of non-precipitation and low groundwater. This applies particularly to steep slopes and erosion hazard areas. Most construction activities are easier and more efficient during summer weather. Long daylight hours also facilitate progress.

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- Keep to an absolute minimum the number of stream crossings that will use invasive crossing method. Where invasive methods are necessary because other methods are more disruptive, instream work must be conducted in strict accordance with the HPA. The HPA must be present at the work site.
- Have an adequate Stormwater Pollution Prevention Plan that is fully implemented.

Q: What regulators would oversee this project if it were a local project?

A. To protect water quality and aquatic resources, King County, affected municipal governments, Washington Department of Fish and Wildlife and the Washington Department of Ecology.

Q: What enforcement mechanisms are available to ensure compliance with water quality standards and protection of habitat?

A. (1) Proponents should hire an independent environmental engineering consultant who will prepare the Stormwater Pollution Prevention Plan as required by the NPDES Construction Stormwater Permit. These plans must propose specific measures to minimize environmental impacts as described above and ensure that these measures are incorporated into the construction plan of the general contractor. The plan shall provide for upstream and downstream monitoring of the streams for settleable solids, turbidity and pH (if concrete or caustic materials are used). The results, including violations shall be retained and reported to the regulatory authority and the proponent.

(2) The regulatory findings and requirements must include a requirement for stipulated penalties to be paid automatically to the regulatory authority by the proponent.

(3) The independent environmental engineering consultant shall use existing information or prepare an evaluation of the areas to be disturbed and damaged. The evaluations shall include a survey of riparian habitat, substrate, available food and individual fish specimens that will be displaced or destroyed as a result of the construction activities. The total affected area will be used in calculating a stipulated Resource Damage Assessment to compensate for the

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loss of state resources and will assume total loss in the first year, 2/3 loss in the second year and 1/3 loss for the third year. Damages will be calculated on the true cost of the lost fish, taking into consideration those species shortly to be listed by the National Marine Fisheries Service.

(4) All stormwater pollution prevention plans, water quality monitoring plans, stream survey plans that determine fish populations, and monitoring results shall be submitted to EFSEC for review and approval.

DATED this _____ day of February, 1999.

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