

EXHIBIT "K-1"

NITRATE-NITROGEN MONITORING AND CANYONFALLS CREEK

Post-construction water quality monitoring of water quality impacts on Canyonfalls Creek will focus on:

- (1) off-site Canyonfalls Creek recharge from the shallow aquifer, and
- (2) ground water quality from an existing shallow aquifer well and at the Canyonfalls Creek Spring.

Sampling protocols and quality assurance / quality control will be derived from the freshwater chapter of the Puget Sound Estuary Program (1990) and applicable sections of the EPA 40CFR part 136(1996). The monitoring plan is shown on Table 1 and described in more detail below.

If the on-site community septic drainfield option is employed (in addition to monitoring requirements imposed by the DOH and/or DOE) the project would continuously monitor nitrate-nitrogen at the Canyonfalls Creek spring and monitor nitrate-nitrogen quarterly in well TW-2, rescreened to sample from the upper portion of the shallow aquifer. Well TW-2 is between the proposed community drainfield site and the Canyonfalls Creek spring. Residential equivalent (RE) connections to the community drainfield would be conditioned to a limit of 50 REs during year one, and a total of 150 REs during year two of development. Full capacity of the community drainfield would be 300 REs. The existing MODFLOW ground water model would be used to estimate transit times for the septic effluent plume to reach each of the TW-2 and Canyonfalls Creek springs sites, so that the number of RE connections could be correlated to measured nitrate-nitrogen concentrations, as well as compared to background concentrations. If extrapolation of the measured data to the full 300 RE connections shows that higher nitrate-nitrogen concentrations would occur than were predicted in the EIS, RE connections would be limited to a number that would not result in exceedance of the predicted EIS concentration change. In no case could the number of RE connections to community drainfield exceed 300.

In the event that Troutlodge and Cascadia agree to perform an in-situ test of a range of nitrate-nitrogen concentrations on trout egg and fry development, those results would replace the EIS prediction to establish the acceptable upper limit of nitrate-nitrogen concentration increase. The monitoring to extrapolate year one and year two data to expected results at 300 RE connections would remain the same, only the criterion for an acceptable nitrate-nitrogen increase could potentially change.

Monitoring would continue for a minimum of three years after the community drainfield was taken off-line unless Troutlodge, the County, and Cascadia agree that the results of an in-situ

test (if performed), indicate there is no reasonably expected risk due to nitrate-nitrogen and no further monitoring is required.

After the project is connected to the permanent sewer system, TW-2 ground water monitoring and Canyonfalls Creek monitoring would continue for three years after completion of Phase I. If the project is connected to the permanent sewer system from inception, TW-2 ground water monitoring would commence with development and cease three years after completion of Phase I.

Reporting

Yearly status reports will provide a comparison of post-development and baseline data. This will include analysis of nitrate to determine if it is significantly greater than predicted during the first years of development. If significant and potentially harmful differences are found, mitigation measures would be employed in consultation with the County and interested parties.

TABLE 1**Phase I Post-Construction Ground Water Monitoring Plan**

Parameter	Canyonfalls Ck. @ TPUD Bridge	Ground Water Well TW-2
Total Suspended Solids	4 times (seasonally)	4 times (seasonally)
Zinc	4 times (seasonally)	4 times (seasonally)
Copper	4 times (seasonally)	4 times (seasonally)
Lead	4 times (seasonally)	4 times (seasonally)
Cadmium	4 times (seasonally)	4 times (seasonally)
Hardness	4 times (seasonally)	4 times (seasonally)
Pesticide Screen	4 times (seasonally)	4 times (seasonally)
pH (in situ)	4 times (seasonally)	4 times (seasonally)
Temperature (in situ)	4 times (seasonally)	4 times (seasonally)
Dissolved Oxygen (in situ)	4 times (seasonally)	4 times (seasonally)
Conductivity (in situ)	4 times (seasonally)	4 times (seasonally)
Continuous Water Level	Yes	Yes
Continuous rainfall, temperature, evaporation	Yes	Yes
Continuous nitrate-nitrogen	Yes	Yes