

ATTACHMENT #1

Soils Removal Activity

The soils removal activity would begin in the western end of the lower stretch of the West Ravine nearest the river. To minimize/avoid potential erosion impacts, it is proposed to work only in dry areas during the summer months. A portion of the unused discharge line would be uncovered and removed. The entrance to the remainder of the discharge line would be plugged with concrete at least three feet thick. The soil and discharge line removal would then proceed up the ravine. Appropriate temporary runoff controls/best management practices (appropriate BMPs from the 2004 Ecology Eastern Washington Stormwater Manual) would be put in place at the end of the ravine. The existing side slopes may have to be cut back to flatter side slopes in steeper areas to avoid upper non-suspect soils from raveling down on to suspect soils. An excavator would remove the soil and place it in a front-end loader. The front-end loader would then fill a truck at the eastern end of the lower reach of the ravine. The truck would then take the soil to the Materials Screening and Stockpile Area. Soils would be removed in one-foot lifts. Field screening samples would be taken and used to estimate extent and depth of PCBs with immunoassay methods. As areas are deemed to meet cleanup goals based on field screening techniques, verification samples would be submitted to an approved laboratory for confirmation analysis. Once achievement of the cleanup standard has been verified, backfilling with the appropriate materials would be performed. This process would be continued in the upper reach of the West Ravine.

Backfilling

Planned ravine backfilling would utilize coarser gravel to cobble size material in the base. Plans are considering the feasibility of using finer grained soil (<2mm size) within voids between larger gravel/cobbles near the river to provide additional long term means to minimize potential for possible residual suspect material, if any remains, from migrating toward the river. Clean gravel and sand are planned to be placed on ravine sides with topsoil to fill in between larger particles close to the river to promote revegetation.

Restoration

Once all removal and backfilling activities have been completed, the ravine side slopes and bottom (except where backfilled with rock) will be revegetated by hydroseeding with native seed mix. Large trees would be left in place to the extent practicable, especially in areas without impacted soil. If it is necessary to meet permit requirements, areas where significant removal of large trees is required could be replanted with live stakes and/or 1 to 5 gallon size trees (native species). It is anticipated that this would be more important near the river to preserve riparian habitat.

If necessary to meet permit requirements, bank restoration near the river could include placement of "vegetated riprap"/live stake planting of native species in joints between larger rock (as in USDA Streambank and Shoreline Protection Engineering Field Handbook or WDFW Integrated Streambank Protection Guidelines). However, this is not anticipated since work is not anticipated so close to the river that streambank stabilization would be needed.