

Columbia River Treaty Fishing Access Sites Tier I Sediment Evaluation FY2001

ABSTRACT

The Clean Water Act (CWA) of 1976, as amended, regulates dredging activities and requires sediment quality evaluation prior to dredging. Guidelines to implement 40 CFR Part 230-Section 404(b)(1) regulations of the CWA, the national Inland Testing Manual (ITM) and the regional Dredge Material Evaluation Framework for the Lower Columbia River Management Area (DMEF) manual have adopted a tiered testing approach for the evaluation of dredge material.

A Tier I study involves the use of existing data, to determine the suitability of dredge material for open inwater placement or upland disposal. No further characterization of material is needed if a Tier I investigation can sufficiently answer questions regarding sediment quality and dredge volumes, as they relate to the DMEF protocols. This Tier I study will include a field investigation to determine if the material to be dredged fits the exclusionary guidelines of the DMEF or if physical and chemical analyses will be run in a Tier II study.

Material subject to the CWA from all four projects, Maryhill, White Salmon, Pasture Point and Three Mile Canyon, as described in this evaluation, meets the guidelines for open in-water or upland disposal without further characterization. Material to be removed from the Maryhill site, not subject to the CWA, is not covered in this characterization and maybe subject to state solid waste, or other, guidelines. Appropriate state regulators should be consulted prior to disposal.

REVIEW OF EXISTING DATA

The data collected during the 1991 MOP (Minimum Operating Pool) study on the Columbia River has 2 sites near the White Salmon site excavation. This data is nearly 9 years old, but no significant changes in source contamination have taken place. This data is still considered representative of the area.

Vibra core samples were collected on September 26, 1991 as part of MOP study, 3 samples at Bingen Boat Basin (RM 171.7) and 3 samples at SD and S Lumber (RM 170.6). Physical analyses, metals, PAHs, Pest/PCBs, TOC and AVS were run on all samples collected. Dioxins/Furans, TBT and phenols were run on select samples collected, as well as, 3 additional physical analyses at each site.

The physical analysis at Bingen ranged from “silt” to “silt with sand” and a mean particle size of 0.036 mm. At SD and S Lumber the mean particle size was 0.257 mm with classification including, “sandy silt”, “silty sand and “silt”. Due to their physical layout, both the Bingen and SD and S Lumber sites contain finer grained material than would be expected at the any of the sites being considered in this evaluation.

Chemical analyses indicate all levels were below screening levels of the DMEF. Dioxin was detected at the SD and S Lumber Company, but using the Toxic Equivalency Factors (TEF) and calculating the Toxic Equivalency Quotient (TEQ); guidance levels for ecological and human health were not exceeded.

In 1992 residences of Bingen requested the Washington Department of Health to test, the Columbia River where dredge material from Bingen had been placed on the bank, for radioactivity attributable to Hanford operations. Other than potassium-40, which is naturally occurring, there was no detectable radioactivity found (1992-1994 Annual Report, June 1999, Washington State Department of Health).

CURRENT PROJECT - Individual Dredge Sites

Maryhill – At Maryhill (app RM 209) the basin excavation (42,032 CY), riprap excavation (550 CY), breakwater excavation (2663 CY) and boat ramp excavation (130 CY), totaling 45, 375 CY, all of which will be excavated prior to the removal of the earthen plug (4109 CY).

The only material to be excavated at Maryhill, subject to the Clean Water Act and 40 CFR 230 Section 404/401, is the 4109 CY earthen plug. The balance of the material will be excavated prior to the removal of the earthen plug. The basin excavation material will be hauled to a designated upland site, with no return water. The earthen plug material is not in proximity to any known contamination source and meets the volume requirement (< 10,000 CY) for the “no test” exemption for small projects, covered in Chapter 6.6.4 of the DMEF.

White Salmon – The White Salmon project (app RM 170) will have a total of 12,695 CY of excavation material, 12,059 CY from the basin, 540 for riprap excavation and 96 CY from the boat ramp. This material will be subject to the Clean Water Act and 40 CFR 230 Section 404/401, if disposal method allows return water to the Columbia River. The material is considered uncontaminated native soil and is not in proximity to any known contamination source. All previous testing information, as noted in the Existing Data section above, does not indicate contamination sources to be present in the area.

Pasture Point – The excavation for a basin and a boat ramp at Pasture Point (app RM 227) will total 1520 CY of material. The material is considered uncontaminated native soil and is not in proximity to any known contamination source. This volume (<10,000 CY) of material meets the “no test” exemption for small projects, covered in Chapter 6.6.4 of the DMEF. This exemption allows for material of “low rank” (chapter 5 of DMEF) be disposed of without testing.

Three mile Canyon – In-water excavation for a boat ramp will total 533 CY of material at Three mile Canyon (app RM 255), with 1257 CY of inwater fill. The material, like that at Pasture Point and Maryhill, is considered uncontaminated native soil and is not in proximity to any known contamination source. The dredge volume meets the “no test” exemption for small projects, covered in Chapter 6.6.4 of the DMEF. This exemption allows for material of “low rank” (chapter 5 of DMEF) be disposed of without testing.

CONCLUSION

All of the dredge material from the four projects discussed (Mary hill, White Salmon, Pasture Point and Three Mile Canyon) are subject to the Clean Water Act (CWA), if the material is disposed of in-water or has run off (return water) back to the Columbia River.

The Clean Water Act (CWA) of 1976, as amended, regulates dredging activities and requires sediment quality evaluation prior to dredging. Guidelines to implement, 40 CFR Part 230-Section 404(b)(1), regulations of the CWA, the national Inland Testing Manual (ITM) and the regional Dredge Material Evaluation Framework for the Lower Columbia River Management Area (DMEF) manual have adopted a tiered testing approach for the evaluation of dredge material.

Material from three projects, Maryhill, Pasture Point and Three Mile Canyon, is considered uncontaminated native soil, is not in proximity to any known contamination source and less than a 10,000CY volume, thereby, meeting the “no test” exemption from testing for small projects with small dredge volumes and “low rank”.

All 12,059 CY of material at the White Salmon project is subject to the CWA for disposal purposes. The DMEF allows for coarse-grained material, with at least 80% retention on a No. 230 sieve, a Total Volatile Solids (TVS) content of less than 5.0% and removed from potential sources of contamination, to be ranked “exclusionary”. The historical data, for projects in close proximity to the White Salmon project, show all levels of contaminants of concern to be below the screening levels adopted for use in the DMEF. Visual on site inspection (February 14, 2000) of the material to be excavated indicates coarse-grained material (>80% sand) with low (<5%) TVS.

After reviewing the historical data and conducting a visual inspection of the material at the purposed project excavation site, a factual determination can be made that the material at this site meets the guidelines for an “exclusionary” ranking. No further characterization of this material is necessary.

Material subject to the CWA from all four projects, Maryhill, White Salmon, Pasture Point and Three Mile Canyon, as described in this evaluation, meets the guidelines for open in-water or upland disposal without further characterization. Material removed from the Maryhill site, not subject to the CWA, is not covered in this characterization and maybe subject to state solid waste, or other, guidelines. Appropriate state regulators should be consulted prior to disposal.

References

Tetra Tech. 1992-1993. Reconnaissance Survey of the Lower Columbia River: Task 1-7. Prepared for the Columbia River Bi-State Committee. Tetra Tech, Inc., Bellevue, WA.

U.S. Army Corps of Engineers, Portland District, Seattle District, U.S. Environmental Protection Agency, Region 10, Oregon Department of Environmental Quality, Washington State Department of Natural Resources. April 1998 (draft document). Dredge Material Evaluation Framework Lower Columbia River Management Area.

U. S. Environmental Protection Agency and U. S. Army Corps of Engineers. February 1991. Evaluation of Dredged Material Proposed for Discharge in Inland and Near Coastal Waters – Testing Manual, dated (referred to as the “Inland Testing Manual”).

Washington State Department of Health, Division of Radiation Protection. June 1999. 1992-1994 Annual Report, 31st Edition, page 62, Olympia, Washington 98504-7827.

**Columbia River Treaty
Fishing Access Sites**

Threemile Canyon Site

Pasture Point Site

Maryhill Site

White Salmon Site

Columbia River

The Dalles Dam

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Map Is Not To Scale

