

CENPS-OP-RG

MEMORANDUM FOR RECORD

3 May 1990

SUBJECT: DECISION ON THE SUITABILITY OF DREDGED MATERIAL TESTED UNDER PSDDA CRITERIA FOR THE MORTON MARINE, DUWAMISH RIVER MAINTENANCE DREDGING PROJECT (OYB-2-013054) TO BE DISPOSED OF AT THE ELLIOTT BAY OPEN WATER DISPOSAL SITE.

1. The following summary reflects the PSDDA agencies (Corps of Engineers, Washington Departments of Ecology and Natural Resources and the Environmental Protection Agency) consensus decision on the acceptability of the sampling plan and all relevant test data (contained in the sampling/testing reports delivered to the Corps over the period March 22 to May 2, 1990 and subsequently sent to the PSDDA agencies for review) to make a determination on the suitability of 4,000 cubic yards of material proposed for dredging from Morton Marine for open-water disposal at a PSDDA disposal site.
2. The PSDDA approved sampling and testing plan for small projects was followed, and quality assurance/quality control guidelines specified by PSDDA were complied with. The data gathered were deemed sufficient and acceptable for regulatory decision-making under the PSDDA program.
3. Chemistry data from the single composited analysis indicated that detected concentrations for Total PCB's and Total DDT exceeded 1989 PSDDA screening level (SL) values. The reported values did not exceed their respective bioaccumulation triggers (BT) or maximum levels (ML) however. Analysis of two other chemicals-of-concern, aldrin and lindane, resulted in these chemicals being reported as undetected at quantitation limits above their SL's. There are no ML's for these chemicals. Only aldrin has a BT and this value was not exceeded. See Enclosure 1 for reported values.
4. The small project testing option existing at the time of sampling and testing was exercised; a single amphipod bioassay was run concurrently with chemical characterization. To fail the single bioassay the "single hit rule" applies (Phase II MPR), whereby test sediment mortality must exceed the control sediment by 20 percent absolute and must exceed the reference sediment mortality by 30 percent absolute and show a statistically significant response (t-test; $p < .05$). Therefore, a test sediment mortality response less than 20 percent absolute over control or 30 percent over reference is not considered a hit under the single hit rule. The project sediment tested was comprised of fine sand (66 percent) and silt (26 percent). The control sediment was collected off West Beach, Whidbey Island and the reference sediment from Carr Inlet. A comparison of the test sediment response with the control and reference showed a 7 percent absolute mortality response relative to the control sediment and a 2 percent absolute mortality response relative to the reference sediment. Therefore, under the small project testing guidelines, the bioassay response was considered a pass under the single hit rule.

5. Based on the above discussion and summary of chemical and bioassay results for the Morton Marine project sediments, the PSDDA agencies concluded that all the proposed dredged material characterized is suitable for disposal at the Elliott Bay PSDDA disposal site. Because the small project option was exercised the maximum volume of sediments which may be disposed of is 4,000 cubic yards.

Concur:

3 May 1990
Date

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David R. Kendall, Ph.D
Seattle District Corps of Engineers

3 May 1990
Date

David J. Fox
David Fox
Seattle District Corps of Engineers

May 3, 1990
Date

John Malek
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Environmental Protection Agency
Region X

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Date

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Washington Department of Ecology

9 May 1990
Date

Betsy Striplin
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Washington Department of Natural Resources

Enclosure

Copies Furnished:

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DMMU file

Enclosure 1

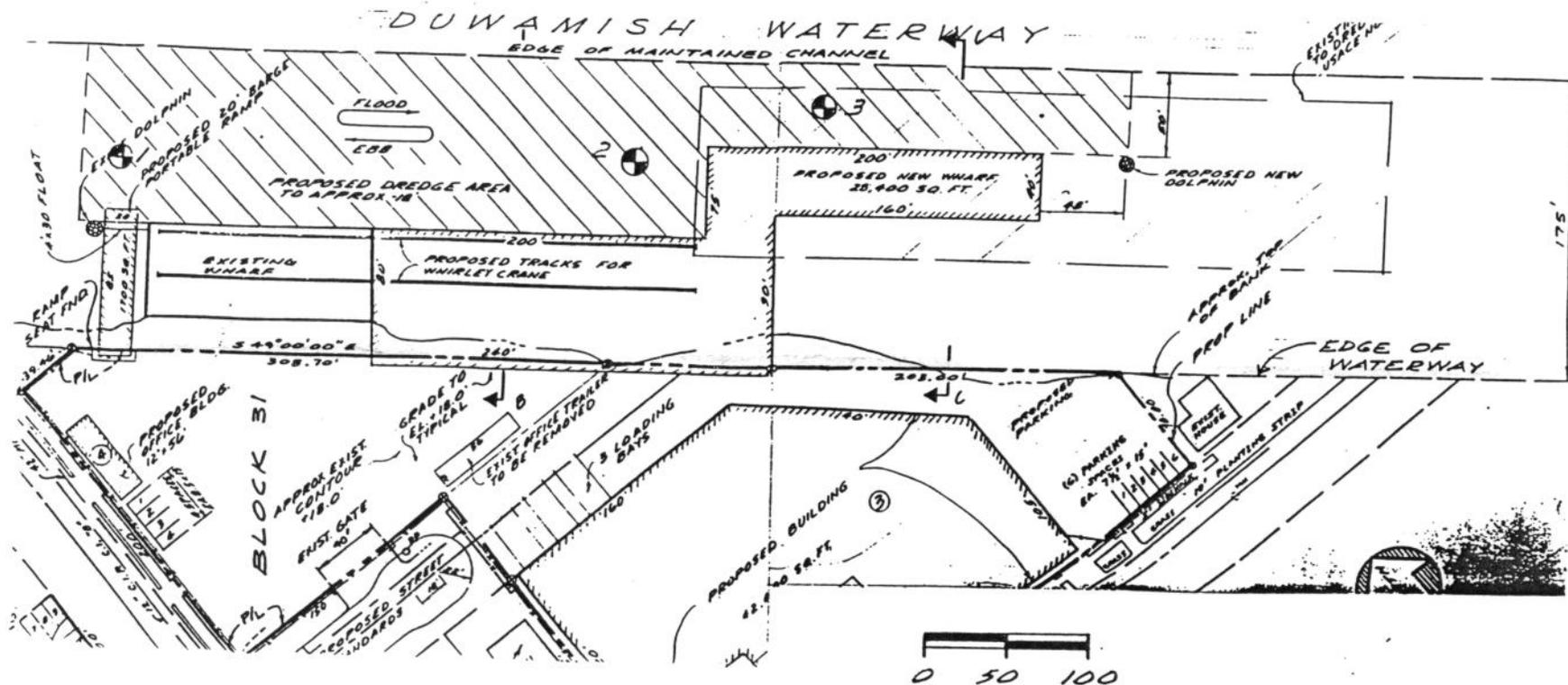
MORTON MARINE
OYB-2-013054

<u>Chemical</u>	Reported Value (ug/kg)	PSDDA Sediment Quality Values (ug/kg)		
		SL	BT	ML
Total DDT	13	6	50	69
Total PCBs	240*	130	38**	2,500
Lindane	15 U	10	--	--
Aldrin	15 U	10	37	--

U = undetected

* equals 14 mg/kg carbon-normalized

** units = mg/kg carbon-normalized



SAMPLING SITES - MORTON MARINE

Permit No. OYB-2-013054

B.H. Morton/Jay Spearman

Sampling done 12/12/89 & 12/13/89