

SUBJECT: DECISION ON THE SUITABILITY OF DREDGED MATERIAL TESTED UNDER PSDDA CRITERIA FOR THE HURLEN CONSTRUCTION, DUWAMISH RIVER MAINTENANCE DREDGING PROJECT (OYB-2-013130) 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 to make a determination on the suitability of 4,000 cubic yards of material proposed for dredging from the Hurlen Construction site 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. Sediments from four sampling locations (see Enclosure 1) in this high-ranked area were composited for one laboratory analysis. Chemistry data from this single composited analysis indicated that detected concentrations for nineteen chemicals-of-concern exceeded 1989 PSDDA screening level (SL) values. Of these, five exceeded PSDDA maximum levels (ML). No bioaccumulation triggers were exceeded. Analysis of six other chemicals-of-concern resulted in values being reported as undetected at quantitation limits above their SLs.

Duplicate analysis of this composited sample resulted in precision values which exceeded PSDDA standards in many cases. For organics analyses the PSDDA precision standard is 100% relative percent difference (RPD). This standard was exceeded for twelve individual chemicals. In the duplicate, eighteen chemicals-of-concern exceeded SL with thirteen of these exceeding ML. Fluoranthene exceeded its bioaccumulation trigger. Analysis of six other chemicals-of-concern resulted in values being reported as undetected at quantitation limits above their SLs. See Enclosure 2 for reported values and precision data.
4. The small project testing option was exercised; the amphipod and microtox bioassays were run concurrently with chemical characterization. The project sediment tested was comprised of 54 percent sand, 37 percent silt and 9 percent clay. The reference sediment was collected from Carr Inlet and was comprised of 54 percent sand, 18 percent silt and 28 percent clay. The control sediment for the amphipod test was collected off West Beach, Whidbey Island. Both reference and control sediments met performance standard criteria. The test sediment passed both bioassays with no significant difference exhibited between test and reference sediments.
5. Despite the lack of failures during biological testing, the exceedance of numerous MLs during chemical testing is a sufficient basis for establishing a reason-to-believe that the proposed dredged sediment is unacceptable for unconfined, open-water disposal (EPTA-Phase I; section 2-5). In the absence of additional acute toxicity, bioaccumulation and chronic effects data the PSDDA agencies concluded that none of the proposed dredged material characterized is suitable for disposal at the Elliott Bay PSDDA disposal site.

Concur:

Sep 4, 1990
Date David R. Kendall
David R. Kendall, Ph.D
Seattle District Corps of Engineers

8/31/90
Date David F. Fox
David Fox
Seattle District Corps of Engineers

Sept 4, 1990
Date John Malek
John Malek
Environmental Protection Agency
Region X

Sept. 7, 1990
Date Richard L. Vining
Rick Vining
Washington Department of Ecology

Sept. 6, 1990
Date Betsy Striplin
Betsy Striplin
Washington Department of Natural Resources

Enclosure

Copies Furnished:

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John Wakeman/CENPS-EN-PL-ER
Rudy Pojtinger/Reg File/CENPS-OP-RG
Tom Mueller/CENPS-OP

John Malek/EPA
Rick Vining/DOE
Betsy Striplin/DNR
DMPMO file

NOTES:

PURPOSE: TO MAINTAIN EXIST. VESSEL LOADING AND MOORAGE FACILITY,

1. FEDERAL HDR LINES NOT ESTABLISHED.

2. DATUM REF. MLLW-D.O.(N.O.S.)

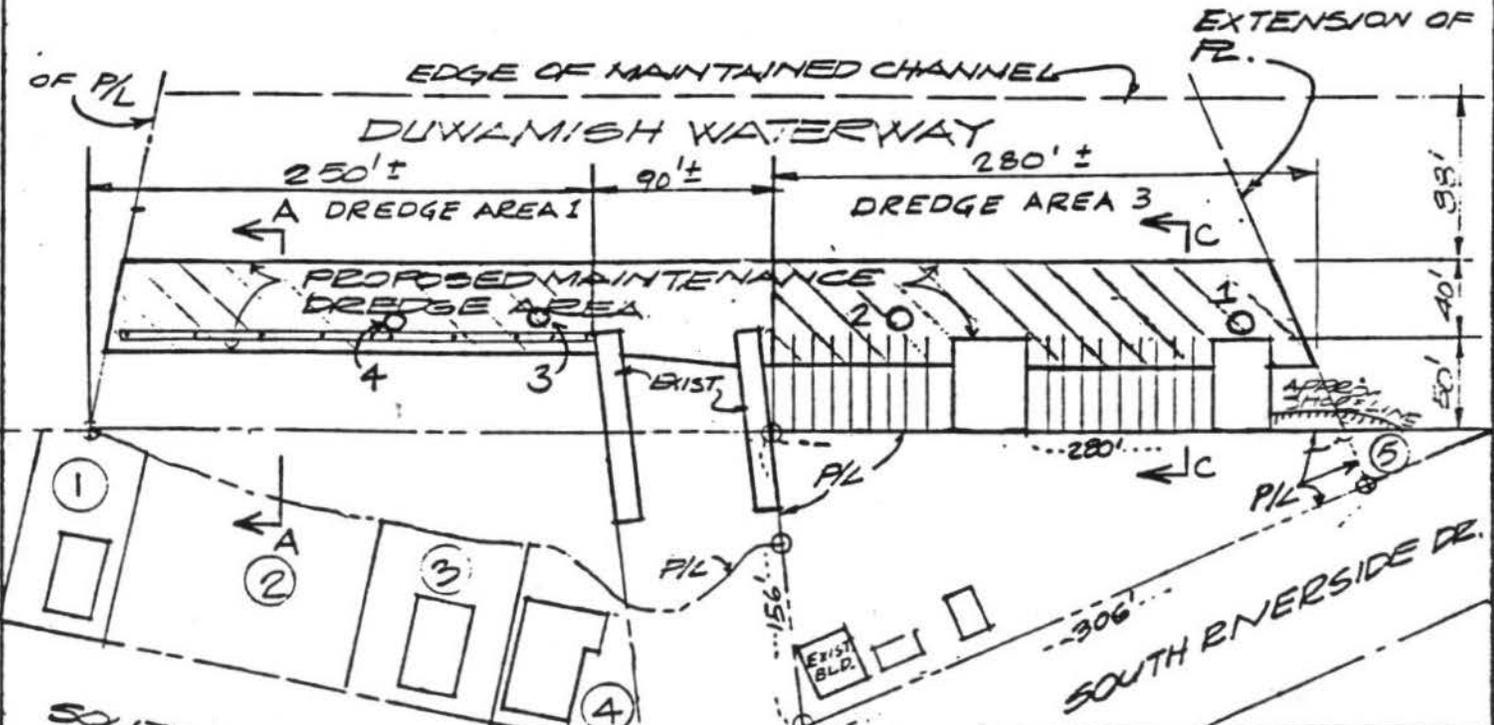
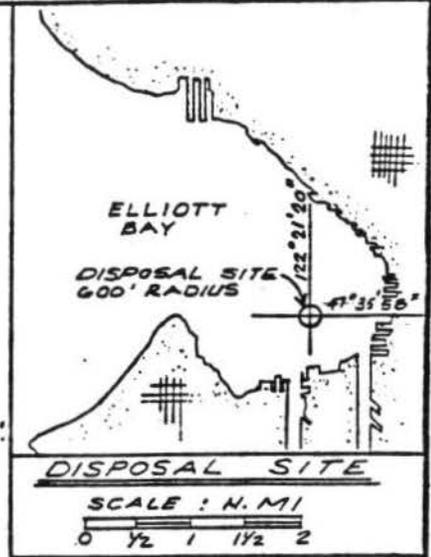
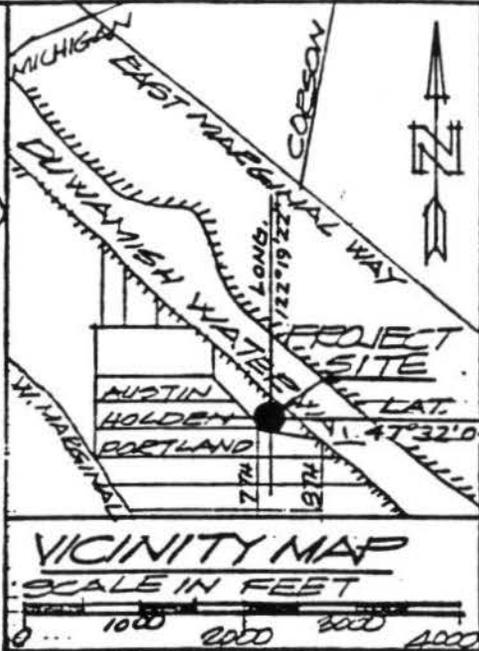
3. REF. PERMIT NO'S:

071-QYB-2-009229

071-QYB-2-005404

071-QYB-1-00481

P-70-147



PROPOSED MAINTENANCE DREDGING IN DUWAMISH WATERWAY SEATTLE, KING. COUNTY, WASH.
 APPLICANT: HURLEN CONSTRUCTION COMPANY.
 AGENT: JAY W. SPEARMAN CONSULTING ENGINEER
 SET. TOR 2 12/27/89

SITE PLAN
 SCALE: 1" = 100'
 0 50 100 FEET.

ADJACENT PROPERTY OWNERS:

1. TRIPLETT EVELYN P.
2. HURLEN CONST.
3. PHILLIPS DANIEL J.
4. MCCONNELL & NEWBY
5. LUKAS PETER F.

Enclosure 2

HURLEN CONSTRUCTION
OYB-2-013130

Chemical	Rep 1 (ug/kg)	Rep 2 (ug/kg)	RPD	PSDDA Sediment Guideline Values (ug/kg)		
				SL	BT	ML
Phenol	200 B ✓			120	876	1200
2-Methylphenol	15 U	15 U ✓	0	10		72
2,4-Dimethylphenol	15 U	15 U ✓	0	10		50
Pentachlorophenol	150 U	150 U ✓	0	69	504	690
Naphthalene	990	11000 ✓	167	210		2,100
2-Methylnaphthalene	240	2100 ✓	159	67		670
Acenaphthylene	290	1700 ✓	142	64		640
Acenaphthene	1100 B	16000 B ✓	174	63		630
Fluorene	940	16000 ✓	178	64		640
Phenanthrene	4000	55000 ✓	183	320		3,200
Anthracene	1100	6600 ✓	143	130		1,300
Total LPAH	8200	108000 ✓	172	610		6,100
Fluoranthene	3900	23000* ✓	142	630	4,600	6,300
Pyrene	6800 B	20000 B ✓	121	430		7,300
Benzo(a)anthracene	1400	5900 ✓	123	450		4,500
Chrysene	1200	4900 ✓	121	670		6,700
Benzofluoranthenes	2300	4200 ✓	58	800		8,000
Benzo(a)pyrene	860	2200 ✓	88	680	4,964	6,800
Indeno(1,2,3-cd)pyrene	300	450 ✓	40	69		5,200
Dibenzo(a,h)anthracene	150	160 ✓	6	120		1,200
Total HPAH	17000	61180 ✓	113	1,800		51,000
Hexachlorobenzene	31 U	31 U ✓	0	23	168	230
Benzyl alcohol	15 U	15 U ✓	0	10		73
Benzoic acid	390 U	390 U ✓	0	216		690
Dibenzofuran	670	11000 ✓	177	54		540

Shaded entries indicate exceedances of ML

* indicates an exceedance of BT

U = undetected

B = blank-corrected