

SUBJECT: DETERMINATION OF THE SUITABILITY OF THE PROPOSED MAINTENANCE DREDGED MATERIAL FROM THE PORT OF EVERETT MARINA – 14TH STREET DREDGING PROJECT (2004-01533) AS EVALUATED UNDER SECTION 404 OF THE CLEAN WATER ACT FOR UNCONFINED OPEN-WATER DISPOSAL.

1. The following summary reflects the consensus determination of the Agencies that comprise the regional Dredged Material Management Program (DMMP) for the State of Washington. The agencies include the Corps of Engineers, Department of Ecology, Department of Natural Resources, and the Environmental Protection Agency. The agencies are charged with determining the suitability of 4,000 cy of proposed maintenance dredging material from the 14th Street Everett Marina, for unconfined open-water disposal at the Port Gardner disposal site.
2. The project was ranked moderate for testing purposes, and three core samples were collected and composited within the single Dredged Material Management Unit (DMMU) with a push-corer. The push corer with 3-inch contaminant-free cellulose acetyl butyrate (CAB) liner tubes. Figure 1 shows the locations of the three core sample stations within the DMMU.
3. Relevant dates for regulatory tracking purposes are included in Table 1.

Table 1. Regulatory Tracking Information and Dates

Corps Permit #:	2004-01533
Initial SAP submittal date:	November 12, 2004
SAP approval letter date:	November 22, 2004
Sampling date(s):	January 5, 2005
Sediment data characterization report submittal date:	February 28, 2005
Volume Tested:	4,000 cy
DAIS Tracking Number	POE14-1-A-F-209
Recency Determination Date: Moderate (5 years)	January 2010

4. The Sampling and Analysis Plan was approved by the Agencies on November 22, 2004, and called for characterization of a single DMMU with three core samples composited for a single analysis (Figure 1). The quality assurance/quality control guidelines specified by the PSDDA Users Manual were generally complied with. The data gathered were deemed sufficient and acceptable for decision-making by the DMMP agencies based on best professional judgment.
5. Table 2 provides an analysis summary of the results of the conventional and chemical analyses for the single DMMU. Chemical analysis of the single sample indicated that from a DMMP perspective there were no SL exceedances of DMMP chemicals of concern (see Table 3-2 for complete chemical testing summary. No biological testing was required for this sample.
6. The results of the single composited surface sample indicated that 4,000 cy of proposed maintenance dredged material is suitable for unconfined open-water disposal at the Port Gardner disposal site.
7. This memorandum documents the suitability of material proposed for dredging from the 14th Street Everett Marina for unconfined open-water disposal at the Port Gardner disposal site. However, this suitability determination does not constitute final agency approval of the project. A dredging plan for this

this project must be completed as part of the final project approval process. A final decision will be made after full consideration of agency input, and after an alternatives analysis is done under Section 404(b)(1) of the Clean Water Act.

Concur:

3 March 05

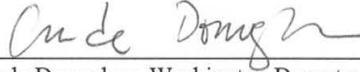
Date



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

3/3/08

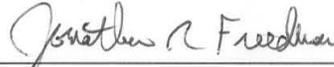
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Cinde Donoghue, Washington Department of Ecology

3/3/2005

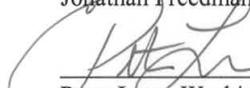
Date



Jonathan Freedman/John Malek, Environmental Protection Agency, Region 10

March 3, 2005

Date



Peter Leon, Washington Department of Natural Resources

Copies Furnished:

Corps Regulatory Branch Project Manager/Susan Glenn

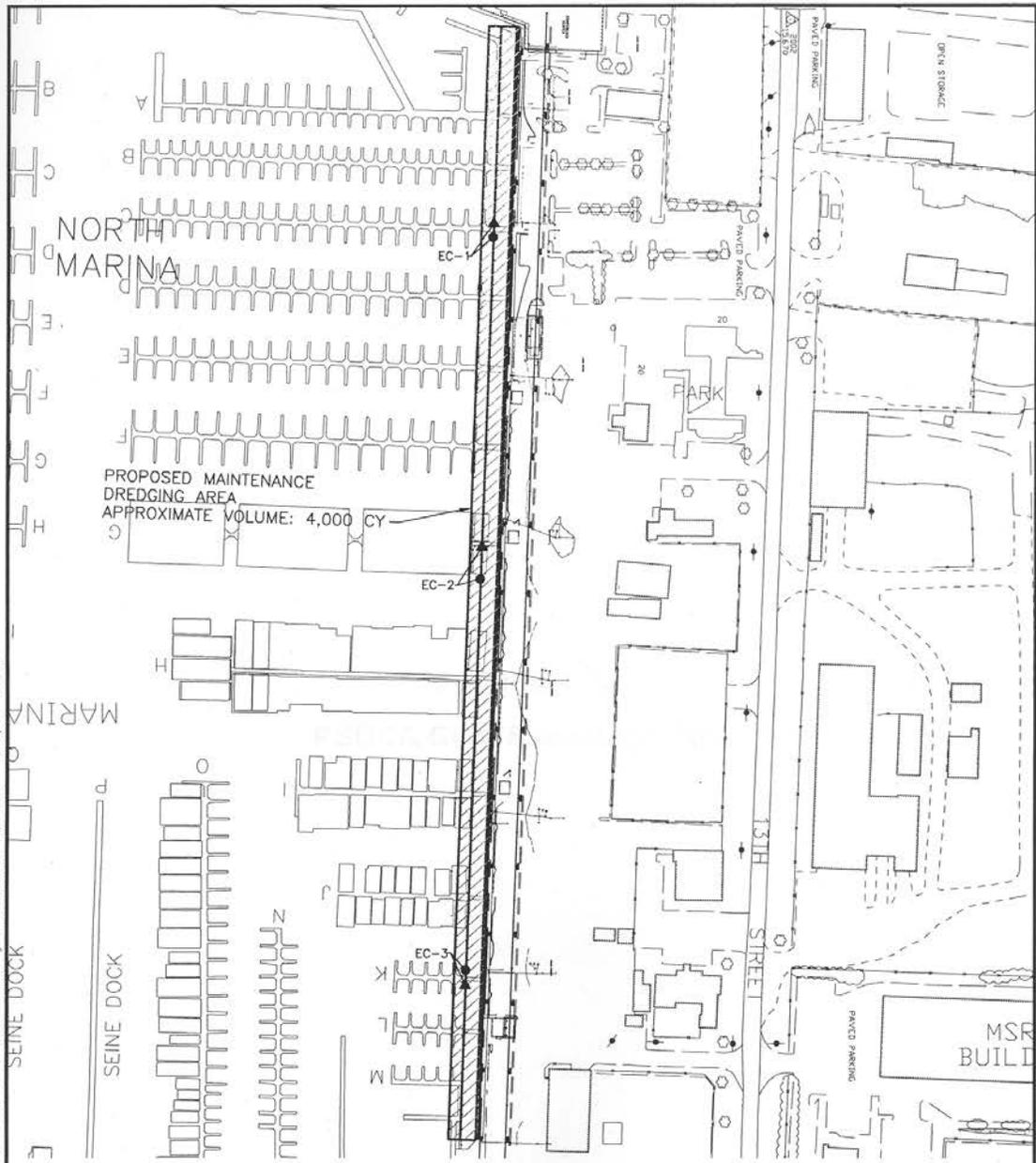
Jonathan Freedman/John Malek, EPA

Cinde Donoghue, Ecology

Peter Leon, DNR

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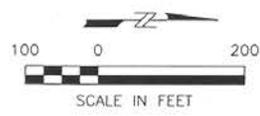
File: H:\18490\1849005005.dwg Layout: FIGURE 1-2 User: ostenberg Plotted: Feb 10, 2005 - 3:46pm Xref's:



LEGEND

-  MAINTENANCE DREDGING AREA
-  TARGET PSDDA SAMPLING LOCATIONS
-  ACTUAL PSDDA SAMPLING LOCATIONS

EXISTING CONDITIONS PLAN



PORT OF EVERETT
 14th STREET MAINTENANCE DREDGING
 PORE1-18490-100
 DATE: 02/02/05 DRWN: A.S./SEA

**CORING LOCATIONS IN
 DMMU-1A AT EVERETT MARINA**
FIGURE 1-2

Table 2. DMMP Sediment Testing Summary for Port of Everett Marina's 14th Street Dredging Project.

CHEMICAL NAME	DMMP				DMMU-EC-1A-S1	
	Units	SL	BT	ML	dry wgt	VQ
					DMMP	
Total Solids	%				62.3	
Total Volatile Solids	%				5.3	
Total Organic Carbon	%				1.8	
Total Ammonia	mg/kg				19.8	
Total Sulfides	mg/kg				580	
Gravel	%				2.4	
Sand	%				39.2	
Silt	%				47.7	
Clay	%				10.6	
Fines (percent silt + clay)	%				58.3	
Eohaustorius estuarius hits:						
Mytilus galloprovincialis hits:						
Neanthes arenaceodentata hits:						
Bioassay Determination: (P/F)					NT	
BTs exceeded:					no	
Bioaccumulation conducted:					no	
Bioaccumulation Determination:						
ML Rule exceeded:					no	
PSDDA Determination:					PASS	
DMMU Volume:	cy				4,000	
Rank					M	
Mean Core sampling depth	ft				3.7	
Maximum sampling depth (mudline)					4.0	
DMMU ID:					DMMU-EC-1A-S1	

Legend:

P = Pass (Suitable for UCOWD)

VQ = Validation Qualifier

UCOWD = Unconfined open-water disposal

NT = No Test

Table 3-2 Summary of PSDDA Investigation Chemical Concentrations

Parameter	SMS Criteria		PSDDA Criteria			EC-1A-S1		
	SQS	MCUL	SL	BT	ML			
Conventional								
Total Solids (%)	nv	nv	nv	nv	nv	62.3		
Total Volatile Solids(%)	nv	nv	nv	nv	nv	5.3		
Total Organic Carbon (%)	nv	nv	nv	nv	nv	1.8		
Ammonia (mg/kg)	nv	nv	nv	nv	nv	19.8		
Total Sulfides (mg/kg)	nv	nv	nv	nv	nv	580		J-
Metals								
	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)		
Antimony	nv	nv	150	nv	200	<8		U
Arsenic	57	93	57	507.1	700	11		
Cadmium	5.1	6.7	5.1	11.3	14	0.3		
Chromium	260	270	nv	267	nv	40.5		
Copper	390	390	390	1,027	1,300	52.4		
Lead	450	530	450	975	1,200	16		
Mercury	0.41	0.59	0.41	1.5	2.3	0.11		
Nickel	nv	nv	140	370	370	44		
Silver	6.1	6.1	6.1	6.1	8.4	<0.5		U
Zinc	410	960	410	2,783	3,800	75.8		
LPAH								
	(ppm TOC)	(ppm TOC)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(ppm TOC)	
Naphthalene	99	170	2.1	nv	2.4	0.055	3.1	Y
Aroclor 1260	nv	nv	nv	nv	nv	<0.020	<1.1	U
Aroclor 1221	nv	nv	nv	nv	nv	<0.039	<2.2	U
Aroclor 1232	nv	nv	nv	nv	nv	<0.020	<1.1	U
Total PCBs **	12	65	0.13	38*	3.1	0.040	2.20	U

Notes:

Bold values at or above laboratory detection limit

Underlined values exceed the SQS value in SMS or the SL value of PSDDA

Data has been validated according to QA-2 protocols.

* This value is normalized to total organic carbon, and is expressed in mg/kg (TOC normalized).

** Total PCBs are calculated by summing detected concentrations of Aroclors.

nv - No value currently established under PSDDA.

U = Undetected

B = Possible/probable blank contamination due to detection in the blank

J- = Estimated concentration, biased low

Y = Reporting limit raised due to interference

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Ammonia (mg/kg)	nv	nv	nv	nv	nv	19.8	
Total Sulfides (mg/kg)	nv	nv	nv	nv	nv	580	J
Metals	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	
Antimony	nv	nv	150	nv	200	<8	U
Arsenic	57	93	57	507.1	700	11	
Cadmium	5.1	6.7	5.1	11.3	14	0.3	
Chromium	250	270	nv	267	nv	40.5	
Copper	350	390	390	1,027	1,300	52.4	
Lead	450	530	450	975	1,200	16	
Mercury	0.41	0.59	0.41	1.5	2.3	0.11	
Nickel	nv	nv	140	370	370	44	
Silver	6.1	6.1	6.1	6.1	6.4	<0.5	U
Zinc	410	960	410	2,783	3,800	75.8	
LPAH	(ppm TOC)	(ppm TOC)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(ppm TOC)
Naphthalene	99	170	2.1	nv	2.4	0.055	3.1
Acenaphthylene	68	66	0.56	nv	1.3	<0.020	<1.1
Acenaphthene	16	57	0.5	nv	2	0.140	7.8
Fluorene	23	79	0.54	nv	3.6	0.110	6.1
Phenanthrene	100	480	1.5	nv	21	0.360	23.0
Anthracene	220	1200	0.66	nv	13	0.110	6.1
2-Methylnaphthalene	38	65	0.67	nv	1.9	<0.020	<1.1
Total LPAH	370	780	5.2	nv	29	0.775	43.1
HPAH	(ppm TOC)	(ppm TOC)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(ppm TOC)
Fluoranthene	160	1200	1.7	4.6	30	0.850	47.2
Pyrene	1000	1400	2.6	11.98	16	0.970	53.9
Benzo(a)anthracene	110	270	1.3	nv	5.1	0.430	23.9
Chrysene	110	460	1.4	nv	21	1.000	55.6
Benzo(b)fluoranthene	230	450	3.2	nv	9.9	0.760	42.2
Benzo(k)fluoranthene	99	210	1.6	nv	3.6	0.230	12.8
Indeno(1,2,3-cd)pyrene	34	88	0.6	nv	4.4	0.120	6.7
Dibenz(a,h)anthracene	12	33	0.23	nv	1.9	0.053	2.9
Benzo(g,h,i)perylene	31	78	0.67	nv	3.2	0.120	6.7
Total HPAH	960	5300	12	nv	69	4.533	251.9
Chlorinated Hydrocarbons	(ppm TOC)	(ppm TOC)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(ppm TOC)
1,3-Dichlorobenzene	nv	nv	0.17	nv	nv	<0.001	<0.06
1,4-Dichlorobenzene	3.1	9	0.11	nv	0.12	<0.001	<0.06
1,2-Dichlorobenzene	2.3	2.3	0.035	nv	0.11	<0.001	<0.06
1,2,4-Trichlorobenzene	0.81	1.8	0.031	nv	0.064	<0.007	<0.39
Hexachlorobenzene	0.38	2.3	0.022	0.168	0.23	<0.020	<1.1
Phthalates	(ppm TOC)	(ppm TOC)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(ppm TOC)
Dimethyl phthalate	53	53	1.4	nv	nv	<0.020	<1.1
Diethyl phthalate	61	110	1.2	nv	nv	<0.020	<1.1
Dio-n-butyl phthalate	220	1700	5.1	nv	nv	<0.020	<1.1
Butyl benzyl phthalate	4.9	64	0.97	nv	nv	<0.020	<1.1
Bis(2-ethylhexyl)phthalate	47	78	8.3	nv	nv	0.150	8.3
Di-n-octyl phthalate	58	5500	0.2	nv	nv	0.026	1.4
Phenols	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	
Phenol	0.42	0.42	0.42	nv	1.2	0.083	UB
2-Methylphenol	0.063	0.063	0.063	nv	0.077	<0.020	U
4-Methylphenol	0.67	0.67	0.67	nv	3.6	0.022	U
2,4-Dimethylphenol	0.029	0.029	0.029	nv	0.21	<0.020	U
Pentachlorophenol	0.36	0.69	0.4	0.504	0.69	<0.050	U
Miscellaneous Extractables	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	
Benzyl alcohol	0.057	0.073	0.057	nv	0.87	<0.020	U
Benzoic acid	0.68	0.65	0.65	nv	0.76	0.220	U
Miscellaneous Extractables	(ppm TOC)	(ppm TOC)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(ppm TOC)
Dibenzofuran	15	58	0.54	nv	1.7	0.026	1.4
Hexachloroethane	nv	nv	1.4	nv	14	<0.020	<1.1
Hexachlorobutadiene	3.9	6.2	0.029	nv	0.27	<0.020	<1.1
N-Nitrosodiphenylamine	11	11	0.028	nv	0.13	<0.020	<1.1
Volatile Organics	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	
Trichloroethene	nv	nv	0.16	nv	1.6	<0.001	U
Tetrachloroethene	nv	nv	0.057	nv	0.21	<0.001	U
Ethylbenzene	nv	nv	0.01	nv	0.05	<0.001	U
Total xylenes	nv	nv	0.04	nv	0.16	<0.003	U
Pesticides	(ppm TOC)	(ppm TOC)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(ppm TOC)
DDT	nv	nv	0.0069	0.05	0.069	<0.006	<0.3
Aldrin	nv	nv	0.01	nv	nv	<0.001	<0.06
alpha-chlordane	nv	nv	0.01	0.037	nv	<0.001	<0.06
dieldrin	nv	nv	0.01	nv	nv	<0.002	<0.11
heptachlor	nv	nv	nv	10*	nv	<0.001	<0.06
alpha-BHC	nv	nv	0.01	nv	nv	<0.001	<0.06
gamma-BHC (Lindane)	nv	nv	nv	nv	nv	<0.020	<1.1
Aroclor 1016	nv	nv	nv	nv	nv	<0.020	<1.1
Aroclor 1242	nv	nv	nv	nv	nv	<0.020	<1.1
Aroclor 1248	nv	nv	nv	nv	nv	<0.020	<1.1
Aroclor 1254	nv	nv	nv	nv	nv	0.150	2.5*
Aroclor 1260	nv	nv	nv	nv	nv	<0.020	<1.1
Aroclor 1221	nv	nv	nv	nv	nv	<0.039	<2.2
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