

December 8, 2004

SUBJECT: DETERMINATION ON THE SUITABILITY OF PROPOSED DREDGED MATERIAL FROM THE BLAIR WATERWAY SOUTHWEST CORNER CUTBACK, COMMENCEMENT BAY, TACOMA, WASHINGTON (FILE # 200400818) EVALUATED UNDER SECTION 404 OF THE CLEAN WATER ACT FOR OPEN-WATER DISPOSAL AT THE COMMENCEMENT BAY OPEN WATER SITE.

- 1. Introduction.** The following summary reflects the consensus determination of the Dredged Material Management Program (DMMP) agencies (U.S. Army Corps of Engineers, Washington Departments of Ecology and Natural Resources, and the Environmental Protection Agency) on the suitability of approximately 105,000 cubic yards of dredged material from the Port of Tacoma Blair Southwest Corner Cutback in the Blair Waterway in Tacoma, Washington. Disposal of suitable material is planned for the Commencement Bay non-dispersive DMMP disposal site, potentially in combination with approved upland sites, approved in-water contained sites, and/or approved beneficial use sites. Project depth of -51 ft. MLLW would be provided along with one foot of allowable overdepth (to -52 ft. MLLW) in the project area. This DMMP SDM is being combined with two others (Blair Inner Reach Cutback and 11th Street cutback) into one permit action under the file number cited above.

This determination of suitability for open-water disposal is based on the acceptability of the sampling conducted by Port of Tacoma contractors and subcontractors on August 31, 2004 (Table 1). All relevant test data from this sampling event is contained in a report submitted by GeoEngineers dated October 12, 2004. These data were considered sufficient and acceptable for decision-making by the DMMP agencies.

Table 1. Regulatory Tracking Dates

SAP received	July 19, 2004
SAP approved	August 23, 2004
Sampling date	August 31, 2004
Data report submitted	October 15, 2004
Recency Determination: Moderate Concern (5-7 years)	August 2009 – 2011
DAIS Tracking number	POTSW-1-A-F-203

Table 2. Project Synopsis

Time of proposed dredging	16 July 2005 – 28 February 2006
Proposed disposal sites	Commencement Bay open water non-dispersive site; and or at permitted beneficial use site(s); and/or at approved upland locations
Sediment ranking	Surficial fill and the upper 8 feet of native material is ranked moderate; deep native materials were not sampled.
Predicted dredge volume	105,000 cubic yards
Project last dredged	new work

2. **Background.** The Port of Tacoma's Blair Waterway has been undergoing clean-up, widening and deepening since the mid-1990's. Projects underway (Pierce County Terminal Expansion) and proposed (Blair Inner Reach and Turning Basin Expansion) are part of the port's plans to modify the Blair Waterway for deep-water shipping. The southwest corner project cuts back a portion of the turning basin needed for proposed berths as well as safe ship passage and turning.
3. **Sampling.** Sampling took place on approximately 27,500 cy of the total proposed 105,000 cy dredge prism. The sampled portion of the dredge prism included the "fill" portion and the top eight feet of native sediments directly beneath the fill. The remaining 79,500 cy are deep native sediments that the DMMP determined, as part of its Tier 1 evaluation, were not necessary to test.

Sampling took place on August 31, 2004. Both DMMU were sampled with an upland drill rig that took two borings according to the approved SAP. Samples from all borings taken in a given DMMU were composited for analysis.

4. **Chemical Analysis.** The Agencies' approved sampling and analysis plan was followed, and quality assurance/quality control guidelines specified by PSEP and the DMMP program were generally complied with. Chemical analyses were performed by Analytical Resources Incorporated (ARI) of Tukwila, Washington.

Conventional results are presented in Table 3. Note that the percentage of total organic carbon in both samples was quite low. Chemical analysis results (Table 4) demonstrated that most samples were predominately free of chemicals of concern, with very few detections of any COCs. Reporting limits for all chemicals were below the DMMP screening levels. Based on these results, no further analyses were required.

Table 3. Results of conventional analyses

MATERIAL		Fill	Native	Deep native
RANK		Moderate	Moderate	Exempt
DMMU		1	2	n/a
Volume (cubic yards)		11,900	13,600	79,500
Grain Size	% Gravel	20.9	2.1	--
	% Sand	42.7	69.6	--
	% Silt	28.6	25.1	--
	% Clay	7.8	3.3	--
	% Fines (clay+silt)	36.4	28.4	--
Total Solids (%)		91.8	80.6	--
Total Volatile Solids (%)		1.63	1.33	--
Total Organic Carbon, %		0.281	0.247	--
Total Ammonia, mg/kg		12.5	15.3	--
Total Sulfides, mg/kg		< 1.2	< 1.2	--

Table 4. Chemical detections for DMMP chemicals of concern. All other COC's were undetected below DMMP screening levels.

Chemical	DMMP Criteria			DMMU 1	DMMU 2
	SL	BT	ML		
Metals (mg/kg dry wt)					
Chromium	--	--	--	25.9	17.8
Copper	390	--	1300	26.7	17.5
Lead	450	--	1200	5	
Nickel	140	370	--	14	10
Zinc	410	--	3,800	31.4	23.3
Phthalates (µg/kg dry wt)					
Bis(2-ethylhexyl)phthalate	9,300	13,870	--	91	33
Diethyl phthalate	1200	--	--	20	

- 5. Comparison to SMS Guidelines.** Because TOC levels were so low (well below 0.5%) no chemical results were carbon normalized. Dry weight concentrations of detected chemicals, and dry weight reporting limits for undetected chemicals, were compared with dry weight Apparent Effects thresholds. No detected or undetected SMS COCs exceeded these thresholds. All sediments are thus suitable for beneficial uses under Washington State Sediment Management Standards.
- 6. Suitability.** This memo documents the suitability of proposed dredged sediments within the Blair Waterway Southwest Corner Cutback project area for open water disposal. The data gathered were deemed sufficient and acceptable for regulatory decision-making under the DMMP program. Based on the results of the previously described testing, the DMMP agencies concluded that all **105,000 cubic yards are suitable** for open water disposal. Open water disposal may be at the Commencement Bay non-dispersive site or at an approved beneficial use site.

A Dredging and Disposal plan for this project must be completed as part of the final project approval process. The Dredging and Disposal plan shall be provided to all DMMP agency representatives at least two weeks prior to the pre-dredge meeting.

This suitability determination does not constitute final agency approval of the project. A final decision on project approval 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.

7. Reference.

GeoEngineers 2004. Dredge Material Characterization For The Blair Waterway Southwest Corner Cutback, Port of Tacoma, Washington. Report to the Port of Tacoma, File No. 0454-089-01

Concur:

12/8/04
Date


Lauran Cole Warner, Seattle District Corps of Engineers

18 Dec 2004
Date


John Malek, Environmental Protection Agency

12/30/04
Date


Cinde Donoghue, Washington Department of Ecology

1/6/2005
Date


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DMMO file