

SUBJECT: DETERMINATION OF THE SUITABILITY OF SEDIMENT PROPOSED TO BE DREDGED FROM THE PORT OF GRAYS HARBOR BERTHING AREAS FOR OPEN-WATER DISPOSAL AT EITHER THE POINT CHEHALIS OR THE SOUTH JETTY DISPOSAL SITES, AS EVALUATED UNDER SECTION 404 OF THE CLEAN WATER ACT.

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 dredged material for in-water disposal and have evaluated the proposed maintenance dredging areas associated with the Port of Grays Harbor berthing areas at Terminals 1, 2, 3, and 4 located in Aberdeen and Hoquiam, Washington. The maintenance material characterized includes a total volume of 101,042 cubic yards from four previously characterized Terminals (Terminal 1, 2, 3, and 4). Terminal 2 requires maintenance dredging, whereas the other Terminals will likely require maintenance dredging sometime in the next few years. The characterization also includes the assessment of an additional 31,799 cubic yards at Terminal 2, outside the maintenance dredging footprint, which is being considered by the Port for future Terminal expansion. This brings the total volume characterized to 132,841 cubic yards. The purposes of the dredging is to provide required berthing and operational depth for large commercial vessels using the terminals.
2. The project was ranked low in the Terminal 1 dredging area and ranked low-moderate at the other three terminals. The sampling and analysis plan was approved on November 14, 2001 by the DMMP agencies for an estimated total dredged material footprint volume of 132,841 cubic yards. Sampling of the proposed dredging footprint (see figures 1-4) was conducted on November 19-20, 2001, and consisted of collecting four power-grab samples within Terminal 1, three power-grab samples within Terminal 2 maintenance area, four vibracore samples within the Terminal 2 Expansion area, five power-grab samples within Terminal 3, and three power-grab samples within the Terminal 4 dredging area. All respective grabs and cores collected within each subarea were composited for analysis as five Dredged Material Management Units (DMMUs).
3. The Sampling and Analysis Plan approved by the Agencies for testing of the five DMMUs was followed, and quality assurance/quality control guidelines specified by the Grays Harbor Dredged Material Management 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.
4. Relevant dates for regulatory tracking purposes are included in Table 1.

Table 1. Regulatory Tracking Dates

SAP submittal date:	October 26, 2001
SAP Approval date:	November 14, 2001
Sampling date(s):	November 19-20, 2001
Sediment data characterization report submittal date:	January 11, 2002
Recency Determination Date: T-1: Low (7 years)	November 2008
T-2, T3, T4: Low-Moderate (6 Years)	November 2007

5. **Table 2** summarizes the results of the conventional parameters analyzed for the five composited DMMUs. Chemical analysis of the five DMMUs indicated that there were no screening level guidelines exceedances for the chemicals-of-concern in Grays Harbor (**Table 3**). This included an assessment of guaiacols and resin acids in GH-3, and only the resin acid dehydrosorbic acid was detected at concentrations quantitated in the navigation channel in 2000 (150 ug/kg). In addition, none of the chemicals-of-concern exceeded either bioaccumulation triggers or maximum levels in the five DMMUs. Therefore, biological testing was not required to render a suitability determination.
6. The results of the chemical analysis indicated that all five DMMUs passed dispersive disposal guidelines for open-water disposal. Thus, the 132,841 cy of dredged material is deemed suitable for placement at either the Point Chehalis or the South Jetty dispersive open-water disposal sites.
7. This memorandum documents the suitability of sediment to be dredged from the Terminal areas of the Port of Grays Harbor maintenance dredging project, for disposal at either the Point Chehalis or the South Jetty dispersive open-water disposal sites. However, this suitability determination does not constitute final agency approval of the project. A dredging plan for 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:

Signed copy on file in the DMMO Office

sources

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DMMO File

Table 2. Testing Summary for Port of Grays Harbor Sediment Characterization.

DMMU ID:		GH-1 (T1)		GH-2 (T2)		GH-3 (T2-e)		GH-4 (T3)		GH-5 (T4)	
Rank (sampling device):		L (grab)		LM (grab)		LM (vibracore)		LM (grab)		LM (grab)	
CHEMICAL NAME	Units	Conc.	VQ	Conc	VQ	Conc	VQ	Conc	VQ	Conc.	VQ
Total Solids	%	47.6		35.2		51.1		36.1		37.9	
Total Volatile Solids	%	6.7		7.9		7.6		7.5		8.4	
Total Organic Carbon	%	2.3		2.2		2.1		2.5		2.8	
Total Ammonia	mg/kg	46.0		19.0		210.0		20.0		80	
Total Sulfides	mg/kg	530		2.3	u	470		4.0		4.6	
Gravel	%	0.73		0.1		2.2		0.4		0.4	
Sand	%	33.4		16.5		15.7		29.0		14.2	
Silt	%	49.3		61.8		60.2		50.5		60.8	
Clay	%	16.6		21.9		22.0		20.0		24.6	
Fines (percent silt + clay)	%	65.9		83.7		82.2		70.5		85.4	
Eohaustorius estuarius hits:											
Mytilus galloprovincialis hits:											
Neanthes arenaceodentata hits:											
Bioassay Determination: (P/F)		NA		NA		NA		NA		NA	
BTs exceeded:		no		no		no		no		no	
Bioaccumulation conducted:											
Bioaccumulation Determination:											
ML Rule exceeded:		no		no		no		no		no	
GH UM Determination:		P		P		P		P		P	
DMMU Volume:	cy	30,000		21,042		31,799		40,000		10,000	
DMMU ID:		GH-1 (T1)		GH-2 (T2)		GH-3 (T2-e)		GH-4 (T3)		GH-5 (T4)	

Legend:

NA = Not Analyzed (bioassays)

P = Pass (Suitable for UCOWD)

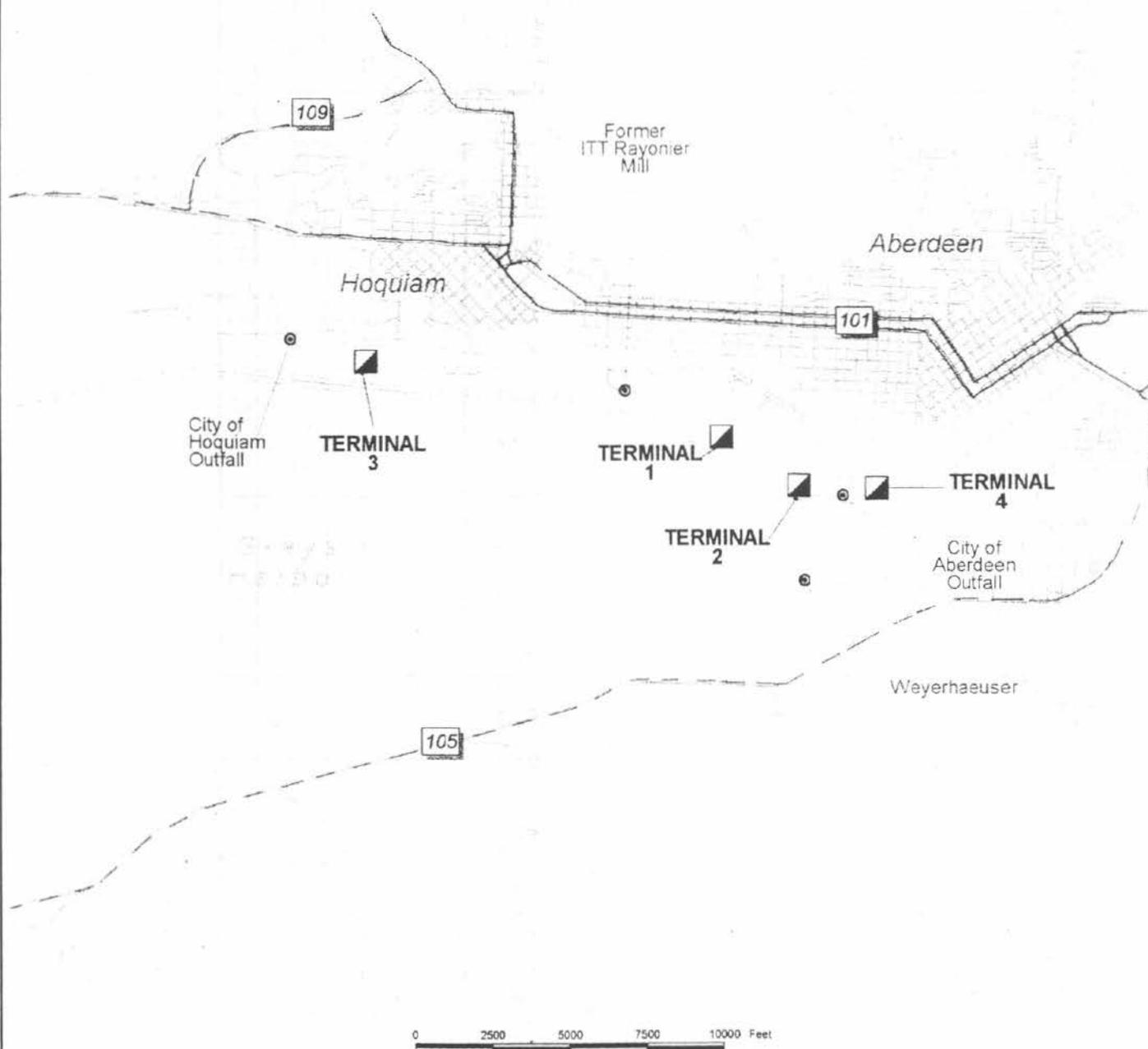


UCOWD = Unconfined open-water disposal

VQ = Validation Qualifier

U = Undetected



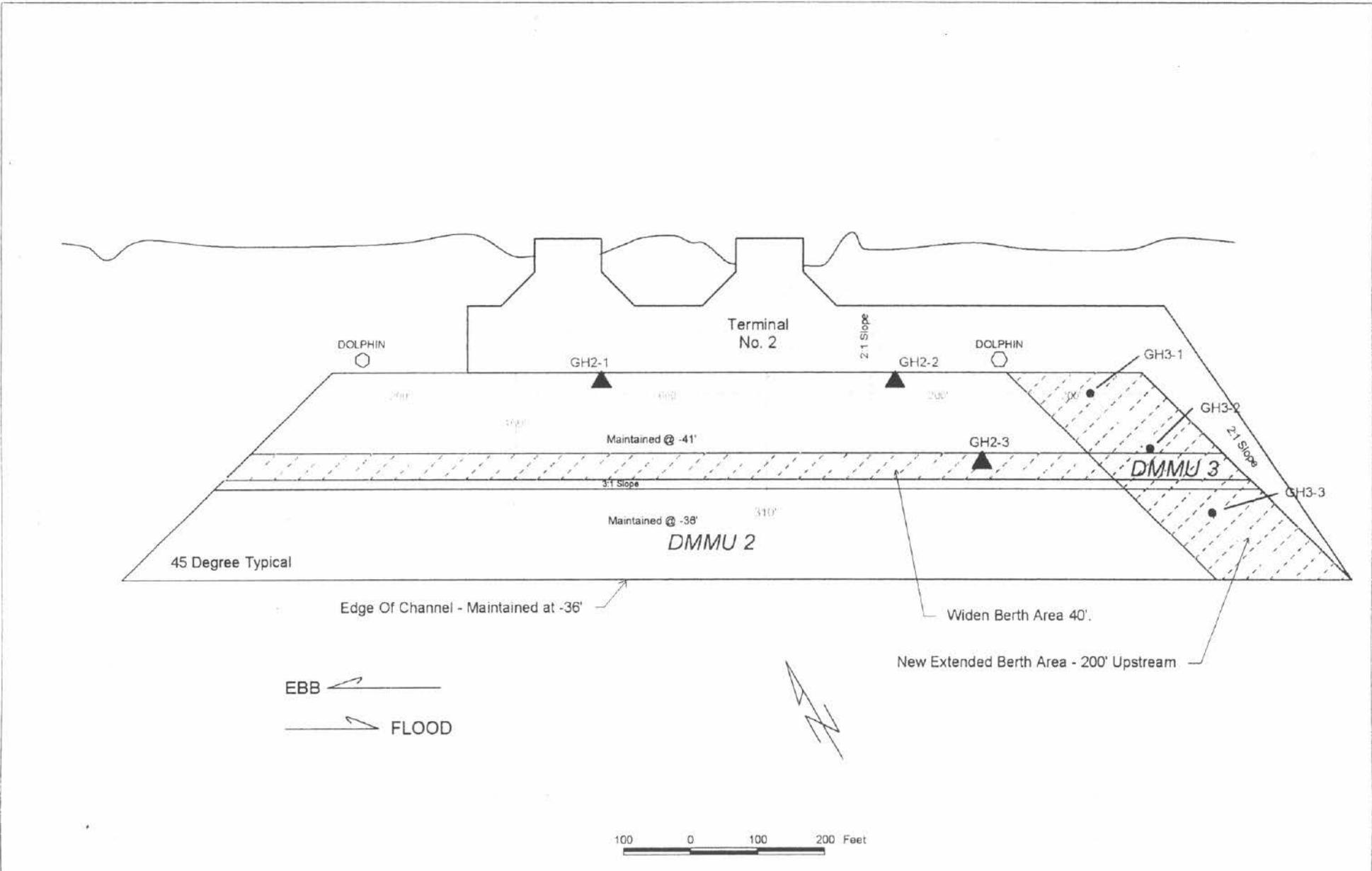


SITE VICINITY MAP

PRIVILEGED AND CONFIDENTIAL ATTORNEY/CLIENT WORK PRODUCT
This map is projected on Washington State Plane, SOUTH Zone, Horizontal - North American Datum of 1983 1991 adjustment. MAP FEATURE SOURCES: WSDOT, SEDQUAL, SEA and others

Grays Harbor SAP
File name: gh-nad83-base-1.apr
Plot Date: 10-23-01

Figure 1

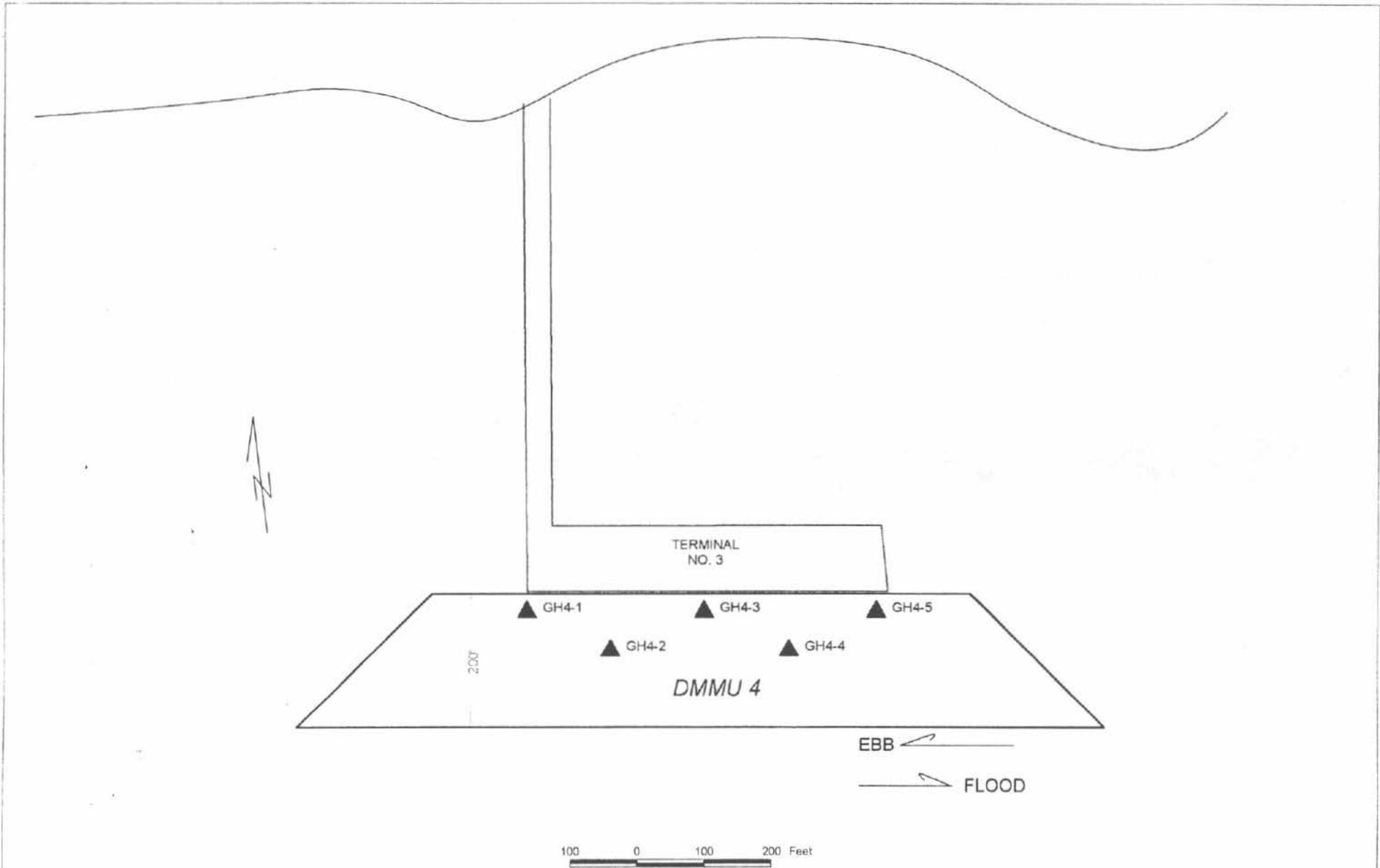


Terminal No. 2 Station Locations (DMMUs 2 and 3)

- ▲ Grab Sample Location
- Core Location
- ▨ Permitted Maintenance Dredging Area (DMMU-2)
- ▨ Proposed Dredging Area Expansion (DMMU-3)

Greys Harbor SAP
 File name: gh-nad83-base-1.apr
 Plot Date: 10-24-01

Figure 2



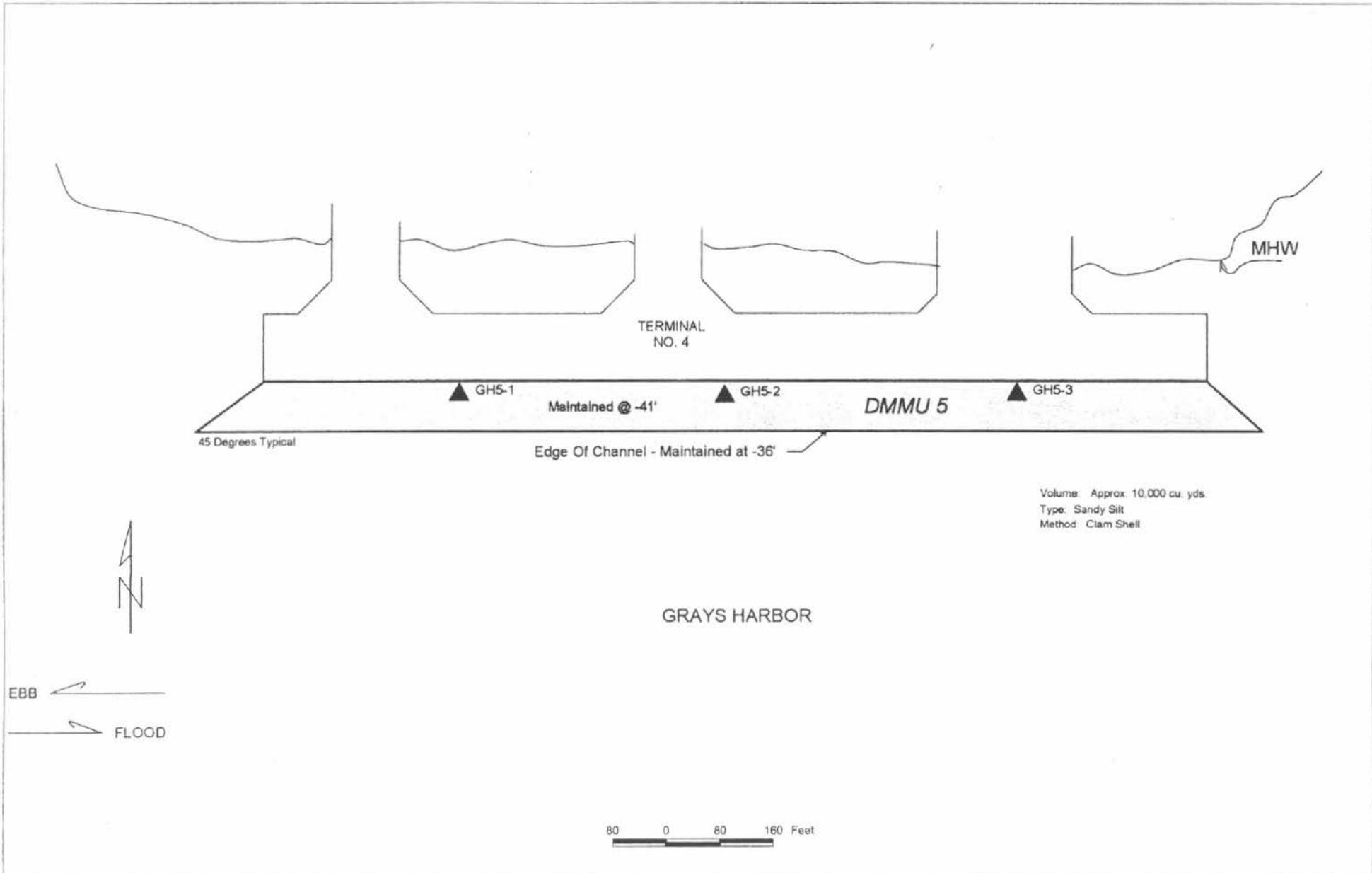
Terminal No. 3 Station Locations
(DMMU 4)

▲ Grab Sample Location

Permitted Maintenance Dredging Area (DMMU-4)

Grays Harbor SAP
File name: gh-nad83-base-1.apr
Plot Date: 10-24-01

Figure 53



Terminal No. 4 Station Locations
(DMMU 5)

- ▲ Grab Sample Location
- Permitted Maintenance Dredging Area (DMMU-5)

Grays Harbor SAP
 File name: gh-na083-base-1.apr
 Plot Date: 10-24-01

Figure 4