CENPS-OP-DMMO

MEMORANDUM FOR RECORD 29 May 1992

SUBJECT: DECISION ON THE SUITABILITY OF DREDGED MATERIAL TESTED UNDER PSDDA GUIDELINES FOR THE PORT OF SEATTLE AMERICAN PRESIDENT'S LINE (TERMINAL 5) PROJECT (92-2-00251), FOR DISPOSAL AT THE PSDDA ELLIOTT BAY OPEN-WATER NONDISPERSIVE SITE.

1. The Port of Seattle proposes to dredge 8,000 cubic yards of sediments from the American President's Line facility at Terminal 5. The following summary reflects the PSDDA agencies' (Corps, Department of Ecology, Department of Natural Resources and the Environmental Protection Agency) suitability determination for disposal of this material at the PSDDA Elliott Bay open-water nondispersive site.

2. The PSDDA agencies ranked the project area "high", based on the guidance provided in the PSDDA Management Plan Report, Phase II (page A-11) for projects in Elliott Bay.

3. A sampling and analysis plan was developed for this project and approved by the PSDDA agencies 9 March 1992.

4. Two dredged material management units (DMMUs) were characterized. DMMU C1 consisted of composited surface sediments from two sampling locations. DMMU C2 consisted of composited subsurface sediments from the same locations.

5. The chemistry data indicated that four detected exceedances of the Dredging Year 1992 PSDDA screening levels (SL) occurred for C1. These included 0.599 mg/kg for mercury (SL = 0.21 mg/kg), 700 ug/kg for pyrene (SL = 430 ug/kg), 150 ug/kg for indeno(1,2,3-c,d)pyrene (SL = 69 ug/kg), and 2,559 ug/kg for total HPAH (SL = 1,800 ug/kg). There were no SL exceedances for C2. There were no detection limits reported above SL for either composite.

6. The SL exceedances for C1 triggered the requirement for biological testing under the tiered testing approach. In this case, concurrent biological testing was conducted for both C1 and C2. The amphipod 10-day acute toxicity test, echinoderm sediment larval combined mortality and abnormality (effective mortality) test, the *Neanthes* 10-day acute toxicity test, and the Microtox bacterial luminescence test were conducted. PSDDA interpretation guidelines specified in the Phase II Management Plan Report (Sept 1989), modified by changes made at the second annual review meeting, were used to evaluate the bioassay data. The control sediment for the amphipod and *Neanthes* bioassays was collected at West Beach, while the seawater control for the sediment larval test came from the Duwamish Head. The reference sediment (all bioassays) came from Carr Inlet. One reference sediment, Parametrix's Carr 1, was used.

7. There were no hits for the amphipod, *Neanthes* or Microtox bioassays. The *Neanthes* worms were taken from a culture maintained at the subcontractor's (Parametrix) laboratory. The LC50 value for these organisms (14.6 mg/l $CdCl_2$) was within the range reported in the literature (12-22 mg/l, from Reish and Johns).

8. In the sediment larval test, Carr 1 reference sediment did not meet its performance standard. The seawater-normalized effective mortality was 53.2%, which is greater than the 20% allowed under PSDDA guidelines. However, the effective mortality for both test sediments was extremely low, with C1 and C2 exhibiting effective mortalities of 2.2 and 3.2 percent respectively. For any "hit" to occur, the seawater-normalized effective mortality of the test sediment must be greater than 20%. Because the seawater-normalized effective mortalities of C1 and C2 were not greater than 20%, no comparison to reference needed to be made, and no hits occurred in the sediment larval test. The reference sediment performance failure was irrelevant.

American President's Line
92-2-00251

9. In summary, the PSDDA-approved sampling and testing plan was followed, and quality assurance, quality control guidelines specified by PSDDA were generally complied with. The data gathered were deemed sufficient and acceptable for regulatory decision-making under the PSDDA program. Based on the results of the chemical and biological testing, the following consensus decision was made by the PSDDA agencies:

All 8,000 cubic yards proposed for dredging from the Port of Seattle American President's Line facility (92-2-00251) are suitable for disposal at the Elliott Bay open-water nondispersive site.

10. This memorandum documents the suitability of proposed dredged sediments for disposal at a PSDDA open-water disposal site. It does not constitute final agency approval of the project. A public notice will be issued for this project. During the public comment period which follows the public notice, the resource agencies will provide input on the overall project. A final permit 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:

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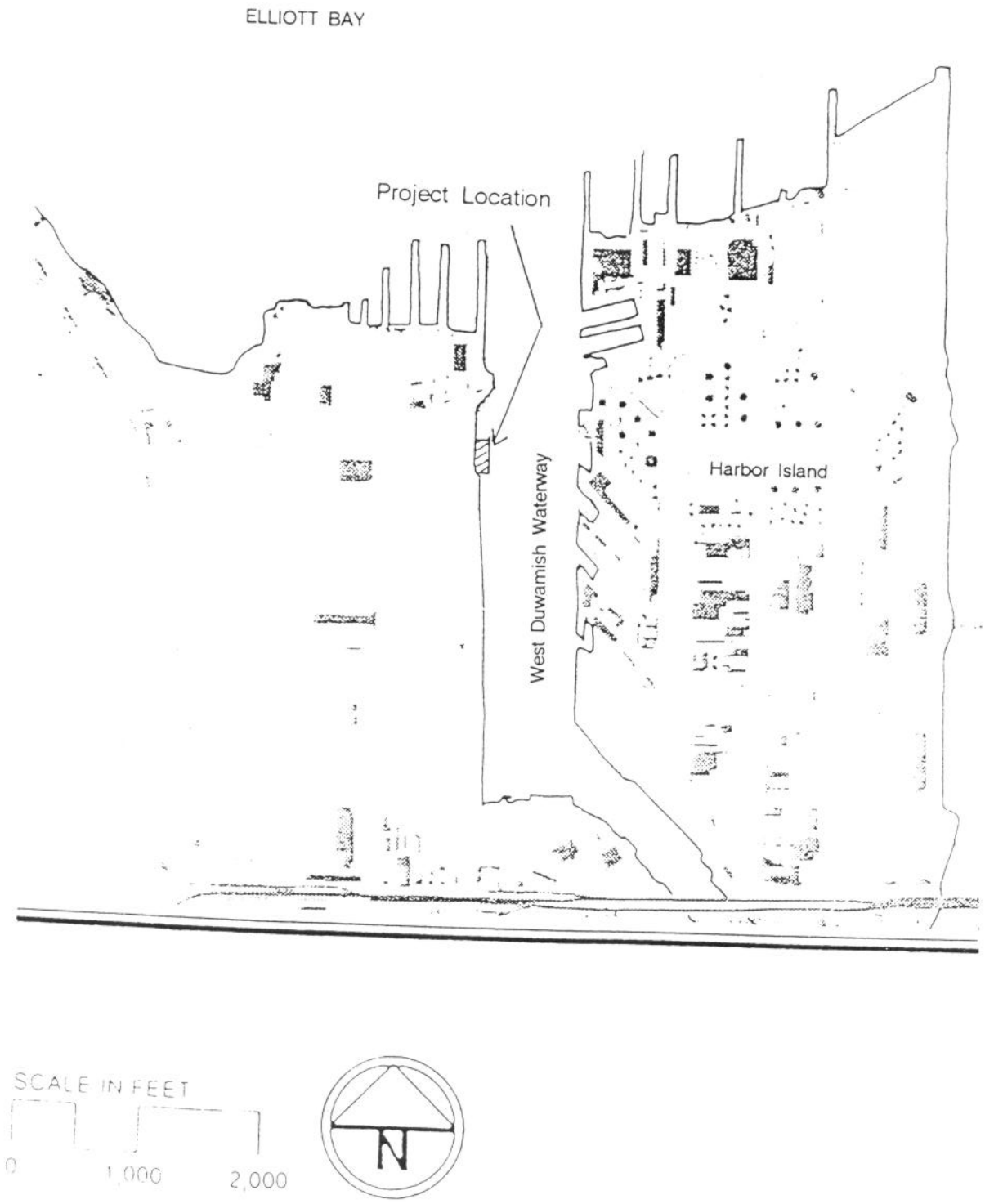

Figure 1.
Map of Seattle, Washington
Showing Location of
Proposed Sampling Area

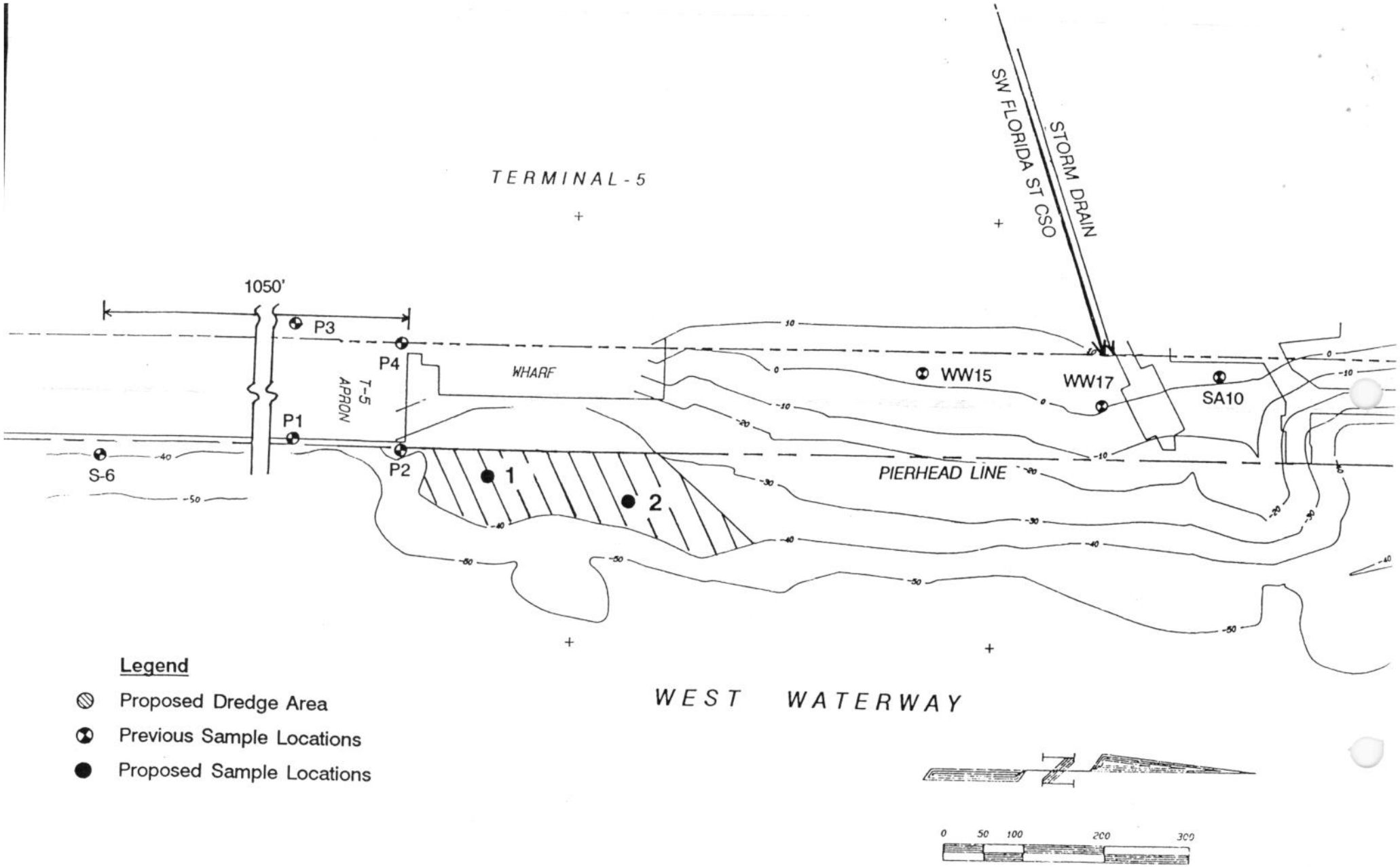

Figure 2.
Site Base Map Showing Previous and Proposed Sample Locations, Bathymetry, and Combined Sewer Outfalls/Storm Drain Locations