

MEMORANDUM

TO: Paul Agid
FROM: Beth Doan
DATE: March 24, 1999

RE: Hamm Creek Soil Quality Review

Background

The Corp of Engineers (USCOE) has supplied the Port of Seattle with soil quality information for the Hamm Creek Restoration Project Site located along West Marginal Way, south of Boeing Field. This information includes partial copies of a 1990 site assessment by the Boeing Company, a 1997 USCOE Sampling and Analysis Plan, and a 1997 USCOE Sediment Characterization Report including Appendix C and E. These reports will be placed in the Port files.

The review of the site data does not indicate any exceedences of MTCA cleanup levels. The material, therefore, should be suitable for use as fill material for the third runway. Several source issues have been evaluated, and should be considered before the Port makes the final decision to accept the material. Our evaluation of these issues are discussed below, and include responses from the USCOE project manager Pat Cagney, and information received informally from Pete Rude, a sediment specialist for Landau Associates, Inc..

Data Summary

The following is a brief summary of some of the detected constituents:

Constituent	Maximum Level (USCOE)	Maximum Level (Boeing)	PSDDA SL	Draft MTCA Method A (Residential)
Total DDT	14 ppb	ND	6.9 ppb	1000 ppb
Total PCB	160 ppb	ND	130 ppb	400 ppb
PAHs (Carc)	ND	459 ppb	1,800 ppb (HPAH)	700 ppb
Mercury	0.074 ppm	0.51 ppm	0.21 ppm	1.0 ppm

ND = Not detected

Discussion

- The USCOE study detected PCBs and DDTs above the PSDDA screening levels but below MTCA cleanup levels. Since the samples were composited over large areas and depths, there is a potential for "hotspots" to go undetected. However, the Boeing study, which did look for problem areas, did not detect PCBs and DDTs.
- Pat Cagney indicated that the USCOE did follow up bioassay tests in accordance with PSDDA protocol (this data was not supplied) and there were some failures. They believe the failures were caused by the oxidized nature of the site as compared to a marine environment (from which the test

Exhibit	<u>287</u>
Date	<u>2/7/02</u>
Witness	<u>CLARK</u>
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AR 019665

organisms are obtained) and have nothing to do with the low levels of PCBs and DDTs.

- Some of the USCOE data indicated PCBs above MTCA cleanup levels (12,000 ppb). Pat explained that this was data TOC normalized in accordance with PSDDA requirements. The actual high concentration was 160 ppb (see table). Pete confirmed that the normalized data was not relevant to MTCA.
- TPH was not analyzed at this site. According to Pat there was no indication of TPH at this site based on site uses and sampling observations. This is consistent with a review of the logs and with the lack of detection of associated organics.
- The Boeing data indicated levels of mercury and PAHs above what they considered to be background levels. However, these values are below MTCA cleanup levels and the USCOE samples had much lower values (see table).
- The USCOE sampling plan mentions that 10,000 yards of material was not analyzed. According to Pat, that material was closely associated with material that was analyzed and he has no reason to believe that it should be any different. The Boeing data looked at the entire site.
- The issue of changes in chemical environment from the Duwamish area to the airport was discussed briefly with Pete. He said there were two general issues, the change in the oxidation state, and the potential marine impacts (salt water). Based on location, there should not be significant impacts from saltwater. He also felt that change in oxidation states (anaerobic to aerobic) would only be a potential concern if metals were at elevated levels. Except for mercury in the one sample, Boeing concluded metals were at background levels.

Conclusions

The Boeing and USCOE reports provide sufficient information to evaluate the soil quality of the Hamm Creek site. The evaluation of the data relative to MTCA indicates that the Hamm Creek material is suitable for third runway fill. The material does not meet PSDDA requirements for open water disposal which could potentially cause some public perception concerns about using this material; however, given the intended use of this material as upland fill these concerns are not technically supported.