FACT SHEET

Stormwater Settling Basin Remediation

NASA Ames Research Center
Moffett Field, California

October 2004

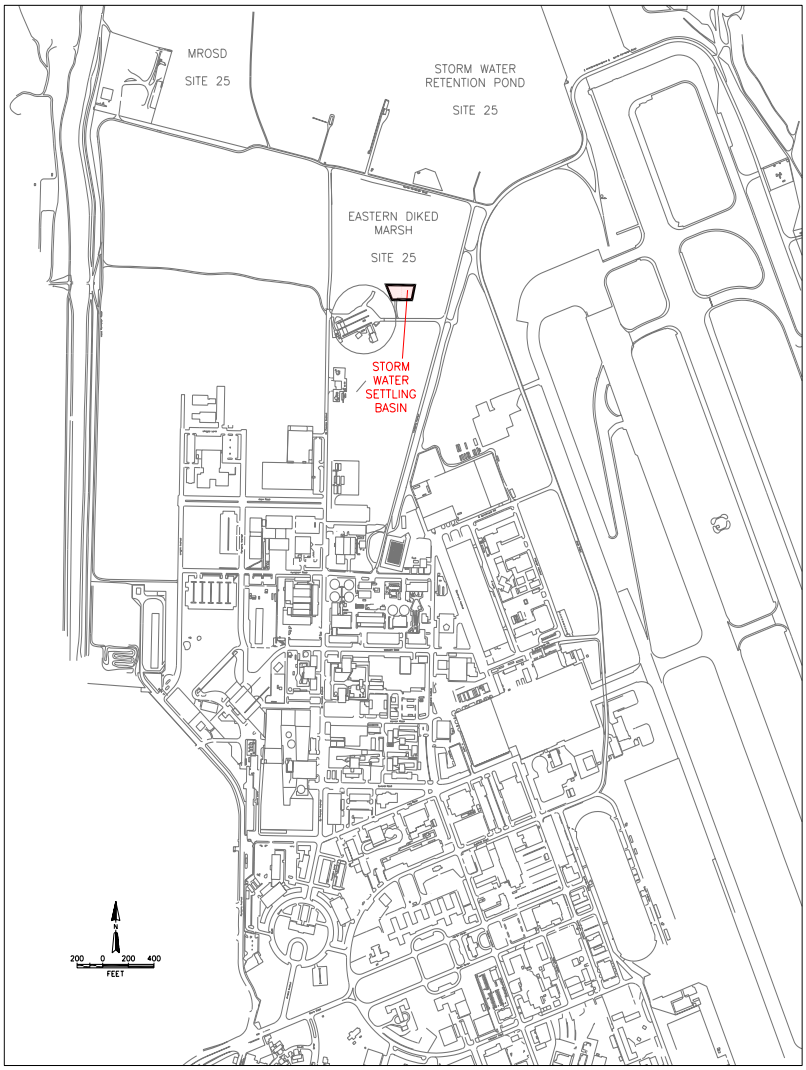

Figure 1: NASA Ames Stormwater Settling Basin Location

The National Aeronautics and Space Administration (NASA) Ames Research Center, Moffett Field, Calif. has developed this fact sheet to inform the public about the completed and proposed activities at its stormwater settling basin. The settling basin is located in the Northwestern portion of NASA Ames (See Figure 1). Stormwater collected from NASA Ames enters the settling basin from the south. Settled stormwater exits the outfall at the northern portion of the settling basin and drains into the Eastern Diked Marsh, located directly north of the settling basin (See Figures 1 and 2). During periods of heavy rainfall, water overflows through the overflow spillway without passing through the settling basin.

The Navy has proposed to excavate contaminated soil and sediment in the Stormwater Retention Pond and the Eastern Diked Marsh (Navy Site 25), located further north of the stormwater settling basin.

Contaminated sediments in Navy Site 25 were primarily transported by stormwater. The Polychlorinated biphenyls (PCB), dichloro-diphenyl-trichloroethane, (DDT) compounds, lead and zinc detected in Site 25 are derived from previous upland activities at NASA Ames including the former NAS Moffett Field. As part of its Stormwater Pollution Prevention Program, NASA Ames will sample the area immediately north of the stormwater settling basin each year, and will remove any contaminated sediment.

SOIL SAMPLING AND ANALYTICAL RESULTS

Between July and September 2004, NASA Ames conducted two rounds of soil sampling north of the settling basin and the overflow spillway. A grand total of 54 soil samples from 27 locations were collected at a depth of 0 inches to 6 inches, and 6 inches to 12 inches. Soil sampling locations are shown in Figure 2. Soil samples were analyzed for PCBs, total DDT, lead and zinc. Sampling for total DDT includes dichloro-diphenyl-dichloroethane (DDD) and dichloro-diphenyl-dichloroethene (DDE).

The following table summarizes the range of concentrations detected and the number of samples that exceeded site-specific cleanup levels.

The Eastern Diked Marsh, located immediately north of the stormwater settling basin, as well as the Stormwater Retention Pond (Navy Site 25), are protected wetlands and provide habitat for a variety of wildlife.

Chemical of Concern	Range of Concentrations Detected (mg/kg)	Number of Samples Exceeding NASA Ames' Cleanup Level	Site-Specific Soil Cleanup Level (mg/kg)
Aroclor 1260 (PCBs)	0.027 – 1.700	6	0.470
Aroclor 1268 (PCBs)	0.022 – 2.300	4	0.470
DDT (total)	0.002 - 0.156	0	0.166
Lead	5.8 - 220	2	148
Zinc	33 - 650	5	454

TABLE 1. SUMMARY OF SOIL SAMPLING RESULTS
All concentrations are in milligrams per kilogram (mg/kg), equivalent to parts per million (ppm).

PROPOSED WORK AT THE SETTLING BASIN

NASA Ames is preparing to excavate the soil impacted in the effluent outfall and the overfill spillway. The horizontal extent of PCB, DDT, lead and zinc contamination above site-specific soil remediation levels was determined to be restricted to 11 sample locations adjacent to the effluent outfall and the overflow spillway. These include sample locations 7, PDG1, PDG2, 12, 13, 14, 15, 16, 19, 20, and 21 (as shown in Figure 2).

Two areas have been identified for excavation – one corresponding to the effluent outfall, and one corresponding to the overflow spillway (Figure 2).

Approximately 450 cubic yards of soil material will be excavated during the removal of the uppermost 12 inches of soil material within the proposed excavation area. The excavated soil will be replaced with clean backfill, and the area will be reseeded with a native wetlands seed mix. Removal and replacement of the upper 12 inches of sediment will eliminate the potential exposure of wildlife and humans to PCBs and lead.

Completion of this remedial effort is scheduled for the fall of 2004.

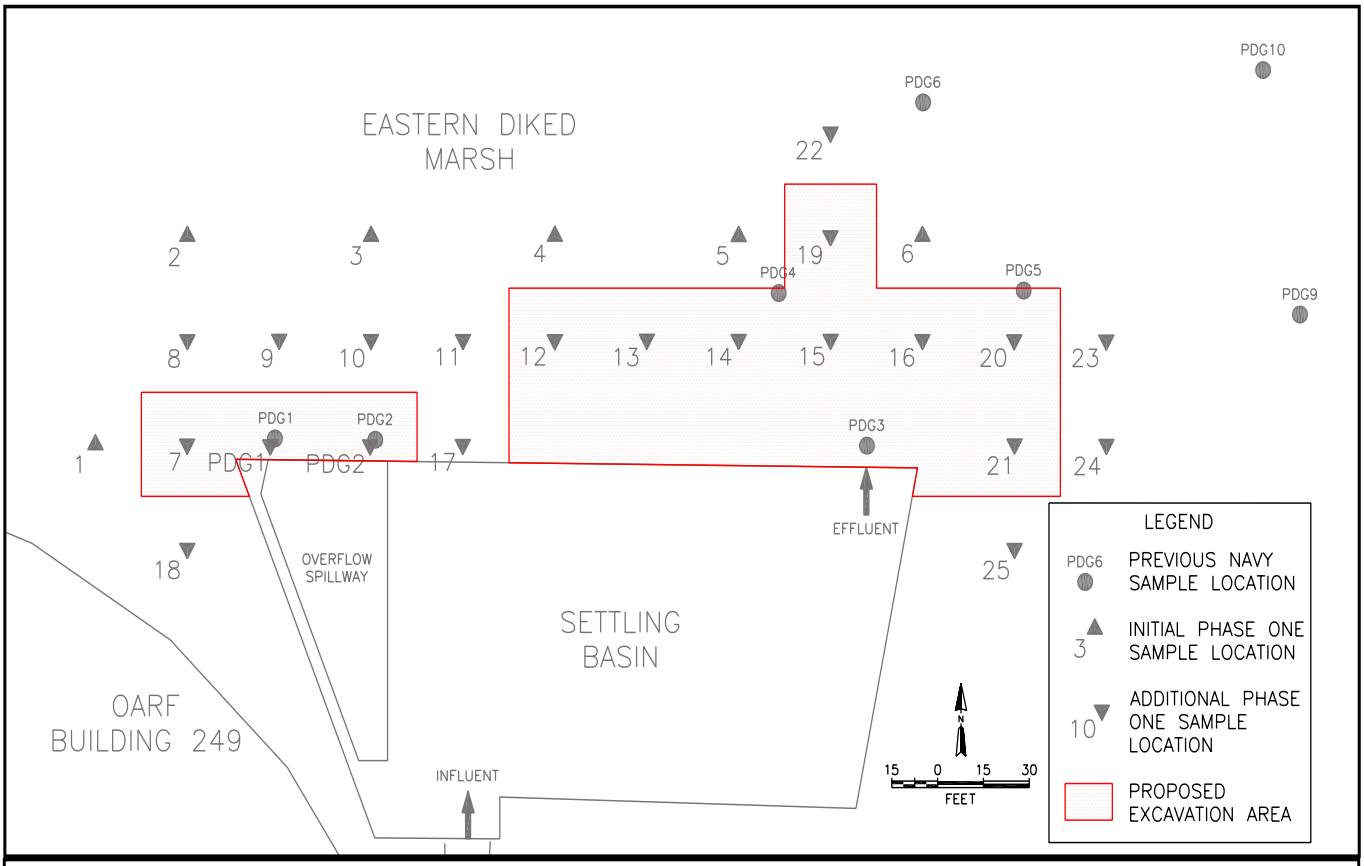

Figure 2: Stormwater Settling Basin Proposed Excavation Area

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