

Core sample locations included Areas 1, 2 and 8 (subaqueous cap), and, Areas 3 and 7 (wetland area caps). Samples were also collected in the natural cap Area 4/5, with laboratory chemical analysis performed on the surface (0-10 cm) stratum only. The performance standards for the capped areas are not applicable to Area 4/5. Cap samples were analyzed for PAHs, metals and physical parameters. Cap coring in Area 2 was not conducted during the 2008, 2009 or 2010 monitoring events due to NAPL releases that were being addressed separately (see section 5.1).

No exceedances of the ER-Ms were reported in cap core samples collected in 2006. No PAHs were detected in any of the mid-cap samples. The only top-of-cap samples containing all 13 PAHs were from near the mouth of the canal and the railroad bridge and near the southern end of the canal where stormwater enters the canal.

No PAHs were detected in any of the 2007 mid-cap samples. No reported metals or PAHs in samples from any of the capped areas exceeded the benchmark values. Only one sample (near the mouth of the canal) contained reported PAHs, although all the detections were reported as estimated concentrations below the practical quantitation limit (PQL).

In 2008, no PAHs were detected in any of the mid-cap samples with the exception of one sample taken from the turning basin which contained estimated concentrations of phenanthrene, fluoranthene and pyrene below the laboratory PQL. No reported metals or PAHs from any of the capped areas exceeded the benchmark values. No reported metals or PAHs from any of the capped areas exceeded the benchmark values in the 2009 or the 2010 cap samples.

Cap Compliance Monitoring Summary. Across most of the Site, compliance monitoring data collected indicate that **the cap has met the performance standards of containing and isolating the contaminated sediment and is resistant to erosion or bioturbation that would expose contamination to ecological receptors, with the exception of portions of Area 2 which experienced seasonal releases of NAPL** through the cap from 2005 to installation of the Amended Cap in 2010.

The sum-of-PAHs and metals in surface sediment samples collected in Area 4/5 are routinely above the ER-M mid-cap benchmark value. As discussed above, there are no chemical performance standards for Area 4/5. The high organic carbon content in the sediments in Area 4/5 limits the bioavailability of PAHs, and the SEM/AVS ratio of less than one indicates that the metals would not be bioavailable. Therefore, the contaminants in Area 4/5 sediments are not likely adversely impacting ecological receptors.

Amended Cap Operation, Maintenance and Monitoring. Due to the absence of a surface sand layer in the Amended Cap, the cap mid-depth chemical, sediment trap and habitat restoration performance standards found in the RD/RA SOW are no longer appropriate for the small portion of the canal covered by the Amended Cap. However, the performance standard for the isolation of contaminants that requires that contaminant migration through the cap be minimized is still applicable and the performance monitoring program has been revised to include monitoring for visual sheens, potential gas build-up, and removal of NAPL from recovery wells.

Superfund Records Center
SITE: PINE STREET CANAL
BREAK: 8.3
OTHER: 501469

Second Five-Year Review Report

for

Pine Street Barge Canal Superfund Site

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