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## **2.2 Soil Analytical Results**

The results from the soil sampling indicate that contaminated soil is present within the limits of construction at Site 1. Soil sample results from 7.5 to 10 ft bgs in soil boring GP-1 indicated concentrations of benzo(a)pyrene, benzo(b)fluoranthene, and arsenic above the industrial direct contact RCLs, concentrations of benzo(a)anthracene, benzo(k)fluoranthene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene above the non-industrial direct contact RCLs, and concentrations of benzene, naphthalene, chrysene, pyrene, cadmium, lead, and mercury above the groundwater pathway RCLs. Arsenic, cadmium, and lead also exceeded the background threshold values (BTV). Soil sample results from 2.5 to 5 ft bgs in soil boring GP-2 indicated concentrations of benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and dibenz(a,h)anthracene above the industrial direct contact RCLs, concentrations of indeno(1,2,3-cd)pyrene above the non-industrial direct contact RCL, and concentrations of benzene, naphthalene, chrysene, and lead above the groundwater pathway RCLs. Lead was also above the BTV. Soil sample results from 5 to 7.5 ft bgs in soil boring GP-3 indicated concentrations of benzo(b)fluoranthene, chrysene, cadmium, and lead above the groundwater pathway RCLs. Cadmium and lead also exceeded the BTV. Soil sample results from 7.5 to 10 ft bgs in soil boring GP-4 indicated concentrations chrysene and lead are present above the groundwater pathway RCLs. Borings GP-2, GP-3, GP-4, GP-5, and GP-6 all had concentrations of arsenic above the non-industrial or industrial direct contact RCL, but none were above the

established surficial background threshold value. Cumulative hazard index and cancer risk were calculated for the sample results at the most contaminated boring locations and do indicate risks above the NR 720 standards, as shown in Table 1. Documentation of these calculations is included in Appendix F.

## **2.3 Groundwater Analytical Results**

The results from the groundwater sampling indicate that contaminated groundwater is present within the limits of construction at Site 1. Groundwater sample results from TW-4 indicate concentrations of benzo(a)pyrene, benzo(b)fluoranthene, chrysene, and arsenic above the enforcement standards (ES). The collected groundwater sample was also analyzed for oil & grease SGT-HEM after communication with the Madison Metropolitan Sewerage District. The sample yielded a non-detection for this analyte.

## **3.2 Contaminated Soil Management**

Contaminated soil was encountered during the investigation in one location within the limits of construction along the USH 151 corridor. The soil borings with impacts above NR 720 soil RCLs are located at Site 1. SVOC and metals contamination at Site 1 is likely associated with former landfill activities at this location (BRRTS #03-13-002205). As stated in a 1991 Phase I and II Environmental Assessment conducted by Warzyn Inc., "By 1950, the lakeshore had been altered,

with 250 to 300 feet of additional land extending into Lake Monona along the Law Park area. From 1933 to the early 1950s, the Law Park area was used as a City landfill." Special Provisions should be included in the construction documents advising the contractor of these findings, and the requirements to manage potentially impacted soil at the following locations: