

For human receptors, cancer risks greater than 10^{-4} and/or non-cancer HIs greater than 1 were used as thresholds for each exposure pathway and land use scenario. Chemicals were not considered to be significant contributors to risk if their individual carcinogenic risk contribution was less than 1×10^{-6} or their non-carcinogenic HQ was less than 1. Acceptable concentrations based on risk were calculated to meet an ILCR of 1×10^{-6} and an HQ of 1 for carcinogens and non-carcinogens, respectively. These calculated concentrations were identified as candidate risk-based PRGs (SAIC, 1998).

For ecological receptors, a quotient method was used that measures the ratio of the COC concentration detected in sediment over the threshold effects value (TEV), which is the concentration above which adverse effects to the receptor were deemed possible. The TEVs were developed for aquatic receptors based on the target acceptable risk values and reference station concentrations. The calculated values were identified as Baseline PRGs (BPRGs), which were then adjusted to ensure that the PRGs target the areas that pose the greatest potential for adverse effects. The resulting values, termed “recommended PRGs”, were then selected as cleanup goals to achieve the greatest practical risk reduction among the identified receptor pathways. Details on the development of the PRGs are presented in the FS Report (Section 2.2.2 and Appendix A).

The recommended PRGs developed (SAIC, 1998) and presented in the FS have been retained as **cleanup levels** in this ROD. Cleanup levels for OU5 were selected for active remediation to support continued industrial use of the site, and future fishing as appropriate. **Table 2-5 summarizes the COCs and cleanup levels selected for remediation at the site.**

TABLE 2-5. OU5 CLEANUP LEVELS		
CHEMICAL OF CONCERN	CLEANUP LEVEL	RISK ENDPOINT
Lead	168 mg/kg	Toxicity to aquatic organisms from exposure to suspended sediment
Benzo(a)pyrene	539 μ g/kg	Adverse human health effects (cancer risk greater than 10^{-4}) from ingestion of shellfish
Total HMW PAHs	13,903 μ g/kg	Toxicity to aquatic organisms from exposure to bedded sediment
Total PCBs	1,060 μ g/kg	Toxicity to aquatic organisms from exposure to suspended sediment

2.9 DESCRIPTION OF ALTERNATIVES

To address potentially unacceptable human health and ecological risks associated at OU5, a **preliminary technology screening** evaluation was conducted in the FS. A number of treatment technologies and process options were initially screened based on their potential effectiveness, implementability, and cost, though some (treatment, sequestration, etc.) were eliminated, primarily due to their impracticality with respect to site-specific circumstances or due to the low levels and discontinuous distributions of contaminants at the site.

The technologies and process options retained after the initial screening were assembled into various alternatives for marine sediment. Consistent with the NCP, the no action alternative was evaluated as a baseline for comparison with other alternatives during the comparative analysis. The remedial alternatives developed in the FS for OU5 are presented in Section 2.9.2.

RECORD OF DECISION

SITE 19 – FORMER DERECKTOR SHIPYARD MARINE SEDIMENT OPERABLE UNIT 5



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