

Kaiser's Proposed Cleanup Alternatives Figure 3

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Cleanup Categories and Associated Contaminants				
Technologies to treat contaminants within each category →	Near Surface Soil	Deep Vadose Zone Soil	Petroleum Hydrocarbon Groundwater Plumes and Associated Smear Zone Soil	Remelt/Hot Line PCB Groundwater Plume and Associated Smear Zone Soil
<p>NOTE: An X indicates the category, contaminants, and cleanup technologies for the specific geographic area at the site.</p> <p>For example, in the Oil House Area three categories exist and all technologies for each category will be used.</p>	<p>Top 20 feet of soil [VOCs, SVOCs, PCBs, and metals e.g., lead, arsenic]</p> <p style="text-align: center;">↓</p>	<p>Begins at a depth of 20 feet and goes down to the smear zone - near the water table (which varies from 33 to 68 feet deep). [Contaminants: VOCs, SVOCs, PCBs comingled w SVOCs, and metals e.g., chromium and arsenic]</p>	<p>Located at a depth varying from 33 to 68 feet below the ground. [Contaminants: free phase petroleum product in contact with groundwater; PCBs comingled with SVOCs]</p>	<p>Located at depths varying from 33 to 68 feet below the ground. [Contaminants: PCBs]</p>
Technologies to treat contaminants within each category →	**Institutional Controls, Monitoring, Monitored Natural Attenuation and Containment; excavation and off-site disposal for SVOCs, PCBs and Metals	**Institutional Controls, Monitoring, Monitored Natural Attenuation and Containment; Containment on non-comingled PCBs	**Institutional Controls, Monitoring, Monitored Natural Attenuation, Operation of Existing Interim Remedial Measures System and Enhanced removal of free phase petroleum product	**Institutional Controls, Monitoring, Monitored Natural Attenuation, Groundwater Containment
Specific Geographic Cleanup Areas				
Oil House Area	X	X	X	
Wastewater Treatment Area	X	X	X	
Oil Reclamation Building Area	X	X	X	
Remelt/Hotline Area	X	X		X
Cold Mill/Finishing Area	X	X	X	
Truck Stop Area	X	X		
Former Rail Car Unloading Area	X	X		
Former Discharge Ravines	X			

**For details about each proposed technology, please see page 4 of the fact sheet.

PCBs (Polychlorinated Biphenyls)
A group of manufactured chemicals historically used as insulating fluids or coolants and lubricants in transformers, capacitors or other electrical equipment. They also have been used in hydraulic oils, fluorescent lights, inks, carbonless paper and other uses. The U.S. stopped manufacturing PCBs in 1977 because of evidence they accumulate or build up in the environment and may have harmful health effects. Humans may be exposed to PCBs from the Spokane River by eating fish caught from certain locations of the river.

Plume
A mass of contamination underground mixed with groundwater.

VOCs (Volatile Organic Compounds)
A group of chemicals containing organic carbon that readily evaporate, changing from liquids to gases when exposed to air. VOCs at Kaiser are mainly gasoline range hydrocarbons.

SVOCs (Semi-Volatile Organic Compounds)
Less volatile hydrocarbons. SVOCs at Kaiser are mainly diesel, Kensol and heavy oil.