

Attachment 7  
Operable Unit Cleanup Levels Matrix

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Operable Unit	Contaminants of Concern	Cleanup Levels		Note any Changes to Cleanup Levels	Remedial Action Objectives	
		Soil				Groundwater
		Residential	Industrial			
I	Cesium-137	23 pCi/g	67 pCi/g		Prevent or minimize: 1. Leaching of contaminants from soil into groundwater, 2. Human exposure from surface and subsurface soil, 3. Uptake to ecological receptors. Rad soil cleanup levels are based on 15 mrem/year above background. ALARA goal is 10 mrem/year above background.	
	Strontium-90	15 pCi/g	15 pCi/g	8 pCi/L		
	Radium-226	5 pCi/g	5 pCi/g			
	Lead	400 mg/kg				
	Mercury	1.84 mg/kg				
	1,2-Dichloroethane			5 µg/L		
	Chloroethane			5 µg/L		
II	Cesium-137	23 pCi/g	67 pCi/g		Documented in the OU I and III RODs.	
	Tritium			20,000 pCi/L		
	Sodium-22			400 pCi/L		
III	1,1,1-Trichloroethane			5 µg/L	1. Meet MCLs for VOCs and tritium in Upper Glacial aquifer within 30 years, 2. Meet MCLs for VOCs in Magothy aquifer within 65 years, 3. Meet MCLs for Sr-90 in Upper Glacial aquifer within 40 years and 70 years at Chemical Holes and BGRR/WCF plumes, respectively.	
	Tetrachloroethylene			5 µg/L		
	Carbon tetrachloride			5 µg/L		
	Tritium			20,000 pCi/L		
	Strontium-90			8 pCi/L		
	PCBs	1 mg/kg - Surface NYSDEC TAGM	10 mg/kg - Subsurf. NYSDEC TAGM			
IV	Ethylbenzene			5 µg/L	Restore groundwater quality to MCLs or background, and prevent or minimize: 1. Leaching of contaminants from soil into groundwater, 2. Human exposure from surface and subsurface soil, 3. Uptake of contaminants in soil by plants and animals.	
	Toluene			5 µg/L		
	Strontium-90			8 pCi/L		
V	Mercury	2 mg/kg			Protect public health and the sole source aquifer, monitor the groundwater, and prevent	
	Cesium-137	23 pCi/g				

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	Trichloroethene			5 µg/L		or minimize: 1. Migration of contaminants present in surface soil via surface runoff, 2. Human and environmental exposure from surface and subsurface soil. 3. Reduce site-related contaminants (e.g., mercury) in sediment to levels that are protective of human health, 4. Reduce or mitigate, to the extent practicable, existing and potential adverse ecological effects of contaminants in the Peconic River, 5. Prevent or reduce the migration of contaminants off the BNL property.
VI	Ethylene dibromide			0.05 µg/L		1. Meet MCLs for EDB in the Upper Glacial aquifer within 30 years, 2. Prevent or minimize further migration of EDB in groundwater vertically and horizontally.
BGRR	Strontium-90	ALARA (1)	ALARA	8 pCi/L		1. Ensure protection of human health and the environment from the potential hazards posed by the radiological inventory that resides in the BGRR complex, 2. Use ALARA while implementing the remedial action, 3.
	Cesium-137	ALARA	ALARA			Implement long-term monitoring, maintenance, and institutional controls to manage potential hazards.

(1) ALARA - as low as reasonably achievable.