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Corrective action with regard to residual contamination in the soil and groundwater associated with the 183-H Solar Evaporation Basins has already started. A significant amount of contaminated soil has been excavated from beneath the former concrete basins and has been moved to the Environmental Restoration and Disposal Facility (ERDF), in accordance with the 183-H Closure Plan contained in the Permit (Ecology 1994) and the action memorandum for disposal of 183-H concrete and soils (DOE-RL et al. 1996). Soil removal was completed at 183-H on May 7, 1997. Groundwater remediation under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) Record of Decisions (ROD) for the 100-HR-3 Operable Unit (EPA 1996) begins in July 1997 with the startup of a pumping well network and ion exchange treatment system that will remove chromium and some co-contaminants.

4.1 Soil Column Corrective Action

The majority of soil column contamination has been removed as described in Section 1.2. Nitrate and fluoride remain in the soil column above groundwater protection standards between the bottom of the excavation (6.1 m [20 ft] below grade) and the water table (approximately 4.6 m [15 ft] vertical area), under the former Basin 1. Clean backfill has been added to minimize infiltration of moisture. Institutional controls are in place to prevent human activities that might enhance soil moisture (e.g., irrigation). Final disposition of remaining nitrate and fluoride in the soil underlying the former 183-H facility will be addressed in a final feasibility study and ROD for the 100-HR-1 Operable Unit.

4.2 Groundwater Corrective Action

Groundwater contamination from 183-H waste is still present in groundwater near the former 183-H Basins. Corrective action to remove hexavalent chromium is being undertaken as an interim remedial measure for the entire 100-HR-3 Groundwater Operable Unit. The treatment methodology will remove hexavalent chromium from groundwater, and some nitrate, technetium-99, and uranium. Whether or not fluoride will be retained by the Dowex 21K resin has not yet been demonstrated, but the resin is expected to do so. Final disposition of groundwater contamination from all sources in the 100-H Area will be addressed in a final feasibility study and ROD for the 100-HR-3 Operable Unit, should the CERCLA Interim Remedial Measure (IRM) action not remediate all contamination.

4.3 Remediation Expectations During the IRM

The interim remedial measure for chromium is designed to remove hexavalent chromium from groundwater using an ion exchange resin. The resin is expected to also remove some nitrate, fluoride, technetium-99, and uranium (strontium-90 will not be removed), although hexavalent chromium will be removed preferentially. Determining how well the ion exchange resin will perform in removing these co-contaminants and 183-H waste indicators is an objective of the IRM performance monitoring program.

Selection of final remediation alternatives for the soil column associated with the 183-H Treatment, Storage, and Disposal (TSD) unit and the underlying groundwater will be done after completion of final feasibility studies for the 100-HR-1 and 100-HR-3 Operable Units. Information gained during the pump-and-treat remediation activities for chromium in groundwater will play a prominent role in guiding the final RODs for these operable units. Also, groundwater monitoring data obtained under the Resource Conservation and Recovery Act (RCRA) program (Hartman 1997), the CERCLA remedial investigation (Peterson and Raidl 1996), and the CERCLA interim remedial measure (DOE-RL 1997) will be used in a focused feasibility study to help identify the optimal final remediation alternative.

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