

Site operations were shut down in February 1988 after the issuance to Petrochem Recycling Corp. of a Notice of Violation by the Utah Bureau of Solid and Hazardous Waste and the Bureau of Air Quality. In November 1988, Region 8 EPA Emergency Response Branch initiated an emergency surface removal action at the Site.

On August 2, 1989, an Administrative Order on Consent (AOC) for Emergency Surface Removal (Docket CERCLA-VIII-89-25) was issued to 27 Potentially Responsible Parties (PRPs) to undertake actions to clean up the Site. These PRPs operated as members of a voluntary association termed the ESRC (Ekotek Site Remediation Committee.) As part of the emergency surface removal action, the ESRC removed surface and underground storage tanks, containers, contaminated sludges, pooled liquids and processing equipment from the Site.

In November 1989, EPA began site assessment field operations. The Site was proposed for listing on the National Priorities List (NPL) on July 29, 1991. The Site was listed on the NPL on October 14, 1992. Only one operable unit was designated for the Site.

#### *Remedial Investigation and Feasibility Study (RI/FS)*

An Administrative Order on Consent (AOC) for the performance of the Remedial Investigation/Feasibility Study (RI/FS) was signed in July 1992 (Docket No. CERCLA (106) VIII-92-21). Members of the ESRC were Respondents for the RI/FS AOC. The Phase I field investigation was undertaken from December 1992 to March 1993 and Phase II investigations were conducted from August to October 1993. A final RI report was issued in July 1994 and the final FS report was issued in January 1995. Two addenda to the FS were submitted on February 24, 1995 and April 7, 1995. EPA published the notice of completion for the FS and the Proposed Plan for remedial action on July 19, 1995.

The results of the remedial investigation indicated that surface soils on the property contained petroleum hydrocarbon contaminants, including semivolatile organic compounds (SVOCs) and polychlorinated biphenyls (PCBs). Contaminated soil extended to the water table in the vicinity of the former tank farm/processing area where a plume of light non-aqueous phase liquids (LNAPL) was present. Groundwater analytical results collected during the RI indicated that vinyl chloride, cis-1,2-DCE, benzene, and arsenic were present at concentrations above their maximum contaminant levels (MCLs). The feasibility study was

completed in January 1995 and included development and evaluation of ten site-wide remedial alternatives. The alternatives consisted of various combinations of technologies for soil and groundwater remediation, including soil excavation and disposal or treatment, containment, LNAPL removal, groundwater extraction and disposal, and intrinsic groundwater remediation.

#### *Record of Decision (ROD) and Explanations of Significant Differences (ESDs)*

EPA's remedy decision was embodied in a final ROD signed on September 27, 1996. The components of the selected remedy included:

- Removal/Disposal of Hot Spot Soils
- Consolidation/Capping of Soils that Exceed Soil Performance Standards
- Partial Removal/Disposal of Soil and Buried Debris and Cap Remaining Debris
- Removal/Treatment of 100% of the LNAPL
- Natural Attenuation/Intrinsic Remediation of Ground Water
- Access and Land Use Restrictions for the Site

An ESD was issued on December 9, 1997, by EPA to modify certain remediation criteria established in the 1996 Record of Decision. The significant differences addressed in the ESD were: corrected and revised soil performance standard values for 2,3,7,8-TCDD (TEF) and PCBs; revised soil hot spot performance standard value for PCBs; and an alternative to permit discharge of water to re-injection wells or to a surface water/storm drain via the substantive requirements of a UPDES permit.

A second ESD was issued on May 11, 1999, by EPA. The second ESD modified two aspects of the 1996 Record of Decision; first it deleted manganese as a designated contaminant of concern in the ground water, and second it increased the volume of contaminated soil destined for off-site disposal.

Changes to the original remedy due to the two ESDs resulted in the following remedy:

- Removal/Disposal of soils exceeding hot spot and soil performance standards
- Removal/Incineration of floating LNAPL down to 0.02 feet thickness
- Natural Attenuation/Intrinsic Remediation of groundwater
- Backfilling excavations with clean soil and regrading/restoration of Site

#### *Response Actions*

**Removal Action.** An Administrative Order on Consent for Removal Action

was issued on December 22, 1997 (Docket No. CERCLA (106) VIII-98-05) for the performance of Drum and Sludge Removal. Members of the ESRC were Respondents for the Administrative Order on Consent for Removal Action. The actions under this AOC were completed prior to the Remedial Design and Remedial Action (RD/RA) Consent Decree in order to expedite and facilitate the remedial action. The actions completed under the Drum and Sludge Removal included the following: the characterization of drummed waste and filter cake sludge, the disposal of approximately 230 drums and the associated waste at a permitted RCRA facility and the disposal of approximately 450 cubic yards of filter cake sludge at a permitted RCRA facility. A final Drum and Sludge Removal Completion Report was issued in December 1998.

**Remedial Actions.** EPA and the ESRC representatives negotiated an agreement to implement the remedy selected in the ROD. This agreement, in the form of a consent decree for remedial design and remedial action (RD/RA Consent Decree), was lodged on March 4, 1998, and entered on April 27, 1998, in the U.S. District Court for Utah.

Remedial actions were conducted in four stages:

- Stage 1: Building Demolition
- Stage 2: Site Demolition, Hot Spot and Removal of Buried Debris
- Stage 3: Soil Excavation and Disposal and LNAPL Excavation and Incineration

• Stage 4: Groundwater Studies  
All remedial actions were conducted in accordance with the ROD, ESDs, Remedial Design (May 1999) and Consent Decree. Groundwater studies supported the choice of monitored natural attenuation/intrinsic remediation for the groundwater component of the remedy. Confirmatory sampling verified that the Site achieved the ROD cleanup objectives for soil and groundwater and that all cleanup actions specified in the ROD and ESDs had been implemented.

#### *Operation & Maintenance (O&M)*

Disposal of hazardous materials, identified in the ROD and ESDs, to a permitted off-site disposal facility and the achievement of the groundwater remediation levels has eliminated the need for O&M at the Site.

#### *Five-Year Review*

Pursuant to CERCLA section 121(c), 42 U.S.C. 9621(c), five-year reviews are required at sites with remaining hazardous substances, pollutants, or contaminants above levels that allow for