

Helms Drum Service
1764 State Road 655
Auburndale, Florida
County: Polk
District: Southwest
Site Lead: Bureau of Waste Cleanup
Approved for Cleanup: February 20, 1993
Delisted: January 27, 1995
HWC # 098

Site Description and History

Helms Drum Service is located at 1764 State Road 655, in a rural area approximately three miles north of Auburndale in Polk County, Florida in Section 16, Township 27S, Range 25E at 28° 08' 06.1466" N, 81° 49' 16.3617" W. The Site is approximately 4.5 acres containing five buildings and an access road. Structures onsite are the Helms residence, a greenhouse and three buildings associated with the drum cleaning operation. The Site slopes towards a small wetland area at its east end. This area contains a creek that feeds nearby Lake Juliana.

The facility, owned by Mr. Leroy Helms, began operations in the mid-1970s and continued until July 1984. General operations consisted of purchasing and reconditioning spent oil drums and open-top drums from the citrus industry. On a typical day an estimated 40 drums and up to 300 gallons of spent oil were treated. Drum reconditioning consisted of a seven step process utilizing kerosene to remove oil residues and a caustic soda (sodium hydroxide) rinse. Spent caustic soda was neutralized with acid (HCl or H₂SO₄) and the process wastewater was discharged to a percolation pond. The percolation pond was a naturally occurring surface depression enlarged to accommodate the volume of wastewater it received.

Threat

The primary concern at the facility was offsite groundwater migration of contamination toward the adjacent wetland and, potentially, Lake Juliana. Past groundwater analyses detected lead, chromium, mercury and sodium concentrations above primary drinking water standards and zinc levels above secondary drinking water standards. Additionally, several organic compounds and cyanide had been detected. Current data indicate there are no violations of the state drinking water standards, and soil contamination is below action levels and the site has been delisted.

Response Strategy and Status

In early 1982, the Florida Department of Environmental Regulation (FDER, now DEP) discovered that the Helms facility was discharging to groundwater without a permit. In April 1982, FDER sampled effluent from the drum washing operation. The analyses revealed elevated levels of lead, chromium and zinc. Consequently, Helms applied to FDER in August 1982 for a discharge permit. FDER did not issue the permit.

In February 1984, following sampling by both FDER and a consultant representing Helms Drum Service, the enforcement section of FDER issued an order to cease all operations and remediate the soil adjacent to the drum reclamation area, the percolation pond and associated ground water. Helms agreed to comply with the order.

In March 1985, Helms' consultant submitted a closure plan to FDER, which, upon review was found deficient in a number of areas. All drum reconditioning equipment was removed from the Site by July 1985. The percolation pond bottom was excavated under the direction of Helms' consultant during July. Approximately 20 cubic yards of sediment primarily contaminated with lead, chromium, molybdenum and barium were removed and shipped for disposal to Chemical Waste Management in Emelle, Alabama. In July 1992, due to a lack of progress by the facility owner to address ground water and soil contamination around the percolation pond, the FDER Southwest District office requested that the FDER Site Investigation Team evaluate the Site for possible National Priority List Status. Upon evaluation, the Site was placed on the State Action List for remediation.

In March 1993, FDER contracted with Woodward-Clyde Consultants (WCC) to continue remedial investigation of the Site. In May 1993, WCC conducted a preliminary Contamination Assessment (CA) of the existing monitoring wells onsite. Results of the preliminary CA in May 1993 indicated elevated levels of lead in the groundwater. These results were incorporated into the Contamination Assessment Plan (CAP) submitted to the DEP in August 1993. In January 1994, WCC installed additional monitoring wells in efforts to further delineate the vertical migration of groundwater contamination. WCC completed the Contamination Assessment in February 1994. The draft Contamination Assessment Report (CAR) was submitted in March 1994. Department review of this document resulted in a request for WCC to collect several confirmation samples and submit the results within a Final CAR. These samples were collected in June 1994 and the Final CAR was approved in September 1994. The Final CAR incorporated sample results from May 1993, January and June 1994. These results indicated that contaminant concentrations were significantly lower than the results of the investigations conducted in the 1980s. Groundwater contamination was only slightly above state drinking water standards, and an extensive area of soil contamination could not be delineated. In October 1994, WCC was requested to collect a round of shallow groundwater samples, which were subsequently collected in November. Analyses revealed no violations of state standards attributable to groundwater. DEP delisted the Site from the State Action List in January 1995.