Public Health Assessment — Richmond County

Alternate Energy Resources
January 25, 2007

Introduction
ATSDR requested that the Georgia Division of Public Health (GDPH) provide a public health assessment to explore the potential human exposure to site-related contaminants. GDPH has reviewed groundwater and surface water monitoring data, and soil sampling data related to the site. The information in this public health assessment is specifically designed to provide the community with information about the public health implications from exposure to hazardous substances at this site, and to identify populations for which further health actions are needed.

Site Description and History
Alternate Energy Resources (AER) operated as a commercial hazardous waste storage and treatment facility from 1975 to 2000. AER's waste treatment processes included: blending high-BTU (British thermal unit) hazardous waste to be used as fuel in off-site industrial boilers and furnaces; recycling hazardous waste solvents by distillation; and treating used oils, hazardous and nonhazardous wastewater, and non-hazardous coolants. In 2000, the facility was abandoned and the owners declared bankruptcy. The AER site was proposed for the National Priorities List (NPL) by the U.S. Environmental Protection Agency (EPA) in September 2005, and finalized in April 2006.

The AER site is a 2.6 acre property located on Walden Drive in Augusta, Richmond County, Georgia. The property is located in an area which is zoned as heavy industrial, with surrounding property zoned as commercial and residential.

The population within one mile of the AER site is approximately 5,624 people. The nearest residence is located 400 feet north of the site. There are no schools or day care facilities within 200 feet of the site.

Environmental Sampling
Ongoing investigations have been conducted at the AER site since 1986 to characterize the extent of contamination released to environmental media (groundwater, surface water, and soil) from the site. Available data include groundwater samples collected from surficial monitoring wells, and deeper Cretaceous monitoring and municipal wells in the area. Surface water samples were collected from 6 locations along Rocky Creek, including a pond located on Clark Street approximately 0.5 miles south of AER and a storm water pond located at the UPS property downgradient of the AER site. Subsurface soil samples were collected from the AER site in 1999, and surface soil samples were collected during closure activities in 2001.

Results
Private Wells
In September 1986, GEPD confirmed that drinking water wells located in the Hollywood subdivision, approximately 2500 feet south and downgradient of the AER site, were contaminated from a plume emanating from the AER property. A house-to-house survey was conducted, identifying all residences with drinking water wells. Of the twenty-seven wells identified, twenty-six were found to be contaminated with TCE above the Maximum Contaminant Level (MCL) for safe drinking water (5 ug/L). Other volatile organic compounds (VOCs) were also found in the private wells; however, those detections were below their respective MCLs and Comparison Values (CV).

Soil
During the closure of the facility in January 2001, surface soil samples (from 0 to 2 feet bgs) were obtained for verification purposes. The samples indicated that surface soils at the AER site are contaminated with VOCs, PAHs, and metals. PCE (1.8 mg/kg) and TCE (2.4 mg/kg) were the only VOCs detected above residential and industrial soil cleanup level, and arsenic was the only metal detected above soil cleanup levels. However, arsenic was the only contaminant detected above a CV at one location west of the former container storage warehouse. The concentration of arsenic found at this location is 110 mg/kg (110 parts per million [ppm]). Ingestion of soil located at this "hotspot" would be the most likely route of exposure for past workers at AER and trespassers. However, the area where arsenic was found at this level is very small relative to the entire 2.6 acre site. Therefore, it is unlikely that either past workers or trespassers would be exposed to default quantities of ingested soil assuming that exposure is occurring for at least 8 hours per day.

Conclusions

GDPH has determined that in the past, site-related groundwater contaminants found in private wells located in the Hollywood subdivision approximately 0.5 miles south-southeast of AER posed ***no apparent public health hazard***. Human exposure to contaminated media occurred in the past, but the exposure was below a level of health hazard. In 1987, residents living in the Hollywood subdivision were connected to municipal water. GDPH also found that the AER site poses ***no apparent public health hazard*** for past and current exposure to contaminated soil for children and adults occasionally trespassing on the property, and for past workers at AER.

Recommendations

- Resumption of groundwater monitoring in the surficial, Cretaceous, and bedrock aquifers by EPA in an effort to determine the vertical and horizontal extent of site-related contamination.
- Continue EPA efforts to determine the extent of contamination in surface and subsurface soils on site.
- Continue EPA effort to determine extent of off-site surface water and contamination attributable to AER. Once the remedial investigation/feasibility study for the AER site is completed, appropriate remediation measures should be undertaken by EPA along with continued monitoring of the effectiveness of such remediation actions.
- The fence surrounding AER should be repaired by EPA and the gates locked to prevent access to the site. If additional data become available, the information will be reviewed by GDPH, and appropriate actions will be taken.