United States Department of Agriculture

Agricultural Research Service

Beltsville Agricultural Research Center
BARC 31 and 32: PCB Cleanup

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The U.S. Department of Agriculture's Agricultural Research Service (ARS) completed a cleanup at the Beltsville Agricultural Research Center (BARC) of polychlorinated biphenyl (PCB) contamination in the soil of a maintenance yard (BARC 32) and former equipment storage area (BARC 31). PCBs are heat transfer fluids associated with old electric transformers that have some hazardous properties.

Transformers containing these fluids stored in the past at these two sites had apparently leaked PCB-containing fluids into the surrounding soil. The soil at these sites was also found to contain other environmental pollutants, including some pesticides, metals, and polynuclear aromatic hydrocarbons (PAHs). These contaminants were also included in the soil clean up.

To determine the extent of contamination, samples from materials stored at both sites as well as samples from surface and subsurface soil and shallow groundwater were collected and analyzed.

To keep the contamination confined, ARS decided, in consultation with EPA, to complete a Time Critical Removal Action at the active and occupied BARC 32 shops area, and a Non-Time Critical Removal Action at the inactive and unoccupied BARC 31 former storage area. Both removal actions were designed to address the high concentrations of PCBs found in soil at the sites.

Completed Removal Actions

Comprehensive work plans were prepared to guide the soil removal actions at each site. Erosion control measures were put in place, and health and safety plans developed to ensure that operations were conducted safely.

The Time Critical Removal Action at BARC 32 was conducted in the spring and summer of 2004. The Non-Time Critical Removal Action at the adjacent BARC 31 site was performed in the spring and summer of 2006. Depending on PCB and/or pesticide, metal, or PAH concentrations, excavated soil and debris from both sites went either to an approved thermal treatment (recycling) facility in Virginia, a Toxic Substances Control Act-permitted landfill in Michigan, or to a non-hazardous waste landfill in Virginia.

On-site soil analyses were performed using sensitive soil test kits to guide excavation activities. When excavations were complete, additional laboratory samples were collected based on field screening results to confirm that restored areas met established cleanup goals.

Approximately 15,000 tons of soil with PCBs and other contaminants of concern (pesticides, heavy metals, and PAHs) were excavated from both sites.

At the conclusion of the cleanups, excavations were backfilled with clean soil. Landscaping, grading, and re-seeding have now returned each site to productive use.

For More Information:

Visit the ARS Information Repository website at http://ars.usda.dandp.com/barcsuperfund/ or contact Kim Kaplan, ARS Information Staff, at 301-504-1637 or Kim.Kaplan@ars.usda.gov regarding other ways to view the ARS Information Repository.