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# Beltsville Agricultural Research Center Update on National Priorities List Activities

December 2009

The Beltsville Agricultural Research Center (BARC) is committed to keeping employees, community neighbors, and others informed about information and actions involving the Center's placement on the Environmental Protection Agency's National Priorities List (EPA NPL). Fact sheets such as this are distributed when new information becomes available.

## **Background**

The Agricultural Research Service (ARS) conducted an assessment of its Beltsville Agricultural Research Center (BARC) in 1991 to identify areas that may be environmentally contaminated as part of complying with EPA regulations.

In 1994, BARC was listed on EPA's National Priorities List (NPL), making it a "Superfund site." The listing was based on contamination identified by ARS in a four-acre site where biodegradable material such as tree limbs and grass clippings, construction rubble such as concrete and glassware, and general refuse were disposed from 1940 to 1975. This "source" material was removed in 1994 as part of the land transfer from BARC to the Washington Metropolitan Area Transit Authority for use as the train yard at the end of the Green Line. Tests are still being conducted to identify other sources and determine the extent of any groundwater and surface water contamination.

## **Site Discovery & the Site Screening Process**

Because of BARC's large size (6,600 acres), the potential number of Areas of Concern (AOCs), and the complexity of identifying and reconciling areas of actual environmental contamination, BARC undertook a more extensive review of the facility to identify any and all potential AOCs.

BARC conducted an in-depth review of historical aerial photos dating from the 1930s to the present covering the entire research center. This review included all of the potential sites found in 1991 and identified other areas in need of evaluation. This was followed by a detailed field reconnaissance of all potential AOCs.

To obtain information regarding past disposal activities, a questionnaire was distributed to all BARC employees. Interviews were then conducted with employees where appropriate, to gain additional insights.

Once these activities were completed, ARS and EPA examined the information and determined which AOCs required more extensive examination of environmental media including soil, groundwater, surface water and sediment, and which areas were merely used for normal agricultural practices and present no threat to the environment. Through a review of historical records, employee interviews, historical aerial photography, and site visits, a total of 167 potential areas of concern (AOCs) were identified.

# Beltsville Agricultural Research Center

## Update on National Priorities List Activities

Of the 168 potential AOCs evaluated, only 61 were recommended for further investigation. These AOCs are currently being investigated as part of a Site Screening Process (SSP). The SSP typically involves sample collection and laboratory analysis of environmental media suspected to be contaminated. Analytical results for an extensive list of possible organic and inorganic contaminants are then compared against risk screening benchmarks compiled by EPA.

“Benchmarks” refer to risk-screening concentrations that may cause human health effects due to exposure to contaminants in soil, surface water, sediment, and groundwater. Initial SSP field investigations have been completed at all 61 AOCs.

Based on SSP findings, five of the sites are in various stages of Remedial Investigation (RI), which is a much more thorough investigation to determine the nature and extent of contamination, and evaluate the potential risks that any contaminants may pose to human health and the environment. Possible alternatives for cleanup to address any risks that have been identified are also being examined.

To date, 30 sites have been designated “no further action” as no human or ecological risks found.

The remaining 31 sites (including 5 sites undergoing a Remedial Investigation) are in various stages of study and cleanup including:

- Cleanups completed at 4 sites.
- Cleanups planned at 11 sites.
- Ongoing investigations at 11 SSP sites.
- Ongoing investigations at 5 RI sites.

The results will be reviewed in conjunction with EPA.

### Removal Actions

The Agency for Toxic Substances and Disease Registry (ATSDR) conducted a review of BARC in November 1995 and determined that ***the potential environmental contamination poses no imminent threat to human health.***

Following ATSDR’s site visit, EPA requested that ARS remove some surface debris from parts of a 70-acre wooded area off Odell Road. The debris included some laboratory bottles and other miscellaneous solid waste, and the removal activity was completed in 1997. Although access is restricted in this area, and warning signs are posted, the site lies close to the North Creek Farms development. The purpose of the removal action was to eliminate any physical or chemical hazard potentially posed by the material found at the site.

Several other BARC sites have undergone surface debris removals. These include a wooded area near the water tower; an area adjacent to the storage yard associated with BARC Building 085; and “Chicken Hill,” along Springfield Road, where chicken manure and other wastes were disposed.

In summary, a total of approximately 1,575 cubic yards of debris, and 59, 55-gallon drums of nonhazardous liquids and solids were removed from these sites. The drums and four or five

# Beltsville Agricultural Research Center

## Update on National Priorities List Activities

small bottles of corrosive liquids found at the Odell Road site was transported to an EPA-approved disposal facility.

Removal actions at two BARC vehicle maintenance yard areas have also been completed, addressing over 15,000 tons of soil containing unacceptably elevated levels of PCBs and pesticides. In addition, removal actions at three additional sites were completed in early 2007 involving a total of 3,000 tons of soil contaminated with lead, arsenic, and PCBs. Removal actions at several other AOCs are planned for completion in 2009.

### **Current and Upcoming Actions**

The following activities are currently in progress:

- Sampling results from the remaining 11 SSP sites are being evaluated and decisions are being made about what additional action may be needed.
- Supplemental field investigations have been completed at most of these sites, and several more are planned when further characterization is required as a result of the Site Screening Process.
- RI reports have been completed for three sites, and are in progress an additional site.
- A facility-wide Baseline Ecological Risk Assessment (BERA) has been completed for BARC. The BERA allows a determination to be made if there are unacceptable risks to the ecology, and if so, to determine an appropriate response.

**For more information...**Contact Kim Kaplan, ARS Information Staff, at 301-504-1637, by e-mail at [Kim.Kaplan@ars.usda.gov](mailto:Kim.Kaplan@ars.usda.gov), or visit the ARS Information Repository located in Room 014, Building 003, 10300 Baltimore Avenue, Beltsville, MD. The Information Repository is open to the public Monday through Friday, 8:30am to 4:30pm. The Information Repository is also available at the Prince George's County Memorial Library at 4319 Sellman Road. The library's hours of operation are Monday through Wednesday, 10 am to 9 pm; Thursday and Friday, 10 am to 6 pm; and Saturday, 10 am to 5 pm.