



Beltsville Agricultural Research Center BARC 12: Chemical Disposal Pits Site

December 2009

A Remedial Investigation is being undertaken at a site in the Beltsville Agricultural Research Center, a 6,600 acre research location of the U.S. Department of Agriculture's Agricultural Research Service (ARS). The 25-acre site, designated as the Chemical Disposal Pits (BARC 12), is located in the far northeastern portion of BARC.

A Remedial Investigation (RI) is a carefully structured process of collecting air, water and/or soil samples, analyzing them for environmental contamination, and evaluating the potential risks that any contaminants found in those samples may pose to human health and the environment. In addition, a RI determines whether or not a long-term cleanup effort (i.e., remedial action) is needed and assesses the potential scope of any required remedial action.

Background

The Chemical Disposal Pits site was used as early as 1943 for storage, burning, and disposal of solvents and other hazardous substances. In the late 1970s, ARS, the Maryland Environmental Service and the Washington Suburban Sanitary Commission (WSSC) conducted a pilot sludge composting operation at the site.

Several environmental investigations, beginning in 1991, identified a number of chemicals and metals at elevated levels in soil, surface water and groundwater. A Site Screening Process investigation in 1998 concluded there was sufficient evidence to warrant a Remedial Investigation. Remedial Investigation sampling and analysis activities began in March 2000.

Remedial Investigation Objectives

The objectives of the Remedial Investigation are to:

- Determine the nature and extent of suspected contamination in soil and groundwater.
- Determine groundwater flow patterns and estimate the rate of any potential contaminant migration in groundwater.
- Locate any buried materials in the areas of the suspected former disposal pits.
- Assess potential risks to human health and the environment from groundwater, soil, and surface water/sediment contamination.
- Determine the need for, and potential scope of, remedial action (i.e., site cleanup).

Remedial Investigation Activities to Date

Twelve groundwater monitoring wells have been installed to sample groundwater and determine flow characteristics at the site. Six additional multi-channel wells have also been installed to assess any contaminant migration, fate and movement. All wells will be sampled periodically throughout the investigation and any required cleanup.

Surface and subsurface soil samples were collected to characterize site geology and to identify and quantify soil contamination. In addition, soil electrical conductivity was studied at the site to

Beltsville Agricultural Research Center

BARC 12: Chemical Disposal Pits Site

help assess environmental fate and transport mechanisms of site contaminants. Seventeen test pits were excavated to identify contents of former disposal pits. Test pit locations were based on review of historical aerial photographs and a comprehensive surface electromagnetic survey.

Soil gas samples were collected from across the site to better delineate volatile organic compound (VOC) contamination. Surface water and sediments in a nearby storm water retention pond and in nearby streams were also sampled to determine if any site contaminants are discharging to these surface water bodies.

A Human Health Risk Assessment is being prepared in accordance with EPA procedures, using analytical data generated by the RI. The Human Health Risk Assessment will identify any potential or existing risks to human health or the environment, and will support the evaluation of potential remedial (cleanup) actions. Current and future potential uses of the area such as possible exposure of BARC employees to surface soil and future use of groundwater for drinking water are also considered.

Risks to the ecology at the Chemical Disposal Pits are also being assessed as part of a facility-wide Ecological Risk Assessment.

For More Information...

Contact Kim Kaplan, ARS Information Staff, at 301-504-1637, by e-mail at 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.