United States
Department of
Agriculture

Agricultural Research Service

# Beltsville Agricultural Research Center Screening Investigations of Potential Areas of Concern

June 2020

The Beltsville Agricultural Research Center (BARC) was listed as a "Superfund" site in 1994, under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). BARC is a facility of the United States Department of Agriculture (USDA) Agricultural Research Service (ARS).

# **Background**

As part of the BARC CERCLA Program, ARS has conducted a systematic review of BARC property to identify and investigate potential Areas of Concern (AOCs).

Potential AOCs were evaluated through a detailed process that included aerial photographic analysis, field reconnaissance, a records search and file review, and extensive employee interviews. The information compiled provided the information needed for USDA-ARS and EPA to determine which AOCs warrant further CERCLA investigation. Of the 167 potential AOCs identified, 63 AOCs have been recommended for further investigation. These AOCs have undergone further investigation as part of a site screening process (SSP) and/or a Remedial Investigation (RI) and Cleanup.

## **Site Screening Process**

The Site Screening Process (SSP) is used to determine if an AOC requires remedial action, needs further study through the Remedial Investigation and Feasibility Study (RI/FS) process, or if no further action is needed.

The AOCs summarized in these tables were investigated under an SSP. Significant progress was made to complete screening investigations and complete cleanups where needed.

Table 1 identifies the forty-two (42) AOCs designated for "no further action." EPA has closed these AOCs out of the SSP because no significant human health or ecological concerns remain.

An additional seven (7) still in the formal closeout process (Table 2). Decision Documents for these AOCs are being considered by EPA, although they are still considered "active" under the SSP. These AOCs may eventually require further cleanup.

Table 3 lists an additional eight (8) AOCs that are in various stages of an RI.

Table 4 lists six (6) sites where cleanups were completed, planned, or are required for completion.

Table 1. AOCs Designated "No Further Action" for Ecological and Human Health Risk

| AOC Name/<br>Number <sup>1</sup>                          | Summary  | Location  |
|---|--|---|
| BARC 1<br>Experimental Wood<br>Treatment Area             | Area used for application of wood treatment chemicals in the 1940s and 1950s. Surface debris removal completed, Fall 1997. Soil removal and disposal completed in early 2007. No Further Action Decision Document completed with EPA August 2010.  | <b>South Farm.</b> 200 ft. southeast of B-060.  |
| BARC 2<br>South Farm Dump                                 | Gravel pit used to dispose of municipal waste and small amounts of other wastes in the 1950s and 1960s. Surface debris removal completed, Fall 1997. Fieldwork completed. No Further Action Decision Document completed with EPA, August 2009.   | South Farm. On the crest of a hill, adjacent to a PEPCO powerline right-of-way, 150 ft. west of Orchard Loop Road.                                    |
| BARC 3<br>North Farm Dump                                 | Pit used to dispose of debris and possibly small amounts of other wastes in the 1950s. Fieldwork completed. No Further Action Decision Document completed with EPA August 2009.  | North Farm. 400 ft. southwest of the intersection of Cherry Hill Road and Service Road.   |
| BARC 5<br>Herbicide Washdown<br>Area                      | Open field used for burning trash and disposing of herbicide contaminated rinse water. Fieldwork completed. No Further Action Decision Document completed with EPA, August 2009.   | North Farm. 700 ft. south of B-041 in a fenced area east of West Drive.   |
| BARC 8<br>Animal Parasitology<br>Unit (APU) Waste<br>Dump | Disposal site for waste from the APU. Utilized in the late 1960s through the 1980s. Initial fieldwork completed, Spring 2000. Follow-on sampling completed, Spring 2004. No Further Action Decision Document completed with EPA, August 2009.  | Central Farm. Southern bank of the Beaver Dam Creek floodplain, 1,200 ft. north of the intersection of Edmonston Road and the APU western entry gate. |
| BARC 9 Dump Off Odell Road                                | Gravel pit and surrounding area used for general refuse disposal in the late 1950s. Surface debris removal completed, Fall 1997. Fieldwork completed. No Further Action Decision Document completed with EPA, August 2010.   | Central Farm. South of Odell Road and east of the Poultry Area.   |
| BARC 10<br>B-301 Washdown Area                            | Washdown and storage area for farm equipment used on East Farm. Fieldwork completed. No Further Action Decision Document completed with EPA, August 2009.  | Central Farm. 400 ft. northeast of<br>the intersection of Beaver Dam and<br>Research Roads.   |
| BARC 11<br>Dump East of B-409                             | Ravines used for disposal of general refuse and possibly other wastes in the 1960s. Surface debris removal completed, Fall 1997. Fieldwork completed. No Further Action Decision Document completed with EPA, August 2009.   | Central Farm. 700 ft. northeast of B-402.   |
| BARC 14<br>Airport Mixing Pad                             | Concrete pad used for mixing and loading pesticides. Initial SSP investigation completed summer 1998. Follow-on sampling completed spring 2003, and spring 2007. Engineering Evaluation/Cost Assessment (EE/CA) and a soil removal action completed in 2010 to remove surface soil contaminated with pesticide residues. No Further Action Decision Document completed with EPA August 2012. | East Farm. In the aircraft hangar area of the BARC airfield, approximately 50 ft. south of B-606.   |
| BARC 17<br>B-064 Scrap Area                               | Wooded site used to store materials and farm equipment. Surface debris removal completed, Fall 1997. Fieldwork completed. No Further Action Decision Document completed with EPA, August 2009.   | South Farm. Along a wooded service lane, approximately 900 ft. southwest of Paint Branch and 300 ft. southeast of B-060.                              |

Table 1. AOCs Designated "No Further Action" for Ecological and Human Health Risk

| AOC Name/<br>Number <sup>1</sup>                       | Summary   | Location  |
|--|---|---|
| BARC 26 Dump Off Poultry Road                          | Former trenched area containing surface debris, including bottles. Surface debris removal completed, Fall 1997. Fieldwork completed. No Further Action Decision Document completed with EPA, August 2009.   | Central Farm. On a hillside east of Poultry Farm, approximately 800 to 1,000 ft. east of B-255A.                |
| BARC 30<br>Chemical Storage Shed<br>Behind Water Tower | Former location of 2 small sheds containing a small amount of chemicals inside and broken glass outside. Surface debris removal completed, Fall 1997. Fieldwork completed. No Further Action Decision Document completed with EPA, November 2017.   | Central Farm. East of the intersection of Zoology and Entomology Roads, 500 ft. north of the B-453 water tower. |
| BARC 31<br>B-442 Scrap Area                            | Storage area for scrap metal and surplus equipment utilized since the 1960s. Surface debris removal completed, Fall 1997. Soil removal and disposal completed in early 2007. No Further Action Decision Document completed with EPA, August 2010.   | Central Farm. 500 ft. north of<br>Powder Mill Road and south of the<br>Chemical Disposal Pits (BARC 12).        |
| BARC 34<br>Drum Disposal Area                          | Surface disposal of empty drums, rubble, and pipe. Surface debris removal completed, Fall 1997. Initial fieldwork completed, Summer 2000. Follow-on fieldwork completed Summer 2002. No Further Action Decision Document completed with EPA, August 2010.   | East Farm. 1,000 ft. east of Soil<br>Conservation Service Road,<br>adjacent to an unnamed service<br>lane.      |
| BARC 34A<br>Fill Area Behind B-537                     | Surface disposal of 10 empty 55-gallon drums. Surface debris removal completed, Fall 1997. Fieldwork completed, Summer 2000. Follow-on fieldwork completed Summer 2002. No Further Action Decision Document completed with EPA, August 2010.  | East Farm. 800 ft. east of B-537 and B-538, at the end of an unnamed service lane.                              |
| BARC 35<br>Chicken Hill                                | Burial and surface disposal of poultry manure<br>and small amounts of debris from the 1950s until<br>1980. Surface debris removal completed, Fall<br>1997. Fieldwork completed. No Further Action<br>Decision Document completed with EPA, August<br>2010.  | East Farm. On the west side of Springfield Road, 800 ft. southeast of the BARC airfield access gate.            |
| BARC 36<br>Airport Scrap Pile                          | Formerly, a debris-filled ravine. Surface debris removal completed, Fall 1997. Initial SSP investigation completed, Summer 1998. Follow-on sampling completed, Spring 2003 and Summer 2007. EE/CA and a soil removal action completed in 2010 to remove surface soil contaminated with pesticide residues. Post closure sampling demonstrated that all contaminated soil that posed an ecological risk had been successfully removed. A Closeout Report was accepted in August 2012 and no further action is anticipated under CERCLA. No Further Action Decision Document completed with EPA, August 2012. | East Farm. 350 ft. southwest of B-604 and 175 ft. north of the former east/west-oriented runway.                |

Table 1. AOCs Designated "No Further Action" for Ecological and Human Health Risk

| AOC Name/<br>Number <sup>1</sup>   | Summary  | Location  |
|--|--|---|
| BARC 37<br>Waste Oil Pit   | Natural ravine used for disposal of waste oil in the 1960s and 1970s. Initial SSP investigation completed Summer 1998. Follow-on sampling completed Spring 2003 and Summer 2007. EE/CA and a soil removal action completed in 2010 to remove surface soil contaminated with pesticide residues. No Further Action Decision Document completed with EPA, August 2012. | East Farm. 50 ft. west of B-606, down slope from the hangar apron.  |
| BARC 41<br>Underground Storage<br>Tank at B-312  | Area where a former underground storage tank was located. Tank was excavated in 1990. Adjacent building used for chemical storage. Initial fieldwork completed, Winter 1998. Followon sampling completed. No Further Action Decision Document completed with EPA, August 2009.   | Central Farm. North of Powder Mill<br>Road at B-312.  |
| BARC 44<br>Dump in Woods at<br>Airport   | Natural depression filled with miscellaneous debris. Surface debris removal completed, Fall 1997. Fieldwork completed. No Further Action Decision Document completed with EPA, August 2010.  | <b>East Farm.</b> 600 ft. west of B-605, in a woodland area along the northern edge of the old BARC airfield. |
| Beltsville Human<br>Nutrition Research<br>Center (BHNRC)<br>Disposal/Fill area<br>behind B-307 | Disposal area containing miscellaneous debris identified during unrelated excavation in Winter 2001. Fieldwork completed. No Further Action Decision Document completed with EPA, August 2009.   | Central Farm: Open area directly behind B-307.  |
| EPIC 9 Open Storage  | Historically used for coal storage and as a service area. Occasional ground scarring was observed. Fieldwork completed. No Further Action Decision Document completed with EPA, August 2009.   | North Farm. Southwest of the intersection of North Drive and 5th Street, at the site of B-013 and B-013A.     |
| EPIC 11<br>Open Storage  | Utilized as a storage area from the 1960s until 1970s. Currently a service yard. Initial fieldwork completed, Winter 1999. Follow-on sampling completed. No Further Action Decision Document completed with EPA, August 2009.  | North Farm. Near the intersection of South Drive and 2nd Street, on the west side of B-008.                   |
| EPIC 21<br>Open Storage  | Manure composting area with adjacent decontamination trough active until 1970. Fieldwork completed. No Further Action Decision Document completed with EPA August 2010.  | Central Farm. 500 ft. northwest of B-1002 in the northwestern portion of the APU.                             |
| EPIC 23<br>Undetermined  | Location of a pipe outfall, possibly for tile drainage system. Fieldwork completed. No Further Action Decision Document completed with EPA, August 2010.   | Central Farm. 1,000 ft. west of B-1423, within the APU.   |
| EPIC 31<br>Disposal/Fill Area  | Area used for disposal of rubble and other miscellaneous debris in the 1930s. Surface debris removal completed, Fall 1997. Geophysical study and test pit investigations completed, March 2008. Fieldwork completed. No Further Action Decision Document completed with EPA, August 2012.  | Central Farm. 250 ft. east of B-<br>301F and south of the BARC<br>Visitors Center.                            |

Table 1. AOCs Designated "No Further Action" for Ecological and Human Health Risk

| AOC Name/                             | Summary  | Location   |
|---------------------------------------|--|--|
| Number <sup>1</sup>                   | -  | Location   |
| EPIC 34<br>Disposal/Fill Area         | Disposal area utilized in the 1950s. Various debris located in small depressions. Surface debris removal completed, Fall 1997. Additional field sampling completed in 2010 to further investigate ecological issues. Follow-on fieldwork completed. No Further Action Decision Document completed with EPA, August 2012. | Central Farm. 600 ft. east of the intersection of Zoology and Center Roads, adjacent to B-314.   |
| EPIC 39<br>Disposal/Fill Area         | Area potentially used for agricultural research in the 1970s and later used to store greenhouse materials. Surface debris removal completed, Fall 1998. Follow-on fieldwork completed. No Further Action Decision Document completed with EPA, August 2010.  | Central Farm. 1,000 ft. southeast of B-459 in a wooded area north of Powder Mill Road.   |
| ENTECH M6<br>B-029 Service Yard       | Miscellaneous ground scarring and surficial discoloration at an area utilized for maintenance activities and storage. Fieldwork completed. No Further Action Decision Document completed with EPA, August 2009.  | North Farm. In the northwestern portion of North Farm, at the intersection of Peach Orchard and Shop Drives.                             |
| ENTECH M12 Woodland Scarring/Clearing | Ground scarring and clearing was identified in aerial photography from 1937. Laboratory bottles and miscellaneous debris located onsite. Surface debris removal completed, Fall 1997. Fieldwork completed. No Further Action Decision Document completed with EPA, August 2009.  | Central Farm. 700 ft. west of B-191 (a residential unit) and east of Edmonston Road.   |
| ENTECH M16 Possible Excavation Site   | Excavation area in late 1930s that was later fenced off. Fieldwork completed. No Further Action Decision Document completed with EPA, August 2009.   | Central Farm. 200 ft. north of<br>Beaver Dam Road and south of the<br>Dairy Research Facility.   |
| ENTECH M22<br>Possible Fill Area      | Land scarring was identified in late 1930s aerial photography. This area was later used for disposal of miscellaneous debris. Surface debris removal completed, Fall 1997. Fieldwork completed. No Further Action Decision Document completed with EPA August 2009.  | Central Farm. 200 ft. south of B-425, along a utility corridor.  |
| ENTECH M23<br>Fill Area               | Fill area utilized in the 1940s. A discharge pipe was identified in this area from an undetermined source. Fieldwork completed. No Further Action Decision Document completed with EPA, August 2009.   | Central Farm. 375 ft. northeast of<br>the intersection of Research and<br>Beaver Dam Roads and adjacent to<br>the Farm Services Complex. |
| ENTECH 3 Public Fueling Station       | Site of former public fueling station, possibly containing underground storage tanks. Fieldwork completed. No Further Action Decision Document completed with EPA, August 2009.  | North Farm. Southwestern corner of the intersection of Baltimore Avenue (Route 1) and Circle Drive.                                      |
| ENTECH 15<br>UST Removal              | Site of underground storage tank removal in 1977 and small-mounded piles of debris. Initial fieldwork completed, December 1998. Follow-on sampling completed Spring 2004 to investigate groundwater contamination. Fieldwork completed. No Further Action Decision Document completed with EPA, August 2010.             | Central Farm. At B-309, encompassing areas north, east, and south of the building.   |
| ENTECH 20 Runway Destruction Activity | Remnants of excavated runway, composting mounds, and miscellaneous rubble. Fieldwork completed, Summer 1998. Follow-on sampling completed. No Further Action Decision Document completed with EPA, August 2010.  | East Farm. Encompasses the north/south- and east/west- oriented runways of the old BARC airfield.  |

Table 1. AOCs Designated "No Further Action" for Ecological and Human Health Risk

| AOC Name/<br>Number <sup>1</sup>                                  | Summary   | Location  |
|---|---|---|
| ENTECH R1<br>Structural Ruin                                      | Building foundation with surficial dumping in and around its remains. Surface debris removal completed, Fall 1997. Soil removal and disposal completed in early 2007. No Further Action Decision Document completed with EPA, August 2010.                                | Central Farm. 100 ft. northeast of BARC 30, north of Powder Mill Road.  |
| ENTECH R3 Possible Disposal Area                                  | Area that formerly housed chicken coops and now contains their dilapidated remnants along with other miscellaneous surface debris. Surface debris removal completed, Fall 1997. Fieldwork completed. No Further Action Decision Document completed with EPA, August 2009. | Central Farm. 100 ft. south of B-<br>240 and west of the former FDA<br>facility.  |
| ENTECH R5 Building Remains and Debris                             | Building remains and debris located in area, may have been be used for research prior to 1960s and the potential dumping of miscellaneous wastes. Fieldwork completed. No Further Action Decision Document completed with EPA, August 2009.                               | Linkage Farm. 600 ft. southeast of<br>the National Agricultural Library and<br>200 ft. north of the Sunnyside<br>Neighborhood Park. |
| ENTECH R13<br>Surface Disposal                                    | Area used to store potting soil. Potential pesticide dumping in area. Fieldwork completed, Winter 1998. No Further Action Decision Document completed with EPA, August 2009.  | Central Farm. 25 ft. north of B-412A, east of Biocontrol Road.  |
| ENTECH R15<br>Surface Dumping Area                                | Disposal site containing several mounds of debris. Surface debris removal completed, Fall 1997. Fieldwork completed. No Further Action Decision Document completed with EPA, August 2010.   | East Farm. 1,100 ft. west of the ARS shooting range, in woods west of a remote tree farm and mulch storage area.                    |
| FDA 1<br>Overgrown Clearing on<br>Edge of Woods and<br>Animal Pen | Disposal area containing construction debris and laboratory bottles. Surface debris removal completed, Fall 1997. Fieldwork completed. No Further Action Decision Document completed with EPA, August 2010.   | Central Farm. 700 ft. southeast of B-335D within the former FDA complex.  |

<sup>1. &</sup>quot;BARC" - identified during the initial 1991 PA/SI.

<sup>&</sup>quot;EPIC" – identified during the 1993 EPA/EPIC aerial photographic analysis.

<sup>&</sup>quot;ENTECH M#" – miscellaneous features identified during the 1997 ENTECH aerial photographic analysis.
"ENTECH R#" – identified during the 1997 ENTECH field reconnaissance and desktop data collection study.

<sup>&</sup>quot;FDA" – identified during the 1993 EPA/EPIC aerial photographic analysis.

Table 2. AOCs Under Review and/or Requiring Further Investigation

| AOC Name/                                  | Summary   | Location  |
|--|---|---|
| Number <sup>1</sup>                        | Guillillary   | Location  |
| BARC 15<br>Test Droplet Area               | Area adjacent to old airport used to test aircraft-borne pesticide application equipment. Initial SSP investigation completed, Summer 1998. Follow-on sampling completed, Spring 2003 and Summer 2007. Monitoring wells installed and sampled in 2010. They identified low concentrations of volatile compounds in groundwater. Additional groundwater investigations were completed in 2011 and 2012 to address EPA concerns. A treatability study has been conducted to evaluate effectiveness of VOC capture system. Further evaluation and discussions with EPA are needed.   | East Farm. Northern end of the old north/south-oriented runway at the old BARC airfield.            |
| ENTECH 7<br>Open Storage Yard<br>(Granary) | Former off-loading area for bulk commodities and coal in the 1940s. Miscellaneous debris and materials stored at this site. Surface debris removal completed, Fall 1997. Initial fieldwork completed, Spring 1999. Follow-on sampling completed, Spring 2004. Soil and groundwater investigation completed in January 2008, including the removal of surface debris and oil contamination. Monitoring wells installed and sampled in 2008 and 2011. Although observed groundwater contamination is likely from an offsite source, a Remedial Investigation is planned to evaluate and incorporate all aspects of soil and groundwater contamination associated with this AOC for further assessment. An offsite groundwater investigation was completed in 2014 that determined the presence of contaminants from a historical chlorinated solvent release from an offsite source. This was determined to be the source of chlorinated contamination in groundwater beneath the site. A draft close-out report was prepared and submitted to EPA for review. Comments were received and a revised close-out recommending no further action is being prepared, late 2018. Further discussion with EPA is needed. | Linkage Farm. 150 ft. south of B-<br>085A and just east of the CSX<br>Railroad right-of-way.        |
| EPIC 16<br>Disposal/Fill Area              | Surface disposal of general refuse in 1950s. Limited debris present in 1996. Surface debris removal completed, Fall 1997. Initial fieldwork completed, Spring 1999. An updated SSP sampling report has incorporated data from sampling at BARC 6 and the Ballard Property monitoring wells and findings from a computer fate and transport model completed in 2015. Further discussion with EPA is needed.  | <b>Linkage Farm.</b> Northeast corner of the intersection of Sunnyside Avenue and the CSX Railroad. |

Table 2. AOCs Under Review and/or Requiring Further Investigation

| AOC Name/<br>Number <sup>1</sup>                   | Summary  | Location   |
|--|--|--|
| EPIC 47<br>(Undetermined)                          | Reportedly, a former U.S. Park Police vehicle test track. Initial SSP investigation completed, Summer 1998. Follow-on sampling completed, Spring 2003 and Summer 2007. Monitoring wells installed and sampled in 2010 identifying low concentrations of volatile compounds in groundwater. Additional groundwater investigations were completed in 2011 and 2012 to address EPA concerns. A treatability study has been conducted to evaluate effectiveness of VOC capture system. Further evaluation and discussions with EPA are needed.   | East Farm. Northern end of the old north/south-oriented runway at the old BARC airfield.   |
| FDA 2<br>Wooded Area                               | Disposal area containing organic wastes and miscellaneous refuse. Surface debris removal completed, Fall 1997. Soil removal and disposal completed in early 2007. No Further Action Decision Document completed. Waiting for EPA review and concurrence of final documentation.  | Central Farm. In a wooded ravine near the former FDA complex, 600 ft. southeast of B-344.  |
| Beltsville Bog                                     | AOC added because of the discovery of dieldrin contamination in soil associated with the BARC 36 AOC. Several sampling events (05/12) have been conducted to characterize and delineate the extent of contamination that borders a wetland area. ARS has proposed soil amendments to address pesticide concentrations in soil. EPA has not indicated if any mitigation will be necessary.  | East Farm. Just north of old BARC airfield.  |
| Composting<br>Stormwater Retention<br>Pond (CSWRP) | Site adjacent to the Chemical Disposal Pits site. This AOC was administratively separated from that site in 2009 due to potential effects on surface waters from the historical operation of a large composting facility in the 1970s that was unrelated to Chemical Disposal Pits site. An SSP report prepared to evaluate potential risks to human health and an ecological investigation were both completed in 2017. EPA and ARS agree that risks do not warrant further investigation or remedial action. No Further Action Decision Document completed. EPA reviewing final documentation before signing off on No Further Action. | Central Farm. North of B-442 Scrap<br>Area (BARC 31), 800 ft. northwest<br>of the intersection of Powder Mill<br>Road and the B/W Parkway. |

<sup>1. &</sup>quot;BARC" – identified during the initial 1991 PA/SI.

<sup>&</sup>quot;EPIC" - identified during the 1993 EPA/EPIC aerial photographic analysis.

<sup>&</sup>quot;ENTECH M#" - miscellaneous features identified during the 1997 ENTECH aerial photographic analysis.

<sup>&</sup>quot;ENTECH R#" – identified during the 1997 ENTECH field reconnaissance and desktop data collection study.

<sup>&</sup>quot;FDA" – identified during the 1993 EPA/EPIC aerial photographic analysis.

Table 3. AOCs Undergoing a Remedial Investigation

| AOC Name/                     |   |  |
|-------------------------------|---|--|
| Number <sup>1</sup>           | Summary   | Location   |
| BARC 4<br>B-033 Washdown Area | Rinse and wash area for West BARC farm equipment where mixing and loading of pesticides occurred prior to 1993. Initial fieldwork completed, winter 1999. Supplemental sampling completed, Winter 2000, 2004, 2008, and 2009. Interim removal action completed in 2011. Remedial Investigation planned in 2020 to evaluate and incorporate all aspects of soil contamination associated with this AOC and the BARC 19 AOC, and to develop remedial options. Removal action of "hot spot" was completed in 2014 to facilitate long term pilot studies. Three pilot studies have been implemented to date (2019). The first was a bench study looking at the potential use of soil amendments to sequestrate chlorinated compounds. This has been followed by two sequential field studies. The current study is on a 3-acre field to demonstrate the efficacy of adding soil amendments on a large scale.  | North Farm. South of B-033, 50 feet northwest of the intersection of Shop and West Drives.           |
| BARC 6 Biodegradable Site     | Area used for the disposal of biodegradable material, construction rubble, and general refuse, from 1940 to 1975. Groundwater contamination was identified in 1993 and a large-scale removal of the landfill was completed in 1994. The property was subsequently transferred to the Washington Metropolitan Transit Authority (WMATA) to construct a rail maintenance yard. A draft RI and FS was completed, determining an offsite property as the likely primary contamination source. Additional monitoring wells installed in 2010 and groundwater studies conducted in conjunction with PRP. A computer model was developed in 2014 simulating fate and transport of chlorinated solvents in groundwater. Results suggest that all contamination around the site originated from an upgradient source. The RI report was updated to incorporate findings from groundwater investigations and the groundwater modeling project supporting the finding that groundwater impacts are from an upgradient source. A No Action Feasibility Study (FS) statement was approved by EPA and included in revised RI report. A No Action Proposed Plan and ROD will be produced recommending no further action on the part of BARC. | Linkage Farm. 1,400 ft. southeast of the intersection of the WMATA access road and Sunnyside Avenue. |

Table 3. AOCs Undergoing a Remedial Investigation

| AOC Name/  AOC Name/              |   |   |
|-----------------------------------|---|---|
| Number <sup>1</sup>               | Summary   | Location  |
| BARC 12<br>Chemical Disposal Pits | Excavation pits possibly used for disposal and/or burning of chemicals in the 1960s; subsequently backfilled. Surface debris removal completed, Fall 1997. A Remedial Investigation was completed in 2009 to determine the extent of groundwater contamination; however, further studies were needed to attempt to identify source areas, delineate the full extent of groundwater contamination, and to segregate the pond from the area considered in the RI. Four monitoring wells were installed to the north and west to delineate groundwater contaminate plumes further. An updated RI was approved by EPA in 2018. In 2018 a treatability study was completed to evaluate groundwater treatment options in advance of the Feasibility Study (FS). The FS is underway and expected to be completed in Summer 2020.   | Central Farm. North of B-442 Scrap<br>Area (BARC 31), 1,100 ft. northwest o<br>the intersection of Powder Mill Road<br>and the B/W Parkway. |
| BARC 19<br>Trenches Behind B-029  | Erosional gully into which metallic waste and refuse were placed in the 1940s. Initial fieldwork completed, Winter 1999. Supplemental sampling completed Winter 2002, 2004, 2008, and 2009 to delineate the extent of pesticide residues. Interim removal action completed in 2011. Remedial Investigation planned in 2020 to evaluate and incorporate all aspects of soil contamination associated with this AOC and the BARC 4 AOC, and to develop remedial options. Removal actions of "hot spot" was completed in 2014 to facilitate long term pilot studies. Three pilot studies have been implemented to date (2018). The first was a bench study looking at the potential used of soil amendments to sequestrate chlorinated compounds. This has been followed by two sequential field studies. The current study is on a 3-acre field to demonstrate the efficacy of adding soil amendments on a large scale. | <b>North Farm.</b> 250 ft. northeast of intersection of Peach Orchard Dr. and Service Rd.   |
| BARC 22<br>College Park Landfill  | Landfill operated by City of College Park from 1950s until 1970s. Mainly residential wastes disposed. When closed, landfill cover was applied in an unorganized fashion. Initial SSP fieldwork completed, winter 1997. Surface debris removal completed, spring 1998. RI completed February 2008. Pilot Study field monitoring completed December 2008 to evaluate the potential use of a vegetative cap. Pilot Study report finalized in 2009 detailing the results from a 3-year field study for vegetative landfill bio-covers. NFA for ecological risks per a TM prepared for the site (3/09). FS completed September 2009. Annual groundwater monitoring is continuing. A Proposed Remedial Action Plan is anticipated in 2020 to recommend the use of biologically active landfill cover.   | Central Farm. 800 ft. east of Edmonston Road, near the intersection of Sunnyside Avenue and Edmonston Road.                                 |

Table 3. AOCs Undergoing a Remedial Investigation

| AOC Name/<br>Number <sup>1</sup> | Summary   | Location   |
|----------------------------------|---|--|
| BARC 32<br>PCB Storage Area      | Area used to store and service transformers containing PCBs prior to the early 1990s. Soil cleanup completed in 2004. Soil sampling and monitoring well installation completed in July 2007 to evaluate the presence of VOCs identified in groundwater. Groundwater investigation Completed, July 2008. A Site Characterization Study was completed in 2014. A direct injection program using proprietary remedial technology was completed in September 2014. A groundwater-monitoring program was established in 2015 to evaluate the efficacy of the treatment program. This project has been entered into the RI/FS process. The RI was completed in early 2019, and an FS is underway.   | Central Farm. 250 ft. northwest of the intersection of Powder Mill Road and the B/W Parkway. |
| EPIC 7<br>Open Storage           | Storage/service area utilized from 1950s until present. Limited ground staining observed. Field sampling conducted in January 2010 to verify the presence of lead in surface soils. Further delineation sampling completed in early 2011. A monitoring well was installed and sampled in May 2015. Remedial Investigation planned to evaluate and incorporate all aspects of soil contamination associated with this AOC and the EPIC 8 AOC, and to develop remedial options. This site was entered into the RI/FS program in 2018 and a gap analysis is being conducted to determine additional information necessary to complete the RI. The Draft RI is currently in review by EPA.  | North Farm. 100 ft. southwest of North Drive and 5th Street intersection.                    |
| EPIC 8 Open Storage              | Storage area utilized from 1950s until present. Materials stored at various times include coal and construction debris. Field sampling conducted in January 2010 to verify the presence of lead in surface soils. Further delineation sampling completed in early 2011 aimed at fuel residues in the subsurface. A monitoring well was installed and sampled in May 2015. Remedial Investigation planned to evaluate and incorporate all aspects of soil contamination associated with this AOC and the EPIC 7 AOC, and to develop remedial options. This site was entered into the RI/FS program in 2018 and a gap analysis is being conducted to determine additional information necessary to complete the RI. The Draft RI is currently in review by EPA. | North Farm. 200 ft. west of B-014, at the southern terminus of 5th Street.                   |

<sup>1. &</sup>quot;BARC" – identified during the initial 1991 PA/SI.
"EPIC" – identified during the 1993 EPA/EPIC aerial photographic analysis.

<sup>&</sup>quot;ENTECH M#" - miscellaneous features identified during the 1997 ENTECH aerial photographic analysis.

<sup>&</sup>quot;ENTECH R#" – identified during the 1997 ENTECH field reconnaissance and desktop data collection study.

<sup>&</sup>quot;FDA" – identified during the 1993 EPA/EPIC aerial photographic analysis.

**Table 4. Completed or Planned Cleanups** 

| AOC Name/   |   |   |
|---|---|---|
| Number 1  | Summary   | Location  |
| Building 421 Concrete Surface Storage Area            | Concrete pads used to store old transformers. Sampling completed in 2006 identified presence of DDT residues adjacent to the pads. EE/CA and soil removal action completed in 2010 to remove surface soil contaminated with pesticide residues. EPA is reviewing final closure report before approving a No Further Action Decision Document.   | Central Farm. Approximately 500 feet south of Powder Mill Road on Biocontrol Road.  |
| BARC 18<br>Low Level Radiation<br>Burial Site (LLRBS) | Former 1.5-acre site used for burial of radiological wastes used in research. Investigated under Nuclear Regulatory Commission (NRC) purview. The source removal was completed by excavation and disposal at licensed disposal facilities following the NRC approved Decommissioning Plan in August 2015. EPA is reviewing the revised Human Health Risk Assessment in early 2020.  | North Farm. 200 feet east of Cherry<br>Hill Road near West Drive.   |
| BARC 27<br>Beaver Dam Road<br>Landfill                | Capped rubble landfill operational from 1940s until 1980s. Contaminated groundwater plume extends from the base of the landfill to the southeast. Field investigation work completed, January 1999. RI completed, March 2008. FS completed, July 2008, and public meeting held in July 2009. Mulch biowall selected as the site remedy. Record of Decision (ROD) received in 2011, followed by design and construction of the remedy in 2012/2013. Biowall Performance is being monitored and a 6-year performance review report was issued in early 2020. Although the remedy has improved groundwater quality, enhancements were implemented in late 2019 and 2020, as required by CERCLA, for optimal performance. | Central Farm. 1,700 ft. east of the intersection of Research and Beaverdam Roads, on the north bank of the Beaverdam Creek stream valley. |
| ENTECH M26<br>Shooting Range                          | Shooting range operational from 1987 until present. Initial fieldwork completed, Summer 2000. Baseline sampling and soil treatment to stabilize lead in soils completed, and post-treatment monitoring has been initiated. Pilot Study conducted, 2008. A determination was made by EPA that ARS is exempt from further investigation under CERCLA until the range is transferred or closed. A Closeout report was prepared in 2012 and an updated Decision Document is being prepared for EPA confirmation and signature.  | East Farm. Southwest of the intersection of Beaver Dam and SCS Roads, 800 ft. southwest of B-506.   |
| ENTECH R2<br>NASA Laser Test Mast                     | Location of former NASA radio/laser test station. Surficial debris and potential groundwater monitoring well present. Fieldwork completed. EPA is reviewing final closure report before approving a No Further Action Decision Document (DD).An updated DD is waiting EPA confirmation and signature.   | Central Farm. 900 ft. southeast of an elevated water tank (B-453), and north of Powder Mill Road.   |

**Table 4. Completed or Planned Cleanups** 

| AOC Name/<br>Number <sup>1</sup> | Summary  | Location   |
|----------------------------------|--|--|
| ENTECH R23<br>Rose Garden Site   | Dilapidated building remains with miscellaneous debris and containers in and around the remains. Surface debris removal completed, Fall 1998. Numerous subsequent soil investigations between 2000 and 2007. Soil removal and disposal completed in 2008 to remedy DDT residues in soil. EPA is reviewing final documentation before approving No Further Action decision. | Central Farm: 210 ft. northwest of B-483 in a wooded area. |

- 1. "BARC" identified during the initial 1991 PA/SI.
  - "EPIC" identified during the 1993 EPA/EPIC aerial photographic analysis.
  - "ENTECH M#" miscellaneous features identified during the 1997 ENTECH aerial photographic analysis.
  - "ENTECH R#" identified during the 1997 ENTECH field reconnaissance and desktop data collection study.
  - "FDA" identified during the 1993 EPA/EPIC aerial photographic analysis.

# For More Information:

Contact Dana Jackson, ARS Remedial Project Manager, 301-504-6025, <a href="mailto:Dana.Jackson@usda.gov">Dana.Jackson@usda.gov</a>.

Contact Leslie Jones Doherty, EPA Remedial Project Manager, 215-814-3409, Jones.Leslie@epa.gov