

## **Pepco Benning Road Facility**

### **Remedial Investigation/Feasibility Study (RI/FS) Project**

## **Overview of RI/FS Project**

March 02, 2013





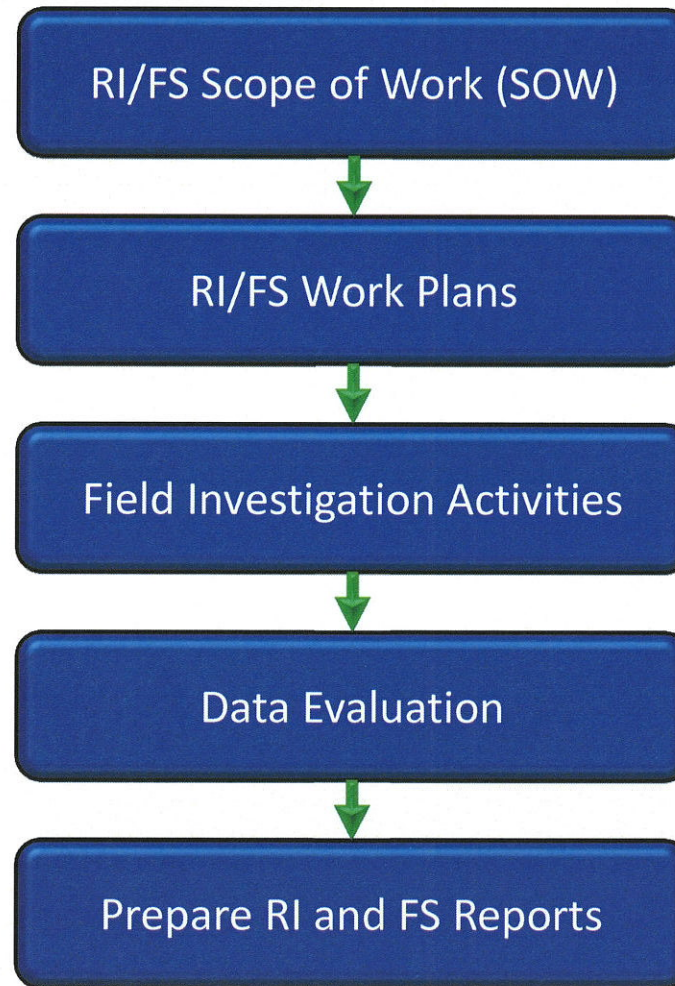
# SITE LAYOUT



## RI/FS Objectives

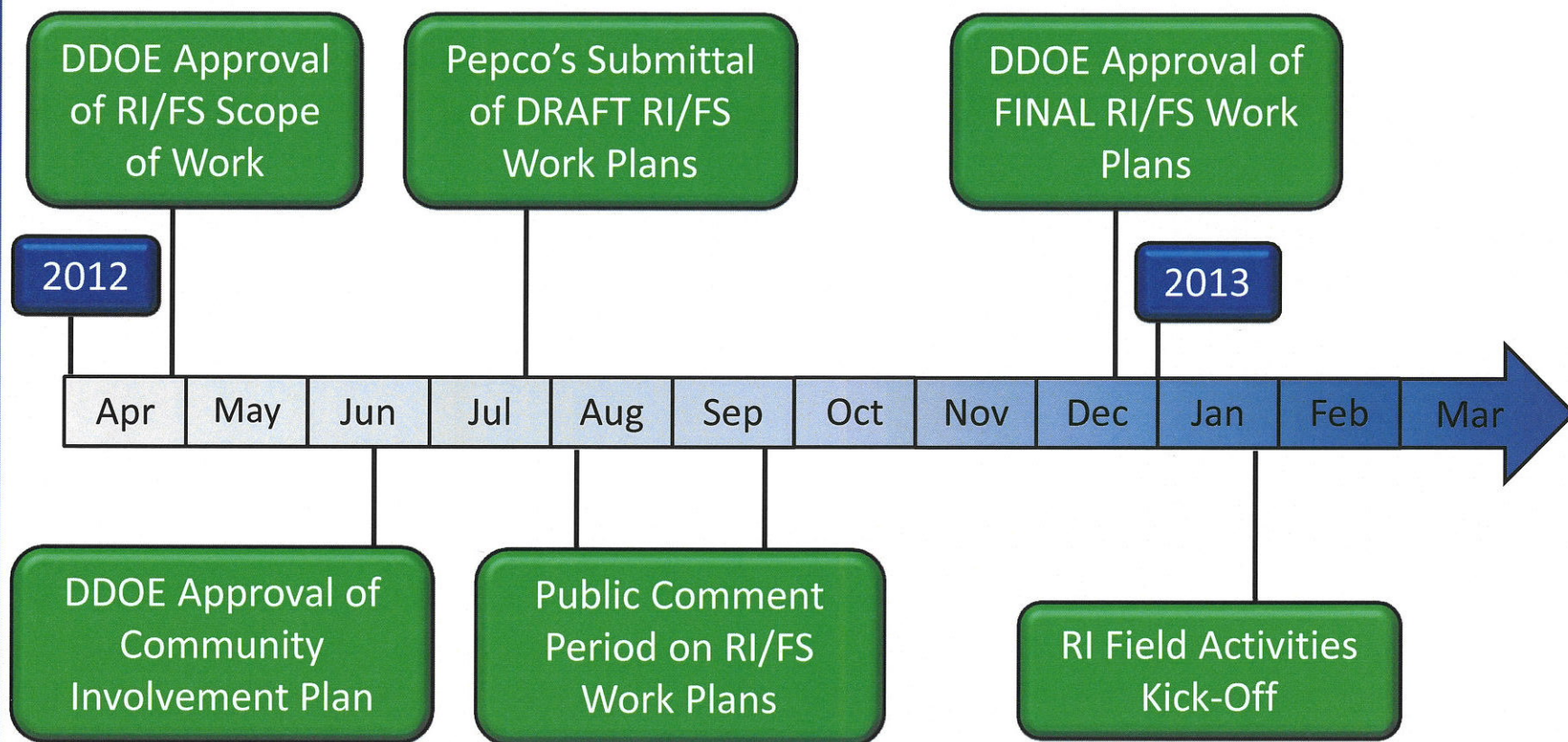
- Remedial Investigation (RI):
  - Define environmental conditions and identify potential sources and areas of contamination
  - Determine impacts to the Benning Road Site and the adjacent Anacostia River from past operations at Benning Road Facility
  - Assess potential risks to human health and the environment
- Feasibility Study (FS):
  - Establish remediation requirements
  - Evaluate remediation technologies to address potential risks identified in the RI

## RI/FS Steps



RI/FS is a phased process requiring regulatory review and approvals each step of the way.





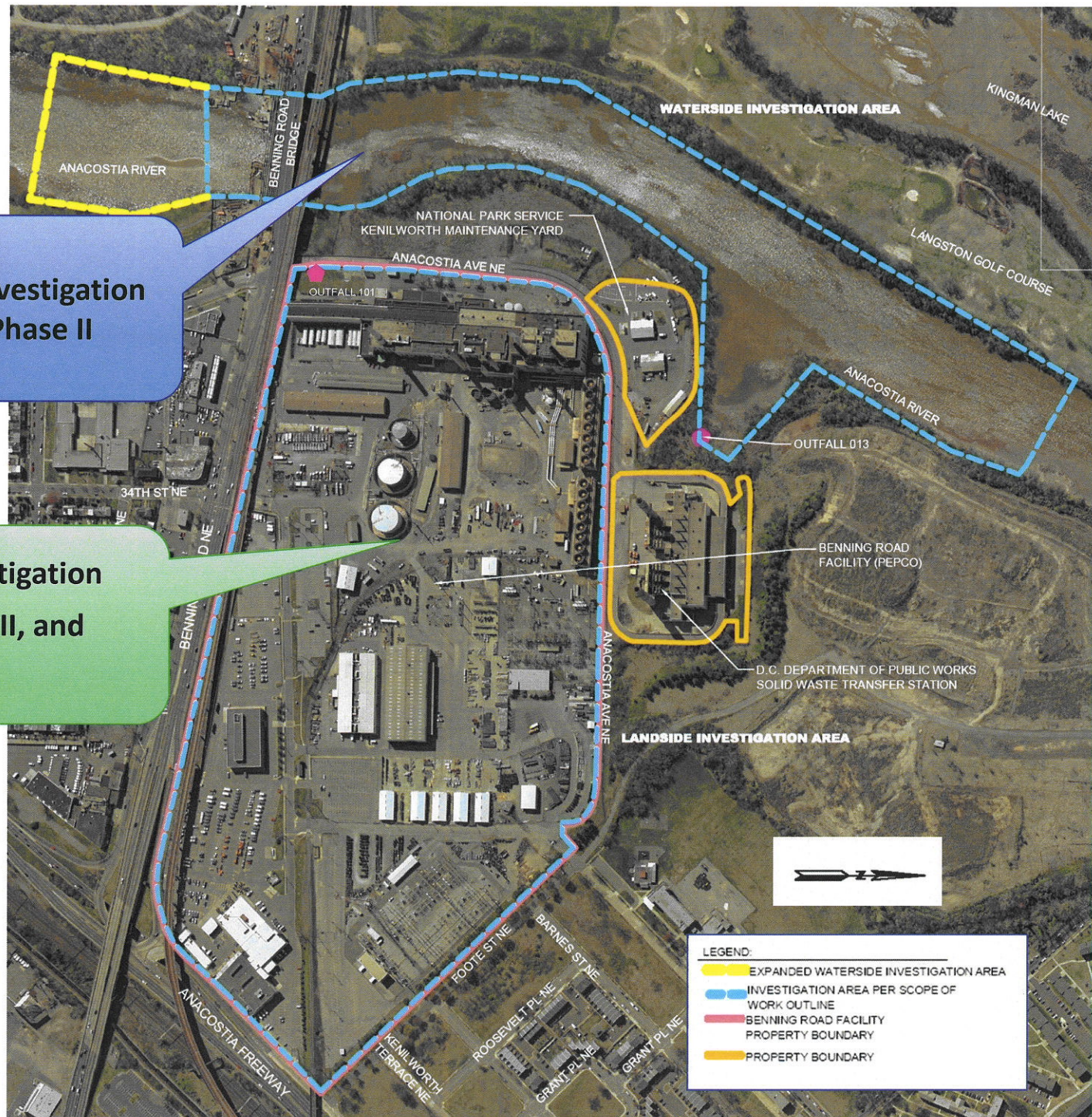
Complete project milestone schedule is available at:

<http://www.benningservicecenter.com/library/documents/RIFSPProjectMilestones.pdf>



**Waterside Investigation  
Phase I and Phase II**

**Landside Investigation  
Phase I, Phase II, and  
Phase III**







★ Historical PCB Releases/  
Cleanup Areas

★ Suspect Location of PCB Entry into the River Based On 2009 EPA Site Inspection Report

□ Target Investigation Areas



## Landside Phase I – Focus on “Target Areas”

- Surface soil samples to evaluate surface soil quality and help plan Phase II investigation
- Subsurface scanning using Electrical resistivity imaging (ERI) technology
- Storm drain sampling to determine surface water discharge pathways
- Soil borings to 60-70 ft below grade to supplement existing data
- Up to 30 soil and 5 water samples for chemical and forensic analysis

Note: Completed field investigation activities shown in **blue**





## Electrical Resistivity Imaging Field Work





## **Landside Phase II – Delineate impacts**

- Up to 120 soil and 40 groundwater samples from 40 locations using direct-push borings
- On-site analysis for key chemicals
- Up to 40 soil and 40 groundwater samples for additional chemical and forensic analysis

## **Landside Phase III – Groundwater Investigation**

- Monitoring wells based on Phase II data
- Aquifer testing
- Monitoring well sampling and analysis





## Waterside Phase I – Understand River Bottom

### ■ River bottom survey

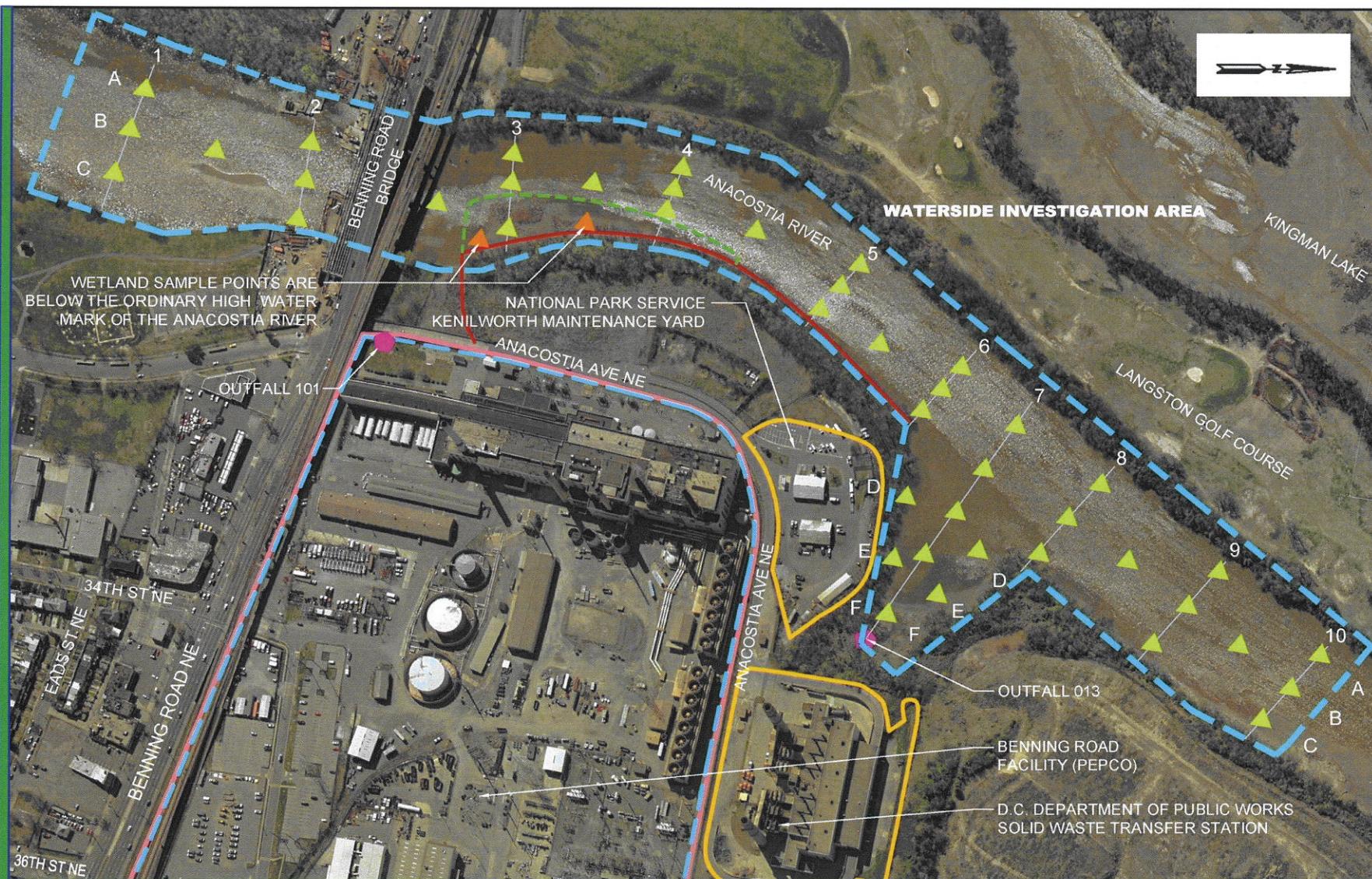
## Waterside Phase II – Delineate Nature and Extent of Impacts

- Water and sediment sampling using barge or boat mounted equipment to ~ 8-10 ft below the mudline
- Up to 220 sediment samples and 20 surface water samples planned at 55 locations in the study area
- Chemical, geotechnical and forensic analysis of sediment and water samples

Note: Completed field investigation activities shown in blue







Investigation targets ~ 1,000 ft to the north and ~2,800 ft to the south of Pepco's main outfall (Outfall 013)



- Field investigation activities kicked off on January 25, 2013
- Landside investigation Phase I is in progress
- Waterside investigation Phase I is completed
- Waterside investigation Phase II will be implemented after receiving all necessary permits
- A week-by-week field investigation activities schedule is available at:  
[http://www.benningservicecenter.com/library/documents/FieldInvestigationActivitiesSchedule\\_Feb282013.pdf](http://www.benningservicecenter.com/library/documents/FieldInvestigationActivitiesSchedule_Feb282013.pdf)
- The field investigation activities schedule will be updated on a monthly basis



- Complete Field Investigation Activities (Pepco)
- Prepare Draft RI Report for DDOE review and public comment within 120 days after completion of field investigation activities (Pepco)
- Prepare Draft FS Report for DDOE review and public comment within 180 days after completion of field investigation activities (Pepco)
- Submit the Final RI and FS reports after DDOE review of and public comment on Draft RI and FS Reports (Pepco)
- Select remedy and prepare Record of Decision (DDOE)



## COMMUNITY OUTREACH MAILING AREA





# Public Questions and Comments



## HISTORICAL PCB SPILLS AT THE BENNING ROAD FACILITY

Date	Incident	Location	Matrix	Maximum Concentration	Depth	Remediation Activities
1985	Underground pipe that lead from Kenilworth Transformer shop to aboveground storage tank leaked waste transformer oil into underlying soil.	Building 56 currently located in vicinity where leak occurred	Soil	3,000 ppm <sup>1</sup>	Directly below transfer oil pipe	Removal of aboveground storage tank associated piping and excavation of all material contaminated with PCBs <sup>2</sup> above 7 ppm.
1988	Soil contamination detected under concrete pad used to prepare off-line PCB capacitor banks to disposal area formerly used to store used electrical equipment	Current location of parking lot located in northeast portion of facility	Soil	140 ppm	Up to 12 inches below ground surface	Removal of concrete pad and 389 tons of PCB contaminated soil. Area covered with asphalt parking lot.
1991	Approximately 8 pounds of PCBs leaked from a PCB capacitor with a concrete surface and seeped through expansion joints into underlying soil	Concrete covered area located between buildings 42 and 61	Soil	PCB capacitor leak assumes PCB concentration greater than 500 ppm	Directly below concrete pad	All PCB contaminated materials removed. After analytical results confirmed effectiveness of cleanup (all soils with greater than 25 ppm PCBs removed), area backfilled and concrete replaced.
1995	PCB contaminated caulk and joint filler located inside cooling towers	Area around cooling tower blowdown basins	Soil	975 ppm	3 feet below ground surface	All PCB contaminated soil above 1 ppm removed (185 cubic feet) and area restored with clean fill.
1997	Oil staining observed on outside of one of two 10,000 gallon holding tanks used to accumulate PCB oils. Spill occurred when operator was switching oil inlet pipe from tank 1 to tank 2.	PCB oil holding tanks	Exterior of tank	No release to environment	No release to environment	NA
2003	Soil investigation in area formerly used for storing used electrical equipment	Area know as salvage yard located west of Buildings 75 and 88	Soil	2.8 ppm	Up to 24 inches below ground surface	All contaminated soil excavated and disposed of off-site.

1 PPM means parts-per-million

2 PCB means Polychlorinated Biphenyls. PCBs were used from the 1920's until their ban in 1979. Existing PCBs were phased out thereafter. PCBs were used in a number of different industrial activities, however primarily as coolants in electrical equipment because they do not burn easily and are good insulators.