



Long-Term Stewardship Assessment Report

Boeing - Philadelphia

EPA ID #: PAD096837356

Philadelphia, Pennsylvania 19078

Assessment Date: November 14, 2018

Report Date: November 30, 2018

Introduction: Long-term stewardship (LTS) refers to the activities necessary to ensure that engineering controls (ECs) are maintained and that institutional controls (ICs) continue to be enforced. The purpose of the EPA Region 3 LTS program is to periodically assess the efficacy of the implemented remedies (i.e., ECs and ICs) and to update the community on the status of the RCRA Corrective Action facilities. The assessment is conducted in twofold, which consists of a record review and a field inspection, to ensure that the remedies are implemented and maintained in accordance to the final decision.

Site Background: The Boeing – Philadelphia facility (Facility) is located at Stewart Ave and Route 291 in Ridley Township, Delaware County, Pennsylvania. The Facility is bisected by Route 291, with approximately 240 acres located north of Route 291 (North Area) and approximately 107 acres located south of Route 291 (South Area) as shown on Figure 1. Crum Creek, Darby Creek, and the Delaware River are the major surface waters near the Facility. The Facility manufactures aircraft and its manufacturing processes are divided into five major categories: 1. Assembly and Testing; 2. Fabrication; 3. Storage; 4. Laboratories; and 5. Others. The manufacturing activities include mechanical, hydraulic and electrical assembly; sheet-metal cutting, bending, punching, and stretch forming; heat treating and processing; paint operations; grit blast/shotpeening; lab testing; composite manufacturing; and metal finishing. In the manufacturing processes, various halogenated and nonhalogenated solvents, acidic and caustic chemicals, paints, fuel, and oil are used and stored.

Current Site Status: In April 2004, EPA Region III and the Commonwealth of Pennsylvania Department of Environmental Protection (“PADEP”) entered into a One Cleanup Program Memorandum of Agreement (“MOA” or “Agreement”) to facilitate PADEP’s implementation of Pennsylvania’s Voluntary Cleanup Program (“VCP”) under the authority of Act 2. At the Boeing Facility, PADEP has approved four Final Reports submitted pursuant to Act 2 and has provided an Act 2 Release of Liability to Boeing for areas within the Facility which have been remediated. EPA has reviewed the Final Reports submitted to PADEP on behalf of Boeing pursuant to Act 2.

In April 2006, EPA issued the Final Decision and Response to Comments (FDRTC). The final remedy determination is Corrective Action Complete with Controls. Controls include groundwater use

restrictions, land use restrictions and engineering controls. The final remedy detailed in the FDRTC is implemented through deed restrictions for the North and South Areas dated March 28, 2005 and a post-remedial care plan. The Boeing – Philadelphia facility is currently active.

Long-term Stewardship Site Visit: On October 14, 2018, EPA conducted a long-term stewardship site visit with Boeing – Philadelphia representatives to discuss and assess the status of the implemented remedies at the site.

The attendees were:

Name	Organization	Email Address	Phone No.
Catheryn Blankenbiller	EPA Region 3	blankenbiller.catheryn@epa.gov	215-814-3464
John Hopkins	EPA Region 3	hopkins.john@epa.gov	215-814-3437
Douglas Taylor	Boeing	Douglas.h.taylor2@boeing.com	610-597-5530
Jeffrey Holmes	Boeing	Jeffrey.holmes@boeing.com	610-390-7651

Institutional Controls (ICs) Status:

Deed Restriction: Two Declaration of Restrictive Covenants are the method for implementing institutional controls required as a condition of the Statement of Basis and Final Decision. The following ICs apply to the North and South Areas of the Facility, shown on Figure 1:

Land Use Restriction: The North and South Areas may not be used for residential purposes unless additional remediation is undertaken to meet Act 2 residential remediation standards. Visual observation of land use at the Boeing – Philadelphia facility indicated that both North and South areas are currently used for industrial purposes. The western portion of the North area remains unoccupied. The Property is well secured with surrounding fence and guardhouses.

Groundwater Use Restriction: Groundwater beneath the North and South Areas shall not be used or consumed for drinking or potable purposes nor shall any such groundwater be extracted for subsequent use or consumption of such groundwater for drinking or potable purposes. The Facility is currently connected to the local municipal water supply. No extraction of groundwater was observed at the time of the visit.

Post-Remedial Care Plan: The South Area requires compliance with the Post-Remedial Care Plan (PCP) to inspect and maintain the asphalt cover. The asphalt cover performs as an engineering control to prevent direct contact exposure to soils above PADEP’s Act 2 Residential Statewide Health Standards. Boeing- Philadelphia provided EPA with a copy of the PCP during the site visit.

Engineering Controls (ICs) Status:

Asphalt Cover: Located in the southern area of the facility. The Asphalt Cover is inspected annually. Boeing-Philadelphia provided EPA with a copy of the inspection records. Pictures 23 and 24 of Attachment B show the Asphalt Cover.

Old Landfill: Located in the northern area of the facility. The Old Landfill is not inspected annually. The Old Landfill had pools of water, holes and trees growing on the edge of the landfill. Pictures 5-17 of Attachment B show the Old Landfill.

Former Lagoon Area: Located in the northern area of the facility. Currently a building resides over the Former Lagoon Area. The pavement in the building is inspected annually. Boeing-Philadelphia provided EPA with a copy of the inspection records. Picture 19 shows the Former Lagoon Area.

Financial Assurance: Financial Assurance is not required for this site.

Reporting Requirements/Compliance: Currently there are no reporting requirements under RCRA CA.

Mapping: The EPA facility website map will be updated to include the North Area, South Area, Old Landfill, Former Lagoon Area and 73.5-acre area (unoccupied western portion of North Area). A downloadable geospatial PDF map is available on EPA's corrective action facility webpage under the "Reports, Documents and Photographs" section, found [here](#), but currently only shows the North and South Area boundaries. Once GIS data are made available for the other features that require long-term monitoring and maintenance, these features will be added to the geospatial PDF.

Conclusions and Recommendations:

- Due to the presence of the Old Landfill and Former Lagoon Areas, an updated post remedial plan is needed, with geospatial data provided for Asphalt Cover, Old Landfill and Former Lagoon Area
- Due to the presence of elevated levels of lead in soils at the 73.5-acre Area, a soil management plan is needed to prevent risks associated with direct contact
- Monitoring Wells that are not needed for long-term monitoring or for evaluating current conditions of the VOC plume should be abandoned. Boeing should identify wells and propose abandonment procedures
- Holes in the Old Landfill need to be filled
- Due to water on Old Landfill (see Picture 11) regrading of the landfill may be needed
- Determine the approximate extent of Old Landfill and type of lining/cap based on historical drawings or figures
- If survey data for the 73.5-acre Area, Asphalt Cover, Old Landfill, and Former Lagoon Area or other areas that require long-term monitoring and maintenance is not available, Boeing should hire a professional surveyor to provide survey data for these features
- Boeing to send over the Groundwater MNA Approval Letter
- EPA will review the most current groundwater data that exists for the VOC plumes and make recommendations for possible vapor intrusion sampling as that pathway was not evaluated using most current VI guidance VISL calculated results
- Retrieve documentation for EPA-approval to cease groundwater monitoring.

Attachments:

Attachment A: Figures

Attachment B: Pictures

Figure 1: Aerial Map of Boeing – Philadelphia



CENTER NORTH AREA

Unit #6

Unit #2

Unit #3

Unit #5

Unit #2

73.5-ACRE AREA

Unit #2

B-B-61

Unit #2

Unit #2

E Engineering
Environmental

Site Plan
Drawing No. 0001
Project: B-B-61
Date: 01/01/98
Scale: As Shown

Picture 1:



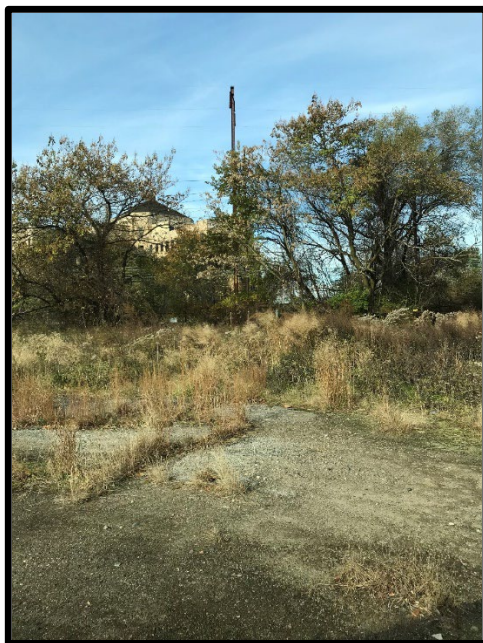
Picture 1: The border between North Area and the 73.5 Acre Parcel, facing west.

Picture 2:



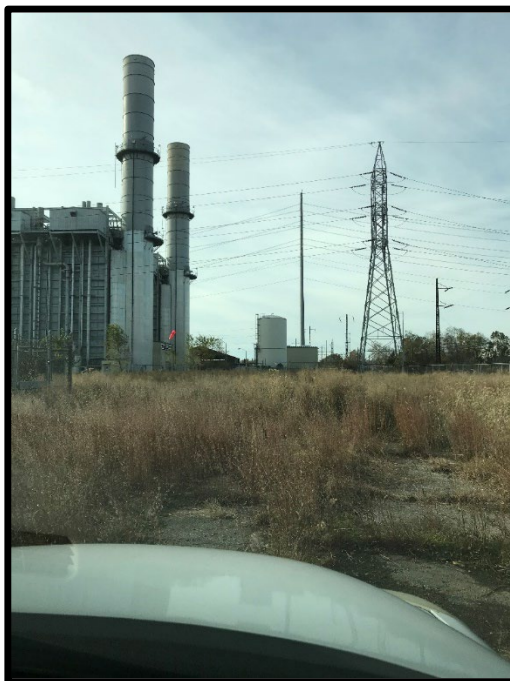
Picture 2: The Northwest portion of the 73.5 Acre site, facing west.

Picture 3:



Picture 3: The Northwest edge of the 73.5 Acre site, facing northwest.

Picture 4:



Picture 4: The Northwest portion of the 73.5 Acre site, facing west.

Picture 5:



Picture 5: The Northwest portion of the 73.5 Acre site, facing west.

Picture 6:



Picture 6: The Old landfill area, facing southeast.

Picture 7:



Picture 7: The North edge of the Old Landfill Area, facing North.

Picture 8:



Picture 8: A depression in the Old Landfill Area, facing the North.

Picture 9:



Picture 9: The Sothern boundary of the Old Landfill Area, facing the West.

Picture 10:



Picture 10: The Southwest corner of the Old Landfill Area, with trees that may have to be removed. Facing the west.

Picture 11:



Picture 11: Pooled water on the western edge of the Old Landfill Area, facing the northwest.

Picture 12:



Picture 12: The Northern edge of the Old Landfill Area, facing the North.

Picture 13:



Picture 13: Holes in the Northern edge of Old Landfill Area, facing the south.

Picture 14:



Picture 14: Holes in the Northern edge of Old Landfill Area, facing the south.

Picture 15:



Picture 15: Holes in the Northern edge of Old Landfill Area, facing the south.

Picture 16:



Picture 16: Holes in the Northern edge of Old Landfill Area, facing the south.

Picture 17:



Picture 17: Holes in the Northern edge of Old Landfill Area, facing the south.

Picture 18:



Picture 18: The Western wall of building 3-28 facing the east.

Picture 19:



Picture 19: The East wall of building 3-24, which is above the Former Lagoon Area.

Picture 20:



Picture 20: Well located on the east edge of Building 2-38.

Picture 21:



Picture 21: Wells along the eastern edge of building 3-28 facing southeast.

Picture 22:



Picture 22: Building 3-57, in southern area, under restoration, facing southeast.

Picture 23:



Picture 23: Asphalt Cap area in Southern Area, facing northwest.

Picture 24:



Picture 24: Asphalt Cap area of the southern area facing south.

Picture 25:



Picture 25: The southern border of the southern area, facing south.

Picture 26:



Picture 26: Former ground water pump and treat building, in northern area, currently used for storage, facing east.