# Remedial Investigation Field Work

## Former Lockbourne Air Force Base
## Areas of Concern 17, 18, 19, 94, and 103

**U.S. ARMY CORPS OF ENGINEERS** **BUILDING STRONG®**

### INTRODUCTION

This fact sheet describes the status of the ongoing environmental restoration of the former Lockbourne Air Force Base (AFB), now used by Rickenbacker International Airport (RIA). An investigation was conducted in 2013 and 2014 to help determine the limits of contamination found at five areas of concern (AOCs) adjacent to the RIA taxiway. Results will determine if action needs to be taken to protect human health and the environment.

### REMEDIAL INVESTIGATION

Results of the 2006 Phase I site investigation and 2011 Phase II site inspection concluded that a remedial investigation is needed. The purpose of a remedial investigation is to evaluate the nature and extent of the contamination and to determine whether contaminants pose an unacceptable risk to human health and the environment. For AOC 94, information about the habitat of the upland sandpiper was needed to determine whether further ecological assessment is required. For AOCs 17/18/19/103, additional sampling of soil, soil gas, indoor air, and groundwater was needed. Investigative fieldwork took place in April, July, and October 2013, and January 2014. Another sampling event is expected to take place in March or April 2014.

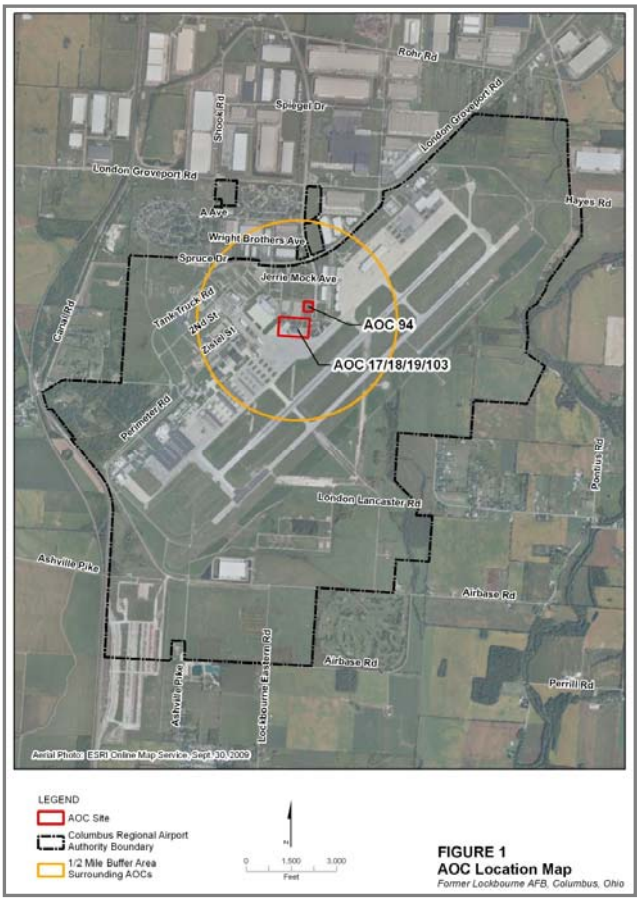


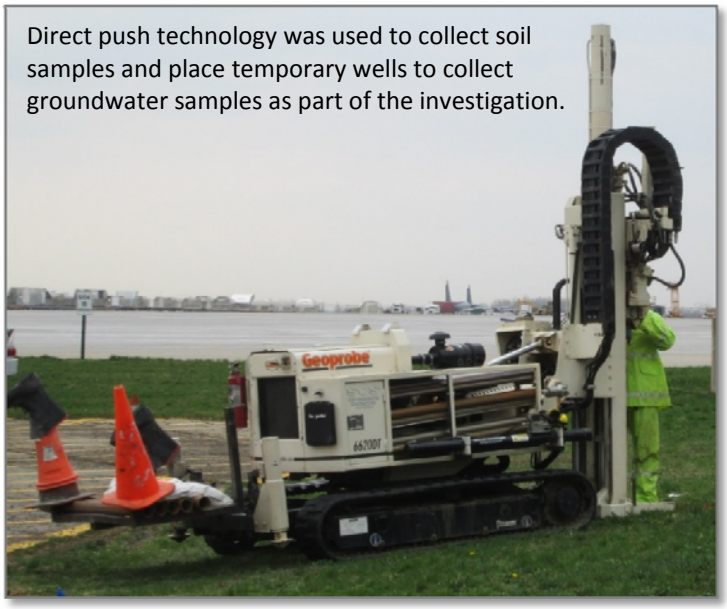
FIGURE 1
AOC Location Map
*Former Lockbourne AFB, Columbus, Ohio*

**Habitat Assessment for Upland Sandpiper—**An ecological survey was conducted at AOC 94 in April 2013 to assess the presence or absence of upland sandpiper habitat and also of the bird itself during breeding season. The assessment included a visual ecological receptor survey to observe ecological features and conditions of the site to determine whether important ecological resources may be present.

It was concluded that there is no suitable habitat for the upland sandpiper at or near AOC 94. AOC 94 consists of mowed grass that could support intermittent foraging for birds and small mammals, but not large local populations. No aquatic habitats, sensitive habitats, threatened or endangered species, or other important ecological resources as defined by Ohio Environmental Protection Agency were identified on or near AOC 94, and the AOC is incapable of supporting important ecological resources, such as the upland sandpiper. The closest confirmed sighting of the upland sandpiper, according to the Ohio Breeding Bird Atlas survey of 2006–2011, was 15 miles west of AOC 94, outside the documented summer home range for foraging and brood-raising habits of the upland sandpiper.

Because the site lacks important ecological resources and provides minimal natural ecological function since it is a regularly mowed parcel in a commercial setting, further ecological evaluation is not warranted. Additional information regarding the survey can be found in the *Ecological Survey of Area of Concern 94 at the Former Lockbourne Air Force Base, Ohio* (CH2M HILL 2013), available online at *http://bit.ly/Lockbourne* and at the Columbus Metropolitan Library, Southeast Branch at 3980 S. Hamilton Road in Groveport, OH.

**U.S. ARMY CORPS OF ENGINEERS–LOUISVILLE DISTRICT**
P.O. Box 59, Louisville, KY 40201-0059
www.lrl.usace.army.mil
**February 2014**



Direct push technology was used to collect soil samples and place temporary wells to collect groundwater samples as part of the investigation.

**Background Study and Soil Characterization—**A soil investigation was conducted in April 2013 to establish site-specific background levels. The background study was conducted to help determine if chemicals detected in 2013 and 2014 soil samples are a result of historical use. Metals are naturally occurring in soil and were included in the background study. Chemicals known as polycyclic aromatic hydrocarbons (PAHs) were also included because PAHs commonly occur in the environment due to human activity. PAHs are found in soil as a result of routine human activities such as asphalt paving of roads and parking lots, and also from the burning of fuels by cars, trucks, and planes. Storm water runoff from paved surfaces deposit the PAHs in soil.

To determine background levels of metals and PAHs, soil samples were collected at locations around the RIA but not at the specific areas under investigation. Surface soil samples were collected from 0 to 2 feet below ground and analyzed for PAHs and metals. Subsurface soil samples were collected from 6 to 8 feet below ground and analyzed for metals. PAHs typically are deposited on the surface. Therefore, samples taken below 2 feet were not analyzed for PAHs. Eighteen PAHs and 24 metals were detected in the background surface soil samples and statistically evaluated to develop a background value.

Concentrations of PAHs and metals detected in soil samples from AOCs 17/18/19/103 will be compared to the background levels as well as to risk-based screening levels established by federal regulatory agencies to protect human health. This evaluation will be presented in the remedial investigation report.

**Groundwater Characterization—**Solvents historically used at the site contained chlorinated volatile organic compounds (CVOCs), which were detected in groundwater at AOCs 17/18/19/103 during the initial investigations. Groundwater samples that were collected during 2013 and 2014 are being evaluated. Results will indicate areas with concentrations of CVOCs in groundwater, and will help evaluate movement of CVOCs in the groundwater and the potential for the CVOCs to degrade either naturally or with treatment. The analysis will help to define whether the contaminants pose risk to human health and will aid in the evaluation of potential treatment technologies.


Groundwater samples were collected from site wells to identify CVOCs present.

**Vapor Sampling—**Vapor or soil gas samples were collected to assess the potential for CVOCs in groundwater to migrate through the soil and to affect air quality in current or future buildings at the site. Additional sampling is planned for spring 2014 to collect air samples from existing buildings at the site and vapor samples from below concrete pavement. Results will reveal whether CVOCs are migrating through the soil and affecting indoor air quality and will aid in the evaluation of potential treatment technologies.

## WHAT'S NEXT?

The results of investigative sampling will determine what to do next. Additional data will be collected in spring 2014 and evaluated with the previously collected data to identify constituents that may pose risk to human health. If needed, a feasibility study will be conducted following the remedial investigation to identify and evaluate cleanup options to address such contamination. If treatment is needed, the evaluation of treatment options will include green and sustainable remediation criteria.

**U.S. ARMY CORPS OF ENGINEERS–LOUISVILLE DISTRICT**
P.O. Box 59, Louisville, KY 40201-0059
www.lrl.usace.army.mil
**February 2014**

## HISTORY AND OVERVIEW

The Lockbourne AFB is a formerly-used defense site (FUDS) in Columbus, Ohio. The property was used as a training base for B-17 and glider crews from 1942 to 1949, and later became an Air Force Strategic Air Command Base and then a Tactical Air Command Base. It was transferred to the Ohio Air National Guard in 1980 and renamed the Rickenbacker Air National Guard Base. In 1984, 1,640 acres (of the original 4,370 acres) were conveyed to the Rickenbacker Port Authority, which renamed the site Rickenbacker International Airport and established a passenger terminal. Rickenbacker Port Authority merged with the Columbus Airport Authority in 2003, forming the Columbus Regional Airport Authority, which owns and operates the airport.

The Department of Defense is responsible for evaluating and cleaning up Department-generated environmental contamination at FUDS properties. The U.S. Army oversees the FUDS program for the Defense Department. The U.S. Army Corps of Engineers manages the evaluation and cleanup of these properties. The Corps of Engineers is responsible for environmental restoration of some areas of the former Lockbourne AFB. The Ohio Environmental Protection Agency provides regulatory oversight.

## SITE BACKGROUND

Environmental restoration at the former Lockbourne AFB has been under way since 1986. The current investigation focuses on four AOCs on and adjacent to the active RIA taxiway and one AOC (AOC 94) located to the north.

The former central machine shop area comprises AOCs 17/18/19/103, which included the Base Engineer's Shop (Building 530, AOC 17), Base Engineer's Maintenance and Inspection Building (Building 532, AOC 18), Engine Cleaning Building (Building 535, AOC 19), and Battery Maintenance Facility (Building 531, AOC 103). Operations at the four buildings likely involved the use of solvents and cleaners. Past contamination likely occurred from surface spills of degreasing solvents. AOC 94 was formerly the Precision Maintenance Laboratory (Building 247). Only the Base Engineer's Maintenance and Inspection Building remains. The other buildings were demolished before 1999.

The RIA passenger charter terminal was constructed over the footprint of AOC 19 after 2001. AOCs 17, 103, and 94 now consist of grass- and pavement-covered areas. The building at AOC 18 is used for aircraft maintenance.

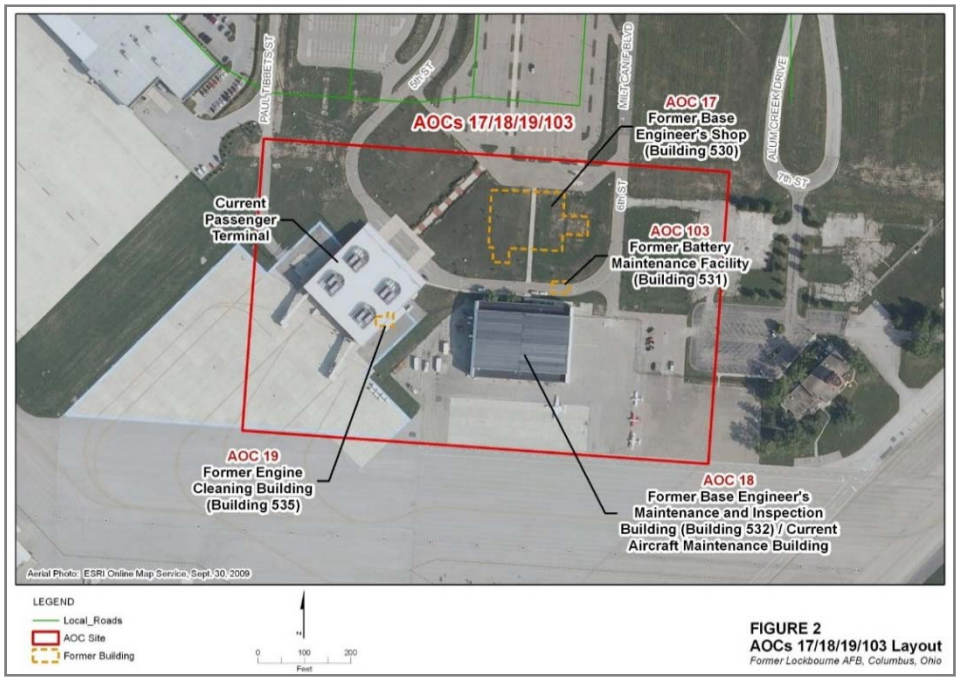



FIGURE 2
AOCs 17/18/19/103 Layout
Former Lockbourne AFB, Columbus, Ohio


FIGURE 3
AOC 94 Layout
Former Lockbourne AFB, Columbus, Ohio

**U.S. ARMY CORPS OF ENGINEERS–LOUISVILLE DISTRICT**
P.O. Box 59, Louisville, KY 40201-0059
www.lrl.usace.army.mil
**February 2014**

**How Do I Get More Information?**

The Corps of Engineers will issue fact sheets such as this one to update the public on environmental restoration work at the site, and will hold annual public meetings based on the level of public interest. If needed, the next public meeting would be held in fall 2014 and would be advertised in local newspapers and on the Corps of Engineers' website.

For more information, please visit the website at *http://bit.ly/Lockbourne* or contact:

Katelyn C. Newton
Public Affairs Specialist
U.S. Army Corps of Engineers
Louisville District
502-315-6773
katelyn.c.newton@usace.army.mil

**U.S. ARMY CORPS OF ENGINEERS**
**LOUISVILLE DISTRICT**
Katelyn C. Newton
P.O. Box 59
Louisville, KY 40201-0059

**U.S. ARMY CORPS OF ENGINEERS–LOUISVILLE DISTRICT**
P.O. Box 59, Louisville, KY 40201-0059
www.lrl.usace.army.mil
**February 2014**