FINAL

ACTION MEMORANDUM

for

TIME-CRITICAL REMOVAL ACTION

FORMER LOCKBOURNE AFB
INDOOR FIRING RANGE
(AREA OF CONCERN #75)
COLUMBUS, OHIO
FUDS Site No. : G05OH0007

U.S. Army Corps of Engineers
Louisville District
600 Dr. M.L. King Jr. Pl.
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August 2010

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FOREWORD

This Time-Critical Removal Action for the Indoor Firing Range (AOC #75) at the former Lockbourne AFB, Ohio, is conducted by the U.S. Army, Corps of Engineers, Louisville District with concurrence of the Ohio Environmental Protection Agency, in accordance with requirements of Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, and the National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR Part 300), as required by the Defense Environmental Restoration Program, as amended by the Defense Authorization Act of 2002.

APPROVED:

8/24/10

KEITH A. LANDRY
Colonel, Corps of Engineers
District Commander

Date

ACRONYMS AND ABBREVIATIONS

AOC	Area of Concern
CELRL	Corps of Engineers, Louisville District
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended
CRAA	Columbus Regional Airport Authority
DD	Decision Document
FLAFB	Former Lockbourne Air Force Base
FSP	Field Sampling Plan
FUDS	Formerly Used Defense Site
HASP	Health and Safety Plan
HUD	U.S. Department of Housing and Urban Development
IRA	Interim Removal Action
mg/L	milligrams per liter
mg/kg	milligrams per kilogram
MMRP	Military Munitions Response Program
NCP	National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR Part 300)
OHANG	Ohio Air National Guard
Ohio EPA	Ohio Environmental Protection Agency
Pb	Lead
PMP	Project Management Plan
PP	Proposed Plan
PRG	Preliminary Remediation Goal
OAC	Ohio Administrative Code
QAPP	Quality Assurance Project Plan
QASP	Quality Assurance Surveillance Plan
RANGB	Rickenbacker Air National Guard Base
RC	Response Complete
RD/RA	Remedial Design / Remedial Action
RI/FS	Remedial Investigation / Feasibility Study
RIP	Remedy In Place
RPA	Rickenbacker Port Authority
SAP	Sampling and Analysis Plan
SC	Site Closeout
TCLP	Toxicity Characteristic Leaching Procedure
TCRA	Time-Critical Removal Action
U.S.	United States
USACE	United States Army Corps of Engineers
VAP	Voluntary Action Program
WP	Work Plan

CONTENTS

FIGURES

SECTION 1.0

STATEMENT OF PURPOSE AND BASIS

This Action Memorandum is for a Time-Critical Removal Action (TCRA), at the Former Lockbourne Air Force Base (FLAFB), involving an inactive indoor firing range designated Area of Concern (AOC) #75. Site investigation activities [*Final Report - Site Investigation of 21 Areas of Concern Former Lockbourne Air Force Base Columbus, Ohio* (Shaw Environmental, Inc., June 2006)] confirmed the presence of an immediate lead (Pb) hazard. The United States Army Corps of Engineers (USACE) Louisville District (CELRL) programmed the TCRA as an Interim Removal Action (IRA), including remedial investigation activities, to support a final Proposed Plan and Decision Document to achieve site closure.

This Action Memorandum serves as a decision document to establish an imminent and substantial risk to the health and safety of individuals and the environment. The format and content of this Action Memorandum is consistent with the requirements specified in Appendix C, Section C-4, of the USACE Formerly Used Defense Sites (FUDS) Program Policy (ER 200-3-1, 10 May 2004).

The threat conditions meet the 40 CFR 300.415 (b)(2) criteria for the TCRA that will be implemented following development and approval of a project Work Plan (WP) that includes a Sampling and Analysis Plan (SAP), comprised of a Field Sampling Plan (FSP) and a Quality Assurance Project Plan (QAPP), and a Health and Safety Plan (HASP). The WP will be supplemented with a Project Management Plan that includes a Contractor Quality Control Plan (CQCP) and a Quality Assurance Surveillance Plan (QASP).

SECTION 2.0

LOCATION AND DESCRIPTION OF SITE

AOC #75 (Building 687) is located on the FLAFB property in central Ohio, 12 miles southeast of downtown Columbus and one-half mile east of the Village of Lockbourne. Figures 1 and 2, at the end of this document, illustrate the location of the FLAFB and the location of AOC #75, respectively. Located in Franklin and Pickaway Counties, the FLAFB was originally

named the Northeastern Training Center of the Army Air Corps and later renamed the Lockbourne Air Force Base. Construction on the base began in 1942. The base consisted of 1,574 acres by the end of 1942 and had two runways; a north-south and an east-west, and an X-shaped taxiway system connecting the two. The current runway configuration was constructed in 1951 while the base was occupied by the Strategic Air Command. The base at that time encompassed over 4,000 acres. The base was renamed Rickenbacker Air Force Base in 1974. In 1980, the base was closed, transferred to the Ohio Air National Guard (OHANG), and renamed the Rickenbacker Air National Guard Base (RANGB). In 1982, the base began the process of disposing of properties, including the transfer of 1,642 acres to the Rickenbacker Port Authority (RPA) in 1984 and 1985. The RPA name was later changed to the Columbus Regional Airport Authority (CRAA). The property owned by the CRAA is named the Rickenbacker International Airport.

The AOC #75 building is approximately 40 feet wide by 80 feet long (see Figure 3) and consists of an unpainted wooden and metal frame structure covered with corrugated metal siding. The building is in disrepair, is unsecured (i.e., open door and windows), and the floor is covered with approximately 6 inches to 3 feet of sand. The building was constructed on top of the former concrete runway. A new floor was poured on top of the runway, in portions of the building, for construction of the building. The building is partially surrounded by an earthen berm along portions of the north, east, and south sides. Photographs of the building exterior and interior are provided in Figures 4 and 5. The Archives Search Report (USACE, 1997) concluded that the indoor firing range was an “area with potential, but not likely to contain ordnance”; and therefore was not subject to the requirements of the military munitions response program (MMRP).

SECTION 3.0

DESCRIPTION OF EXISTING SITE HAZARDS

Hazards within AOC #75 (Building 687) were confirmed during the site investigation. Eighteen metals were detected in the sand on the floor in the building. Copper, magnesium, thallium, and zinc were detected above background but below their respective preliminary remediation goals (PRGs), if available. Antimony was detected above both background and the PRG. Arsenic was detected above the PRG but below background. Lead was detected above

both background and the PRG. A composite sample collected of the sand material was analyzed for toxicity characteristic leaching procedure (TCLP) metals and Pb was detected above the regulatory limit, making the sand characteristically hazardous for waste disposal purposes. Given the prior use of the building, Pb dust was assumed to exist on the interior building surfaces.

SECTION 4.0

CURRENT LAND USE AND RISK OF EXPOSURE

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 CFR 300.415b), identifies factors that must be considered in determining whether a threat to human health or welfare or the environment exists. The factors applicable to the AOC #75 are:

- Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances, pollutants or contaminants;
- High levels of hazardous substances, pollutants, or contaminants in soils largely at or near the surface that may migrate; and,
- Weather conditions that may cause hazardous substances, pollutants, or contaminants to migrate or be released.

Although access to the area is controlled, this may change in the future based on reasonably foreseeable redevelopment activities of the Columbus Regional Airport Authority (CRAA). Currently, the area is used as a lay-down and stockpiling area by the CRAA and its contractors to support construction projects and, as such, is open for various time periods. We understand that the CRAA will use this area for storage in the future and access to the area will continue.

While the AOC 75 building structure affords some containment at present, it is in a deteriorated state and will continue to deteriorate, thus allowing for the potential uncontrolled migration of lead to the surrounding surface soils.

The USACE deemed it appropriate to designate this as a TCRA to expedite cleanup based on the increased potential for migration of lead-containing sand as the structure continues to deteriorate. In order to address the noted hazards, as confirmed by the site investigation, the USACE chose to proceed with the TCRA in an effort to "remove" the hazard expeditiously. Follow-on sampling efforts are intended to direct the project back into the "remedial process" in support of a final Decision Document (DD) and Remedy In Place (RIP), Response Complete (RC), and Site Closeout (SC). The approach taken by the USACE is viewed as the most efficient, cost-effective approach in comparison to a much longer Remedial Investigation/Feasibility Study RI/FS, Remedial Design/Remedial Action (RD/RA) path. While the primary purpose is to expeditiously address the hazard regarding elevated lead concentrations

in the sand, the approach also allows return to the remedial process for project completion in accordance with CERCLA.

4.1 Current Land Use

Rickenbacker International Airport is a high-speed international logistics hub. It comprises a 5,000-acre logistics hub, an adjacent industrial park, and an on-site Foreign-Trade Zone. The airport specializes in air cargo and features parallel 12,000-foot-long runways capable of handling all types of aircraft around the clock. The airport has 120 acres of ramp space, 25 hydrant fueling stations, and 500,000 square feet of cargo terminal space. Sixty companies currently have operations at Rickenbacker. These include six international airfreight companies, two E-commerce operators, 11 logistics operations, and distribution centers for 32 businesses. In addition to these businesses, units of the Ohio Air National Guard, Ohio Army National Guard, Army Reserve, and Navy Reserve are stationed at the facility. The Columbus District Office of United States Customs is located within the Foreign-Trade Zone.

4.2 Summary of Site Risks

The on-site human receptors at AOC #75 are CELRL personnel and other CRAA or National Guard or Reserve authorized personnel such as utility, security, and grounds personnel and CRAA-authorized contractors or visitors who are knowledgeable about the potential hazards. The general public does not have direct access to FLAFB or AOC #75.

Ecological receptors include plants and animals, such as agricultural crops (typically corn and soybeans) grown near this area, other plants and/or animals that are consumed by the local fauna such as deer, rabbits, birds, small rodents or fox that are known to inhabit the area. In the case of game animals, deer, squirrels, and rabbits could be of concern, as these receptors could be subject to human consumption. Deer is of primary concern as they tend to have wider habitat ranges than other game and may migrate offsite. Small fish, amphibians and other aquatic organisms that inhabit the area in or near on-site drainage courses could also be receptors, which could also lead to secondary consumption of local game fish. There are no Critical Habitats included at the former FLAFB for endangered species according to the US Fish and Wildlife Service.

4.3 Risk Assessment

Access – Access to AOC #75 is restricted to CCRA authorized personnel. The overall area is surrounded by a fence and locked gates and site security is monitored. The public does not have access to the area without CCRA authorization. Site use (i.e., industrial / airfield logistics) is expected to remain the same for the foreseeable future.

Activity – Current and future activities that can bring receptors into contact with contamination at AOC #75 are routine work activities or surface or below ground work performed by base personnel or authorized contractors working at or near AOC #75. Exposure may be unintentional due to contaminant migration associated with normal weather occurrences.

Exposure media – Exposure media are those that contain the source, or those media that become contaminated through potential migration of the contaminant from the source area. The following exposure media may be present at AOC #75:

- Contact with surface and subsurface soils.
- Surface water and sediments near AOC #75, via overland flow of contamination in soils, percolation and periodic runoff associated with storms.
- Air, via volatilization and particulate re-suspension (fugitive dust) from contaminated surfaces and soils.
- Groundwater via leaching from soil.
- Food chain, via plant uptake from soils, and contaminated fish and wildlife consumption.

Exposure routes – Exposure routes are those processes by which a contaminant or physical agent comes in contact with a receptor. For most environmental contaminants, these processes include ingestion, inhalation, and dermal contact. Ingestion is applicable to all exposure media, except air. Dermal contact is applicable to all exposure media, except air and the food chain. Inhalation is applicable to air, soils, and groundwater.

Receptors – On-site personnel and a limited number of authorized base personnel and visitors (e.g., security personnel, maintenance personnel, etc.) have the greatest exposure potential because they work in proximity to the former indoor firing range.

Potential indirect receptors of lead hazards from the former range are off site and are exposed via contact with surface water and sediment in the various on-site watercourses and ditches, by ingestion of food chain biota, and by inhalation of particulates.

The results of this risk analysis demonstrate that the greatest potential risk exists to on-site personnel and on-site biota. In as much as AOC #75 is not a Critical Habitat for endangered species and that on-site biota are not normally used for food except those adjacent areas that are actively cultivated for agricultural purposes, removal actions to be completed should focus on protection of CCRA personnel and authorized visitors.

SECTION 5.0

PREVIOUS ACTIONS TO ADDRESS SITE HAZARDS

To date, no removal or remedial actions have been undertaken to mitigate the existing hazards at the AOC #75 site.

SECTION 6.0

PROPOSED ACTIONS TO ADDRESS ACTUAL THREAT

The TCRA will include the following work elements:

- Preparation of project WP for review and approval by the CELRL, CRAA, and Ohio EPA.
- Removal and proper off-site disposal of the hazardous sand from Building 687.
- Wash-down and rinse of existing building floor (concrete overlay and/or runway surface).
- Demolition, removal and proper offsite disposal or recycle of Building 687, including pre-demolition asbestos abatement in order to safely and cost-effectively address contaminants.
- Removal and proper offsite disposal of contaminated soil, from building apron, to levels that are consistent with the screening levels established for the previous site investigation, or other appropriate screening levels.
- Sampling and analysis for assessment, post-removal verification, and waste management.
- Construction completion reporting.

FIGURES

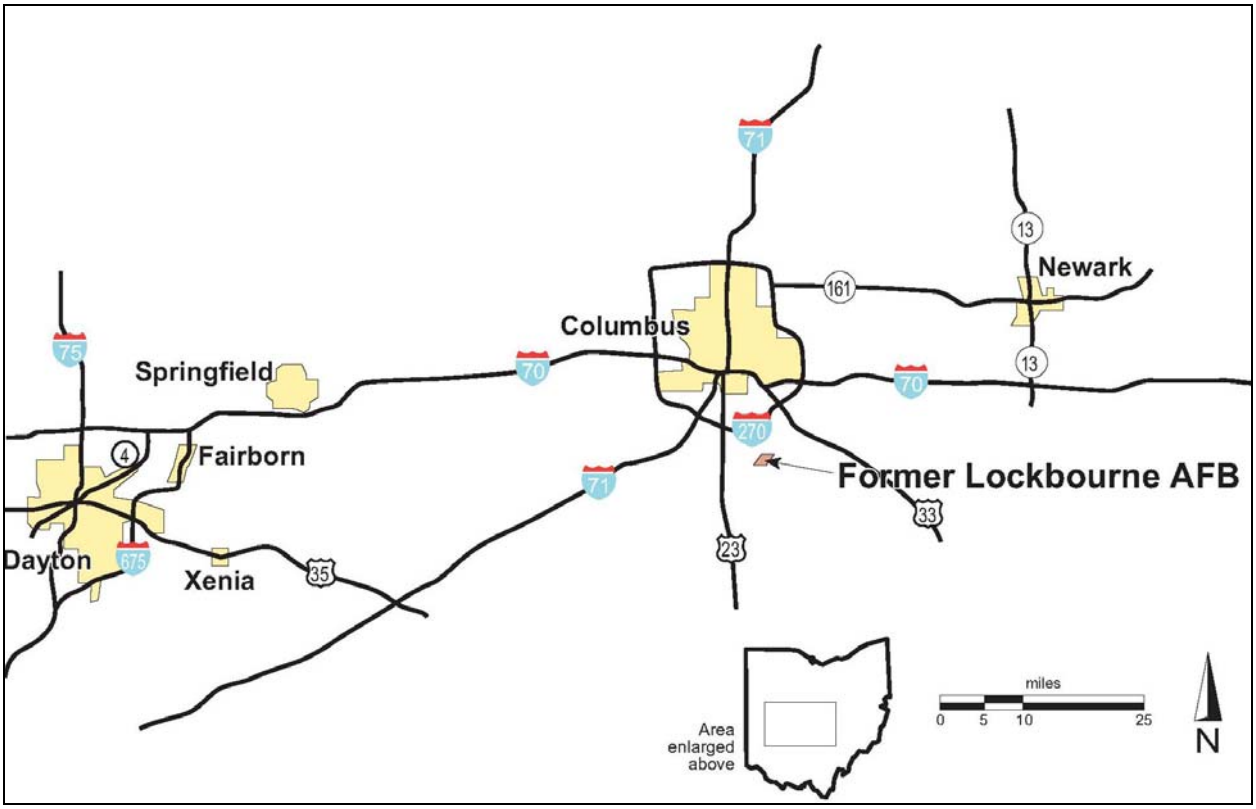

FIGURE 1. LOCATION OF THE FLAFB

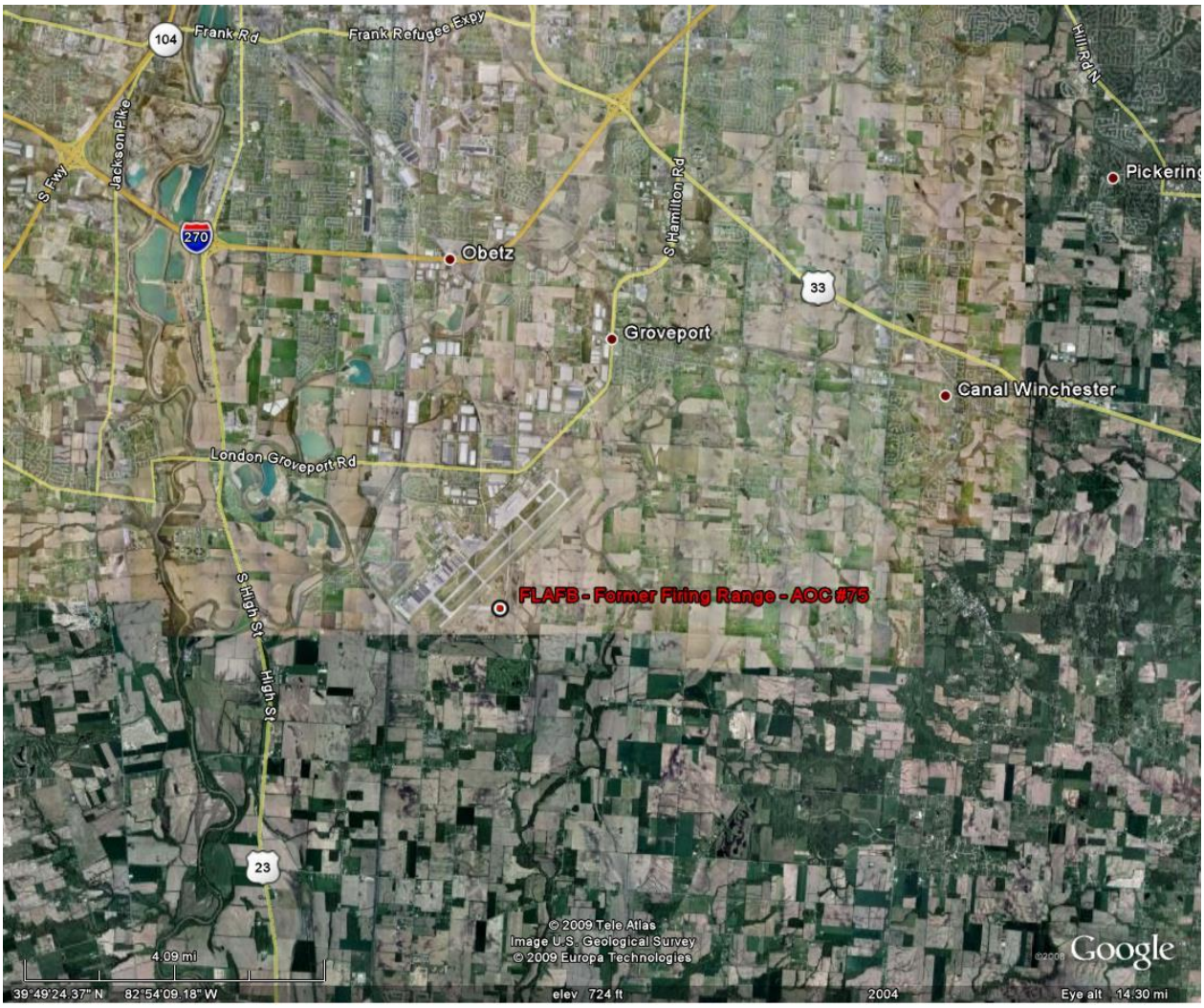

FIGURE 2. LOCATION OF AOC #75

FIGURE 3. AERIAL VIEW OF AOC #75

FIGURE 4. PHOTOGRAPH OF AOC #75 EXTERIOR

FIGURE 5. PHOTOGRAPH OF AOC #75 INTERIOR