FINAL
Preliminary Assessment Report
Mansfield Lahm Fire Station
Mansfield, Ohio

Perfluorooctane-Sulfonic Acid (PFOS) and Perfluorooctanoic Acid (PFOA) Impacted Sites
ARNG Installations, Nationwide

August 2019

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Acronyms and Abbreviations

°F	degrees Fahrenheit
AECOM	AECOM Technical Services, Inc.
AFFF	aqueous film forming foam
AOI	Area of Interest
ARNG	Army National Guard
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CSM	conceptual site model
FTA	fire training area
gpm	gallons per minute
IED	Installations & Environment Division
OHANG	Ohio Air National Guard
OHARNG	Ohio Army National Guard
PA	Preliminary Assessment
PFAS	per- and poly-fluoroalkyl substances
PFOA	perfluorooctanoic acid
PFOS	perfluorooctanesulfonic acid
US	United States
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency

Executive Summary

The United States (US) Army Corps of Engineers (USACE) Baltimore District on behalf of the Army National Guard (ARNG)-Installations & Environment Division (IED), Cleanup Branch contracted AECOM Technical Services, Inc. (AECOM) to perform *Preliminary Assessments (PAs) and Site Inspections for Perfluorooctanesulfonic acid (PFOS) and Perfluorooctanoic acid (PFOA) Impacted Sites at ARNG Facilities Nationwide*. The ARNG is assessing potential effects on human health related to processes at facilities that used per- and poly-fluoroalkyl substances (PFAS), primarily in the form of aqueous film forming foam (AFFF) released as part of firefighting activities, although other PFAS sources are possible.

AECOM completed a PA for PFAS at the Mansfield Lahm Fire Station in Mansfield, Ohio to assess potential areas of PFAS use, release, or storage and potential exposure pathways to receptors. In 2007, the Ohio Air National Guard (OHANG) granted a permit to the Ohio Army National Guard (OHARNG) to use 0.541 acres of land for the construction, operation, and maintenance of a 6,847 square foot fire station located on Mansfield Lahm Air National Guard Base. The permit expired in March 2017 and was renewed; the expiration date of the new permit is unknown. The performance of this PA included the following tasks:

- Reviewed data resources to obtain information relevant to suspected PFAS use, storage, or release
- Conducted a site visit on 25 July 2018
- Interviewed current Ohio Army National Guard (OHARNG) personnel during the site visit
- Completed visual site inspections to confirm absence of PFAS use, release, or storage locations and documented with photographs

No Area(s) of Interest (AOIs) related to potential PFAS use, release, or storage were identified at the Mansfield Lahm Fire Station during the PA, although several potential PFAS sources are located adjacent to the Mansfield Lahm Fire Station, within OHANG property (**Figure ES-1**). The OHANG is currently conducting their own PFAS study. Contact the OHANG for further information.

CLIENT	ARNG			
NOTES	Preliminary Assessment for PFAS at Mansfield Lahm Fire Station, OH			
REVISED	2/7/2019	GIS BY	MS	2/7/2019
SCALE	1:3,600	CHK BY	TK	2/7/2019
Base Map: OSIP Imagery		PM	RG	2/7/2019

Summary of Findings

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Figure ES-1

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1. Introduction

1.1 Authority and Purpose

The United States (US) Army Corps of Engineers (USACE) Baltimore District on behalf of the Army National Guard (ARNG)-Installations & Environment Division (IED), Cleanup Branch contracted AECOM Technical Services, Inc. (AECOM) to perform *Preliminary Assessments (PAs) and Site Inspections for Perfluorooctanesulfonic acid (PFOS) and Perfluorooctanoic acid (PFOA) Impacted Sites at ARNG Facilities Nationwide* under Contract Number W912DR-12-D-0014, Task Order W912DR17F0192, issued 11 August 2017. The ARNG is assessing potential effects on human health related to processes at facilities that used per- and poly-fluoroalkyl substances (PFAS), primarily in the form of aqueous film forming foam (AFFF) released as part of firefighting activities, although other PFAS sources are possible. In addition, the ARNG is assessing businesses or operations adjacent to the ARNG facility (not under the control of ARNG) that could potentially be responsible for a PFAS release.

PFAS are classified as emerging environmental contaminants that are garnering increasing regulatory interest due to their potential risks to human health and the environment. PFAS formulations contain highly diverse mixtures of compounds. Thus, the fate of PFAS compounds in the environment varies. The regulatory framework at both federal and state levels continues to evolve. The US Environmental Protection Agency (USEPA) issued Drinking Water Health Advisories for PFOA and PFOS in May 2016, but there are currently no promulgated national or state of Ohio standards regulating PFAS in drinking water. In the absence of federal maximum contaminant levels, some states have adopted their own drinking water standards for PFAS.

This report presents findings of a PA for PFAS at the Mansfield Lahm Fire Station in Mansfield, Ohio, in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended, the National Oil and Hazardous Substances Pollution Contingency Plan (40 Code of Federal Regulations [CFR] Part 300), and USACE requirements and guidance.

This PA documents potential fire training areas (FTAs) as well as other locations where PFAS may have been used, stored, or released into the environment at the Mansfield Lahm Fire Station. The term PFAS will be used throughout this report to encompass all PFAS chemicals being evaluated, including PFOS and PFOA, which are key components of AFFF.

1.2 Preliminary Assessment Methods

The performance of this PA included the following tasks:

- Reviewed data resources to obtain information relevant to suspected PFAS use, storage, or release
- Conducted a site visit on 25 July 2018
- Interviewed current Ohio Army National Guard (OHARNG) personnel during the site visit
- Completed visual site inspections to confirm absence of PFAS use, release, or storage locations and documented with photographs

1.3 Report Organization

This report has been prepared in accordance with the USEPA *Guidance for Performing Preliminary Assessments under CERCLA* (USEPA, 1991). The report outline is as follows:

- **Section 1** – **Introduction:** identifies the project purpose and authority and describes the facility location, environmental setting, and methods used to complete the PA
- **Section 2** – **Fire Training Areas:** describes the FTAs at the facility identified during the site visit
- **Section 3** – **Non-Fire Training Areas:** describes other locations of PFAS releases at the facility identified during the site visit
- **Section 4** – **Emergency Response Areas:** describes areas of AFFF release at the facility, specifically in response to emergency situations
- **Section 5** – **Adjacent Sources:** describes sources of PFAS release adjacent to the facility that are not under the control of ARNG
- **Section 6** – **Conceptual Site Model:** describes the pathways of PFAS transport and receptors for the Area(s) of Interest (AOIs) and the facility
- **Section 7** – **Conclusions:** summarizes the data findings and presents the conclusions of the PA
- **Section 8** – **References:** provides the references used to develop this document
- **Appendix A** – Data Resources
- **Appendix B** – Preliminary Assessment Documentation
- **Appendix C** – Photographic Log

1.4 Facility Location and Description

Mansfield Lahm Fire Station is located within Mansfield Lahm Air National Guard Base in Mansfield, Ohio. Located in the middle of Richland County, Mansfield is half way between the cities of Cleveland and Columbus (**Figure 1-1**). Mansfield Lahm Regional Airport, previously Mansfield Municipal Airport, includes 210 acres occupied by the OHANG since 1948. The airport is capable of handling large commercial and military aircraft.

In 2007, the OHANG granted a permit to the OHARNG to use 0.541 acres of land for the construction, operation, and maintenance of a 6,847 square foot fire station located on Mansfield Lahm Air National Guard Base (see **Appendix A**). The original term of the permit was 10 years, which expired in March 2017. A renewal permit has been granted; however, a copy of the permit was not available for this PA.

The Mansfield Lahm Fire Station is home to the 5694th Engineer Detachment unit. The OHARNG was responsible for the construction of the fire station and its subsequent required upkeep. The fire station has two bay doors and is capable of holding two firetrucks; however, most of the square footage of the fire station consists of administrative offices to support the OHARNG. The two firetrucks present in the fire station are tactical firefighting trucks, capable of combating five types of fires and able to deploy in almost any terrain (ONG, 2017).

Besides administrative support, the fire station is only responsible for the storage of the firetrucks. The firetrucks are available for deployment in relation to military defenses but are only used for annual training exercises located off-site. According to interviewee knowledge, this training does not include the use of AFFF, only water.

1.5 Facility Environmental Setting

Mansfield Lahm Fire Station is located in the Appalachian Highlands region of Ohio. The Appalachian Highlands encompass the eastern part of the state and are characterized by

alternating plateaus and plains and a higher relief than the adjacent Interior Plains. The terrain around the facility exhibits moderate relief, with the facility occupying a local topographic high. The elevation of the facility is approximately 1,295 feet above mean sea level. The facility is located within the Mansfield Lahm Regional Airport; the airport is surrounded by farmland and deciduous forest to the north and west, industrial buildings to the south, and by farmland, a railroad yard, and a race track to the east.

1.5.1 Geology

Mansfield Lahm Fire Station lies within the Appalachian Plateaus physiographic province, Killbuck-Glaciated Pittsburgh Plateau district. The Killbuck-Glaciated Pittsburgh Plateau district contains ridges and flat uplands covered with thin glacial drift and dissected by steep valleys. The district is bounded to the west and north by the Allegheny and Portage Escarpments and to the south and east by the Wisconsinan glacial margin (ODGS, 1998).

Mansfield Lahm Fire Station is situated on thin to thick Wisconsinan-age clay to loam till (ODGS, 1998). The glacial till unit is underlain by the Cuyahoga Formation, a Mississippian sedimentary bedrock unit composed of sandstone, siltstone, and shale. The sandstone can be silty to conglomeratic and commonly intergrades with the siltstone and shale (Slucher, E.R. *et al*., 2006).

1.5.2 Hydrogeology

Mansfield Lahm Fire Station is located in the Appalachian Plateaus aquifer system. The aquifer system has two hydrologic units within the vicinity of the Mansfield Lahm Fire Station: (1) the surficial aquifer system and (2) the Mississippian aquifer. The surficial aquifers consist of thin lenses of sand and gravel interbedded in thick layers of clayey till. Water-bearing deposits are frequently not encountered in the surficial aquifers in this area. The Mississippian aquifer is composed primarily of Cuyahoga Formation sandstone. Yields from the sandstone are generally 5 to 20+ gallons per minute (gpm). Yields of greater than 250 gpm have been achieved in wells deeper than 275 feet (Schmidt, 1979).

The property is located on the southwestern side of a topographic high point, and groundwater generally flows radially from the topographic high. Groundwater generally flows to the south and west in the direction of Rocky Fork, a stream located approximately 1.4 miles west from the facility boundary (**Figure 1-2**). While the water table shows variability around the facility, typical depth to water ranges from 14 to 118 feet below ground surface (ODNR, 2018). No potable water wells are located within the Mansfield Lahm Fire Station; however, domestic wells and monitoring wells exist within a mile of the facility, including at the Mansfield Lahm Regional Airport (**Figure 1-2**).

1.5.3 Hydrology

Regional surface water features include Rocky Fork, which is a tributary of the Mohican River.

No surface water currently enters Mansfield Lahm Fire Station. Surface water runoff from the north, west, and central areas surrounding the Mansfield Lahm Fire Station collects in an underground drainage system on the southwest of OHANG property. This drainage system then discharges to an off-site outfall in Rocky Fork. Six intermittent streams originate within 3,000 feet of the facility and flow radially away from the facility from the southeast to the west. All of the intermittent streams flow into Rocky Fork. One retention pond is located approximately 1,400 feet south of the facility boundary (**Figure 1-3**).

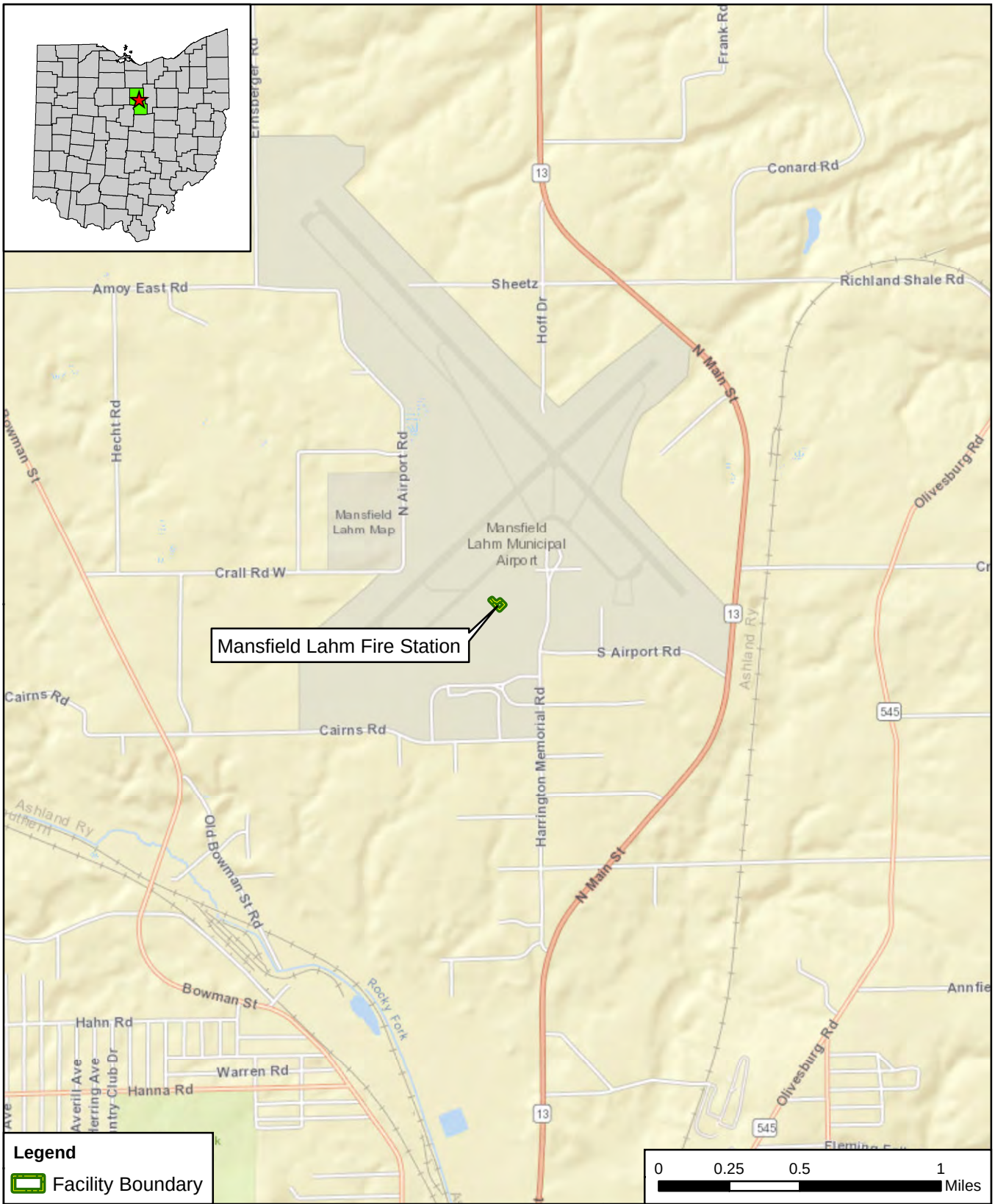
1.5.4 Climate

The climate in Mansfield is temperate, humid subtropical, with cool to cold winters and long, hot summers. The average temperature is 58.8 degrees Fahrenheit (°F), with summer highs of 80 °F and winter lows of 20.5 °F. Average annual precipitation is 44.2 inches (NOAA, 2018).

1.5.5 Current and Future Land Use

Directly north of the facility lies the Mansfield Lahm Regional Airport, which owns and operates Runways 5, 14, 23, and 32. Residential areas primarily occupy land south of the facility, with agricultural and forested areas occupying most of the land to the east, north, and west of the facility.

Mansfield Lahm Fire Station consists of one building within the OHANG base. The original permit granted to the OHARNG allowed for the use and occupancy of 0.541 acres of the OHANG Base. The construction, operation, and upkeep of a fire station was managed by OHARNG shortly after the executed permit. Most of the fire station consists of administrative offices in support of OHARNG operations. Only two firetrucks are located within the fire station and are used for training purposes and military deployment overseas. The Mansfield Lahm Fire Station will continue to conduct joint trainings with other OHARNG and OHANG personnel; however, this training will occur in various locations across Ohio and does not include the use of AFFF. Future land use at Mansfield Lahm Fire Station is not anticipated to change.



CLIENT	ARNG			
NOTES	Preliminary Assessment for PFAS at Mansfield Lahm Fire Station, OH			
REVISED	2/7/2019	GIS BY	MS	2/7/2019
SCALE	1:31,680	CHK BY	TK	2/7/2019
Base Map: Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI,		PM	RG	2/7/2019

Facility Location

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12420 Milestone Center Drive
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Figure 1-1

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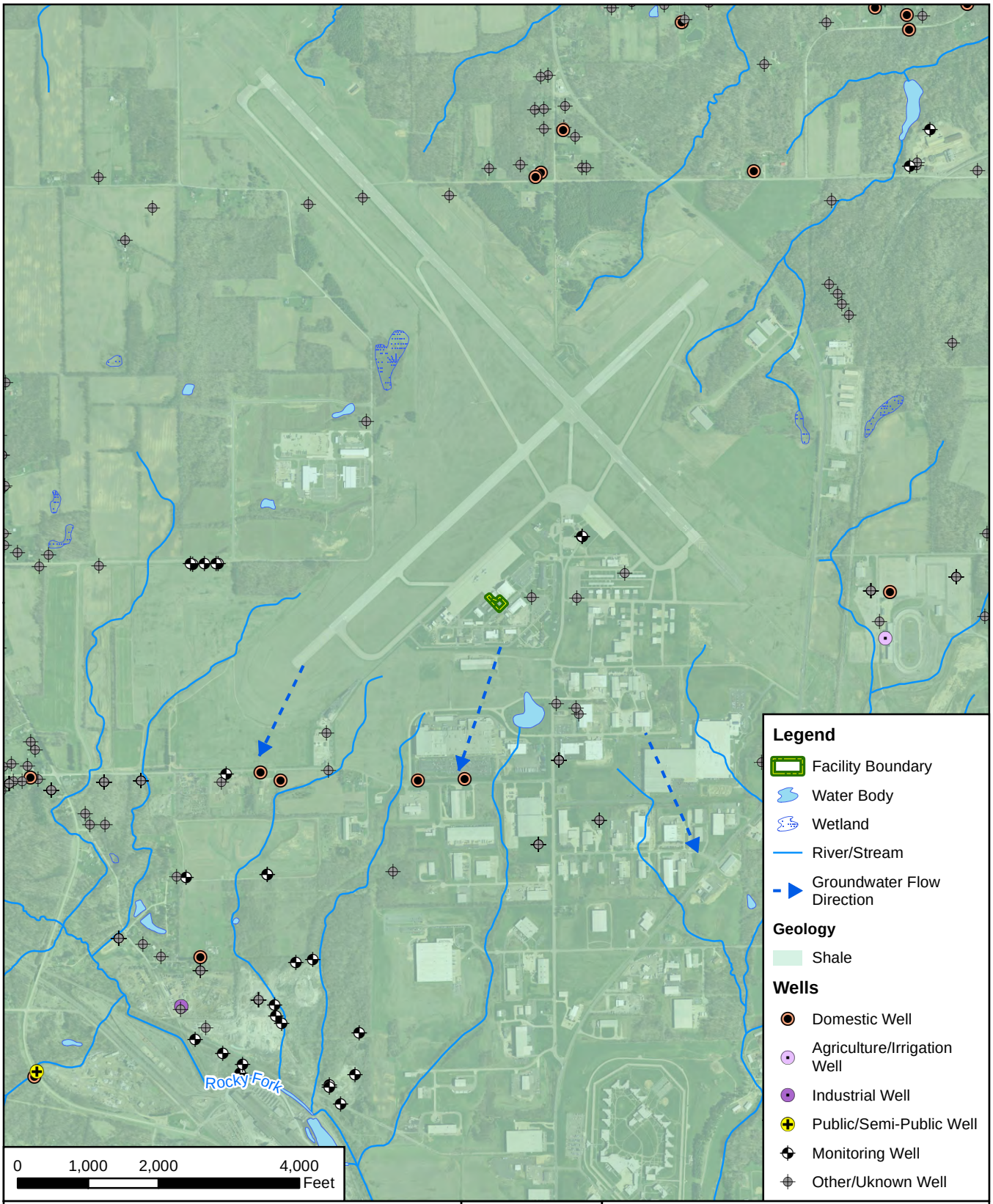

CLIENT	ARNG			
NOTES	Preliminary Assessment for PFAS at Mansfield Lahm Fire Station, OH			
REVISED	2/7/2019	GIS BY	MS	2/7/2019
SCALE	1:24,000	CHK BY	TK	2/7/2019
Base Map: OSIP Imagery		PM	RG	2/7/2019

Groundwater Features

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Figure 1-2

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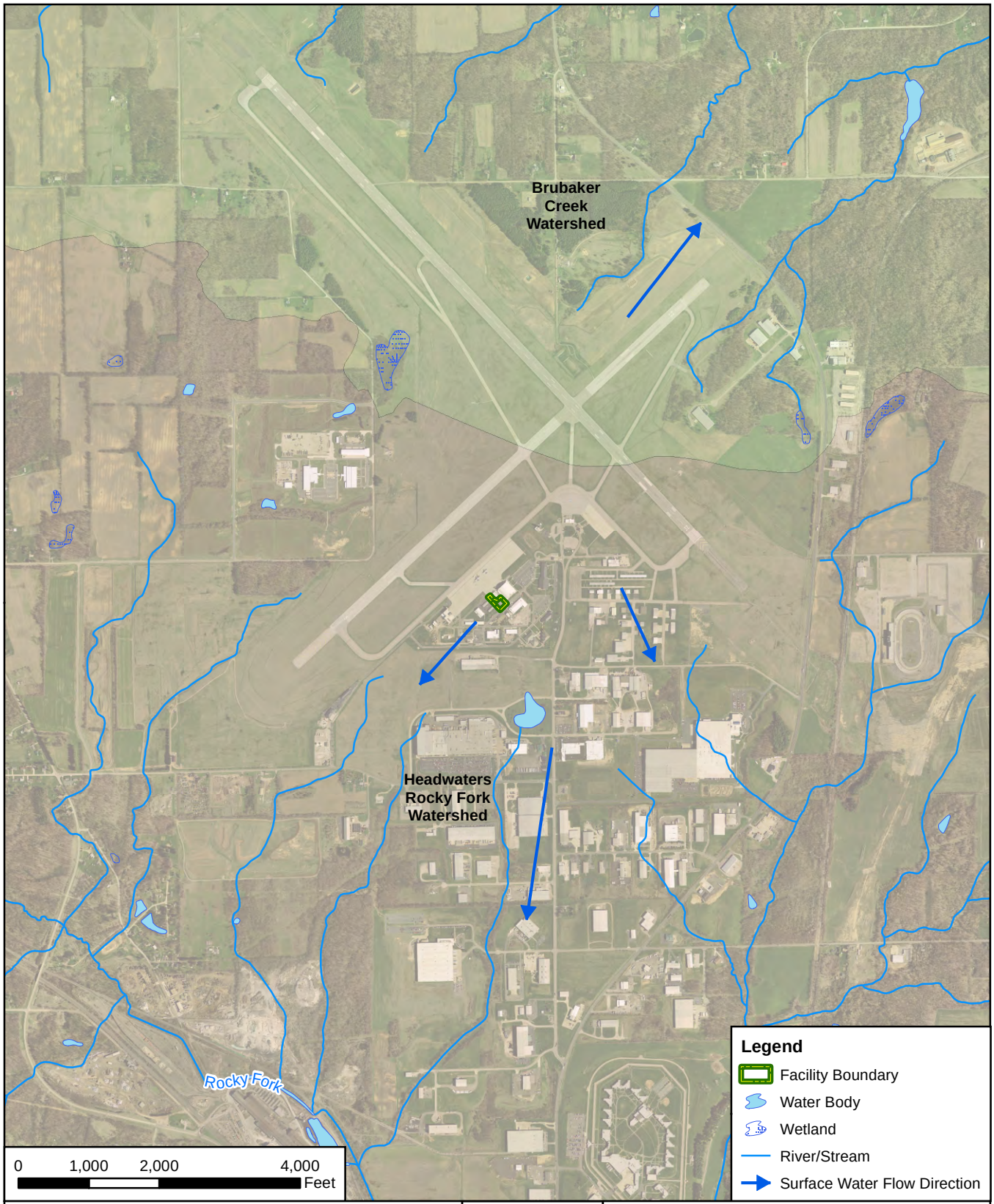

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Surface Water Features

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Figure 1-3

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2. Fire Training Areas

Based on interviewee knowledge of the Mansfield Lahm facility history since its construction in 2007, no FTAs were identified during this PA.

3. Non-Fire Training Areas

No non-FTAs where AFFF was potentially stored and/or released were identified during the PA. According to interviews with facility personnel, and based on visual inspection of the fire station and firetrucks, the firetrucks are not equipped with AFFF tanks. Additionally, no fire suppression system is present within the fire station, and no AFFF was or ever has been stored at the fire station since its construction in 2007.

4. Emergency Response Areas

Based on interviewee knowledge of the facility history since its construction in 2007, no emergency response areas were identified within the Mansfield Lahm Fire Station.

5. Adjacent Sources

The Mansfield Lahm Fire Station sits within the OHANG's 179th Airlift Wing (179AW). During the PA, several areas of potential use, storage, or release, not under control of OHARNG, were identified within the OHANG facility. The 179AW has utilized AFFF since the 1970s; therefore, these ares have the potential to impact soil, sediment, and surface water within the OHANG property. Descriptions of the adjacent sources are presented below and are shown on **Figure 5-1**.

5.1 Air National Guard Property

According to a PA conducted by engineering firm BB&E, several potential AFFF releases have occurred on OHANG property that are adjacent to the Mansfield Lahm Fire Station (BB&E, 2016). The Mansfield Lahm Fire Station sits within the OHANG's 179th Airlift Wing (179AW). The 179AW has utilized AFFF since the 1970s, and may be a potential source of PFAS. The OHANG is currently conducting PFAS investigations at the 179AW. Contact the 179AW for any details on the status of this investigation.

Based on surface water flow directions surrounding the facility, there is the potential for AFFF releases from OHANG property to impact the Mansfield Lahm Fire Station. Surface water runoff from the north, west, and central areas surrounding the Mansfield Lahm Fire Station collects in an underground drainage system on the southwest of OHANG property. This drainage system then discharges to an off-site outfall in Rocky Fork. Any surface water runoff not captured within the underground drainage system has the potential to flow through the property boundary of the Mansfield Lahm Fire Station, leaving the potential for AFFF releases to impact the Mansfield Lahm Fire Station.

5.2 Landfills

A number of landfills are located within Richland County, Ohio. The closest landfill to the Mansfield Lahm Fire Station is the former Richland County Solid Waste Landfill, located approximately four and a half miles southwest of the Mansfield Lahm Fire Station. The geographic coordinates are: 40°46'16.86"N; 82°33'37.55"W. The landfill historically accepted various wastes including hazardous materials; it was closed more than ten years before the construction of the Mansfield Lahm Fire Station.

Landfills are not usually a primary release area of PFAS, but materials disposed in landfills may create a secondary source of contamination. Such materials may include used AFFF storage containers or products associated with waterproofing uniforms or boots. No information obtained at Mansfield Lahm Fire Station indicated PFAS-related materials were disposed of in the former landfill area.

Based on visual inspections, interviews with facility personnel, and online research, other historical or currently active landfills are not located near the Mansfield Lahm Fire Station.

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Base Map: OSIP Imagery		PM	RG	2/7/2019

Adjacent Sources

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Figure 5-1

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6. Conceptual Site Model

Based on the PA findings from interviews with facility personnel, on-facility observations, review of Environmental Data Resource reports, and online research, no release areas were identified as AOIs at the Mansfield Lahm Fire Station. A conceptual site model (CSM) identifies three components necessary for potentially complete exposure pathways related to a site: (1) source, (2) pathway, and (3) receptor. If any of these elements are missing, the pathway is considered incomplete. However, since no PFAS sources were identified to originate at the Mansfield Lahm Fire Station or from activities associated with the facility, CSMs were not developed.

Nearby off-facility sources were identified during this PA. According to the Ohio State Water Wells database, approximately 30 private drinking water wells are located within a 0.5-mile radius of the Mansfield Lahm Fire Station, with several of these wells located on OHANG property (BB&E, 2016). Previous sampling of private drinking water wells was conducted in 2016 and 2017 by the Ohio EPA, approximately 3.5 miles northeast of the Mansfield Lahm Fire Station. All samples displayed non-detect values for PFOA and PFOS.

7. Conclusions

This report presents a summary of available information gathered during the PA on the use and storage of AFFF and other PFAS-related activities at Mansfield Lahm Fire Station. The PA findings are based on the information presented in **Appendix A** and **Appendix B**.

7.1 Findings

Based on information obtained during interviews conducted with facility personnel, facility observations, and reviewed documentation, it is confirmed that AFFF has not been stored, used, or released at the Mansfield Lahm Fire Station; therefore, no AOIs related to PFAS release were identified at the Mansfield Lahm Fire Station.

Interviewee knowledge from OHARNG personnel at the Mansfield Lahm Fire Station dates back to at least 2013. Evidence obtained during the PA supports that current or former ARNG facility activities have not contributed to any potential PFAS contamination in soil, groundwater, surface water, or sediment. No potential areas of PFAS use, release, or storage, current or historic, were identified at the Mansfield Lahm Airport. However, several potential PFAS sources are located adjacent to the Mansfield Lahm Fire Station, within OHANG property (**Figure 7-1**). Therefore, a potentially complete exposure pathway exists for PFAS contamination in surface water in association with off-facility sources.

The area presented in **Table 7-1**, discussed in further detail in **Section 2** through **Section 5**, was determined to have no suspected release:

Table 7-1. Determinations of No Suspected Release

No Suspected Release Area	Used by	Rationale for No Suspected Release Determination
Mansfield Lahm Fire Station	OHARNG	Based on interviews conducted during the site visit, visual inspection of the facility, and facility-related document review, no use, storage, or potential release of AFFF occurred at this facility.

7.2 Uncertainties

A number of information sources were investigated during this PA to determine the potential for PFAS-containing materials to have been stored, used, or released at the facility. Historically, documentation of PFAS use was not required because PFAS were considered benign. Therefore, records were not typically kept by the facility or available during the PA on the disposition and use of PFAS in training, firefighting, or other non-traditional activities.

The conclusions of this PA are predominantly based on the information provided during interviews with personnel who had direct knowledge of PFAS use at the facility. Sometimes the provided information was vague or conflicted with other sources. Gathered information has a degree of uncertainty due to the absence of written documentation, the limited number of personnel with direct knowledge due to staffing changes, the time passed since PFAS were first used (1969 to present), and a reliance on personal recollection. Inaccuracies may arise in potential PFAS release locations, dates of release, volume of releases, and the concentration of AFFF used. There is also a possibility the PA has missed a source of PFAS, as the science of how PFAS may enter the environment continually evolves.

In order to minimize the level of uncertainty, readily available data regarding the use and storage of PFAS were reviewed, current personnel were interviewed, multiple persons were interviewed

for the same potential source area, and potential source areas were visually inspected. Based on interviews and historical document review, uncertainties related with this PA are minimal, and any potential present or historic AFFF-related activity at Mansfield Lahm Fire Station is unlikely.

Table 7-2 summarizes the uncertainties associated with the PA:

Table 7-2. Uncertainties within the PA

Area	Source of Uncertainty
Mansfield Lahm Fire Station	Direct interviewee knowledge is not available from the date of construction in 2007 until 2013.

7.3 Potential Future Actions

Based on the documented absence (2007-present) of the use, storage, or release of PFAS-containing materials at Mansfield Lahm Fire Station, no AOIs were identified during the PA. Evidence does not indicate that current or former ARNG activities contributed PFAS contamination to soil, groundwater, surface water, or sediment at the facility or adjacent areas. Mansfield Lahm Fire Station will not move forward in the CERCLA process.

CLIENT	ARNG			
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Base Map: OSIP Imagery		PM	RG	2/7/2019

Summary of Findings

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Figure 7-1

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8. References

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National Oceanic and Atmospheric Administration (NOAA). 2018. "Data Tools: 1981-2010 Normals: Mansfield Lahm Regional Airport, OH US." *NOAA National Centers for Environmental Information.* https://www.ncdc.noaa.gov/cdoweb/datatools/normals. August 8, 2018.

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Ohio Division of Geological Survey (ODGS). 1998. "Physiographic regions of Ohio." *Ohio Department of Natural Resources, Division of Geological Survey*, page-size map with text, 2 p., scale 1:2,100,000.

Ohio National Guard (ONG). 2017. *Ohio Army, Air National Guard Firefighters Continuously Hone Skills: 5694th Firefighters Train at Air Force Reserve Facility in Youngstown for AT*. https://www.ong.ohio.gov/stories/2017/Oct/20171013-5694th.html. August 2018.

Schmidt, J.J. 1979. "Ground-Water Resources of Richland County." *Ohio Department of Natural Resources, Division of Water, Ground Water Resources Section*, map with text, 1 p.

Slucher, E.R., Swinford, E.M., Larsen, G.E., *et al*. 2006. "Bedrock Geologic Map of Ohio." *ODGS*, Map BG-1, version 6.0, scale 1:500,000.

USEPA, 1991. *Guidance for Performing Preliminary Assessments under CERCLA*. EPA/540/G-91/013. September 1991.

Appendix A
Data Resources

Data Resources will be provided separately on CD. Data Resources for Mansfield Lahm Fire Station includes:

Mansfield Leases, Licenses, and Permits

- 2007 Department of the Army License No. DACA27-3-07-259 located at Mansfield-Lahm Air National Guard Base, Ohio
- 2007 Department of the Air Force Permit No. DACA27-4-07-258 located at Mansfield-Lahm Air National Guard Base, Ohio

Previous Investigations Completed at Mansfield

- 2016 BB&E Final Perfluorinated Compounds Preliminary Assessment Site Visit Report Mansfield Air National Guard Base (See separate PDF of document)

Mansfield Installation Maps

- 2018 Installation Map
- 2018 Aerial Photos

Mansfield EDR Report

- 2018 Mansfield Lahm Fire Station EDR Report

Appendix B
Preliminary Assessment Documentation

Appendix B.1
Interview Records

PA Interview Questionnaire - Other

Facility: Mansfield
Interviewer: [redacted]
Date/Time: 7/25/18

Interviewee: [redacted]	Can your name/role be used in the PA Report? (Y) or N
Title: Readiness NCO - Aircraft Inspector	Can you recommend anyone we can interview?
Phone Number: *will obtain from Katie Tait	Y or (N)
Email: *will obtain*	

Roles or activities with the Facility/Years working at the Facility:

only aid @ facility since construction in 2007
Mostly administrative activities
[redacted] @ Mansfield Lahm Fire Station (emp. 2013-Present)
[redacted] @ Mansfield ARNG FMS nearby (emp. at least since 2014)

- OHARNG staff informally interviewed retired OHANG personnel; however, they wished to not have their names or titles use; OHANG retiree's confirmed absense of PFAS @ OHARNG Mansfield

PFAS Use: Identify accidental/intentional release locations, time frame of release, frequency of releases, storage container size (maintenance, fire training, firefighting, buildings with suppression systems (as builts), fueling stations, crash sites, pest management, recreational, dining facilities, metals plating, or waterproofing). How are materials ordered/purchased/disposed/shared with others?

No spills/releases/storage @ fire station since construction	Known Uses
	Use
	Procurement
Fire trucks stay parked in facility; some routine maintenance; trucks do not have AFFF capabilities	Disposition
	Storage (Mixed)
	Storage (Solution)
	Inventory, Off-Spec
No areas identified near FS/@ surrounding airport	Containment
	SOP on Filling
	Leaking Vehicles
Trucks only deploy for off-site training and overseas military support	Nozzle and Suppression System Testing
	Dining Facilities
	Vehicle Washing
	Ramp Washing
	Fuel Spill Washing and Fueling Stations
	Chrome Plating or Waterproofing

Appendix B.2
Visual Site Inspection Checklists

Visual Survey Inspection Log

Recorded by: [redacted]
ARNG Contact: [redacted]
Date: *7/25/2018*

Source/Release Information

Site Name / Area Name / Unique ID: Mansfield Lahm Fire Static

Site / Area Acreage: Approx. 0.50 acres

Historic Site Use (Brief Description): Fire Station built in 2007 for support of tactical training and military operations

Current Site Use (Brief Description): Administrative support and support of military operations

1. Was AFFF used (or spilled) at the site/area? **Y / N**

1a. If yes, document how AFFF was used and usage time (e.g., fire fighting training 2001 to 2014):

2. Has usage been documented? **Y / N**

2a. If yes, keep a record (place electronic files on a disk):

3. What types of businesses are located near the site? **Industrial / Commercial / Plating / Waterproofing / Residential**

3a. Indicate what businesses are located near the site

Mansfield Lahm Municipal Airport and various commerical buildings

4. Is this site located at an airport/flightline? **Y / N**

4a. If yes, provide a description of the airport/flightline tenants:

Mansfield Lahm Municipal Airport occupied by the City of Mansfield and OHANG

Other Significant Site Features:

1. Does the facility have a fire suppression system? **Y / N**

1a. If yes, indicate which type of AFFF has been used:

1b. If yes, describe maintenance schedule/leaks:

1c. If yes, how often is the AFFF replaced:

1d. If yes, does the facility have floor drains and where do they lead? Can we obtain an as built drawing?

Transport / Pathway Information

Migration Potential:

1. Does site/area drainage flow off installation? **Y / N**

1a. If so, note observation and location:

Underground drainage system discharges to Rocky Fork

2. Is there channelized flow within the site/area? **Y / N**

2a. If so, please note observation and location:

Underground drainage system discharges to Rocky Fork

3. Are monitoring or drinking water wells located near the site? **Y / N**

3a. If so, please note the location:

Drinking water wells located with a mile of the facility

4. Are surface water intakes located near the site? **Y / N**

4a. If so, please note the location:

Significant Topographical Features:

1. Has the infrastructure changed at the site/area? **Y / N**

1a. If so, please describe change (ex. Structures no longer exist):

2. Is the site/area vegetated? **Y / N**

2a. If not vegetated, briefly describe the site/area composition:

3. Does the site or area exhibit evidence of erosion? **Y / N**

3a. If yes, describe the location and extent of the erosion:

4. Does the site/area exhibit any areas of ponding or standing water? **Y / N**

4a. If yes, describe the location and extent of the ponding:

Visual Survey Inspection Log

Receptor Information

1. Is access to the site restricted? **Y / N**

1a. If so, please note to what extent:

Guarded and gated entrance to facility

2. Who can access the site? **Site Workers / Construction Workers / Trespassers / Residential / Recreational Users / Ecological**

2a. Circle all that apply, note any not covered above:

3. Are residential areas located near the site? **Y / N**

3a. If so, please note the location/distance:

Residential areas primarly occupy land to the south of the facility

4. Are any schools/day care centers located near the site? **Y / N**

4a. If so, please note the location/distance/type:

5. Are any wetlands located near the site? **Y / N**

5a. If so, please note the location/distance/type:

Additional Notes

Photographic Log

Photo ID/Name	Date & Location	Photograph Description
1	7/25/2018	One of the firetrucks inside of the Mansfield Lahm Fire Station. This truck does not contain an AFFF-capable tank.
2	7/25/2018	View of two of the firetrucks from the back of the fire station. Picture was taken at the entrance door into the fire station from the administration side. No fire suppression system is present in this fire station and no storage of AFFF occurs at this location.

Appendix B.3
Conceptual Site Model Information

Preliminary Assessment – Conceptual Site Model Information

Site Name: Mansfield LAHM Fire Station

Why has this location been identified as a site?

Presence of a firestation with two firetrucks.

Are there any other activities nearby that could also impact this location?

Yes, adjacent airport and ANG property with known historic releases

Training Events

Have any training events with AFFF occurred at this site? No

If so, how often? N/A

How much material was used? Is it documented? N/A

Identify Potential Pathways: Do we have enough information to fully understand over land surface water flow, groundwater flow, and geological formations on and around the facility? Any direct pathways to larger water bodies?

Surface Water:

Surface water flow direction? Generally to the southwest, south, and southeast.

Average rainfall? 44.2 inches/year

Any flooding during rainy season? No

Direct or indirect pathway to ditches? Indirect

Direct or indirect pathway to larger bodies of water? Indirect

Does surface water pond any place on site? No

Any impoundment areas or retention ponds? No

Any NPDES location points near the site? No

How does surface water drain on and around the flight line? Surface water flows in a southernly direction; however, no surface water currently enters the facility. Any potential surface water runoff would be collected in an underground drainage system that then discharged to Rock Fork.

Preliminary Assessment – Conceptual Site Model Information

Groundwater:

Groundwater flow direction? In the same direction as surface water, generally southwest, south, and southeast

Depth to groundwater? Typically 14-118 ft bgs

Uses (agricultural, drinking water, irrigation)? Industrial and some domestic

Any groundwater treatment systems? No

Any groundwater monitoring well locations near the site? Yes, see Figure 1-2

Is groundwater used for drinking water? Yes, a combination of both surface water and 10 supply wells

Are there drinking water supply wells on installation? No

Do they serve off-post populations? N/A

Are there off-post drinking water wells downgradient? Yes

Waste Water Treatment Plant:

Has the installation ever had a WWTP, past or present? No.

If so, do we understand the process and which water is/was treated at the plant? N/A

Do we understand the fate of sludge waste? No

Is surface water from potential contaminated sites treated? Unknown

Equipment Rinse Water

1. Is firefighting equipment washed? Where does the rinse water go? N/A

2. Are nozzles tested? How often are nozzles tested? Where are nozzles tested? Are nozzles cleaned after use? Where does the rinse water flow after cleaning nozzles?
N/A

3. Other? N/A

Preliminary Assessment – Conceptual Site Model Information

Identify Potential Receptors:

Site Worker: None

Construction Worker: None

Recreational User: None

Residential: None

Child: None

Ecological: None

Note what is located near by the site (e.g. daycare, schools, hospitals, churches, agricultural, livestock)?

Airport directly adjacent to the north; park and elementary school approx. 2.5 miles southwest; correctional facility approx. 2.5 miles south;

Documentation

Ask for Engineering drawings (if applicable).

Has there been a reconstruction or changes to the drainage system? When did that occur?

N/A

Appendix C
Photographic Log

APPENDIX C – Photographic Log

Army National Guard, Preliminary Assessment for PFAS	Mansfield Lahm Fire Station	Mansfield, Ohio

Photograph No. 1

Description:

One of the firetrucks inside of the Mansfield Lahm Fire Station. This truck does not contain an AFFF-capable tank.

Photograph No. 2

Description:

View of two of the firetrucks from the back of the fire station. Picture was taken at the entrance door into the fire station from the administration side. No fire suppression system is present in this fire station and no storage of AFFF occurs at this location.