FINAL
Preliminary Assessment Report
Army Aviation Support Facility #3
Meridian, Mississippi

Perfluorooctanesulfonic Acid (PFOS) and Perfluorooctanoic Acid (PFOA) Impacted Sites
ARNG Installations, Nationwide

September 2020

Prepared for:

Army National Guard Bureau
111 S. George Mason Drive
Arlington, VA 22204

UNCLASSIFIED

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Acronyms and Abbreviations

AASF	Army Aviation Support Facility
AECOM	AECOM Technical Services, Inc.
AFFF	aqueous film forming foam
AOI	Area of Interest
ANG	Air National Guard
ARNG	Army National Guard
bgs	below ground surface
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CSM	conceptual site model
EDR™	Environmental Data Resources, Inc.™
°F	degrees Fahrenheit
FSS	fire suppression system
FTA	fire training area
MRA	Meridian Regional Airport
MSARNG	Mississippi Army National Guard
NOAA	National Oceanic and Atmospheric Administration
OWS	oil/water separator
PA	Preliminary Assessment
PFAS	per- and poly-fluoroalkyl substances
PFOA	perfluorooctanoic acid
PFOS	perfluorooctanesulfonic acid
SI	Site Inspection
US	United States
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
VSI	Visual Site Inspection

Executive Summary

The Army National Guard (ARNG) is performing Preliminary Assessments (PAs) and Site Inspections (SIs) for Perfluorooctanesulfonic acid (PFOS) and Perfluorooctanoic acid (PFOA) Impacted Sites at ARNG Facilities Nationwide. A PA for per- and polyfluoroalkyl substances (PFAS)-containing materials was completed for the Meridian Army Aviation Support Facility (AASF) #3 (also referred to as the "facility") in Meridian, Mississippi to assess potential PFAS release areas and exposure pathways to receptors. The performance of this PA included the following tasks:

- Reviewed available administrative record documents and Environmental Data Resources, Inc. (EDR)™ report packages to obtain information relevant to potential PFAS releases, such as: drinking water well locations, historical aerial photographs, Sanborn maps, and environmental compliance actions in the area surrounding the facility;
- Conducted a site visit on 8 March 2019 and completed visual site inspections at locations where PFAS-containing materials were suspected of being stored, used, or disposed;
- Interviewed current Mississippi ARNG (MSARNG) personnel during the site visit as well as environmental managers and operations staff. Follow-up interviews were also conducted with operations staff following the site visit;
- Identified areas of interest (AOIs) and developed a preliminary conceptual site model (CSM) to summarize potential PFAS source-pathway-receptor linkages for each AOI.

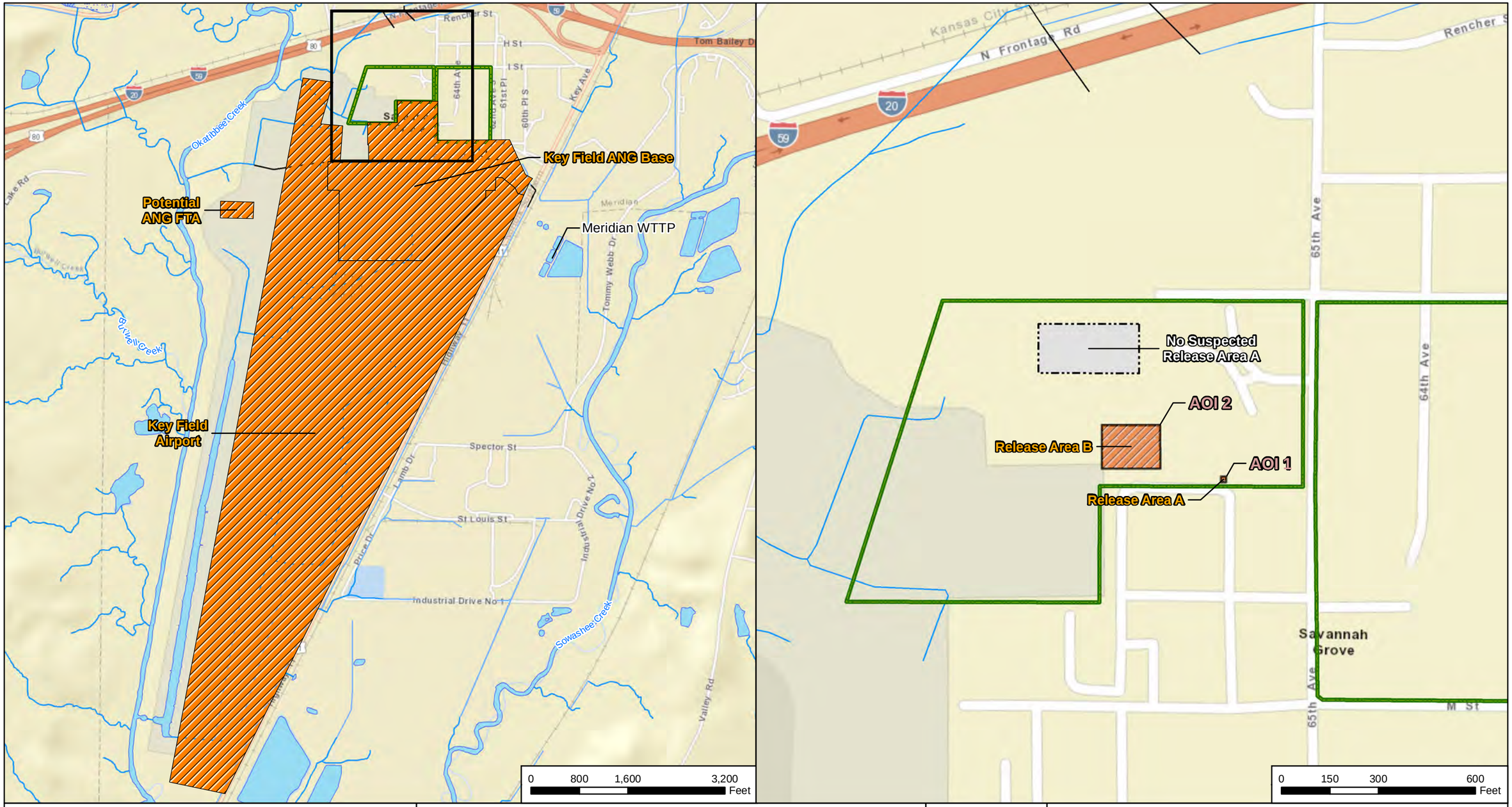
Two AOIs (referred to as "AOI 1" and "AOI 2") related to potential PFAS release were identified at AASF #3 during the PA. AOI 1 is the AFFF system tank located outside of the hangar building at the facility. The tank has evidence of leaking and could be a potential source of PFAS release. AOI 2 is the location of Tri-Max™ Carts that were formerly stored on the wash rack. The fate of the AFFF in the Tri-Max™ units is unknown, and it is possible they were emptied at AOI 2 prior to removal from AASF #3, creating a potential source of PFAS at the facility. The AOIs are shown on **Figure ES-1** and described in the **Table ES-1** below. The preliminary CSM for AASF #3 is presented in **Figure ES-2.**

Table ES- 1: AOIs at Meridian AASF #3

Area of Interest	Name	Used by	Potential Release Date
AOI 1	AFFF System Tank	AASF #3 Personnel	2015/2016
AOI 2	Tri-Max™ Carts	AASF #3 Personnel / State Contractors	2007-2012

Based on the Environmental Protection Agency (USEPA) Unregulated Contaminant Monitoring Rule 3 (UCMR3) data, it was indicated that no PFAS were detected in a public water system above the USEPA Health Advisory (HA) within 20 miles of the facility. The HA is 70 parts per trillion for PFOS and PFOA, individually or combined. PFAS analyses performed in 2016 had method detection limits that were higher than currently achievable. Thus, it is possible that low concentrations of PFAS were not detected during the UCMR3 but might be detected if analyzed today.

Based on a potential PFAS release at these AOIs, there is potential for exposure to PFAS contamination in media at or near the facility. The preliminary CSM for AASF #3, which presents the potential receptors and media impacted, is shown on **Figure ES-2**.



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PROJECT	Preliminary Assessment for PFAS at Meridian AASF, MS			
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SCALE	1:3,600	CHK BY	LC	7/14/2020
Base Map: National Agricultural Imagery Program, 2017. Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong),		PM	RG	7/14/2020

Legend

- Area of Interest
- Potential PFAS Release
- No Suspected Release
- Facility Boundary
- Water Body
- Wetland
- River/Stream
- Canal/Ditch
- Pipeline

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Summary of Findings

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Figure ES-1

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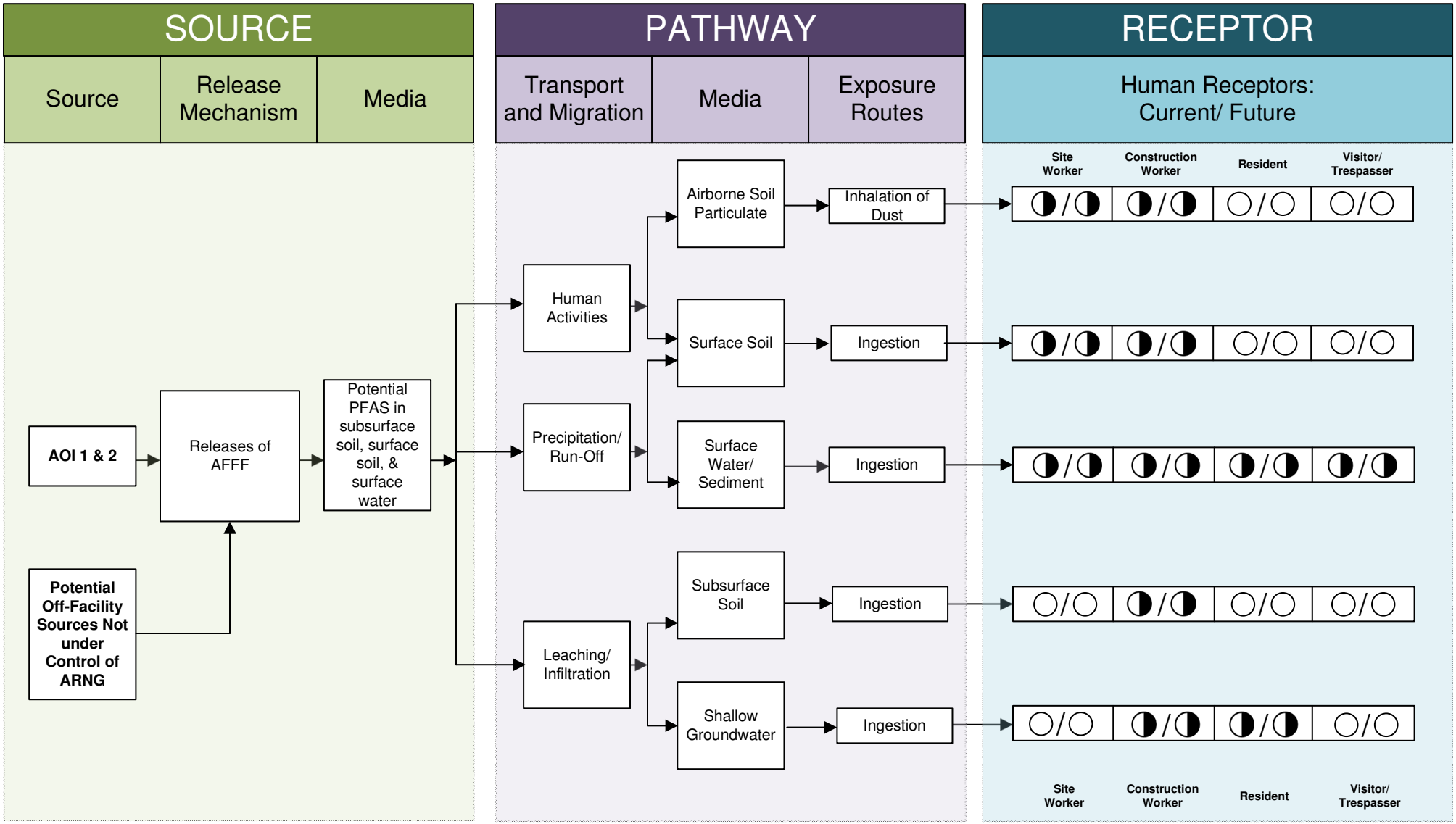


LEGEND

- Flow-Chart Stops
- Flow-Chart Continues
- Partial / Possible Flow
- Incomplete Pathway
- Potentially Complete Pathway
- Complete Pathway

Notes:

1. The resident and recreator receptors refer to an off-site receptor.
2. Dermal contact exposure pathway is incomplete for PFAS.

Figure ES-2
Preliminary Conceptual Site Model
Meridian AASF

1. Introduction

1.1 Authority and Purpose

The Army National Guard (ARNG) G9 is the lead agency in performing *Preliminary Assessments (PAs) and Site Inspections (SIs) for Perfluorooctanesulfonic acid (PFOS) and Perfluorooctanoic acid (PFOA) at Impacted Sites at ARNG Facilities Nationwide.* This work is supported by the United States (US) Army Corps of Engineers (USACE) Baltimore District and their contractor AECOM Technical Services, Inc. (AECOM) 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 a Drinking Water Health Advisory (HA) for PFOA and PFOS in May 2016, but there are currently no promulgated national standards regulating PFAS in drinking water. The HA is 70 parts per trillion for PFOS and PFOA, individually or combined.

This report presents findings of a PA for PFAS-containing materials at the Meridian Army Aviation Support Facility (AASF) #3 (also referred to as the “facility”) in Meridian, Mississippi, 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 Part 300), and Army requirements and guidance.

This PA documents potential locations where PFAS may have been used, stored, or released into the environment at AASF #3. 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 available administrative record documents and Environmental Data Resources, Inc. (EDR)^{TM} report packages to obtain information relevant to potential PFAS release, such as: drinking water well locations, historical aerial photographs, Sanborn maps, and environmental compliance actions in the area surrounding the facility;
- Conducted a site visit on 8 March 2019 and completed visual site inspections (VSIs) at locations where PFAS-containing materials were suspected of being stored, used, or disposed;
- Interviewed current Mississippi ARNG (MSARNG) personnel during the site visit as well as environmental managers and operations staff. Follow-up interviews were also conducted with operations staff following the site visit;

- Identified areas of interest (AOIs) and developed a preliminary conceptual site model (CSM) to summarize potential PFAS source-pathway-receptor linkages for each AOI.

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 sections and descriptions of each are 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 fire training areas (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** – **Preliminary Conceptual Site Model:** describes the pathways of PFAS transport and receptors for the 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

The AASF #3 is located southwest of the City of Meridian, at Meridian Regional Airport (also known as Key Field) (MRA), in Lauderdale County, Mississippi approximately 19 miles west of the Mississippi-Alabama Border (**Figure 1-1**). The facility houses the B Company 111th and comprises seven buildings on the 3.5-acre property including a hangar; storage, administration, hazmat and used oil buildings; and a fire pump house. The AASF #3 provides aviation and maintenance support primarily for helicopters. The facility was established in 1979, and interviewee involvement at the facility began in 1988. The property is leased by the state of Mississippi from the Meridian Airport Authority; the current lease is valid until 31 August 2061 (**Appendix A**).

1.5 Facility Environmental Setting

Lauderdale County is located in the Atlantic Plain Physiographic Region, which runs along the eastern and southern coast of the US, extending from Massachusetts down to the Gulf of Mexico. The Atlantic Plain is separated into two provinces; the continental shelf beyond the coastline and the interior portion known as the Coastal Plain, the inner edge of which is commonly accepted to be the extent of Cretaceous or Tertiary deposits (Fenneman, 1917). AASF #3 is situated in the

East Gulf Coastal Plain, a belted section of the Coastal Plain between the Mississippian Alluvial Plain and the Floridian Section that drains to the Gulf of Mexico (Fenneman, 1928).

1.5.1 Geology

AASF #3 overlies a thin deposit of Quaternary floodplain alluvium which, in the vicinity of the City of Meridian, has often been reworked through construction. The soil underlying AASF #3 is approximately 6 feet of fine sandy loam. Unaltered soil in the uplands are loamy and clayey, well drained, and typically highly acidic (Allgood, 1983).

The main geologic formation underlying AASF #3 is the Wilcox Group; it comprises, in stratigraphic order, the Hatchetigbee, Tuscahoma, and Nanafalia Formations corresponding to the Upper, Middle, and Lower Wilcox. The Hatchetigbee consists of regressive nonmarine sediments, gray to brown cross-bedded sands, and lignitic clay, and it has been eroded away beneath the facility to an approximate thickness of several dozen feet (Leidos, 2019). Underlying the Hatchetigbee is the gray lignitic sand of the Tuscahoma Formation (**Figure 1-2**), and it is often laminated with gray clay and fossiliferous marls and reaches a thickness of approximately 350 feet. Beneath the Tuscahoma lies the Nanafalia Formation, which consists of buff-colored, fossiliferous, glauconitic, calcareous sands, dark lignitic silt, clay and some gravel; it is approximately 300 feet thick (CH2M Hill, 1992).

The Wilcox Group has not been significantly structurally deformed but does have a gentle regional dip of 25 to 30 feet per mile to the south-southeast (Leidos, 2019).

1.5.2 Hydrogeology

The Middle and Lower Wilcox (Tuscahoma/Nanafalia Formations) are the principal aquifers in the area (**Figure 1-2**). An EDR™ report included a well search for a 1-mile radius surrounding the facility (**Appendix A**) and listed 49 registered state and federal wells, with 88% of the wells situated within these two formations. Wells within the Lower Wilcox are set from 740 to 870 feet below ground surface (bgs); static water levels measured in the 1970s and 80s within these wells are typically 12 to 21 feet bgs. Wells within the Middle Wilcox are set from 240 to 400 feet bgs; static water levels measured from 42 to 78 feet bgs (EDR™, 2019). Using additional online resources, such as state and local Geographic Information System databases, wells were researched in a 4-mile radius of the facility. Well data from the US Geological Survey (USGS) shows one industrial well and six domestic wells within 4 miles downgradient of the facility with 28 wells of unknown purpose (USGS, 2019).

Between approximately 2.5 and 3.5 miles south, southeast, and southwest of the facility, there are domestic wells in the lower Hatchetigbee Formation that range in depth from 191 to 420 feet bgs. While most wells in the vicinity of the facility are screened in the middle and lower formations, these wells are shallower and more likely to be affected by potential contamination from the AASF #3 area (Leidos, 2019).

Several monitoring wells are set within the Hatchetigbee Formation, about 1 miles to the south in the center of the Key Field (Leidos, 2019); these wells are set 15 to 27 ft bgs. However, **Figure 1-2** does not show all six wells at Key Field, and most wells displayed in that area are categorized as “unknown” wells. GIS well data are occasionally incomplete due to the time of the data layer compilation and incomplete data attributes for each well. In this case, the wells categorized as “unknown” do not have information entered for the well use category. The groundwater within the Wilcox Group flows to the south-southwest, following the structural dip of the formation (**Figure 1-2**). Groundwater flow direction at the facility is approximated to follow the same trend; however, local variations in flow direction to the west were noted at the adjacent Air National Guard (ANG) Base located immediately to the south of the facility. Potable water supply to the facility is supplied by the City of Meridian.

Based on the USEPA Unregulated Contaminant Monitoring Rule 3 (UCMR3) data, it was indicated that no PFAS was detected in a public water system above the USEPA Health Advisory (HA) within 20 miles of the facility. The HA is 70 parts per trillion for PFOS and PFOA, individually or combined. PFAS analyses performed in 2016 had method detection limits that were higher than currently achievable. Thus, it is possible that low concentrations of PFAS were not detected during the UCMR3 but might be detected if analyzed today.

Though no PFAS was detected in the public water system at the time of the UCMR analysis, an SI performed by the adjacent ANG Base showed PFAS in groundwater immediately south of the facility exceeding the HA.

1.5.3 Hydrology

The AASF #3 property is predominately impermeable, consisting of asphalt, concrete, and tarmac. According to the site spill prevention, control, and countermeasures plan, surface flow is across the site to the west, towards Okatibbee Creek and several emergent wetlands via outfalls located to the west of the south apron (Bhate, 2011; **Appendix A** [Final Storm Water Pollution Prevention Plan]).

According to the National Wetlands Inventory, there is an excavated lacustrine waterbody running the length of Key Field to the west. Additionally, there are two small emergent wetland bodies approximately 300 feet west of the AASF #3's western boundary (**Figure 1-3**) (US Fish and Wildlife Service (USFWS), 2019).

The major river system of the area, the Okatibbee River, is fed by Lake Okatibbee, a lacustrine body of about 5.5 square miles which lies 10 miles north of AASF #3. The Okatibbee River runs along the western edge of Key Field, where it is fed by Burwell Creek as well as other tributaries.

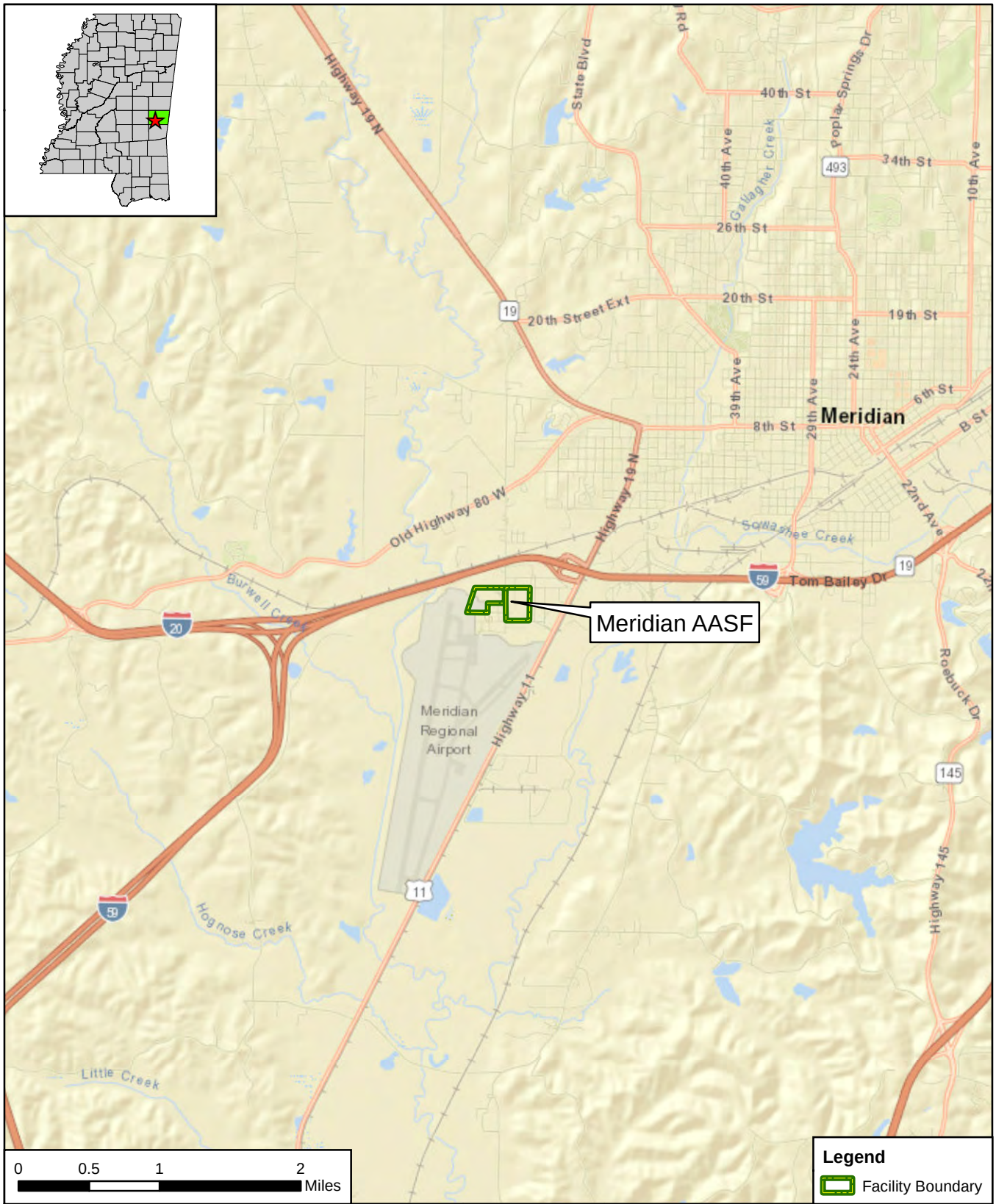
Regionally, AASF #3 lies within the Burwell Creek-Okatibbee Creek Watershed, and surface flow is primarily to the south southwest.

1.5.4 Climate

Mississippi has a hot sub-tropical climate and averages an annual 58.8 inches of precipitation, with April being the rainiest month, averaging over 7.19 inches of precipitation. Snowfall in Mississippi is rare. Summer temperatures reach an average of 81.9 degrees Fahrenheit (°F) and an average maximum of 92.5°F, with July being the hottest month. Winter months reach an average temperature of 51.0°F, and minimum temperatures reach an average low of 39.7°F, with January being the coldest month (National Oceanic and Atmospheric Administration [NOAA], 2019).

1.5.5 Current and Future Land Use

AASF #3 has a controlled access gate and is adjacent to Key Field at Meridian Regional Airport. The facility provides aviation and maintenance support primarily for helicopters. Reasonably anticipated future land use is not expected to change from the current land use.



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Base Map: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI,		PM	RG	8/24/2020

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Facility Location

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12420 Milestone Center Drive
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Figure 1-1

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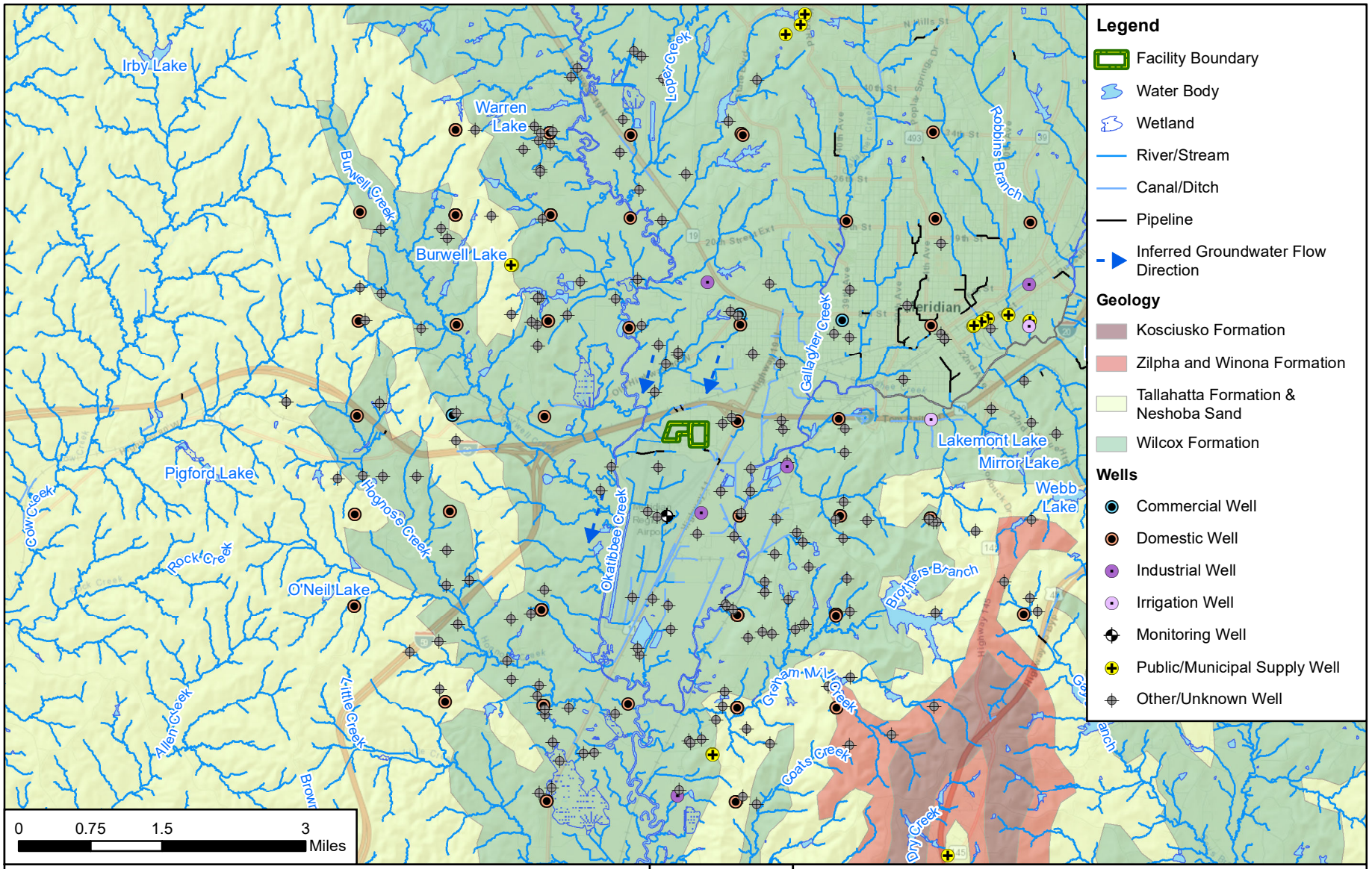

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TITLE

Groundwater Features

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Figure 1-2

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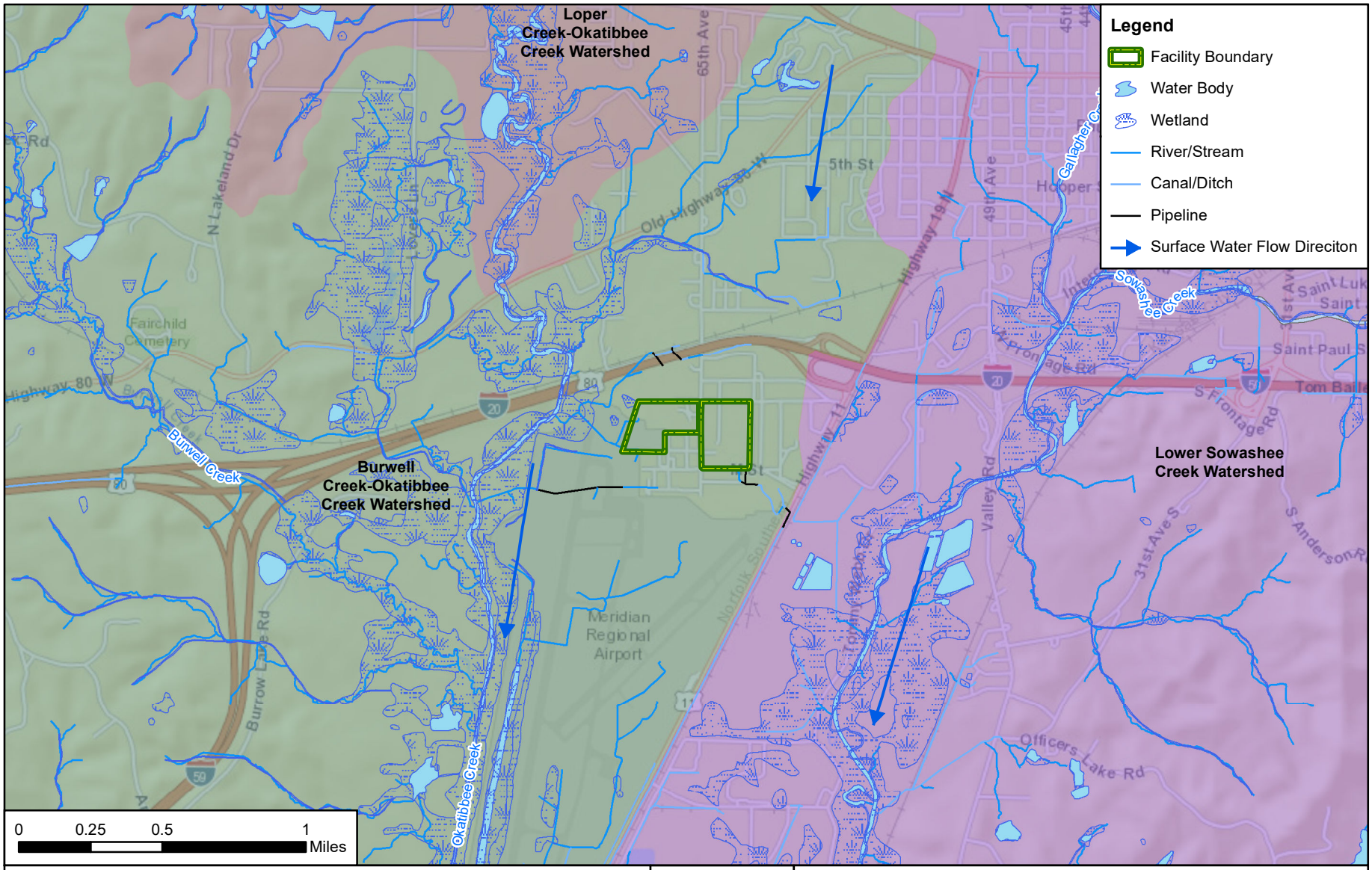

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TITLE

Surface Water Features

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Figure 1-3

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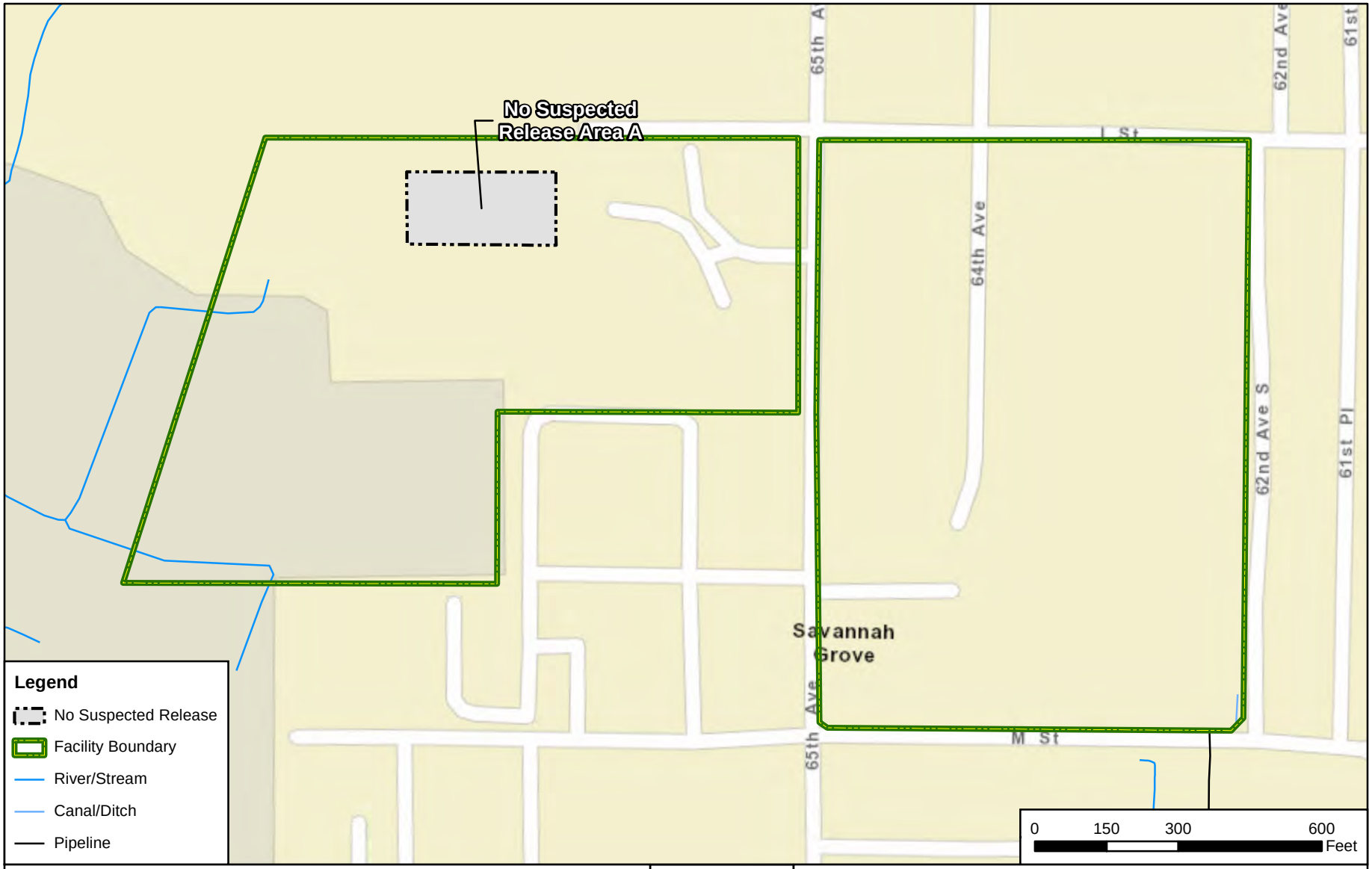
2. Fire Training Areas

While no official FTAs were identified at AASF #3 during the PA through interviews (**Appendix B**), historical document review, or the EDR™, an area of the north apron was identified as a temporary training area for MSARNG personnel.

2.1 No Suspected Release Area A – North Apron

Fire training of MSARNG personnel includes wheeled fire extinguisher unit training. Around 2000, a handful of the wheeled units were discharged to concrete at No Suspected Release Area A, on the North Apron. The exact contents of the extinguishers were not documented, but it is suspected, based on descriptions by MSARNG peronnel, that they were carbon dioxide extinguishers. According to interviews with AASF #3 personnel, the contents were described as a cold mist that left no residue. This is consistent with extinguishers filled with carbon dioxide rather than AFFF or other firefighting foams. This location has no suspected PFAS release (**Figure 2-1**).



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TITLE

Fire Training Area

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Figure 2-1

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3. Non-Fire Training Areas

In addition to FTAs, the PA evaluated areas where PFAS-containing materials may have been broadly used, stored, or disposed. This may include buildings with fire suppression systems, paint booths, AFFF storage areas, and areas of compliance demonstrations. Two non-FTAs where AFFF was stored and/or potentially released were identified during the PA. Descriptions of the non-FTAs are presented below, and the locations of the non-FTAs are shown on **Figure 3-1**. The facility currently has 5 or 6 dry chemical portable units on the aprons that are maintained by the state, according to interviewees (the specific state agency was not specified). The kitchen is equipped with a restaurant-grade fire suppression system (FSS). No fueling infrastructure is located at AASF #3; fueling is performed by an off-site fueling truck. No emergencies requiring the use of foam have occurred.

3.1 Release Area A – AFFF System Tank

The AASF #3 hangar is equipped with an AFFF suppression system. The system was installed in 2007, and initial testing was completed with water only. The system consists of an approximately 500-gallon upright tank that is located outside the hangar and connects to the pump room through the wall along the southeast corner. The location of the AFFF system tank is Release Area A. Floor drains within the pump room connect to an oil/water separator (OWS) that discharges to the sanitary sewer. The sanitary sewer discharges to the city of Meridian's Wastewater Treatment Plant (WWTP). Sometime in 2015 – 2016 the tank bladder was replaced and refilled with AFFF by an outside contractor; the replacement was described as routine. Drips and resultant corroded paint on the upright tank are visible (**Appendix C**), indicating overfilling or spillage of AFFF. The system also has dedicated water tanks on which the valves have cracked twice, once in 2007 during the installation of the system and once around 2017/2018. No release of AFFF occurred due to cracks in the water valves. Due to evidence of AFFF leaks, Release Area A is considered an area of potential PFAS release.

3.2 Release Area B – Tri-Max™ Carts

Between 2007 and 2011/2012, approximately 10 portable Tri-Max™ units were kept at AASF #3; the units were stationed on the wash rack area at Release Area B (**Figure 3-1**). It is unknown specifically what the capacity of the units was, their concentration, and whether they were serviced or refilled. According to interviewees, a contractor (unknown company) for the State of Mississippi emptied the units prior to removing them from the facility. It is unknown if the AFFF contents were disposed of at the facility or if they were containerized and disposed of off-site. If the contents were disposed of on-site, it is possible that AFFF would have been rinsed into the wash pad which drains through the OWS and subsequently discharges to the sanitary sewer. AASF #3 personnel noted that holes were drilled into the Tri-Max™ units prior to sending them to Camp Shelby for disposal. The final disposal location of the Tri-Max™ units is unknown. Due to the uncertainty of how and where the AFFF was emptied, the location of Release Area B is considered an area of potential PFAS release (**Figure 3-1**).

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Base Map: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c)		PM	RG	8/24/2020

TITLE

Non-Fire Training Area

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Figure 3-1

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4. Emergency Response Areas

No emergency response areas or incidents were identified within AASF #3 during the PA through interviews (**Appendix B**), historical document review, or the EDR™. The ANG responds to all emergency incidents at AASF #3, though it is unknown when the ANG became the primary first responders or if this has been protocol for the entire period of ARNG operation at the facility.

5. Adjacent Sources

Four potential off-facility sources of PFAS adjacent to AASF #3, not under the control of the ARNG, were identified during the PA. Based on interviews with MSARNG personnel (**Appendix B**) and historical document review, the identified adjacent areas with potential AFFF releases are outside the AASF #3 boundaries. Descriptions of the adjacent sources are presented below, and the locations of the areas are shown on **Figure 5-1**. Although the adjacent sources are generally located to the south of the facility, hydraulically downgradient, localized variations in groundwater flow direction may occur. Because Key Field ANG Base immediately abuts the southern border of the facility, it is unknown if variations in local groundwater flow could result in adjacent releases migrating to the facility.

5.1 Meridian Wastewater Treatment Plant (WWTP)

The Meridian WWTP is located approximately 0.75 miles southeast of AASF #3. Although no use of AFFF at the WWTP has been identified, WWTPs can be sources of PFAS. The OWSs at both Key Field ANG Base, discussed in **Section 5.3** below, and the AASF #3 connect to the sanitary sewer system that discharges to the Meridian WWTP. Due to releases from the ANG Base and potential releases from AASF #3, the WWTP is an adjacent source of PFAS.

5.2 Key Field Airport

Key Field Airport, also known as MRA, is a functional joint-use (civilian/military) airfield. AFFF use at the airport is unknown and is therefore considered a potential adjacent source of PFAS.

5.3 Key Field ANG Base AFFF Releases

The Mississippi ANG owns and operates a base at Key Field immediately south of AASF #3; AFFF releases have been documented at the ANG Base. The ANG performed an SI in 2019 and identified seven sites where PFAS constituents exceeded screening criteria (Leidos, 2019). Groundwater samples collected from areas immediately adjacent to the southern boundary of AASF #3 were determined to contain high levels of PFAS. Key Field ANG Base is shown on **Figure 5-1,** and summary information from the 2019 SI is provided in **Table 5-1**:

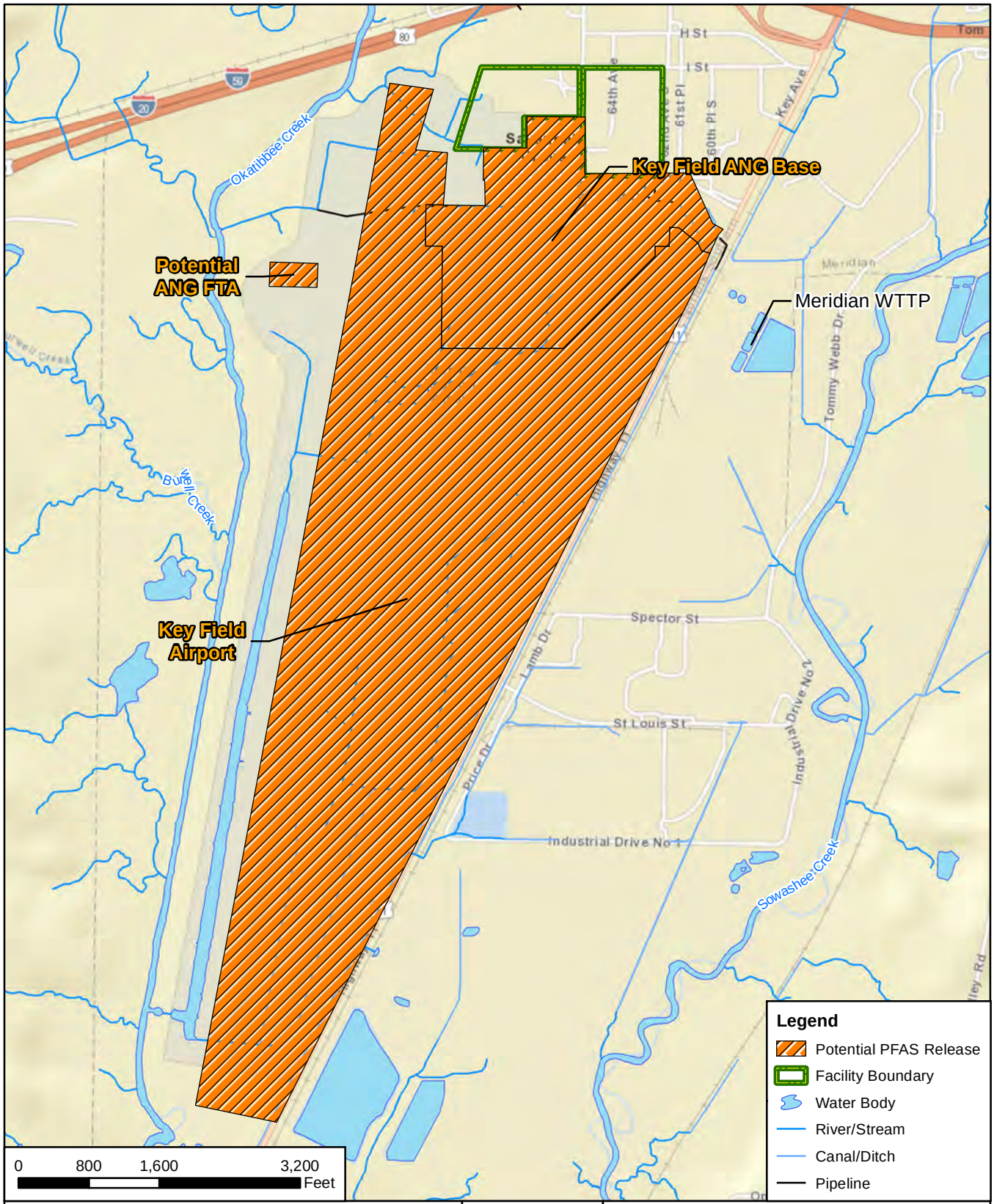
Table 5-1 Potential PFAS Sources at Key Field ANG Base

Site	Description
Hangar 150	In 2002, a ruptured pipe in the FSS caused a discharge of 2,400 gallons of AFFF in the hangar. AFFF was washed into the OWS and a grassy area southeast of the hangar. Foam was reported to enter both the sanitary sewer and stormwater systems. AFFF traveled through Outfall 002 and to a drainage ditch leading to Okatibbee Creek). PFOS and PFOA were detected in both surface and subsurface soil samples at this release area. Combined PFOS and PFOA concentrations exceeded the HA in groundwater.
Hangar 160	The AFFF FSS was activated in 2013 for routine testing and released 180 gallons of AFFF. The AFFF was discharged to the OWS for the hangar, and there was no suspected release to the environment surrounding the hangar.

	PFOS and PFOA were detected in surface and subsurface soil samples. The combined PFOS and PFOA concentrations in groundwater were found to be equal to the HA.
Building 155 – Fire Station	As of January 2019, the fire station houses seven vehicles containing AFFF and an AFFF trailer. The vehicles were filled with AFFF in the fire station's bay using either 5-gallon buckets or a hose from the AFFF trailer. Soil was not sampled at this release area because it is surrounded by concrete. Groundwater was sampled from a co-located well also used for the Former AFFF Spray Test Area. Groundwater results show PFOS and PFOA at this location exceeded the HA.
Building 104 – Former Fuel Cell Maintenance	Building 104 previously had an AFFF FSS. The installation date is unknown, but the system was retrofitted with a water deluge system in 1992. PFOS and PFOA were detected in surface and subsurface soil at this release area. Combined PFOS and PFOA concentrations were found to exceed the HA in groundwater.
Former AFFF Spray Test Area	Annual AFFF spray system tests were conducted at this location until 2014, expending approximately 5-10 gallons of AFFF per firetruck and AFFF trailer. The year testing started and total amount of AFFF released are unknown. Runoff from the spray test area drains to the west, and the storm water drainage pathway from the spray test area leads to a flood control ditch. The ditch flows to the adjacent flood control levee and then to Okatibbee Creek. AFFF expended in spray tests was left to dissipate on pavement or washed into the surrounding grassy areas. At this release area, PFOS and PFOA were detected in both surface and subsurface soil. PFOS and PFOA, individually and combined, exceeded the HA. Groundwater was sampled from a co-located well used for both this release area and Building 155. Groundwater results show PFOS and PFOA at this location exceed the HA.
Aircraft Parking Apron	The aircraft parking apron was identified because two catch basins in the grassy areas on the west end of the apron are downgradient of potential release areas Hangar 160 and Building 155. PFOS and PFOA were detected in surface and subsurface soil at this release area. PFOS and PFOA both exceeded the HA in groundwater samples.
Stormwater Outfall 002	The outfall is not within Key Field boundaries, but it is located where many AFFF releases would have been routed, including the release in Hangar 150. The ANG outfall is located south (downgradient) of the AASF #3 stormwater outfalls; however, it is unknown if the outfalls are interconnected. In the surface water sample at this release area, PFOS and PFOA exceeded the HA. Soil and groundwater samples were not taken at this location, but sampling results at Key Field may indicate that PFOS and PFOA are present beyond the ANG Base boundary.

5.4 Potential ANG FTA

AASF #3 interviewees recalled an ANG FTA on the western side of Key Field used for mock crashes in the mid-1990s. The mock crashes were set on fire and extinguished; it is unknown if AFFF were used as the fire suppressant. This FTA is likely the location of three former FTAs documented in the 2016 ANG PA that included mock crash FTAs. The location for the potential ANG FTA, which AASF #3 personnel indicated on a map, correlates with the location of the three FTAs in the ANG PA, located on the western side of Key Field. The FTAs were reported to have been active between 1960 and 1989 within the ANG PA. There is no documentation or recollection of AFFF being used at these locations. However, due to Air Force use of AFFF beginning in 1970, there is a possibility that PFAS were released at this location (HydroGeoLogic, 2016).



CLIENT	ARNG			
PROJECT	Preliminary Assessment for PFAS at Meridian AASF, MS			
REVISED	7/14/2020	GIS BY	MS	7/14/2020
SCALE	1:19,200	CHK BY	LC	7/14/2020
Base Map: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI,		PM	RG	7/14/2020

Adjacent Sources

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Figure 5-1

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6. Preliminary Conceptual Site Model

Based on the PA findings, two potential release areas were designated as AOIs. The AOIs are shown on **Figure 6-1**. The following sections describe the CSM components and the specific preliminary CSMs developed for the AOIs. The CSM identifies the three components necessary for a potentially complete exposure pathway: (1) source, (2) pathway, and (3) receptor. If any of these elements are missing, the pathway is considered incomplete.

In general, the potential PFAS exposure pathways are ingestion and inhalation. Human exposure via the dermal contact pathway may occur, and current risk practice suggests it is an insignificant pathway compared to ingestion; however, exposure data for dermal pathways are sparse and continue to be the subject of PFAS toxicological study. Receptors at Meridian AASF #3 include site workers, construction workers, and residents and recreators outside the facility boundary. The preliminary CSMs for the AOIs indicate which specific receptors could potentially be exposed to PFAS and are shown on **Figure 6-2**.

6.1 AOI 1 Release Area A – AFFF System Tank

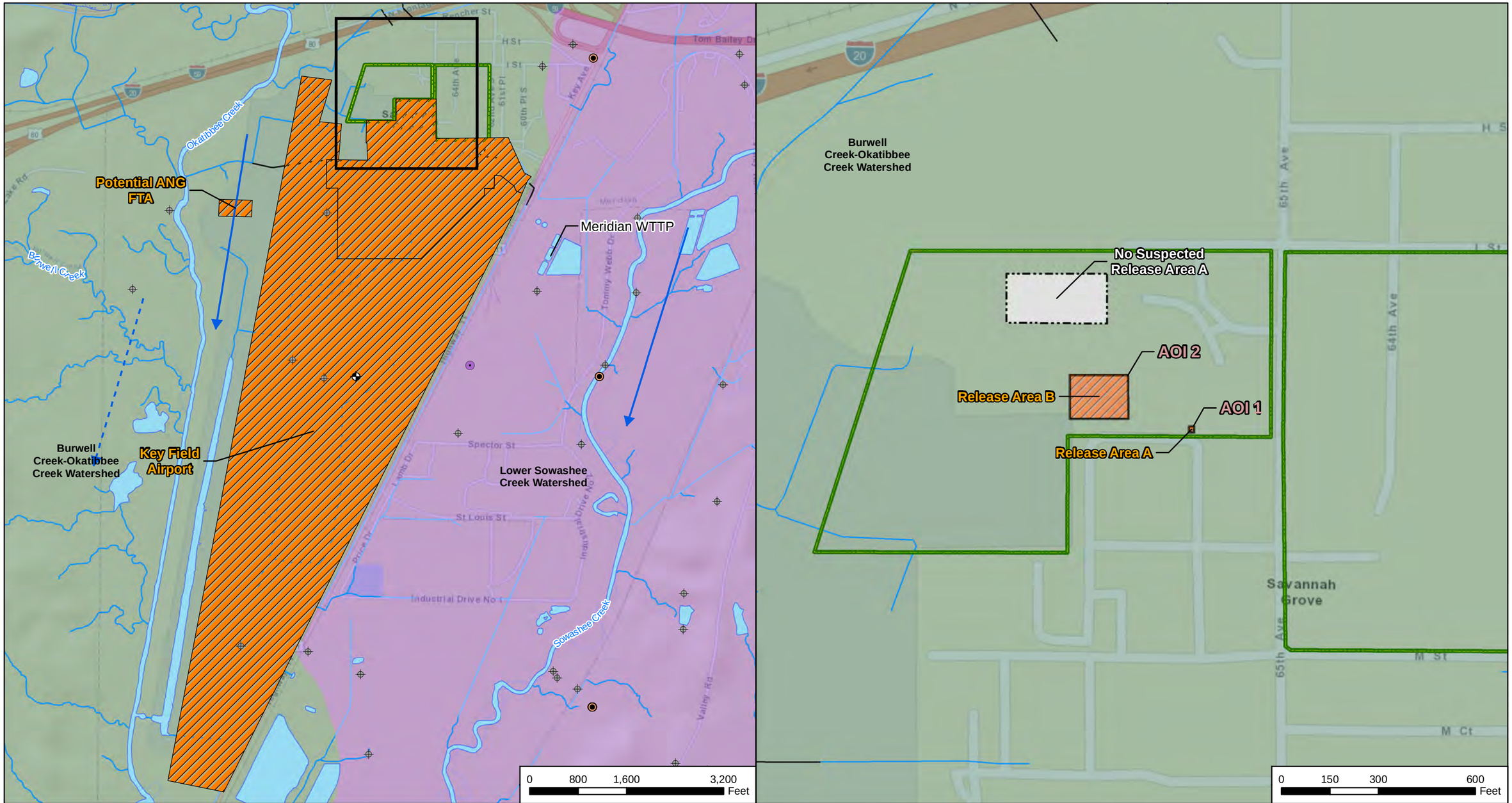
AOI 1 encompasses Release Area A (**Figure 6-1**). The AASF #3 hangar is equipped with an AFFF FSS. The system is supplied by an approximately 500-gallon upright tank located on the southeast corner of the hangar. Since the system was installed in 2007, it has not been activated; however, the bladder reportedly was replaced approximately 2015 – 2016. Evidence of leaked/spilled AFFF is visible on the outside of the tank (**Appendix C**). The volume of AFFF released to the ground underneath the tank is unknown. Due to evidence of AFFF release from the tank, this area has been designated as an AOI.

If a release of foam occurred in this area, it could have migrated via surface water pathways. The storm drains flow off-facility to Okatibbee Creek. PFAS following this path would create a potentially complete pathway for surface water and sediment ingestion for site workers, construction workers, trespassers, and downstream off-facility residents and recreators of Okatibbee Creek.

If the AFFF entered surface soil in the area of the AFFF System Tank as a result of spills, as photographs of corrosion on the tank support (**Appendix C**), there is the potential for PFAS to infiltrate further into subsurface soil and groundwater. PFAS entering surface soil would result in a potentially complete ingestion and inhalation pathway for surface soil to site workers and construction workers; subsurface soil for the construction worker; and groundwater for construction workers and off-facility residents with downgradient domestic water wells. Because access to the facility is controlled, trespasser exposure is considered incomplete.

6.2 AOI 2 Release Area B – Tri-Max™ Carts

AOI 2 is the location of Release Area B, where Tri-Max™ carts were stored (**Figure 6-1**). The fate of AFFF in the extinguishers, whether they were emptied in a way that AFFF was captured or if they were emptied into the area of the wash pad for it to disperse, is unknown. Had AFFF been emptied in the area of the wash pad, the potential release pathways for AFFF would be identical to the pathways described above in **Section 6.1**. AFFF may have drained through the wash pad to the OWS and subsequently to the Meridian WWTP via the sanitary sewer. Stormwater drains are located adjacent to the wash pad, any wash water or stormwater that is not captured by wash pad drains could carry PFAS via the storm drains off-facility to Okatibbee Creek.



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PROJECT	Preliminary Assessment for PFAS at Meridian AASF, MS			
REVISED	7/14/2020	GIS BY	MS	7/14/2020
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Base Map: National Agricultural Imagery Program, 2017. Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong),		PM	RG	7/14/2020

Legend

- Potential PFAS Release
- No Suspected Release
- Facility Boundary
- Water Body
- Wetland
- River/Stream
- Canal/Ditch
- Pipeline
- Surface Water Flow Direciton
- Inferred Groundwater Flow Direction

Wells

- Domestic Well
- Industrial Well
- Monitoring Well
- Other/Unknown Well

N

Area of Interest

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Figure 6-1

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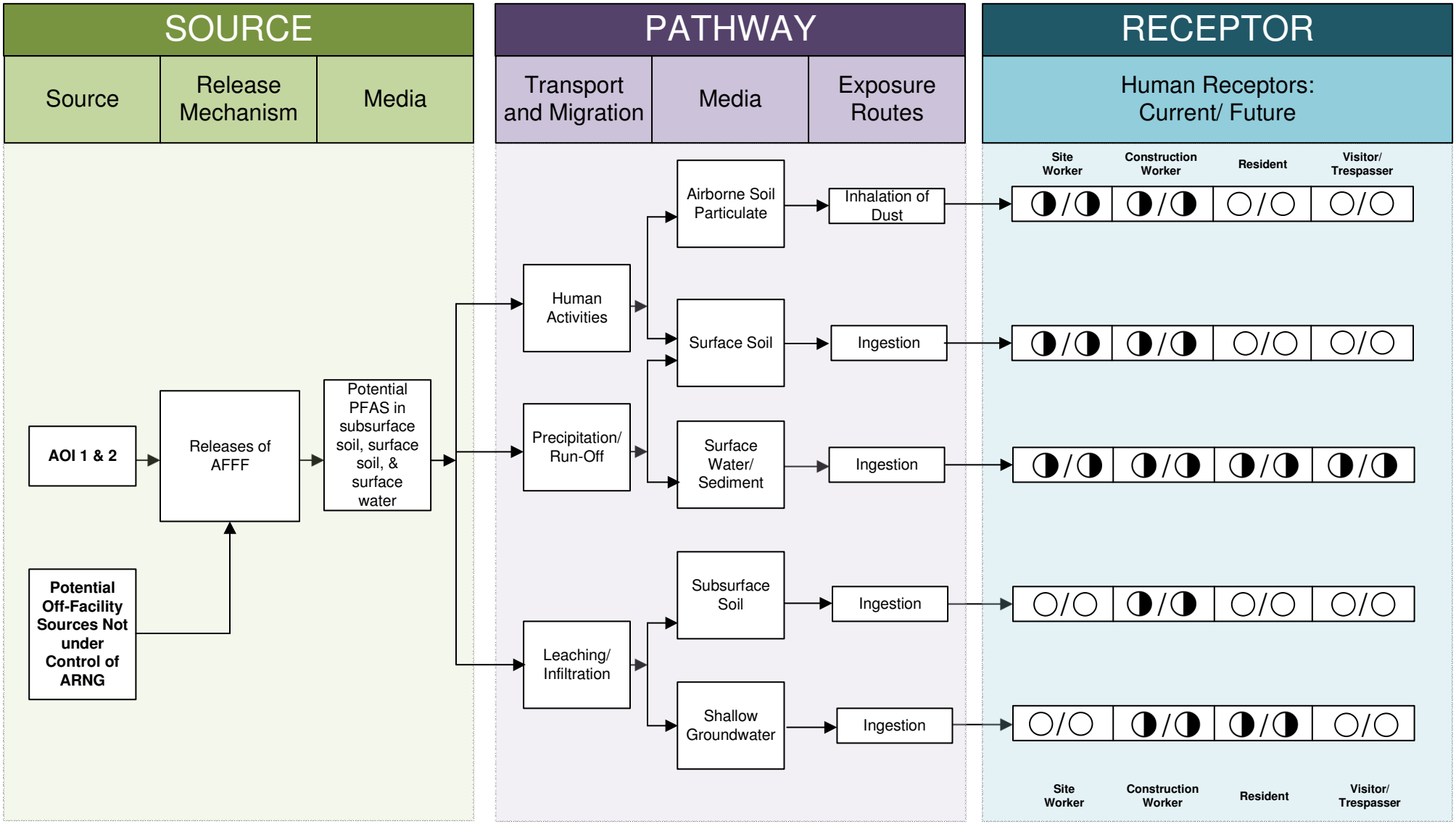


LEGEND

- Flow-Chart Stops
- Flow-Chart Continues
- Partial / Possible Flow
- Incomplete Pathway
- Potentially Complete Pathway
- Complete Pathway

Notes:

1. The resident and recreator receptors refer to an off-site receptor.
2. Dermal contact exposure pathway is incomplete for PFAS.

Figure 6-2
Preliminary Conceptual Site Model
Meridian AASF

7. Conclusions

This report presents a summary of available information gathered during the PA on the potential use, storage, or release of AFFF and other PFAS-related activities at AASF #3. The PA findings are based on the information presented in **Appendix A** and **Appendix B**.

7.1 Findings

Two AOIs related to potential PFAS releases (**Table7-**1) were identified at AASF #3 during the PA through interviews with facility personnel (**Figure 7-**1).

Table 7-1 AOIs at AASF #3

Area of Interest	Name	Used by	Potential Release Dates
AOI 1	Release Area A	AASF Personnel	2015/2016
AOI 2	Release Area B	AASF Personnel / State Contractors	2007-2012

Based on potential PFAS release at the AOIs, there is potential for exposure to PFAS contamination in media at or near the facility. The preliminary CSM for AASF #3, which presents the potential receptors and media impacted, is shown on **Figure 6-2**.

There are four potential adjacent sources of PFAS near AASF #3. Due to the proximity and history of AFFF release at the adjacent ANG facility, it is considered a potential adjacent source. The SI for the adjacent ANG Base showed PFAS exceeding the HA in groundwater immediately south of AASF #3. The Meridian WWTP to the southeast, a potential ANG FTA to the southwest, and Key Field Airport to the south are also potential adjacent sources of PFAS. Though the adjacent sources are downgradient of the facility, they are considered potential adjacent sources of PFAS due to their proximity and potential for contamination to AASF #3.

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 based on all available information, including: previous environmental reports, EDRs™, observations made during the VSI, and interviews. Interviews with personnel with direct knowledge of a facility generally provided the most useful insights regarding a facility's historical and current PFAS-containing materials. 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. The uncertainties associated with the PA are summarized in **Table 7-1**.

Table 7-2: Uncertainties

Area of Interest	Source of Uncertainty
AOI 1: Release Area A – AFFF System Tank	The amount of AFFF released and exact timeframe of the leak are unknown.
AOI 2: Release Area B – Tri-Max™ Carts	It is unknown if the AFFF contents of the Tri-Max™ Carts were disposed of at the facility or if they were containerized and disposed of off-site.
General	A data gap exists between 1979, when the facility was established, and 1988. Firsthand knowledge of activities that occurred at AASF #3 dates back to 1988. It is unknown if the stormwater outfalls between the facility and the ANG Base are connected prior to discharging to Okatibbee Creek.

7.3 Potential Future Actions

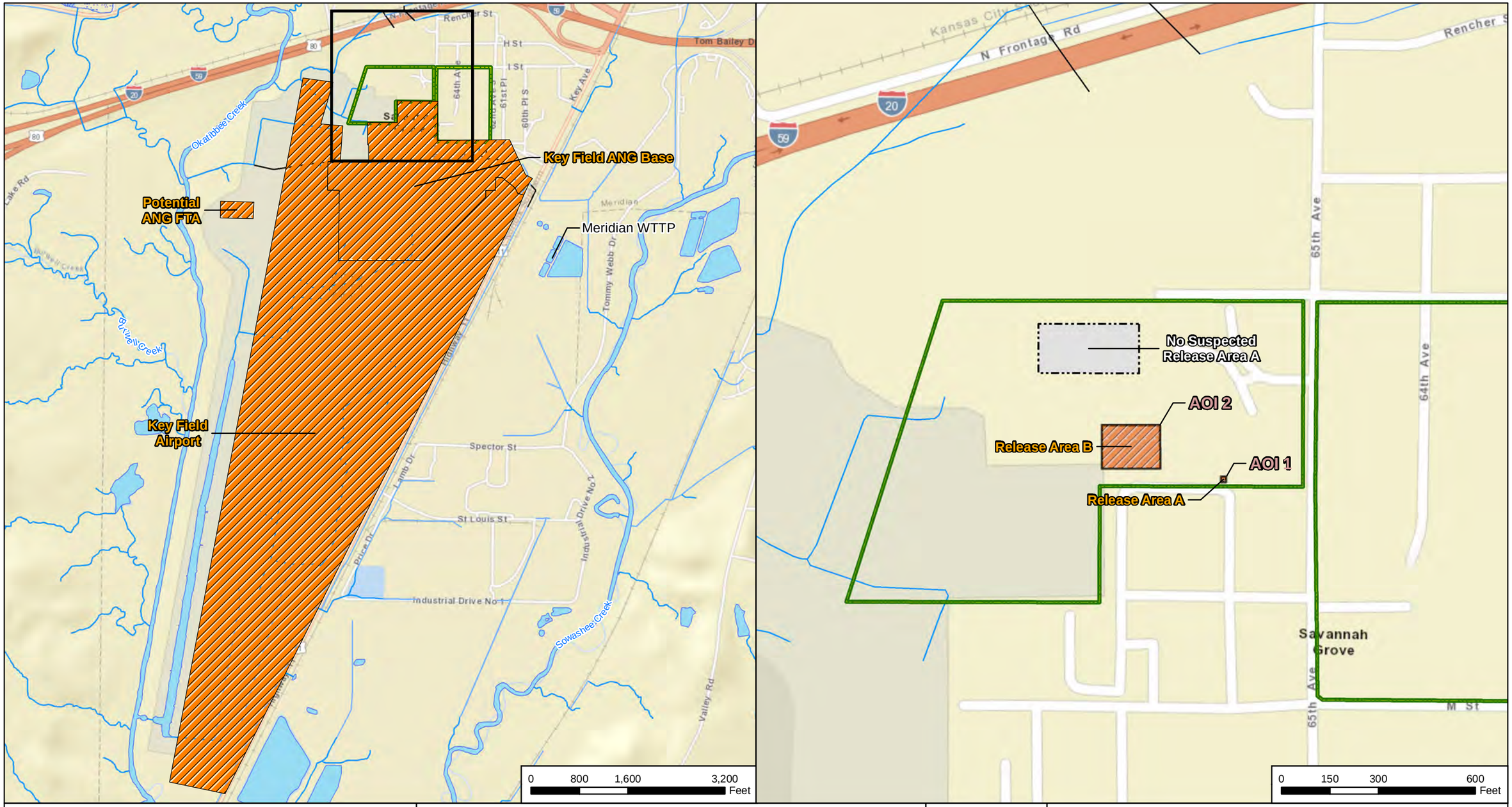
Based on the absence (1988-present) of the release of PFAS-containing materials on the North Apron (No Suspected Release Area A), evidence does not indicate that current or former MSARNG activities in this area contributed to PFAS contamination in media at or near the facility. This area will not move forward in the CERCLA process.

Interviews and physical evidence indicate PFAS may have been introduced into the environment, thus, there is a potential for receptors to be exposed to PFAS as shown in the Preliminary CSM in **Section 6**. **Table 7-4** summarizes the rationale used to determine if the AOIs should be considered for further investigation under the CERCLA process and undergo an SI.

ARNG will evaluate the need for an SI at Meridian AASF #3 based on the potential receptors, the potential migration of PFAS contamination off the facility, and the availability of resources.

Table 7-3: PA Findings Summary

Area of Interest	Rationale	Potential Future Action
AOI 1 Release Area A	The AFFF System Tank has evidence of an AFFF leak on the outside of the tank.	Proceed to an SI, focus on soil, surface water, sediment, and groundwater
AOI 2 Release Area B	There is a possibility AFFF from demilled Tri-Max™ Carts was released at this location.	Proceed to an SI, focus on soil, surface water, sediment, and groundwater



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PROJECT	Preliminary Assessment for PFAS at Meridian AASF, MS			
REVISED	7/14/2020	GIS BY	MS	7/14/2020
SCALE	1:3,600	CHK BY	LC	7/14/2020
Base Map: National Agricultural Imagery Program, 2017. Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong),		PM	RG	7/14/2020

Legend

- Area of Interest
- Potential PFAS Release
- No Suspected Release
- Facility Boundary
- Water Body
- Wetland
- River/Stream
- Canal/Ditch
- Pipeline

N

Summary of Findings

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Figure 7-1

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Appendix A
Data Resources

Data resources will be provided separately on CD. Data resources for Meridian AASF #3 include:

Meridian AASF #3 Site Background Documents

- 2017 Meridian Storm Water Pollution Prevention Plan, Volume 2, 1 March 2017
- 2014 Geologic Map of the Meridian South Quadrangle
- 2011 Meridian Spill Prevention, Control, and Countermeasure Plan and Spill Contingency Plan, August 2011

Previous Investigations Completed

- 2019 The EDR Radius Map™ Report with GeoCheck®; Aerial Photo Decade Package; & Certified Sanborn Map Report; Target Property Jackson AASF, 365 Shop Street, Jackson, MS 46176.
- 2017 Jackson AASF Storm Water Pollution Prevention Plan (SWPPP), Volumes I & II
- 1972 Amendment to Lease Agreement, Jackson Municipal Airport Authority

Meridian AASF #3 Site Property Documents

- 2011 Meridian Lease Document, 12 August 2011

Appendix B
Preliminary Assessment Documentation

Appendix B.1
Interview Records

From: [redacted]
Sent: Saturday, May 30, 2020 8:49 AM
To: [redacted]
Subject: [EXTERNAL] RE: [Non-DoD Source] ARNG PFAS: Meridian AASF - TriMax Units (UNCLASSIFIED)

Sir,

The AFFF tanks were removed from our facility and demilled and disposed of elsewhere. That is all that I know about them. Please let me know if you need further assistance

Thanks

[redacted]

From: [redacted]
Sent: Friday, May 29, 2020 9:57 AM
To: [redacted]
Cc: [redacted]
Subject: RE: [Non-DoD Source] ARNG PFAS: Meridian AASF - TriMax Units (UNCLASSIFIED)

Hello [redacted],

I'm assisting my colleague, [redacted] with the completion of the Meridian AASF PFAS PA Report. So, first of all, thank you for your continued support and for the information you provided below. We just have a few more questions:

- Do you/the personnel who de-milled the tanks recall how the state contractor emptied the AFFF from the units? Was the AFFF emptied into a tote or frac tank and taken away for disposal or were they emptied to the ground or a drain?
- Where was the De-milling performed at the facility?

If you can provide answers to these questions, or simply let us know that the answers to the questions are unknown/undocumented, we should have sufficient information to complete our report.

Thanks again [redacted]. We look forward to hearing back from you.

[redacted]

[redacted]

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From: [redacted]
< [redacted] > >
Sent: Monday, March 02, 2020 1:26 PM
To: [redacted] > >
Subject: RE: [Non-DoD Source] ARNG PFAS: Meridian AASF - TriMax Units (UNCLASSIFIED)

CLASSIFICATION: UNCLASSIFIED

[redacted],

Sorry for the delay but I did talk to the guys that DE milled those tanks for turn in. It was done here and both of the guys that did it said that someone from the state came and emptied them for them prior to them being de milled. However they did not have a point of contact of which company it was . Again sorry for the delay but at least now we have an answer. If you have any more questions for me feel free to email or call me

Thanks
[redacted]

From: [redacted] > >
Sent: Friday, February 28, 2020 9:12 AM
To: [redacted]
Cc: [redacted]
> >
Subject: [Non-DoD Source] ARNG PFAS: Meridian AASF - TriMax Units

Good morning [redacted],

Thank you again for speaking with us on Tuesday. As a follow up, were you able to speak with other personnel to determine if, how, and where the former TriMax units were emptied at the AASF prior to turning them in?

Have a good weekend,
[redacted]

[redacted]

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PA Interview Questionnaire - Other

Facility: AASF #3 Meridian, MS
Interviewer: [redacted]
Date/Time: 8 March 2019 @ 0800

Interviewee: See Below **Title:** **Phone Number:** **Email:**	Can your name/role be used in the PA Report? **Y** or N Can you recommend anyone we can interview? **Y** or N

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

[redacted], Production Control, Alternate Environmental Compliance Officer, 11 years

[redacted], Backshop and Building Maintenance Supervisor, 24 years

[redacted], Grounds Maintenance, 31 years

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?

Facility Background: Established in 1979, Support facility, B Company 111th, chinooks only. State Troops come in for classroom and simulation training. Prior to 1979, Key Field airport was used as a WWII base.

No official Fire Training Areas. Training of the 111th includes fire extinguisher training with wheeled units. No foam expended. In approximately 2000 a couple of the wheeled units were discharged to the concrete of the North Apron. The contents were described as a "mist" that was cold and left no residue on the concrete. The expended units were most likely CO_2 extinguishers.

Hangar has an AFFF suppression system consisting of an approximate 500-gallon upright tank that is located outside of the hangar along the southeastern corner. The system was installed in 2007 (tank is date stamped). Initial testing of the system was with water only, no foam was used during the test. Approximately 3-4 years ago, the bladder in the tank was replaced by an outside contractor and the tank refilled with AFFF. The replacement was described as routine. Drips from tank overfill or spillage are present on the outside of the AFFF storage tank (see photos). The paint on the exterior of the tank appears corroded where the drips are. The pump room is located inside the hangar building, floor drains within the room drain to the OWS and subsequently to the sanitary sewer. No leaks observed in the pump room during site visit. System has dedicated water tanks. The water valve has cracked and leaked water twice but only water was released – once right after it was installed in in 2007 and once around 2017/2018.

No emergencies requiring the use of foam have occurred.

Known Uses
Use
Procurement
Disposition
Storage (Mixed)
Storage (Solution)
Inventory, Off-Spec
Containment
SOP on Filling
Leaking Vehicles
Nozzle and Suppression System Testing
Dining Facilities
Vehicle Washing
Ramp Washing
Fuel Spill Washing and Fueling Stations
Chrome Plating or Waterproofing

PA Interview Questionnaire - Other

Facility: AASF #3 Meridian, MS
Interviewer: [redacted]
Date/Time: 8 March 2019 @ 0800

There is no bulk storage of AFFF at the facility. No fire trucks were ever stationed at the facility. Air Guard provides emergency response for the facility. Fire training at the AASF is practical in nature regarding facility and equipment/vehicle operations. Interviewees did not recall ANG spraying any suppressants during such training.

The facility currently has approximately 5-6 portable units that are stored outside on the apron. The units observed during the site visit were dry chemical. Portable units are maintained by the State (*direct follow up questions to* [redacted] *via separate interview*).

Between 2007 and 2011/2012, approximately 10 portable Trimax units were at the facility. Interviewees recalled they were bright green in color. Capacity, concentration, and whether they were serviced or refilled was unknown. Interviewees said that holes were drilled into the canisters to empty prior to turning into USFPO warehouse at Camp Shelby. *Ask* [redacted] *(Maintenance Supervisor) about details on this event: where emptied, how much, concentration, etc.*

No fueling operations are present on the facility. A fueling truck comes in to fuel on the pad.

Kitchen has restaurant grade suppression system over stove (photo).

ANG base immediately south of ARNG AASF has known AFFF releases. ANG conducting own PA/SI. ARNG interviewees pointed out an additional ANG FTA potentially not mentioned in the ANG PA. In the mid-1990s, interviewees recalled an ANG FTA on the western side of the runways – saw mock crashes set on fire and put out, unknown if AFFF or what suppressant was used. Recalled ARNG landing a helicopter in that area and how difficult it was because there is metal sticking out of the ground.

Tank farm (private) located immediately north of the facility. Interviewees have never seen a fire truck in that area. No fire suppression systems observed from afar.

Use of AFFF at the commercial hangars at Key Field airport is unknown.

Drinking water is supplied by the City of Meridian (likely from the Okatibee Reservoir).

City WWTP is located immediately east of the airport.

Appendix B.2
Visual Site Inspection Checklists

Visual Site Inspection Checklist

Names(s) of people performing VSI: [redacted]

Recorded by: [redacted]

ARNG Contact: [redacted]

Date and Time: ***March 8, 2019 0800***

Method of visit (walking, driving, adjacent): ***Walking***

Source/Release Information

Site Name / Area Name / Unique ID: ***AASF#3 Meridian,***

Site / Area Acreage: ***3.5 acres***

Historic Site Use (Brief Description): Estabilshed in 1979 as a support facility

Current Site Use (Brief Description): Houses the B Company 111th and provides aviation and maintenance support primarily for helicopters.

Physical barriers or access restrictions: Access Resticted with controlled access gate.

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

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

AFFF FSS present on site. Outdoor AFFF tank shows signs of dripped/spilled AFFF on outside of the tank. Historical TriMax units may have been demilled onsite, disposition of AFFF contents unknown.

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

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

No formal documentation of AFFF FSS bladder replacement.

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

3a. Indicate what businesses are located near the site

Adjacent Key Field airport, ANG Base, and WWTP

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

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

AASF located on northern portion of the airport. Othere tenets unknown except for ANG Base.

Visual Survey Inspection Log

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:

AFFF FSS in hangar, external AFFF tank with dedicated water tanks. Type of AFFF unknown

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

AFFF tank bladder replaced approx. 2015/2016 by outside contractor. No documentation available.

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

AFFF replaced when bladder was replaced.

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

Lead to OWS and subsequently the sanitary sewer.

Transport / Pathway Information

Migration Potential:

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

1a. If so, note observation and location:

surface flow is across the site to the west, towards Okatibbee Creek

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

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

facility is predominantly paved with storm water flow to the west to the creek

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

3a. If so, please note the location:

Facility drinking water sourced from the City of Meridian. Several unknown well types downgradient of the facility, a few domestic wells approx. 3 miles downgradient

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

4a. If so, please note the location:

5. Can wind dispersion information be obtained? Y / **N**

5a. If so, please note and observe the location.

6. Does an adjacent non-ARNG PFAS source exist? **Y / N**

6a. If so, please note the source and location.

ANG Base at Key Field along southern border of the AASF. ANG Base has documented AFFF releases.

6b. Will off-site reconnaissance be conducted? Y / **N**

Visual Survey Inspection Log

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:

facility is mostly paved with patches of grass between paved areas

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

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

patches of unvegetated ground, little erosional evidence

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:

Receptor Information

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

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

Access restricted by controlled access gate

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:

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:

two small emergent wetlands near the western boundary of the facility

Visual Survey Inspection Log

Additional Notes

Photographic Log

Photo ID/Name	Date & Location	Photograph Description

Appendix B.3
Conceptual Site Model Information

Preliminary Assessment – Conceptual Site Model Information

Site Name: Meridian AASF #3, Mississippi

Why has this location been identified as a site?
Facility is an AASF. AFFF FSS on site, TriMax units historically present

Are there any other activities nearby that could also impact this location?
AASF located on Key Airfield. Air National Guard Base located immediately south of AASF

Training Events

Have any training events with AFFF occurred at this site? *Not with AFFF*

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 west via storm drain system*

Average rainfall? *58.8 inches annually*

Any flooding during rainy season? *Unknown*

Direct or indirect pathway to ditches? *Storm drain outfalls to the west*

Direct or indirect pathway to larger bodies of water? *storm drains lead to Okatibbee Creek*

Does surface water pond any place on site? *No*

Any impoundment areas or retention ponds? *No*

Any NPDES location points near the site? *3 Outfalls located along the western boundary and northwest corner of the AASF*

How does surface water drain on and around the flight line? *Stormwater drains*

Preliminary Assessment – Conceptual Site Model Information

Groundwater:

Groundwater flow direction? *Approximately south/southwest. Local differences in flow may trend more west.*

Depth to groundwater? *15-27 ft bgs*

Uses (agricultural, drinking water, irrigation)? *Downgradient domestic approx. 3 miles away*

Any groundwater treatment systems? *No*

Any groundwater monitoring well locations near the site? *Not on facility, some monitoring wells on ANG Base and Key Field*

Is groundwater used for drinking water? *No*

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 approx. 3 miles downgradient to the south*

Waste Water Treatment Plant:

Has the installation ever had a WWTP, past or present? *No, Meridian WWTP (municipal) located to the east across highway*

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? *No*

Equipment Rinse Water

1. Is firefighting equipment washed? Where does the rinse water go? *No*

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?

Preliminary Assessment – Conceptual Site Model Information

Identify Potential Receptors:

Site Worker *Yes*

Construction Worker *Yes*

Recreational User *Yes – off site*

Residential *Yes – off site*

Child *Yes – off site*

Ecological *Yes*

Note what is located near by the site (e.g. daycare, schools, hospitals, churches, agricultural, livestock)?
Surrounding area is predominantly industrial/commercial

Documentation

Ask for Engineering drawings (if applicable).

Has there been a reconstruction or changes to the drainage system? When did that occur? *No*

Appendix C
Photographic Log

APPENDIX C – Photographic Log

Army National Guard, Preliminary Assessment for PFAS	Meridian AASF	Meridian, Mississippi

Photograph No. 1

Description:

Non-AFFF restaurant-grade fire suppression system above stove in the AASF kitchen.

Photograph No. 2

Description:

Close-up of the cooking range suppression system details.

APPENDIX C – Photographic Log

Army National Guard, Preliminary Assessment for PFAS	Meridian AASF	Meridian, Mississippi

Photograph No. 3

Description:

Image of portable dry chemical fire extinguisher located on the flight apron and a close-up of its details.

Photograph No. 4

Description:

Tag from water sprinkler system inspection.

APPENDIX C – Photographic Log

Army National Guard, Preliminary Assessment for PFAS	Meridian AASF	Meridian, Mississippi

Photograph No. 5

Description:

AFFF deluge system control room (left) and image of outdoor AFFF tank with evidence of AFFF drips/spill.

Photograph No. 6

Description:

Rust on AFFF tank, indicating potential spills (left), and staining on ground below AFFF tank water valve (right).

APPENDIX C – Photographic Log

Army National Guard, Preliminary Assessment for PFAS	Meridian AASF	Meridian, Mississippi

Photograph No. 7

Description

AFFF tank with evidence of spills (left), AFFF tank certification information (right).