Final
Preliminary Assessment Report
Tupelo Army Aviation Support Facility No. 2,
Tupelo, Mississippi

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

July 2020

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Acronyms and Abbreviations

°F	degrees Fahrenheit
AASF	Army Aviation Support Facility
AECOM	AECOM Technical Services, Inc.
AFFF	aqueous film forming foam
AOI	Area of Interest
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.™
FTA	fire training area
HA	USEPA lifetime Drinking Water Health Advisory
MDEQ	Mississippi Department of Environmental Quality
MSARNG	Mississippi Army National Guard
NFPA	National Fire Protection Association
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 Inpsection

Executive Summary

The United States (US) Army Corps of Engineers (USACE) Baltimore District on behalf of the Army National Guard (ARNG) G9 contracted AECOM Technical Services, Inc. (AECOM) to perform *Preliminary Assessments (PAs) and Site Inspections (SIs) 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 polyfluoroalkyl 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 current Army Aviation Support Facility (AASF) No. 2 (also referred to as the "facility") in Tupelo, Mississippi, to assess potential PFAS release areas and exposure pathways to receptors. The current AASF was constructed in 2011 on a two parcel, 38.9-acre area of land leased from the Tupelo Airport Authority by the State of Mississippi in 2007. The performance of this PA included the following tasks:

- Reviewed data resources to obtain information relevant to suspected PFAS releases;
- Conducted a site visit on 5 March 2019;
- Interviewed current Tupelo AASF Mississippi ARNG (MSARNG) and Tupelo Regional Airport personnel during the site visit;
- Completed visual site inspections at known or suspected PFAS release locations and documented with photographs;
- Developed a preliminary conceptual site model (CSM) to outline the potential release and pathway of PFAS for the Area(s) of Interest (AOIs) and the facility.

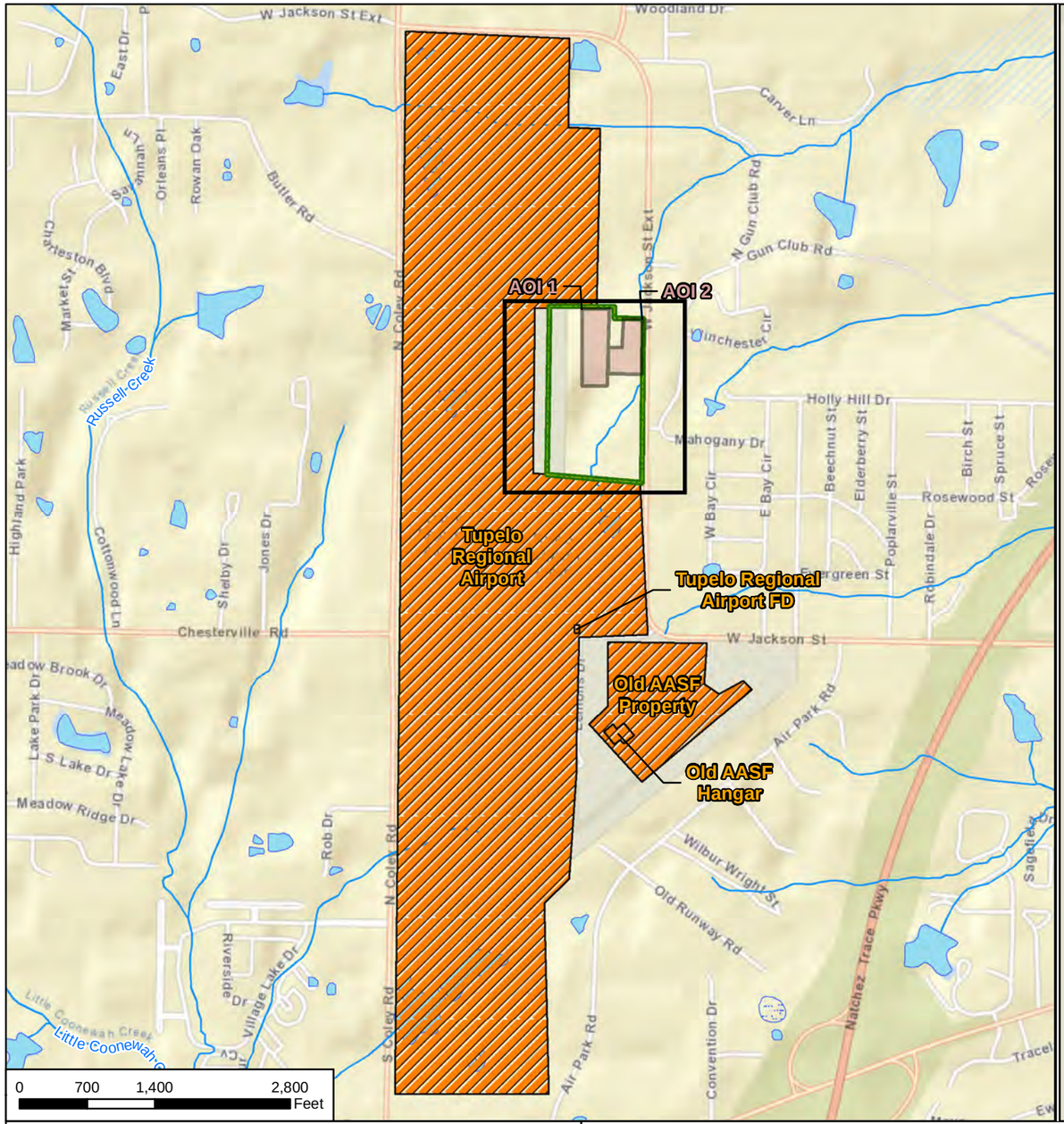
Two AOIs related to a potential PFAS releases were identified at the Tupelo AASF during the PA. The AOIs are shown on **Figure ES-1** and described in **Table ES-1** below:

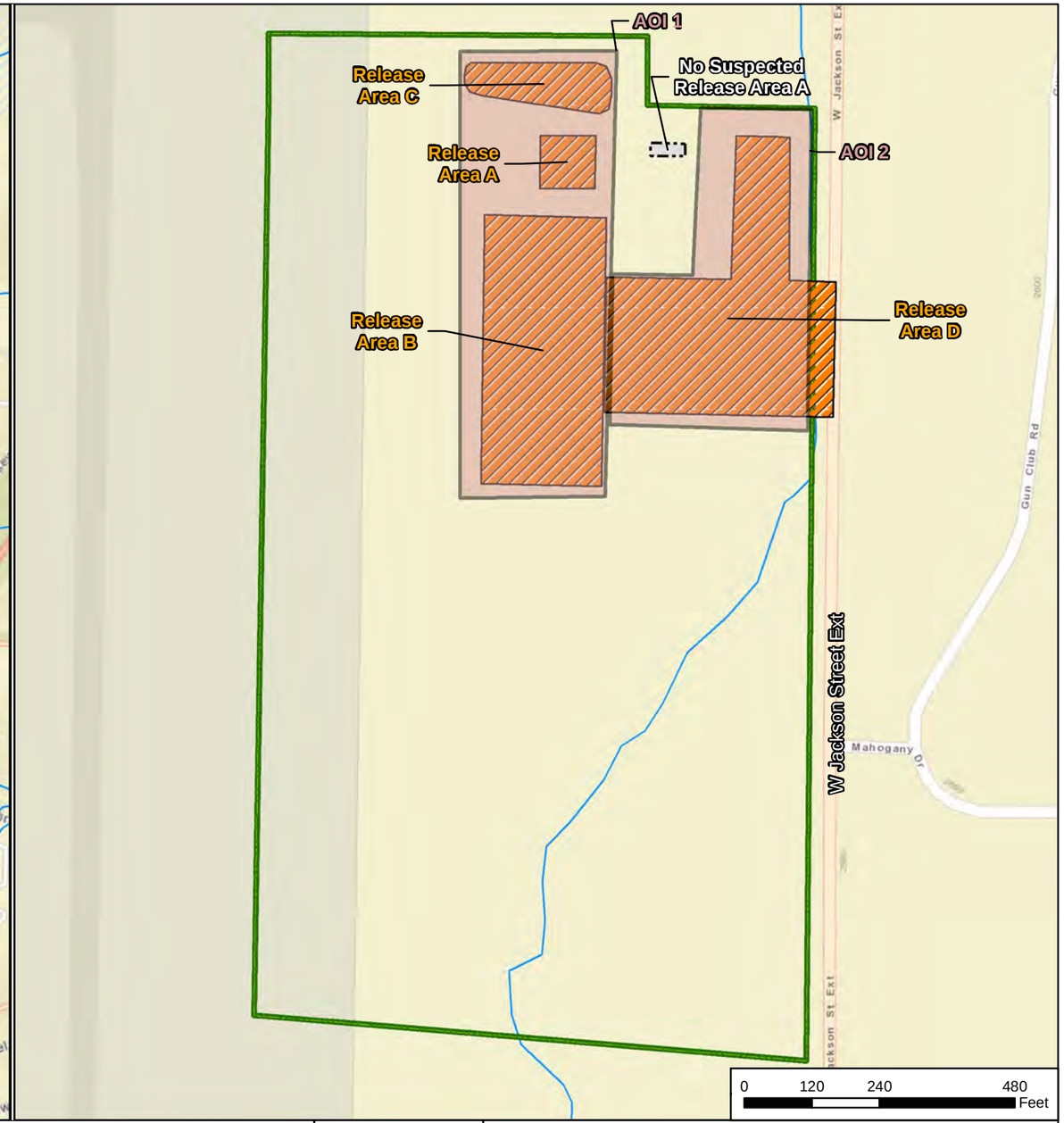
Table ES- 1: AOIs at Tupelo AASF

Area of Interest	Name	Used by	Potential Release Date
AOI 1	Western Release Areas	MSARNG	Since October 2010
AOI 2	Bladder Rupture Release	MSARNG	November 2011

Based on potential PFAS releases at the two AOIs, there is potential for exposure to PFAS contamination in surface soil to site workers, construction workers, residents, and trespassers via ingestion and inhalation of dust; surface water and sediment to site workers, construction workers, trespassers, and off-facility residents and recreational users via ingestion; subsurface soil to construction workers via ingestion; and groundwater to off-facility residents via ingestion. Potential off-facility PFAS release areas exist adjacent to the current Tupelo AASF. Interviewees confirmed that AFFF has been released to the environment in these adjacent areas. The preliminary CSM for Tupelo AASF is shown on **Figure ES-2**.

Based on the USEPA Unregulated Contaminant Monitoring Rule 3 Data, it was indicated that no PFAS were detected in a public water system above the USEPA lifetime Drinking Water Health Advisory within 20 miles of the facility.





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PROJECT	Preliminary Assessment for PFAS at Tupelo AASF, MS			
REVISED	7/1/2020	GIS BY	MS	7/1/2020
SCALE	1:2,880	CHK BY	JH	7/1/2020
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	7/1/2020

Area of Interest
Potential PFAS Release
Facility Boundary
Water Body
Wetland
River/Stream

N

Summary of Findings

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Figure ES-1

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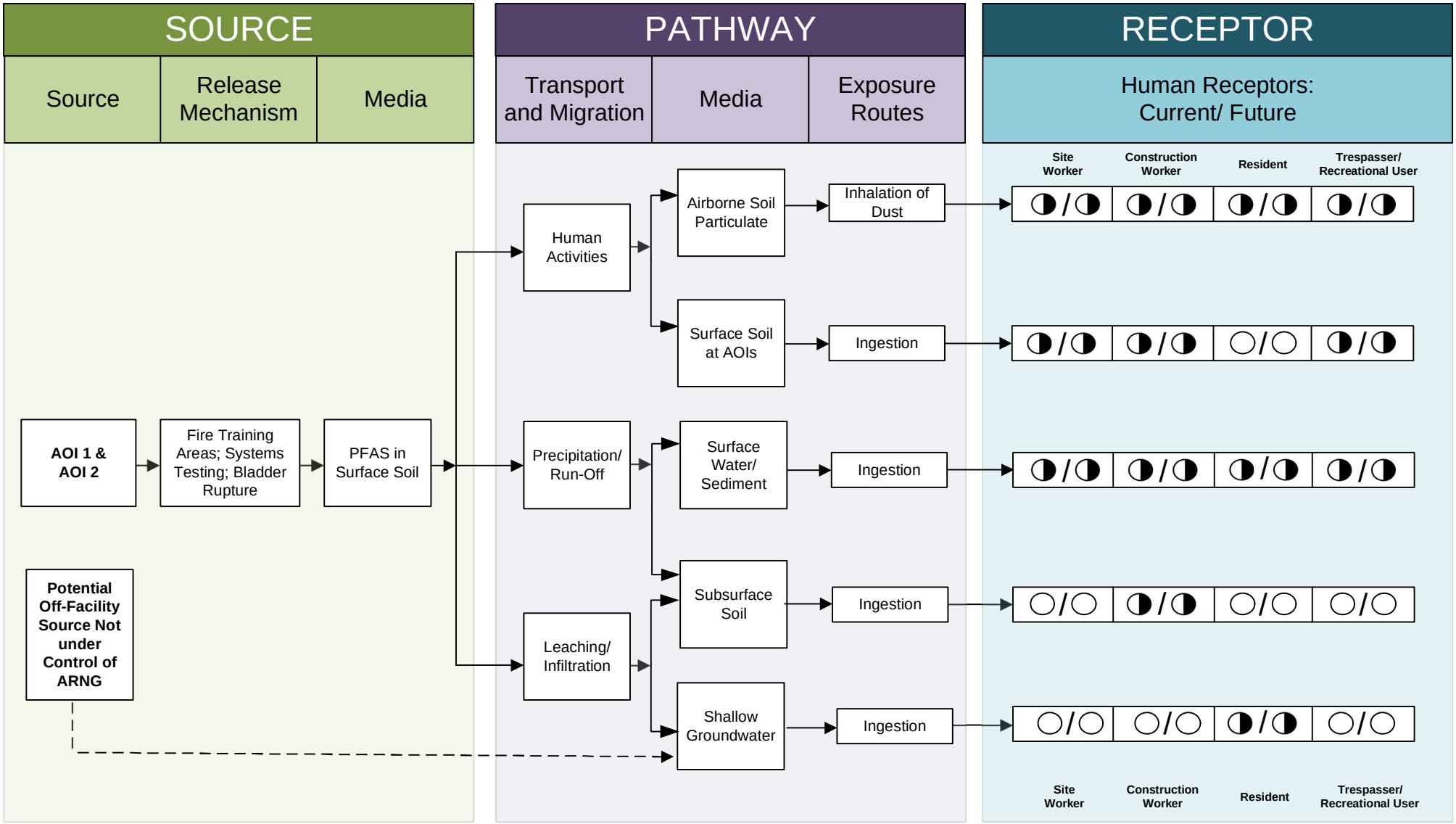


LEGEND

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

Notes:
1. The resident and recreational user receptors refer to an off-site resident and recreational user.
2. Dermal contact exposure pathway is incomplete for PFAS.

Figure ES-2
Preliminary Conceptual Site Model
Tupelo AASF

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) G9 contracted AECOM Technical Services, Inc. (AECOM) to perform *Preliminary Assessments (PAs) and Site Inspections (SIs) 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 polyfluoroalkyl 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 lifetime Drinking Water Health Advisories (HAs) for PFOA and PFOS in May 2016, but there are currently no promulgated national standards regulating PFAS in drinking water.

This report presents the findings of a PA for PFAS at the Army Aviation Support Facility (AASF) No. 2 (also referred to as the “facility”) in Tupelo, 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 USACE requirements and guidance.

This PA documents a known fire training area (FTA) as well as other locations where PFAS may have been released into the environment at the current AASF. 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 releases;
- Conducted a site visit on 5 March 2019;
- Interviewed current Mississippi ARNG (MSARNG) AASF and Tupelo Regional Airport personnel during the site visit;
- Completed visual site inspections (VSI) at known or suspected PFAS release locations and documented with photographs;
- Developed a preliminary conceptual site model (CSM) to outline the potential release and pathway of PFAS for the Area(s) of Interest (AOIs) and the facility.

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 FTAs at the facility identified during the site visit
- **Section 3** – **Non-Fire Training Areas:** describes other locations of potential PFAS releases at the facility identified during the site visit
- **Section 4** – **Emergency Response Areas:** describes areas of potential PFAS release at the facility, specifically in response to emergency situations
- **Section 5** – **Adjacent Sources:** describes sources of potential 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 Tupelo AASF No. 2 is located on the eastern side of Tupelo Regional Airport in Lee County, Tupelo, Mississippi (**Figure 1-1**). The AASF is situated approximately 1.5 miles south of McCullough Boulevard and 1 mile west of Natchez Trace Parkway. Construction of the current AASF was finished in 2011, and the AASF encompasses 38.99 acres. According to leasing documents, the land has been leased to the State of Mississippi from the Tupelo Airport Authority since December 2007. The term of the lease is 40 years and is set to end on 10 December 2047. Prior to construction of the current facility, the old AASF was operated by the MSARNG from the 1960s to 2008 and was located at the southern end of the airport, approximately 0.5 miles south of its current location; it is currently privately owned by an aviation salvage company.

The mission of the facility is to support the supervision and coordination of matters concerning the operations and use of ARNG aviation. The AASF houses multiple guard units and repairs and maintains aircraft. The building was designed to be a state emergency mobilization site for the state of Mississippi and operates in a dual role as an emergency center and AASF.

1.5 Facility Environmental Setting

Tupelo is in the Black Belt Prairie physiographic region, which is a crescent-shaped region approximately 25 miles wide that stretches from Alabama, through northeastern Mississippi, into southern Tennessee. The Black Belt Prairie is characterized by its dark, fertile soil used primarily for farmland, and it is underlain by Cretaceous-aged geologic units (National Aeronautics and

Space Administration, 2018). The facility sits at an elevation of about 330 to 350 feet above mean sea level.

1.5.1 Geology

Tupelo is situated on top of the Cretaceous-aged Selma Group, with locally overlying yellowish-orange alluvium deposits composed primarily of clay, silt, and sand. The Selma Group has three members: the Demopolis Chalk, the Coffee Sand, and the Mooreville Chalk. In the eastern section of the Tupelo 7.5-minute Quadrangle, Coffee Sand outcrops are present. In the western section, closer to the AASF, Demopolis Chalk outcrops are present (Mississippi Department of Environmental Quality [MDEQ], 2019a). The Selma Group overlies the Eutaw and Tuscaloosa formations. Mineral resources in Lee County include limestone, water, and rocks with sufficient calcium and aluminum silicates to manufacture mineral wool (Mississippi State Geological Survey, 1946).

1.5.2 Hydrogeology

The AASF sits atop the Coffee Sand, Eutaw-McShan, and Gordo (part of the Tuscaloosa formation) aquifers and may also overly the Paleozoic aquifer, although its lateral extent is not fully known (MDEQ, 2014; Strom and Mallory, 1995). The Paleozoic aquifer system consists of chert beds, sandstone, shale, and limestone, whereas the Gordo, Eutaw-McShan, and Coffee Sand aquifers consist mostly of clay, sand, and, in the case of the Coffee Sand aquifer, sandstone (O'Hara, 1996).

The Eutaw-McShan aquifer is confined by the Mooreville Chalk, which ranges in thickness from approximately 115 to 160 feet (MDEQ, 2019a). Various sources disagree with the latitude at which the Mooreville Chalk becomes absent. Boswell (1976) states that the Mooreville Chalk is absent at Tupelo and to the north of the city, meaning that the Coffee Sand and Eutaw-McShan aquifers are hydraulically connected. However, Strom and Mallory (1995) state that the disappearance of the Mooreville Chalk occurs at a latitude close to the Union-Pontotoc county boundary, meaning the Eutaw-McShan aquifer is confined at Tupelo. Additionally, the Tupelo 7.5-minute quadrangle map identified the Mooreville Chalk in Tupelo (MDEQ, 2019a), further suggesting the Eutaw-McShan is confined at the Site.

The 2014 MDEQ groundwater assessment surveyed a few wells within Lee County that were tapping into the Coffee Sand, Eutaw-McShan, and Gordo aquifers. The surveyed wells collecting water in the Coffee Sands aquifer were 147 and 200 feet below ground surface (bgs), 606 feet bgs in the Eutaw-McShan aquifer, and 669 feet bgs in the Gordo aquifer. No recent local groundwater studies/data were available. The inferred direction of groundwater flow is assumed to flow south/southeast (**Figure 1-2**). It is possible that the groundwater may locally flow to the southwest, towards Russell Creek, based on the proximity of the watershed divide.

No potable water wells are located within facility boundaries. Drinking water at the AASF and town is supplied by the City of Tupelo, which purchases drinking water from the Northeast Mississippi Regional Water District, who obtains the water from the Tombigbee River, approximately 18 miles to the east. However, a domestic well exists approximately 400 feet east of the facility boundary (**Figure 1-2**) and is completed within the Eutaw-McShan aquifer at 550 feet bgs. The US Geological Survey (USGS) National Ground Water Information System (USGS, 2019) and the MDEQ Borehole Collection (2019b) provide borehole data for wells around Tupelo. No wells downgradient of the AASF that collect water at depths less than 400 feet bgs have been identified, suggesting that none of the identified wells are collecting water in the Coffee Sand aquifer. Based on the research presented above, these wells should be confined in the Eutaw-McShan aquifer.

Based on the USEPA Unregulated Contaminant Monitoring Rule 3 data, it was indicated that no PFAS were detected in a public water system above the HA within 20 miles of the facility.

1.5.3 Hydrology

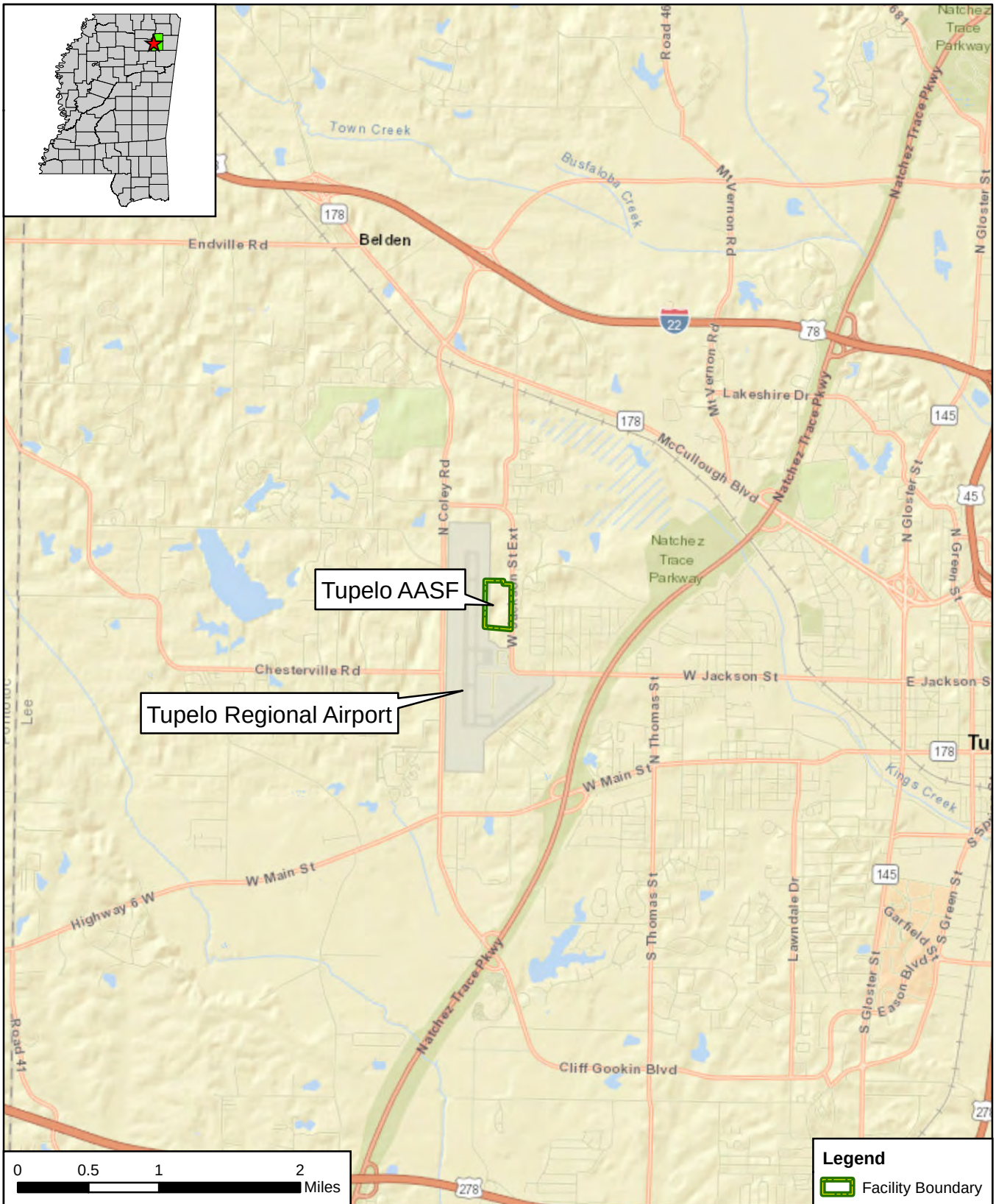
The AASF is situated within the eastern portion of Kings Creek-Town Creek Watershed; the Little Coonewah Creek-Coonewah Creek watershed is present to the west of the facility and bisects the Tupelo Regional Airport (**Figure 1-3**). Local surface water features include small, unnamed ponds and tributaries that flow into Kings Creek. A drainage ditch associated with one of the unnamed tributaries runs along the eastern facility boundary and flows north. Stormwater at the AASF is directed towards one of two retention ponds located within the northeastern portion of the facility. These retention ponds overflow into the drainage ditch system that flows north before joining Kings Creek to the northeast and ultimately flows southeast through the city of Tupelo.

1.5.4 Climate

The humid subtropical climate at Tupelo AASF is characterized as having long, hot summers, and a relatively short, mild winter (Mississippi State Geological Survey, 1946). The average temperature is 73.4 degrees Fahrenheit (°F). Seasonally, temperatures vary from a summer average monthly high of 92 °F to a winter average monthly low of 32 °F. Average precipitation is 55 inches (World Climate, 2019).

1.5.5 Current and Future Land Use

The AASF is a controlled access facility and is located adjacent to the Tupelo Regional Airport. The Tupelo Regional Airport is owned and operated by the Tupelo Airport Authority. The AASF operates in a dual role as a state emergency center and AASF. 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	11/11/2019

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Facility Location

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Figure 1-1

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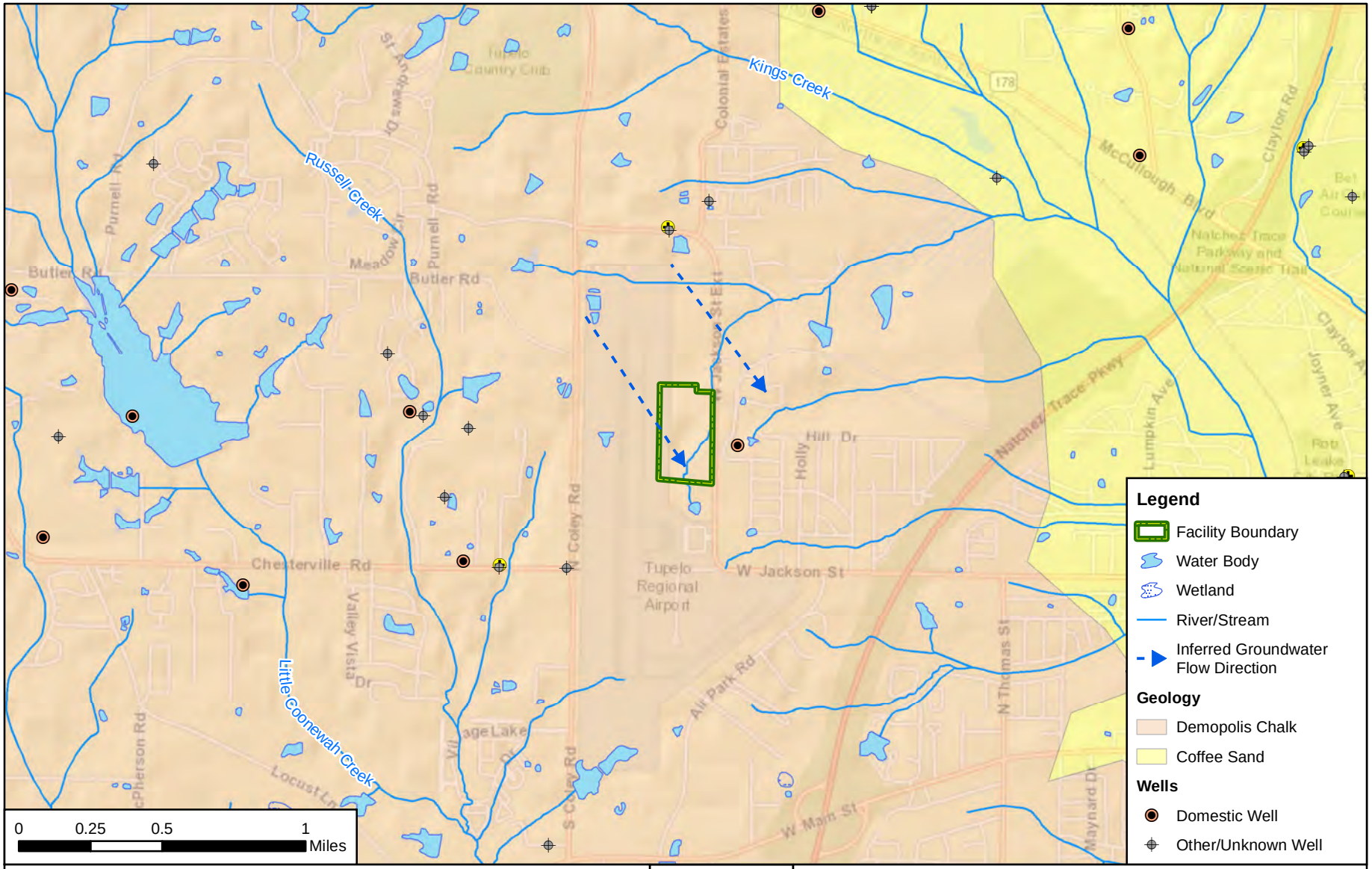

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TITLE

Groundwater Features

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Figure 1-2

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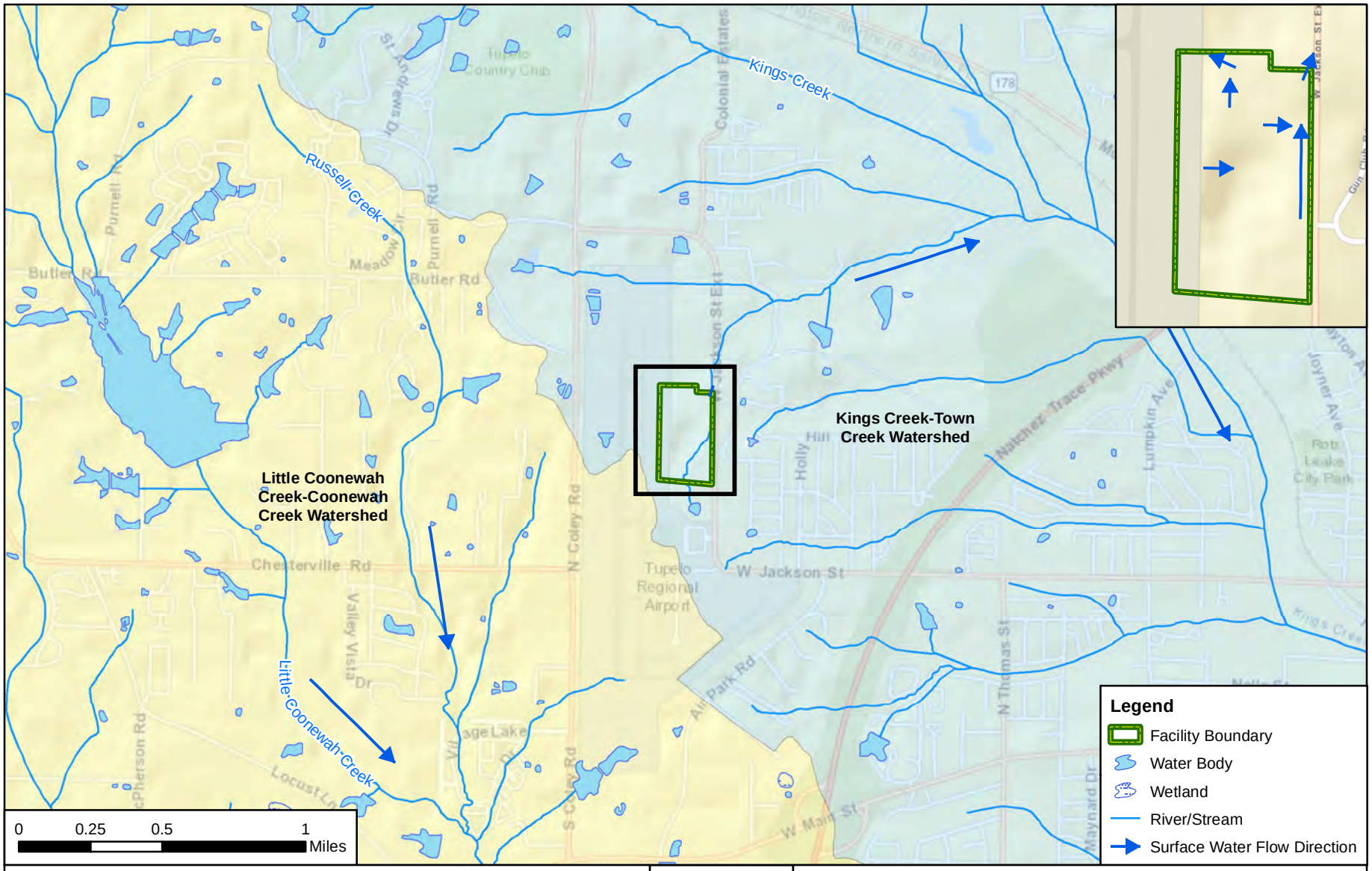

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TITLE

Surface Water Features

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Figure 1-3

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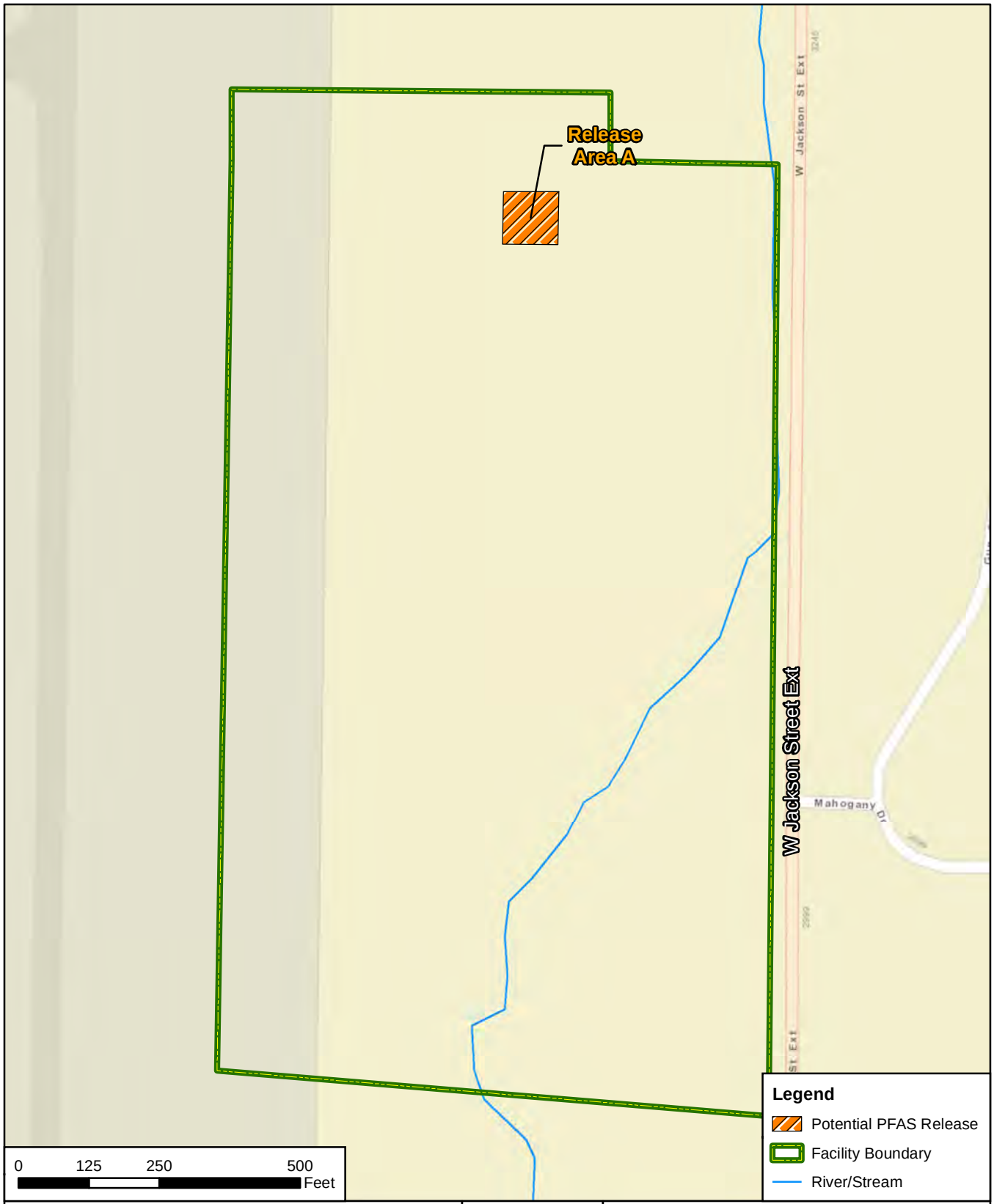
2. Fire Training Areas

One FTA was identified within the current AASF facility during the PA through interviews. This FTA is described below and shown in **Figure 2-1**.

2.1 Release Area A – Tri-Max™ Training

The current AASF houses eight to ten 30-gallon portable Tri-Max™ units that are stored in the hangar unless needed on the flight line. Interviewees recalled that the AFFF originally stored within the Tri-Max™ units was not freeze-resistant, and one canister froze, buckling the metal of the canister. Although the canister buckled, there was no breach or leak of the contents. The Tri-Max™ units are recharged and refilled by a local fire service company in the city of Tupelo. An interviewee stated that training with an out of date Tri-Max™ unit occurred once at the AASF. The training consisted of personnel discharging an unknown quantity of AFFF into the wash rack. The wash rack drains to an underground oil/water separator (OWS), which discharges to the sanitary sewer. Release Area A is shown on **Figure 2-1** and includes the training area and the area immediately surrounding it.



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Fire Training Area

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Figure 2-1

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3. Non-Fire Training Areas

Three non-FTAs where AFFF was stored and/or potentially released were identified during the PA. A description of each non-FTA is presented below and shown on **Figure 3-1**.

3.1 Release Areas B and C – Hangar Suppression System Test

The AASF hangar is outfitted with a fire suppression system that consists of two 800-gallon AFFF tanks filled with Buckeye 3% Mil Spec; the system is supplied with water by two dedicated 93,000-gallon water tanks. An initial system test was performed by a contractor in October 2010. Interviewees stated that the initial test was performed with foam, and an unknown quantity of AFFF was pumped out of the system by the contractor and directed towards a trench drain, which runs the length of the hangar bay doors.

According to interviewees and the facility's storm water pollution prevention plan, the trench drain flows to the OWS; however, in the event of activation of the fire suppression system, a trigger lock bypasses the OWS, and the trench drains are discharged to a retention pond in the northern area of the facility. In this event, a manual valve on the retention pond is supposed to be closed in order to prevent the AFFF and water from leaving the property until the release can be cleaned up. Interviewees did not know if either the trigger lock or manual valve were activated during testing. It is unknown if test water entered the OWS or was discharged directly to the retention pond. Additionally, pictures included in the system test report (**Appendix A**) show water/foam being pumped outside the hangar (Release Area B) onto the concrete apron. Release Area B includes portions of the hangar and apron where discharge from the system test was directed. Discharges in this area would likely flow to stormwater drains located along the apron that drain directly to the retention pond (Release Area C on **Figure 3-1**). Therefore, AFFF may have been released to the environment at Release Areas B and C shown on **Figure 3-1**.

Testing of the system last occurred in 2015, which involved a flow test with only water to test header pressure. No foam was discharged. Interviewees stated that no samples have ever been taken of the system's AFFF. The fire marshal schedules system tests but no tests have been completed to date.

3.2 Release Area D – Bladder Rupture Release

A tank bladder rupture in November 2011 led to a loss of approximately 800 gallons of AFFF. Interviewees noted that improper hardware used to install the system caused a coupling to break, which tripped the mixing valve. The leaks caused the bladder of one tank to rupture. Foam reportedly filled the office hallways and flowed out to the east side of the AASF, into the parking lot. AASF personnel recalled that the foam filled the retention pond and drainage ditches along the eastern facility boundary and flowed out into the road (W Jackson Street). Foam remaining in the office area was squeegeed out through the front door into the parking lot where the foam was allowed to naturally dissipate. Personnel recalled that several months after the release occurred, the concrete and grassy areas would foam whenever it rained. Release Area D includes portions of the building where the release occurred as well as the parking area and retention pond and where foam was directed (**Figure 3-1**).

3.3 No Suspected Release Area A – Hazardous Waste Storage Area

No Suspected Release Area A is a Hazardous Waste Storage area that stores 32 out-of-date 5-gallon buckets of AFFF (Ansulite 3%, Mil Spec MIL-F-24385F) that were awaiting pick up for disposal at the time of the VSI. The storage area is temperature controlled and is completely

enclosed. No evidence of spills or leaks were observed during the site visit. No Suspected Release Area A is shown on **Figure 3-1**.

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Non-Fire Training Areas

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Figure 3-1

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4. Emergency Response Areas

No instances of emergency response were identified at the Tupelo AASF during the PA based on interviews, online research, and the Environmental Data Resources, Inc. (EDR)™ report (**Appendix A**). The Tupelo Regional Airport provides aircraft rescue and firefighting to the airport and the AASF. The Tupelo municipal Fire Department provides structure fire support. Joint training occurs with AASF personnel but only includes simulation and aircraft walk through exercises. No firefighting training with live fire has occurred. Tupelo Regional Airport personnel reported that there has been no emergency response with foam in the last two years; however, emergency response prior to that was unknown.

5. Adjacent Sources

Potential off-facility sources of PFAS adjacent to the Tupelo AASF were identified during the PA. No additional potential source areas were identified by the EDR™ report within a 1-mile radius surrounding the facility. A description of each adjacent source is presented below, and the adjacent sources are shown on **Figure 5-1**.

5.1 Tupelo Regional Airport Fire Department

The airport fire department is located approximately 1,500 feet south of the AASF's southern boundary. The department has several foam-capable firetrucks that are filled with AFFF. It is not known if any incidental spills of AFFF have occurred during routine maintenance or filling of the trucks. Emergency response with foam has not occurred within the last two years; however, previous emergency response is unknown. Airport personnel reported that fire training takes place at the Mississippi Fire Academy near Jackson, Mississippi, not at the airport. The geographic coordinates of the fire department are approximately 34°15'53.67" N; 88°45'59.25" W (**Figure 5-1**).

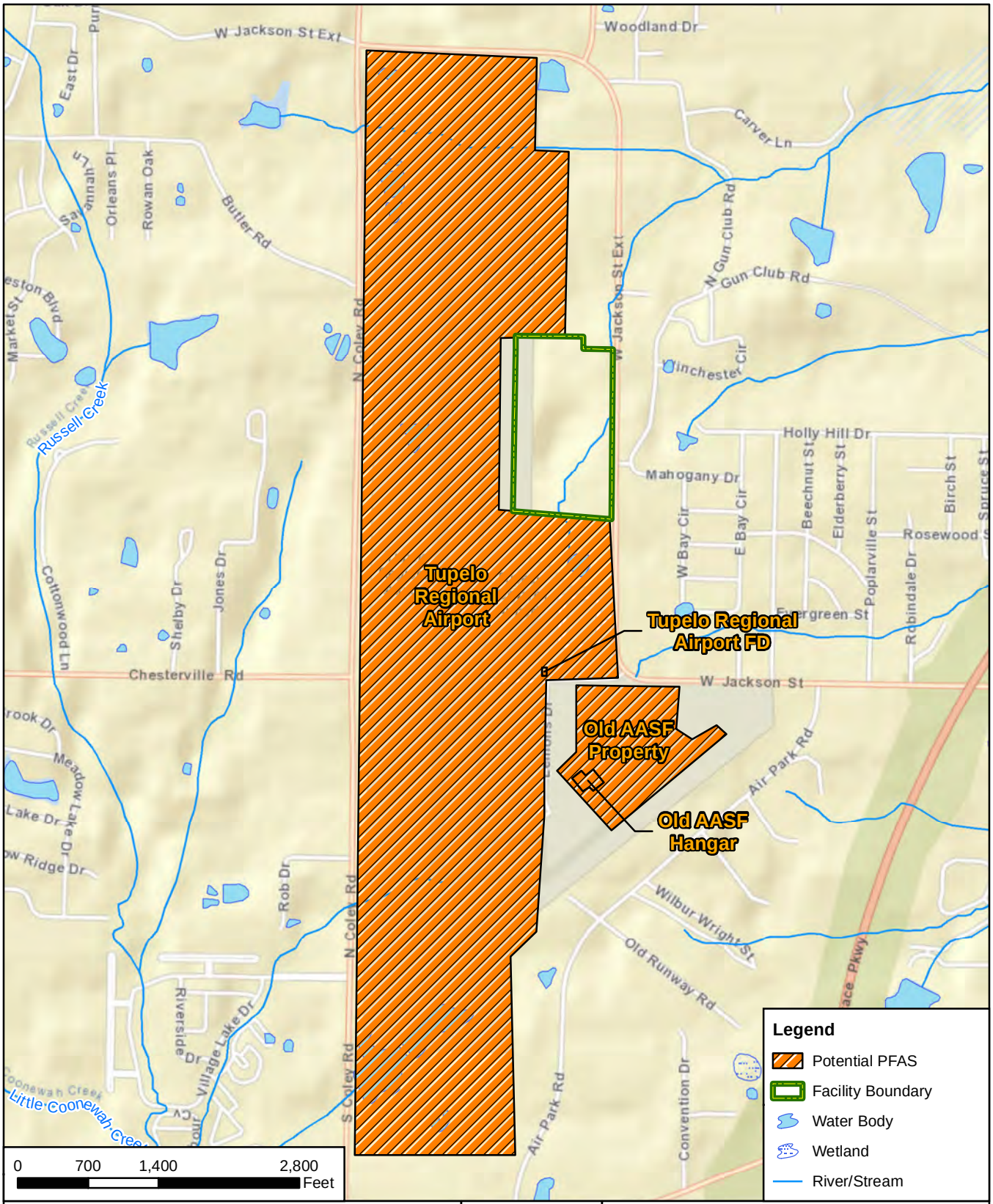
5.2 Tupelo Regional Airport

Airport personnel reported that National Fire Protection Association (NFPA) testing is conducted annually at the airport. Testing involves the fire department being called to respond to a random location within the response area of the airport and discharging a small unspecified volume of AFFF on the ground in order to demonstrate capability. There is no specified testing area, such that AAFF may have been released to soil anywhere within airport property. The geographic coordinates of the center of the airport property are approximately 34°16'00.13" N; 88°46'11.11" W (**Figure 5-1**).

5.3 Old AASF Property and Hangar

The Tupelo AASF was previously located at the southern end of the airport, approximately 0.5 miles south of its current location. The old AASF was reportedly in operation from the 1960s to 2008; it is currently privately owned by an aviation salvage company. During MSARNG occupancy, the Old AASF had eight to twelve Tri-Max™ units on-site. Training with the units occurred at various locations within the property. Each unit was drained and refilled at the old facility annually. Interviewees recalled that AFFF was drained into the OWS, which discharged into the Tupelo sanitary sewer. Additionally, the Old AASF had a firetruck that was disposed of around 1990 or 1991. The truck was filled with AFFF but was never used for emergency response. Interviewees did not recall if training or testing with the truck occurred or if any leaks happened. The geographic coordinates of the Old AASF Property are approximately 34°15'42.52" N; 88°45'49.35" W (**Figure 5-1**).

The Old AASF Hangar is still extant today and is used by the current owner (a private aviation salvage company). During MSARNG occupancy, an AFFF suppression system was installed in 1992 or 1993. The system consisted of three 150- to 200-gallon AFFF vats that stood on legs within the hangar; each vat was equipped with a manned nozzle. Interviewees recalled that a full-scale test of the system was conducted when it was initially installed. Current AASF personnel stated that the AFFF suppression system in the old hangar is still active and used by the current owner. Personnel observed that a system test was conducted at the old hangar by the current owner around February 2019. The geographic coordinates of the Old AASF Hangar are approximately 34°15'42.89" N; 88°45'54.00" W (**Figure 5-1**).



CLIENT	ARNG			
PROJECT	Preliminary Assessment for PFAS at Tupelo AASF, MS			
REVISED	6/30/2020	GIS BY	MS	6/30/2020
SCALE	1:16,800	CHK BY	JH	6/30/2020
Base Map: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI,		PM	RG	6/30/2020

Adjacent Sources

AECOM
12420 Milestone Center Drive
Germantown, MD 20876

Figure 5-1

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6. Preliminary Conceptual Site Model

Based on the PA findings, two AOIs were identified at the current AASF: AOI 1 Western Release Areas and AOI 2 Bladder Rupture Release. The AOI locations are shown on **Figure 6-1**. The following sections describe the CSM components and the specific preliminary CSMs developed for AOI 1 and 2. The CSMs identify the three components necessary for a potentially complete exposure pathway: (1) source, (2) pathway, (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 the 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 the AASF include site workers, construction workers, residents, trespassers, and off-facility recreational users. The preliminary CSMs for AOI 1 (**Figure 6-2**) and AOI 2 (**Figure 6-3**) indicate which specific receptors could potentially be exposed to PFAS.

Several adjacent sources of potential PFAS releases are located surrounding the facility, including the Tupelo Regional Airport, which conducts annual NFPA testing with AFFF, and the Old AASF Property and Hangar, which has both historical releases from MSARNG use and potential current day releases from private owners (**Figure 6-1**).

6.1 AOI 1 Western Release Areas

AOI 1 Western Release Areas encompasses Release Areas A, B, and C (**Figure 6-1**). During a training event, an unknown quantity of AFFF was discharged into the wash rack (Release Area A), which discharges to the OWS and, subsequently, the sanitary sewer. Additionally, during an initial test of the hangar suppression system, an unknown quantity of AFFF was pumped out and directed towards the trench drain at the hangar bay doors. Foam may have also been discharged to stormwater drains on the apron during testing (collectively Release Area B). As a result, an unknown quantity of AFFF may have flowed directly into a retention pond to the north (Release Area C) from either of these drains during testing.

Although no permanent surface water bodies are present within AOI 1, facility stormwater flows into this retention pond (Release Area C) via a system of stormwater drains. Additionally, the retention pond receives drainage from the hangar whenever the fire suppression system is activated. The retention pond drains into an unnamed tributary of Kings Creek. Therefore, both release events may have potentially released PFAS to surface water, sediment, and surface soil at Release Area C. PFAS may have migrated from surface soil to subsurface soil and groundwater via leaching.

Ground-disturbing activities to surface soil at AOI 1 could result in site worker, construction worker, and trespasser exposure to potential PFAS contamination via inhalation or ingestion of soil particles. Similarly, ground-disturbing activities to subsurface soil could result in construction worker exposure via inhalation of soil particles and ingestion of subsurface soil. Therefore, the inhalation and ingestion pathways for these receptors are considered potentially complete.

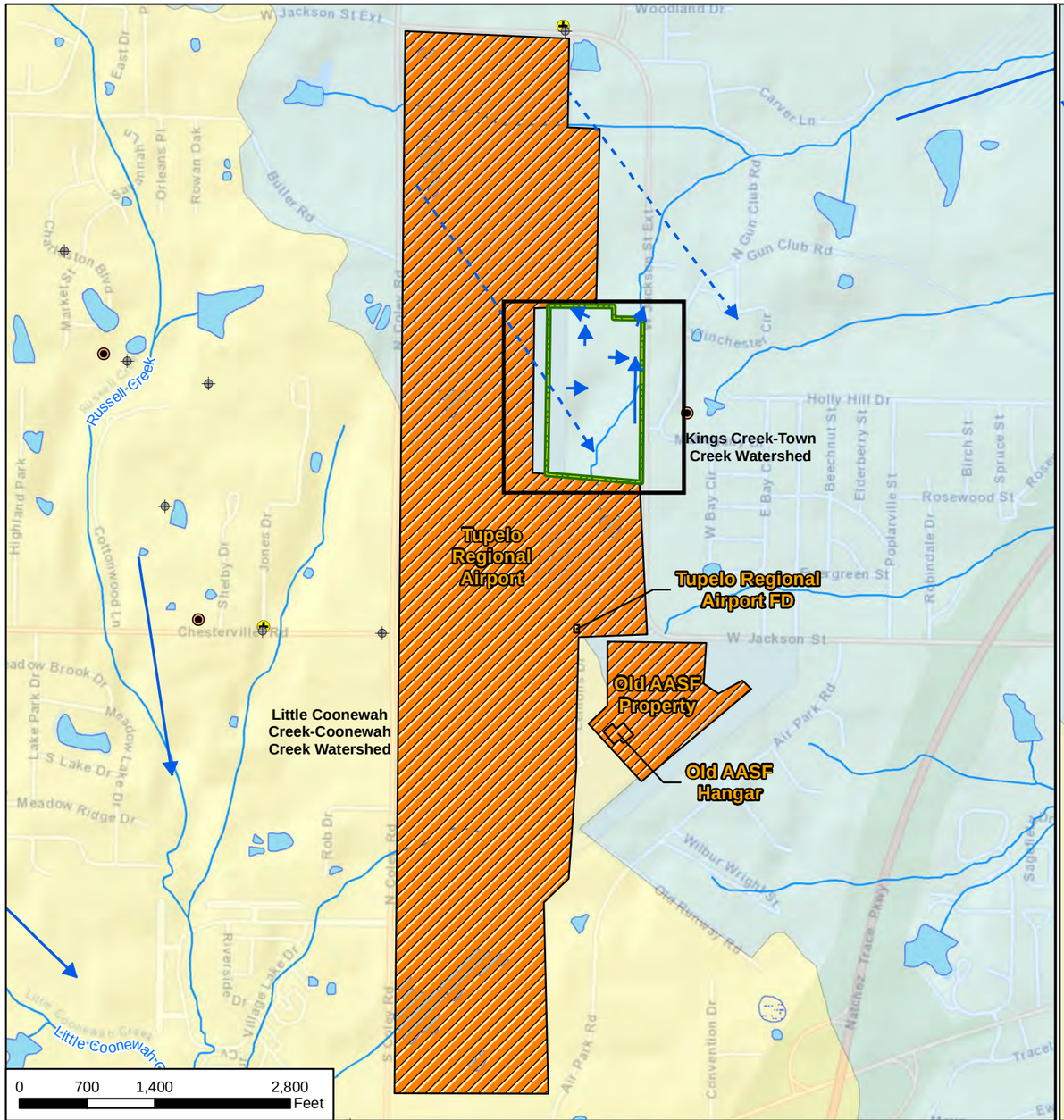
The retention pond (Release Area C) within the facility boundary discharges into an unnamed tributary of Kings Creek. Consequently, the exposure pathway for surface water and sediment via ingestion is potentially complete for the off-facility residents and recreational users. The AASF and town's drinking water is sourced from the Tombigbee River (located over 18 miles to the east of the facility). However, domestic and unknown use type wells are present immediately to the east and west of the facility. Because the specific hydrogeology beneath the facility is uncertain, it is not known if there is communication between the shallow and deeper aquifers. Given that the

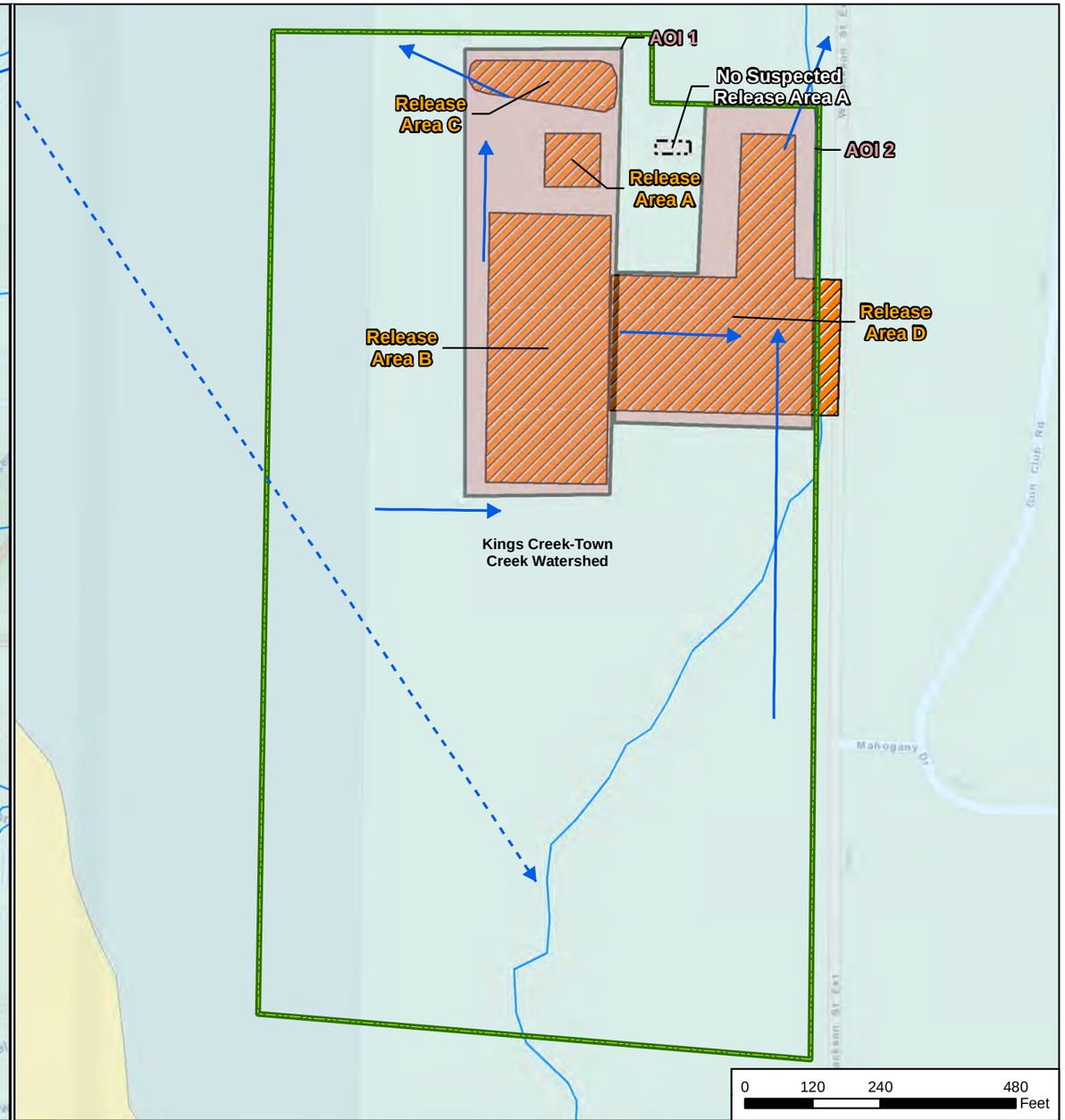
assumed groundwater flow is south/southeast, the pathway is considered potentially complete for groundwater to off-facility residents. Current depth to groundwater is unknown near the facility; however, historic USGS depth to groundwater measurements (USGS, 2019) suggest the groundwater may be too deep (>80 feet bgs) to affect construction workers working on trenching activities. Consequently, the exposure pathway for groundwater to construction workers is considered incomplete. The preliminary CSM for the AASF is shown on **Figure 6-2**.

6.2 AOI 2 Bladder Rupture Release

AOI 2 is located east of AOI 1. Due to a hardware malfunction from tank installation, approximately 800-gallons of AFFF were discharged at the AASF. The AFFF subsequently flowed out of the building, into the parking lot to the east, filled the eastern drainage ditches and retention pond, and eventually flowed out onto W Jackson Street (**Figure 6-1**). The foam was allowed to naturally dissipate.

The eastern drainage ditch and retention pond discharge into the same unnamed tributary as Release Area C and AOI 1. Consequently, PFAS may have been released to surface water, sediment, and surface soil. Additionally, foam that dissipated on the parking lot and W Jackson Street was likely transported by overland flow to surface soils and/or sediment, potentially releasing PFAS to these media. Depending on infiltration rates, PFAS may migrate from the surface soil to subsurface soil and groundwater via leaching. The pathways and receptors for AOI 2 are the same as described in **Section 6.1** with one exception. Due to the proximity of residential houses to the AOI, ground disturbing activities within AOI 2 could also expose residents (in addition to site workers, construction workers, and trespassers) to PFAS via inhalation of airborne soil particles. The preliminary CSM for AOI 2 is shown on **Figure 6-3**.





CLIENT	ARNG			
PROJECT	Preliminary Assessment for PFAS at Tupelo AASF, MS			
REVISED	7/1/2020	GIS BY	MS	7/1/2020
SCALE	1:2,880	CHK BY	JH	7/1/2020
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	7/1/2020

- Potential PFAS Release
- Facility Boundary
- Water Body
- Wetland
- River/Stream
- Surface Water Flow Direction
- Inferred Groundwater Flow Direction
- Domestic Well
- Other/Unknown Well
- Public Water System

N

Areas of Interest

AECOM 12420 Milestone Center Drive Germantown, MD 20876

Figure 6-1

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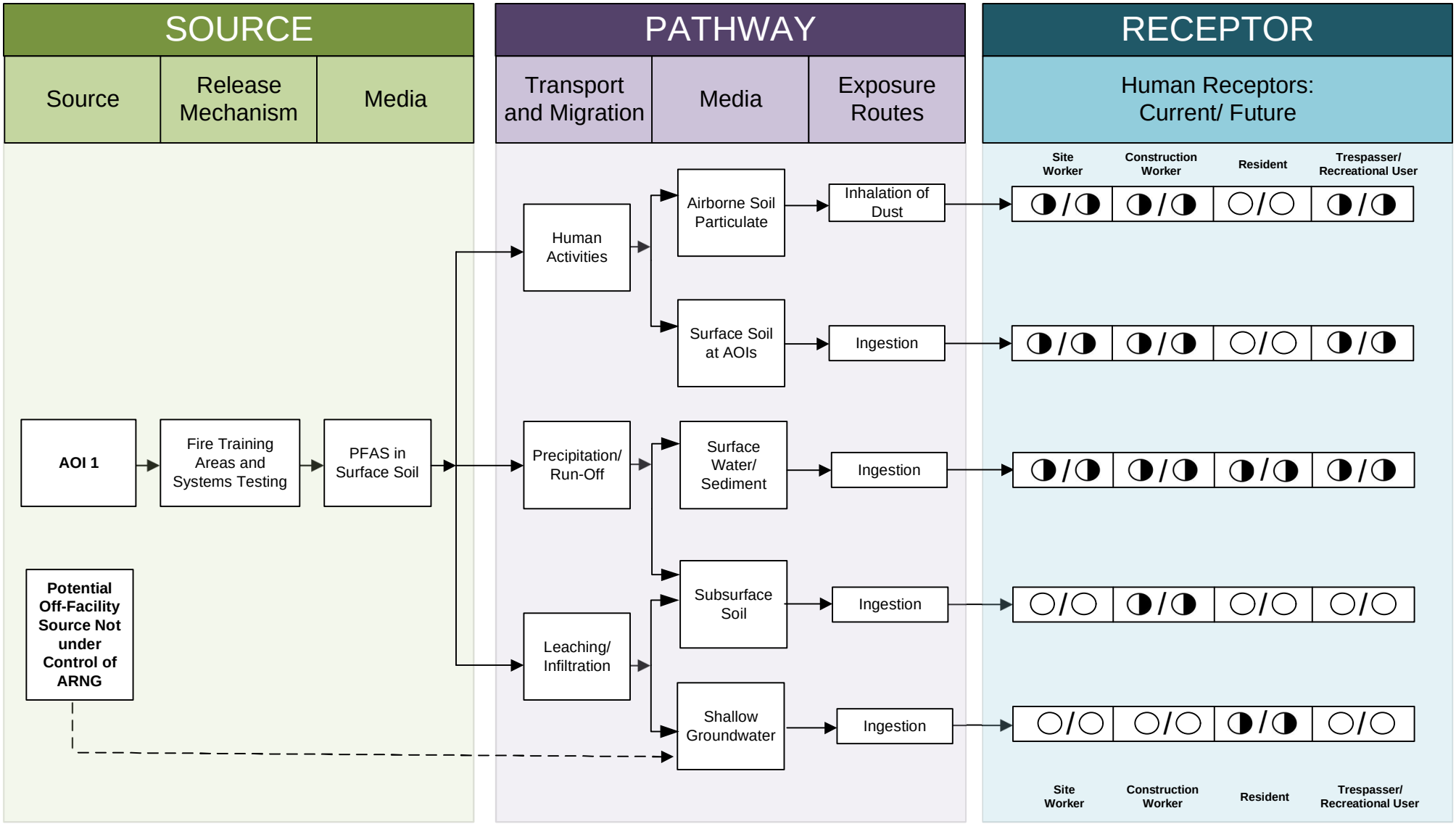
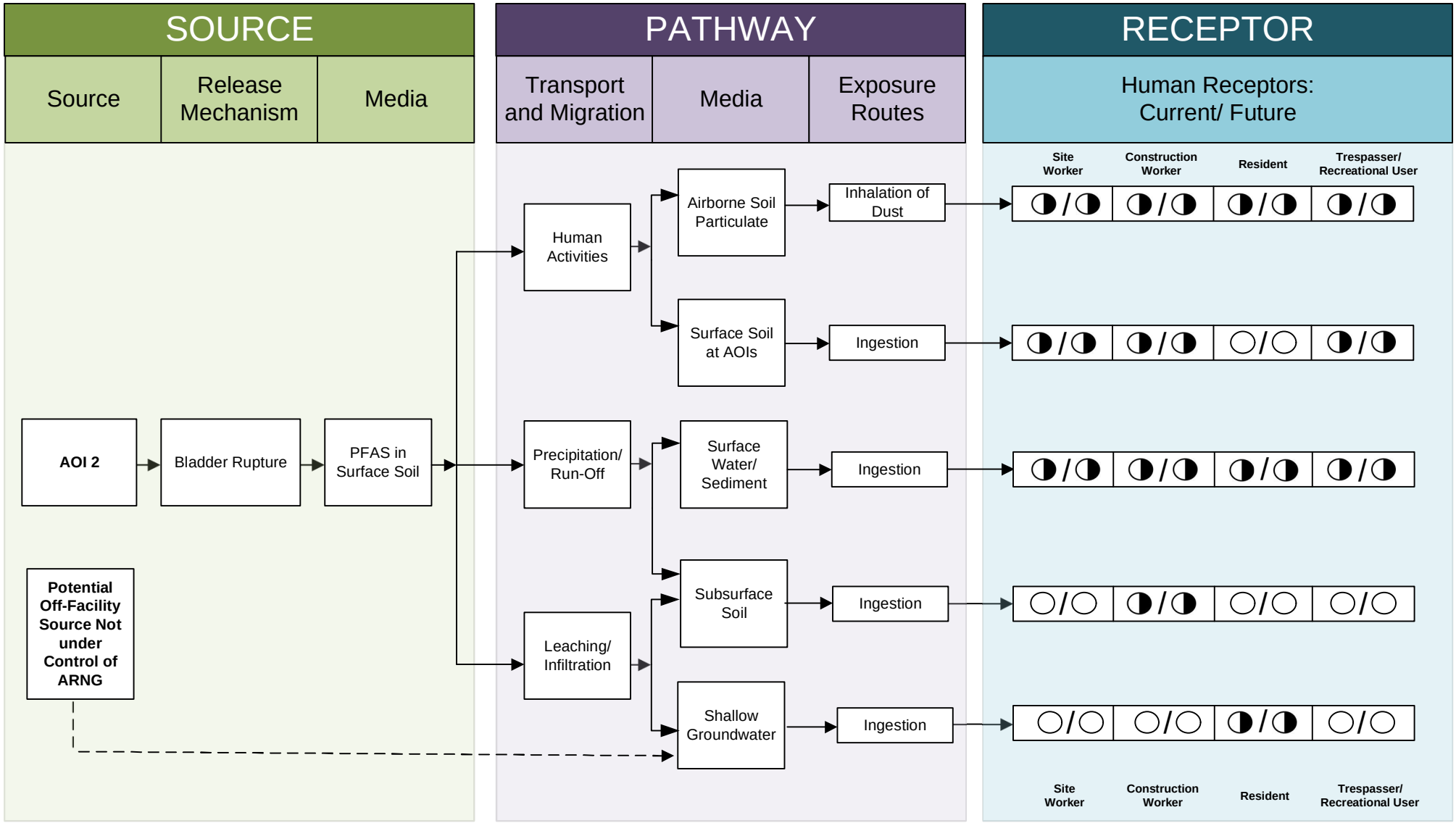


LEGEND

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

Notes:
1. The resident and recreational user receptors refer to an off-site resident and recreational user.
2. Dermal contact exposure pathway is incomplete for PFAS.

Figure 6-2
Preliminary Conceptual Site Model
AOI 1 Western Release Areas



LEGEND

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

Notes:
1. The resident and recreational user receptors refer to an off-site resident and recreational user.
2. Dermal contact exposure pathway is incomplete for PFAS.

Figure 6-3
Preliminary Conceptual Site Model
AOI 2 Bladder Rupture Release

7. Conclusions

This report presents a summary of available information gathered during the PA with respect to the use of AFFF and other PFAS-related activities at the AASF. 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 were identified at the AASF during the PA. A summary of the AOIs is shown in **Table 7-1** and their location on **Figure 7-1**.

Table 7-1: AOIs at Tupelo AASF

Area of Interest	Name	Used by	Potential Release Dates
AOI 1	Western Release Areas	MSARNG	Since October 2010
AOI 2	Bladder Rupture Release	MSARNG	November 2011

Based on potential PFAS releases at the two AOIs, there is potential for exposure to PFAS contamination in surface soil to site workers, construction workers, residents, and trespassers via ingestion and inhalation of dust; surface water and sediment to site workers, construction workers, trespassers, and off-facility residents and recreational users via ingestion; subsurface soil to construction workers via ingestion; and groundwater to off-facility residents via ingestion. Potential off-facility PFAS release areas exist adjacent to the current Tupelo AASF. Interviewees confirmed that AFFF has been released to the environment in these adjacent areas.

The following area discussed in **Section 3** was determined to have no suspected PFAS releases (**Table 7-2**).

Table 7-2: No Suspected Release Areas

No Suspected Release Area	Used by	Rationale for No Suspected Release Determination
No Suspected Release Area A – Hazardous Waste Storage Area	MSARNG	Building is properly isolated and there is no evidence of spills.

7.2 Uncertainties

A number of information sources were investigated during this PA to determine the potential for PFAS-containing materials to have been present, 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 or historically maintained by the facility or available during the PA with respect to the use of PFAS in training, firefighting, other non-traditional activities, or its disposition.

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. **Table 7-3** summarizes the uncertainties associated with the PA.

Table 7-3: Uncertainties

Area of Interest	Source of Uncertainty
AOI 1 Western Release Areas – Release Area A	Dates of potential release at the wash rack were undocumented. However, construction of the current AASF was reportedly finished in 2011; therefore, the training had to have occurred in the past 8 years. The exact quantity and concentration of AFFF used during this release are unknown.
AOI 1 Western Release Areas – Release Area B	It is unknown if the trigger lock system for the OWS or manual valve of the retention pond were engaged during testing. It is therefore unknown if test water entered the OWS or was discharged directly to the retention pond.
General	Hydrogeology beneath the facility is uncertain. It is not known if there is communication between the shallow and deeper aquifers. Groundwater flow direction is also not definitively known due to the lack of reliant local data. Groundwater is assumed to flow to the south-southeast.
Adjacent Sources	Because groundwater flow direction is not certain, it is unknown if potential off-facility PFAS release areas are upgradient, side gradient, or downgradient of the current AASF.

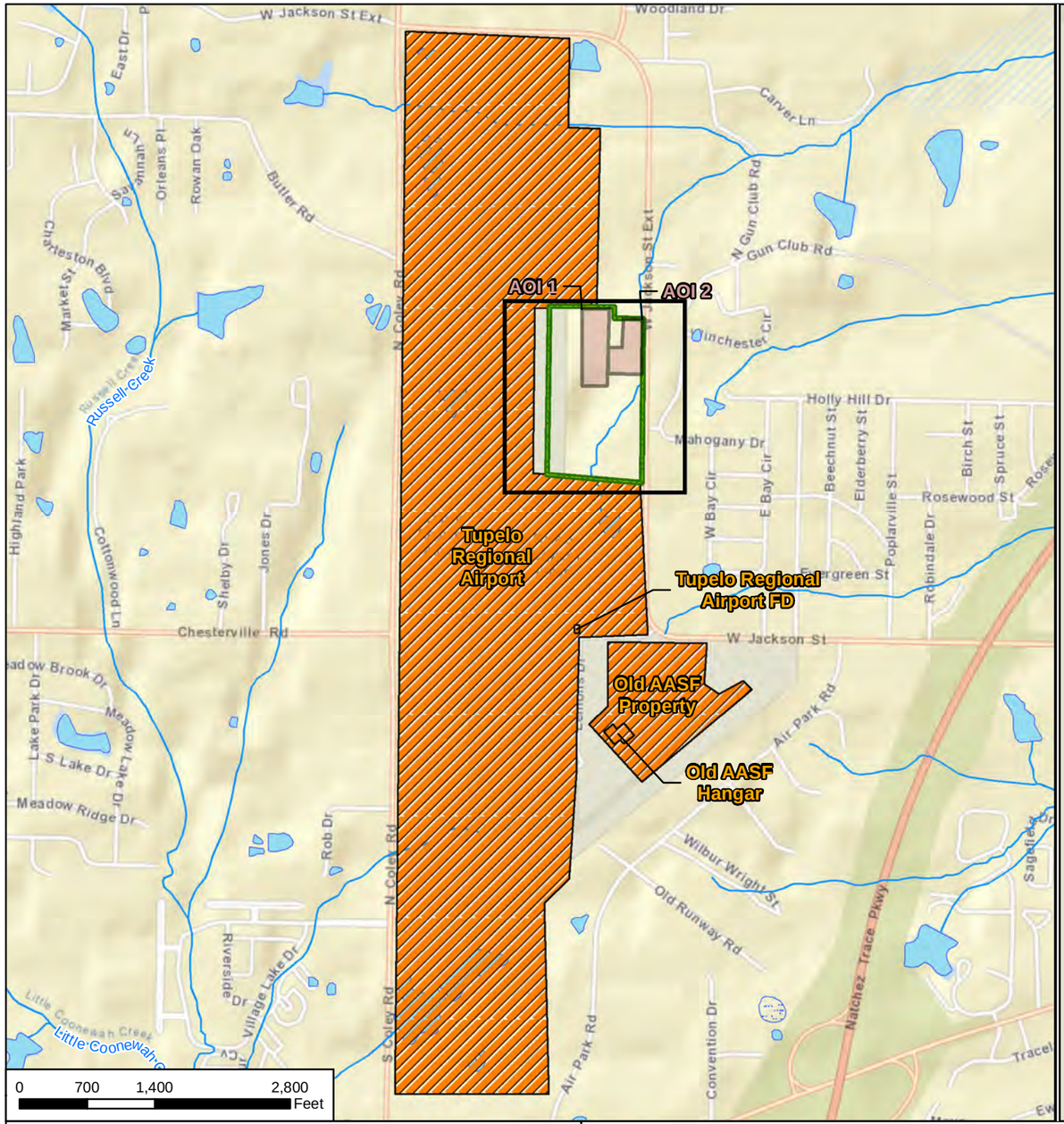
7.3 Potential Future Actions

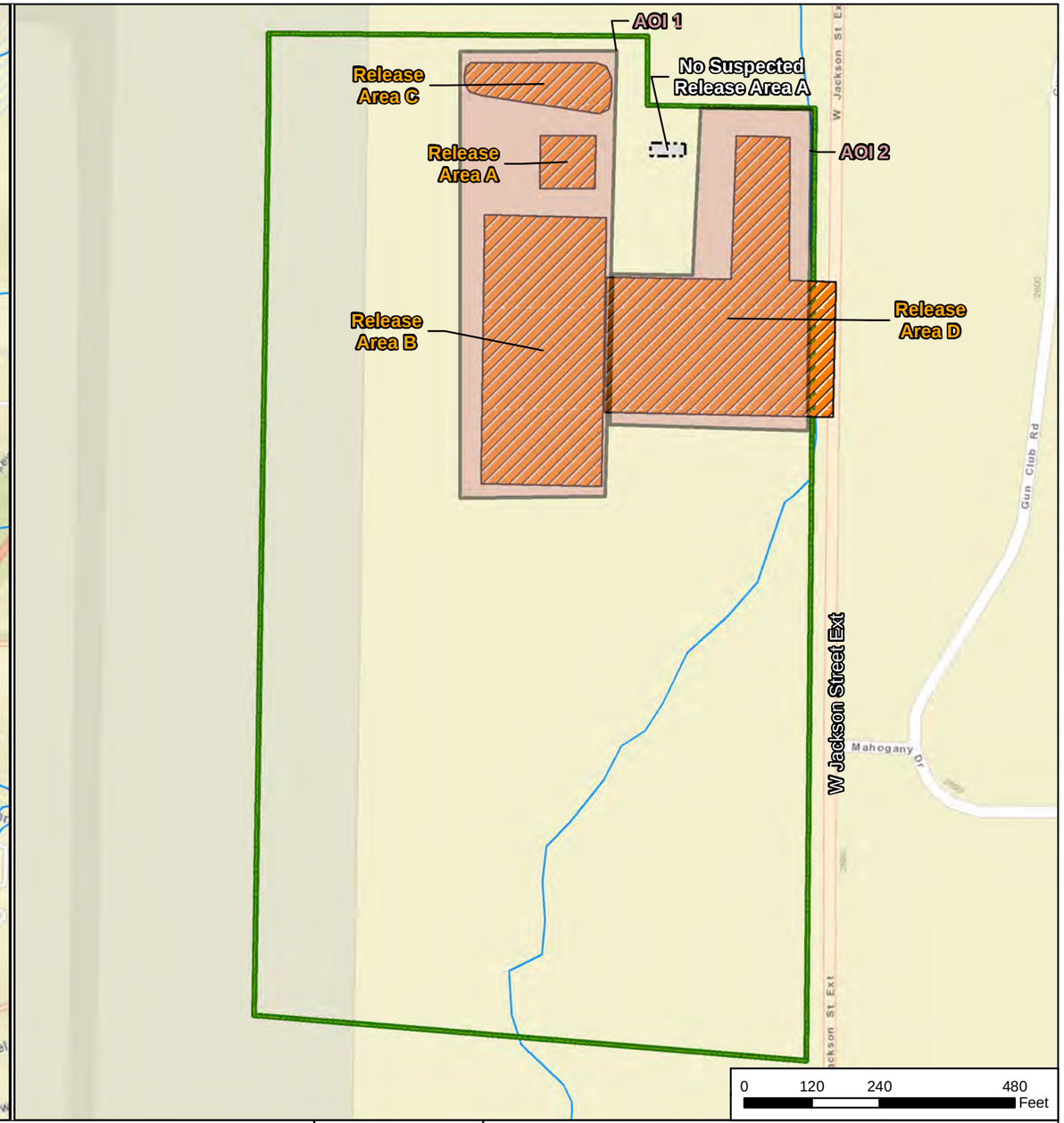
Interviews and records indicate that ARNG activities may have resulted in potential PFAS releases at the AOIs identified during the PA. Based on the preliminary CSMs developed for the AOIs, there is potential for receptors to be exposed to PFAS contamination in soil, groundwater, surface water, and sediment at the two AOIs. **Table 7-4** summarizes the rationale used to determine if the AOIs should be considered for further investigation under the CERCLA process and undergo a SI.

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

Table 7-4: PA Findings Summary

Area of Interest	Rationale	Potential Future Action
AOI 1 Western Release Areas	During a training event and a separate systems test, AFFF may have been released in unknown quantities.	Proceed to an SI, focus on soil, groundwater, surface water, sediment
AOI 2 Bladder Rupture Release	Tank bladder rupture resulted in an 800-gallon release of AFFF.	Proceed to an SI, focus on soil, groundwater, surface water, sediment





CLIENT	ARNG			
PROJECT	Preliminary Assessment for PFAS at Tupelo AASF, MS			
REVISED	7/1/2020	GIS BY	MS	7/1/2020
SCALE	1:2,880	CHK BY	JH	7/1/2020
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	7/1/2020

Area of Interest
Potential PFAS Release
Facility Boundary
Water Body
Wetland
River/Stream

N

Summary of Findings

AECOM
12420 Milestone Center Drive
Germantown, MD 20876

Figure 7-1

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Appendix A
Data Resources

Data Resources will be provided separately on CD. Data Resources for Tupelo AASF, Mississippi.

Tupelo AASF Leases, Licenses, and Permits

- 2007 Tupelo AASF Lease

Tupelo AASF Spill Prevention, Control, and Countermeasure Plan

- 2017 Army Aviation Support Facility No. 2 Tupelo, Mississippi Spill Prevention, Control, and Countermeasure/Spill Contingency Plan

Tupelo AASF Storm Water Pollution Prevention Plan

- Final SWPPP, Volume 1
- 2017 Final SWPPP, Volume 2

Tupelo AASF Inspection Reports

- 2010 Foam System Inspection/Test/Maintenance Report

Tupelo AASF EDR™ Report

- 2019 EDR Aerial Photo Decade Package
- 2019 EDR Radius Map Report with GeoCheck
- 2019 Certified Sanborn Map Report

Appendix B
Preliminary Assessment Documentation

Appendix B.1
Interview Records

PA Interview Questionnaire - Other

Facility:_Tupelo AASF No. 2, MS_
Interviewer:_[redacted]_
Date/Time:_5 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], GSE Technician, 7 years

[redacted], Facility Maintenance Coordinator, over 26 years (7 years in current position)

[redacted], GSE Technician & Environmental Coordinator, 11 years

[redacted], Director of Operations at Tupelo Regional Airport, 2 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 history/description: Current AASF finished in approx. 2009. Purpose is duel role emergency center & AASF. Houses multiple guard units & maintains aircraft. Building designed to be a state emergency mobilization site for the state.
- **Old AASF:**
  - o Was located at southern end of airport from 1960's to 2008, approx. ½ mile south of current location and is now privately owned by an aviation salvage company.
  - o Old AASF Hangar had an AFFF suppression system installed in approx. 1992/93 consisting of 3-vats on legs, each with a manned nozzle, within the hangar. Each vat has a ~150-200 gallon capacity. A full scale test of the system was conducted when it was installed.
  - o Old AASF had 8-12 Trimax units on-site. Training with the units occurred at various locations within the Old AASF. Each unit was drained and refilled at the facility annually. Old AFFF was drained into the OWS which discharges to the Tupelo sanitary sewer.
  - o Had an old fire truck at Old AASF that was gotten rid of in approx. 1990/91. Was AFFF filled but never used for emergency responses. Not known in training occurred or leaks.
  - o AFFF suppression system still active at Old AASF hangar, now under private ownership. A system test was conducted approx. 1-month ago (Feb. 2019) by new owner.
- **New/Current AASF:**
  - o Has 8-10 30-gallon Trimax units. Stored in the hangar unless needed on the flight line. Originally the AFFF w/in was not freeze proof and one

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

canister froze, buckling the metal of the canister but did not breech or leak. Trimax units are serviced (recharged/refilled) by a local fire service company in Tupelo. Training with out of date Trimax unit occurred once at AASF – an unknown quantity was discharged at/into the Wash Rack which discharges to the OWS.

- o Hangar suppression system: two 800-gallon tank system with dedicated water supply tanks (two 93,000 gallon water tanks). System filled with Buckeye 3% MilSpec. Contractor conducted initial system test with foam. An unknown quantity of AFFF was pumped out by the contractor and directed towards the trench drain along the hangar bay doors. The trench drain flows to the OWS but has a trigger lock that bypasses and flows out to the stormwater pond to the north. It is not known if the system lock triggered or not. – pic of system test in manual shows pumping to outside of hangar, allowed to flow to storm drains on pad west of hangar.
- o November 2011: 800-gallons of AFFF lost during bladder rupture. Improper hardware used to install the system caused a coupling to blow which tripped the mixing valve. The leaks caused the tank bladder to rupture. Foam filled the office hallways and flowed out the east side of the AASF into the parking lot, filled the drainage ditches, and flowed out into the road. The office area was squeegeed out the front door and the foam outside allowed to naturally dissipate. For months after the release, the concrete and grassy areas would foam whenever it rained.
- o Testing of the system was last done in 2015 – included a flow test with only water to test header pressure, no foam discharged. No samples have ever been taken of the system's AFFF. The fire marshal schedules system tests but no tests to date.
- o 32 out-of-date 5-gallon buckets of AFFF (Ansulite 3%, Mil Spec MIL-F-24385F) are currently stored in the Hazardous Waste storage building awaiting pick up for disposal. The building is temperature controlled and completely covered. No evidence of spills.
- o Emergency response provided by City of Tupelo and Tupelo Regional Airport fire station. Joint training occurs with AASF personnel but only includes simulation and aircraft walk through exercises – no fire and no foam.
- o Drinking water at AASF and town is supplied by City of Tupelo which gets the water from the Tombigbee River

- **Tupelo Regional Airport**:
  - o Airport provides Aircraft Rescue and Firefighting (ARFF) to airport and AASF, Tupelo municipal FD provides structure fire support.
  - o Airport FD located immediately east of tower.
  - o Airport fire department has several foam capable fire trucks with foam loaded.
  - o No emergency response with foam within the last 2 years, unknown prior to that
  - o Training occurs at Mississippi Fire Academy near Jackson, MS – none on airport
  - o NFPA testing conducted annually at airport. Called to respond to random locations within the response area of the airport and discharge a small volume of foam to demonstrate capability.
  - o No other hangers on the airport have an AFFF suppression system except for the old AASF hangar (currently occupied by private aviation salvage company)

Appendix B.2
Visual Site Inspection Checklists

Visual Site Inspection Checklist

Names(s) of people performing VSI: [redacted] *(AECOM) &* [redacted] *(ARNG)*

Recorded by: [redacted]

ARNG Contact: [redacted]

Date and Time: *5-Mar-19*

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

Source/Release Information

Site Name / Area Name / Unique ID: Tupelo AASF No. 2, Missis

Site / Area Acreage: approximately 37 acres

Historic Site Use (Brief Description): Tupelo Regional Airport, Current AASF finished in approx. 2009. Previous AASF location now privately owned, located at southern end of the airport

Current Site Use (Brief Description): Duel role emergency center & AASF. Houses multiple guard units & maintains aircraft. Building designed to be a state emergency mobilization site for the state.

Physical barriers or access restrictions: fenced 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):
Current AASF: One time training with TriMax unit at wash rack. Hangar system testing by contractor directed to storm drains outside hanager. Hangar system bladder rupture in 2011 filled office building and eastern parking lot to the road with foam.

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

2a. If yes, keep a record (place electronic files on a disk):
Record of current AASF initial system testing kept as hard copy onsite

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

3a. Indicate what businesses are located near the site
Tupelo Regional Airport, church offices, research and development company.

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

4a. If yes, provide a description of the airport/flightline tenants:
Tupelo Regional Airport, a comercial aviation disassembly facility, various other private companies.

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:

Buckeye 3% MilSpec

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

Initial system testing by contractor, bladder rupture and release in 2011

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

Testing of the system was last done in 2015 – included a flow test with only water to test header pressure, no foam discharged. Frequency of testing unknown.

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

Yes, lead to OWS

Transport / Pathway Information

Migration Potential:

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

1a. If so, note observation and location:

Drainage flows to one of two retention ponds (one north of facility and one east). Overflow of retention ponds flows offsiite to the north along riprapped drainage ditches.

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

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

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

3a. If so, please note the location:

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.

Tupelo Regional Airport - annual NFPA testing

Commercial aviation disassembly facility - Former AASF location, recent system testing by current owners known

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):

Currently AASF built approx. 2009

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

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

all non-paved areas vegetated with grass

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:

Receptor Information

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

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

Fenced and controlled gate entry

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:

Approx. 500 feet to the east 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:

Appendix B.3
Conceptual Site Model Information

Preliminary Assessment – Conceptual Site Model Information

Site Name: *Tupelo AASF No. 2, Mississippi*

Why has this location been identified as a site?

Aviation asset that has an AFFF suppression system.

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

Yes, Tupelo Regional Airport and commercial aircraft disassembly facility (former AASF location with known AFFF suppression system).

Training Events

Have any training events with AFFF occurred at this site? *Yes, at both current and former AASF locations*

If so, how often? *Once at current AASF, routine at former AASF*

How much material was used? Is it documented? *Unknown*

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? *Stormwater flows to the one of two retention ponds (respectively, north and east of the facility) that drain to an offsite riprap lined drainage channel that flows to the north.*

Average rainfall?

Any flooding during rainy season?

Direct or indirect pathway to ditches? *Both*

Direct or indirect pathway to larger bodies of water? *No*

Does surface water pond any place on site? *Only in stormwater retention ponds.*

Any impoundment areas or retention ponds? *Yes, two retention ponds – one north that receives stormwater from the western apron and overflow from the OWS and one east that receives stormwater from the eastern and southern POV parking areas.*

Any NPDES location points near the site? *Yes, Outfalls 001 and 002 associated with the retention ponds.*

How does surface water drain on and around the flight line? *Drainage from the apron flows east to French drains that flow to the northern retention pond.*

Preliminary Assessment – Conceptual Site Model Information

Groundwater:

Groundwater flow direction? *Unknown – likely to the southeast towards Kings Creek and the larger Tombigbee River system*

Depth to groundwater?

Uses (agricultural, drinking water, irrigation)?

Any groundwater treatment systems? *Not at facility*

Any groundwater monitoring well locations near the site? *None known*

Is groundwater used for drinking water? *No, city municipal supply from Tombigbee River*

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

Waste Water Treatment Plant:

Has the installation ever had a WWTP, past or present? *No – City of Tupelo WWTP located approx. 4.5-miles to southeast of facility*

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? *N/A*

Is surface water from potential contaminated sites treated? *Only via OWS.*

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?
One time training with a former TriMax unit at the wash rack which drains to the OWS

Preliminary Assessment – Conceptual Site Model Information

Identify Potential Receptors:

Site Worker - *yes*

Construction Worker - *potentially*

Recreational User - *no*

Residential – *offsite only*

Child – *offsite only*

Ecological – *no sensitive habitats*

Note what is located near by the site (e.g. daycare, schools, hospitals, churches, agricultural, livestock)?
Commercial and industrial mostly, residential homes located on eastern side of facility approx 500-ft to east.

Documentation

Ask for Engineering drawings (if applicable).

Has there been a reconstruction or changes to the drainage system? When did that occur? *Not since facility constructed in approx 2009*

Appendix C
Photographic Log

APPENDIX C – Photographic Log

Army National Guard, Preliminary Assessment for PFAS	Tupelo AASF	Mississippi

Photograph No. 1

Description:

Out of date AFFF stored in No Suspected Release Area A.

Date Taken:

3 March 2019

Photograph No. 2

Description:

Release Area C. Standing on the eastern side of the AASF looking southeast across the parking lot and W Jackson Street where the release overflowed from the building.

Date Taken:

3 March 2019

APPENDIX C – Photographic Log

Army National Guard, Preliminary Assessment for PFAS	Tupelo AASF	Mississippi

Photograph No. 3

Description:

Retention pond where AFFF from the Release Area C flowed into. Standing on southwestern corner of the retention pond facing north-northeast.

Date Taken:

3 March 2019

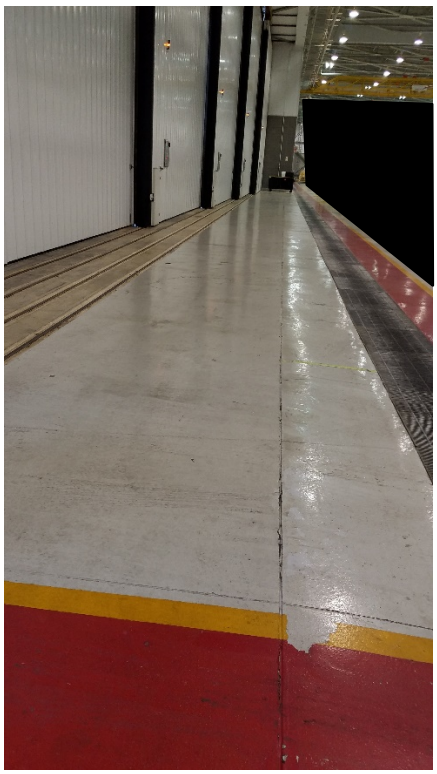
Photograph No. 4

Description:

Inside hangar facing north. Trench drains running length of the hangar bay doors visible on right had side of photo.

Date Taken:

3 March 2019



APPENDIX C – Photographic Log

Army National Guard, Preliminary Assessment for PFAS	Tupelo AASF	Mississippi

Photograph No. 5

Description:

Fire suppression system. Two 800-gallon capacity AFFF tanks and associated piping.

Date Taken:

3 March 2019

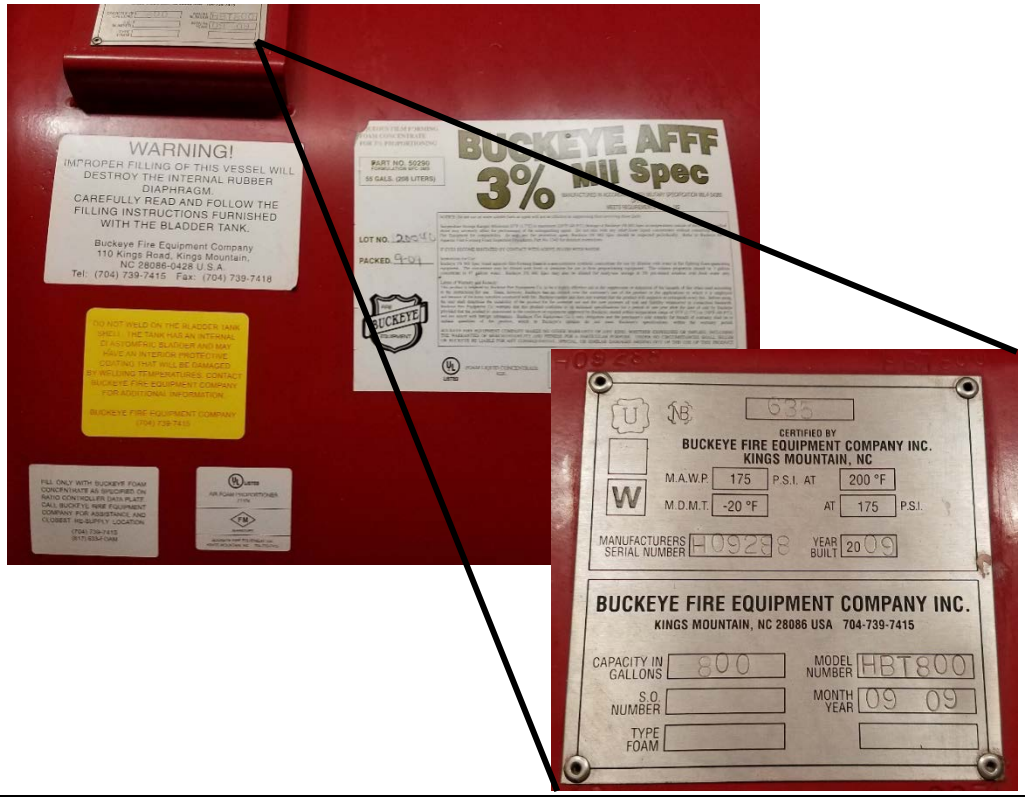
Photograph No. 6

Description:

Details and specifications listed on one of the 800-gallon AFFF tanks that supply the fire suppression system.

Date Taken:

3 March 2019



APPENDIX C – Photographic Log

Army National Guard, Preliminary Assessment for PFAS	Tupelo AASF	Mississippi

Photograph No. 7

Description:

Release Area A. Standing on southwest corner facing northeast.

Date Taken:

3 March 2019

Photograph No. 8

Description:

Release Area D. Standing on southeast corner facing northwest.

Date Taken:

3 March 2019

APPENDIX C – Photographic Log

Army National Guard, Preliminary Assessment for PFAS	Tupelo AASF	Mississippi

Photograph No. 9

Description:

Former Tupelo AASF Hangar, now privately owned. Standing on the northwestern side of the hangar, facing southeast.

Date Taken:

3 March 2019