FINAL
Preliminary Assessment Report Esler Field Army Aviation Support Facility, Louisiana

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

July 2020

Prepared for:

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

UNCLASSIFIED

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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
BeB	Beauregard silt loam
bgs	below ground surface
Ca	Caddo silt loam
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
ChB	Cahaba fine sandy loam
CSM	conceptual site model
DPT	Direct push technology
EDR™	Environmental Data Resources, Inc.™
FD	Fire department
FTA	fire training area
LAARNG	Louisiana Army National Guard
LsB	Libusse silt loam
NOAA	National Oceanic and Atmospheric Administration
OWS	Oil Water Separator
P&A	plugged and abandoned
PA	Preliminary Assessment
PFAS	per- and poly-fluoroalkyl substances
PFOA	perfluorooctanoic acid
PFOS	perfluorooctanesulfonic acid
SI	Site Inspection
UCMR3	Unregulated Contaminant Monitoring Rule 3
US	United States
USACE	United States Army Corps of Engineers
USACHPPM	United States Army Center for Health Promotion and Preventive Medicine
USAEHA	United States Army Environmental Hygiene Agency
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
VFD	Volunteer Fire Department
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 Esler Field Army Aviation Support Facility (AASF; also referred to as the "facility") near Pineville, Louisiana, to assess potential PFAS release areas and exposure pathways to receptors.

The facility (originally named Camp Beauregard Army Airfield) was constructed in 1940 and closed in 1946. In the 1950s, the property was ceded to the Rapides Parish Police Jury. In 2001, the airport's management was transferred to the Louisiana ARNG (LAARNG) in a 99-year lease.

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; Reviewed data resources to obtain information relevant to suspected PFAS releases;
- Conducted a site visit on 24 January 2019 and completed visual site inspections at locations where PFAS-containing materials were suspected of being stored, used, or disposed;
- Interviewed personnel during the site visit who are associated with Esler Field AASF, including a former facility commander, current/former maintenance supervisors, and a safety officer (onsite since 1996); and,
- Identified Area(s) of Interest (AOIs) and developed a preliminary conceptual site model (CSM) to summarize potential source-pathway-receptor linkages of potential PFAS in soil, groundwater, surface water, and sediment for each AOI.

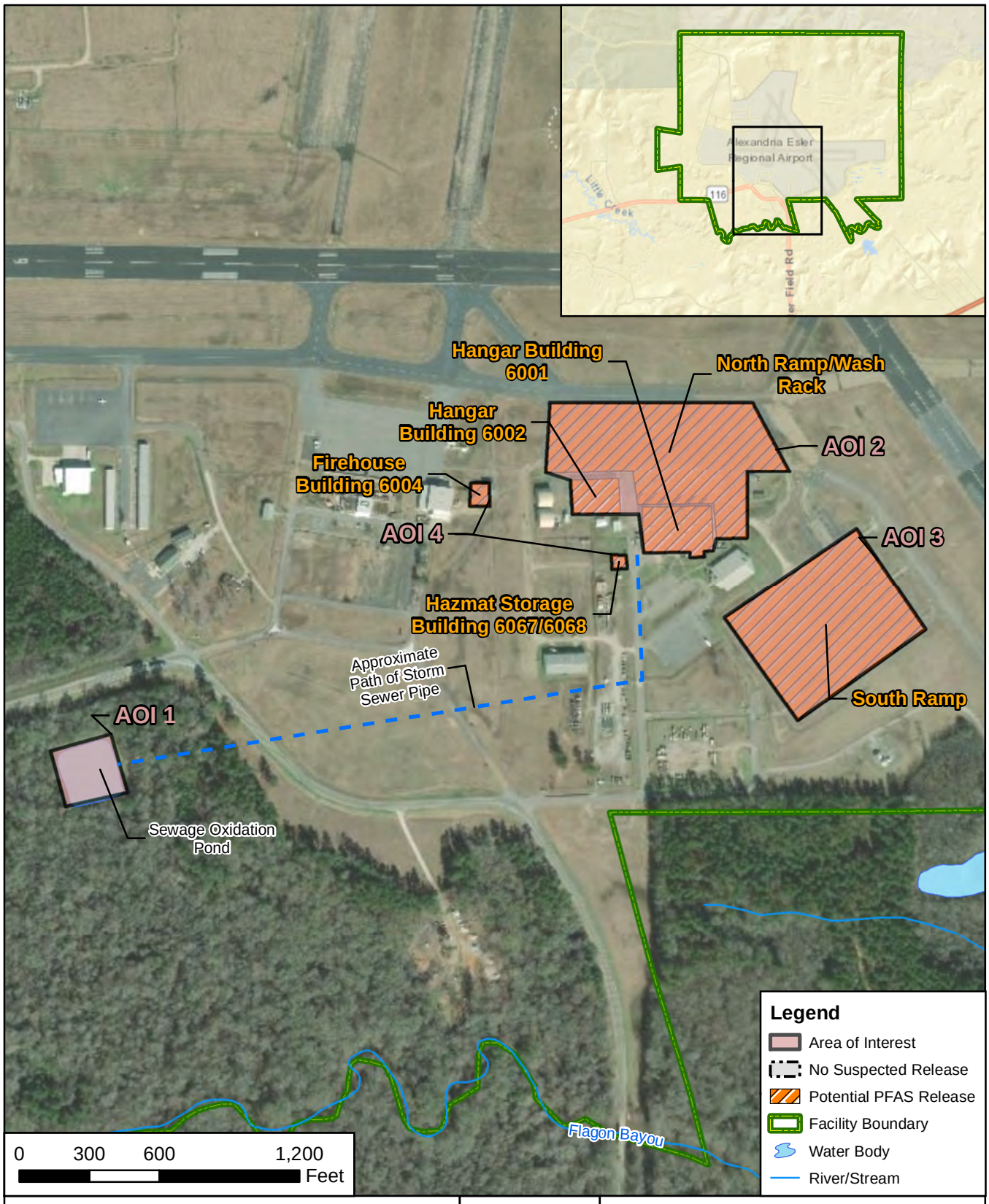
Four AOIs related to potential PFAS releases were identified at Esler Field AASF during the PA. The AOIs are shown on **Figure ES-1** and described in **Table ES-1** below.

Table ES-1: AOIs at Esler Field AASF

Area of Interest	Name	Used by	Potential Release Date
AOI 1	Sewage Oxidation Pond	LAARNG	Between 1996 and 2007
AOI 2	North Ramp/Wash Rack;	LAARNG jointly with the Holloway Volunteer Fire Department (FD);	North Ramp/Wash Rack training between 1996 and 2007;
	Hangar Buildings 6001 and 6002	LAARNG	hangar AFFF storage from 1980s to current
AOI 3	South Ramp	LAARNG jointly with the Holloway Volunteer FD	Between 2006 and 2007
AOI 4	Firehouse Building 6004;	LAARNG jointly with Holiday Village FD;	Between late 1980s and 1990s;
	Hazmat Storage Building 6067/6068	LAARNG	Since 1996

Based on potential PFAS releases at four AOIs, there is potential for exposure to PFAS contamination in media at the facility. The preliminary CSM for Esler Field AASF, which presents the potential receptors and media impacted, is shown on **Figure ES-2**. ARNG will evaluate the need for an SI based on the potential receptors, the potential migration of PFAS contamination off the facility, and the availability of resources.

Based on the US Environmental Protection Agency (USEPA) Unregulated Contaminant Monitoring Rule 3 (UCMR3) data, 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.



CLIENT	ARNG			
NOTES	Preliminary Assessment for PFAS at Esler Field, LA			
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SCALE	1:7,200	CHK BY	SS	3/19/2020
Base Map: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI,		PM	RG	3/19/2020

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Summary of Findings

AECOM
12420 Milestone Center Drive
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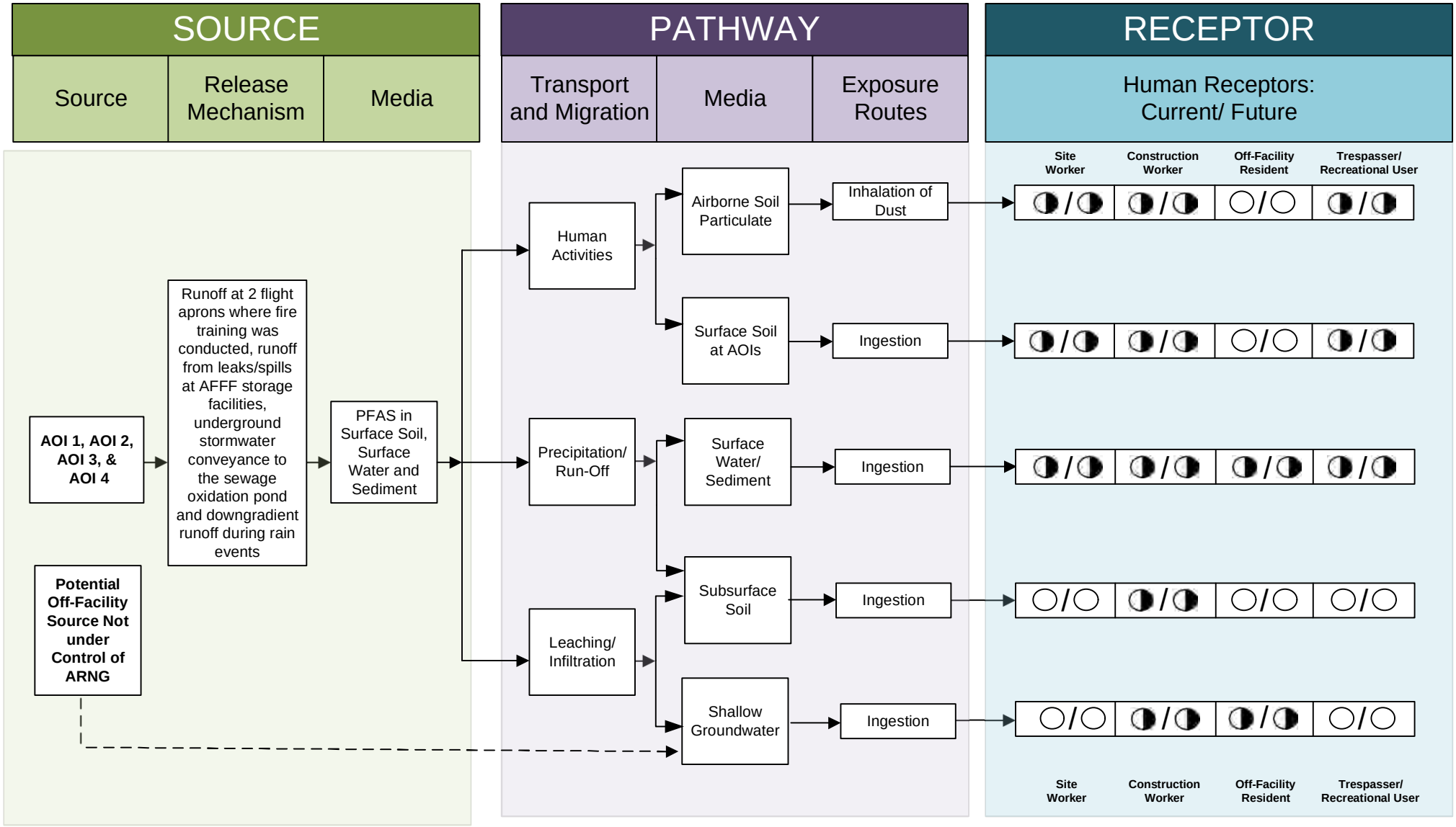
Figure ES-1



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
AOI 1, AOI 2, AOI 3, & AOI 4 at Esler Field AASF, LA

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 their 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 sources of PFAS are possible. In addition, the ARNG is assessing businesses or operations adjacent to the ARNG facility (not under the control of ARNG) that could potentially be responsible for a PFAS release.

PFAS are classified as emerging environmental contaminants that are garnering increasing regulatory interest due to their potential risks to human health and the environment. PFAS formulations contain highly diverse mixtures of compounds. Thus, the fate of PFAS compounds in the environment varies. The regulatory framework at both federal and state levels continues to evolve. The US Environmental Protection Agency (USEPA) issued Drinking Water Health 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 the findings of a PA for PFAS-containing materials at Esler Field Army Aviation Support Facility (AASF; also referred to as the "facility"), near Pineville, Louisiana, in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended, the National Oil and Hazardous Substances Pollution Contingency Plan (40 Code of Federal Regulations [CFR] Part 300), and Army requirements and guidance.

This PA documents the locations where PFAS were historically stored and reportedly released into the environment at Esler Field 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 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; Reviewed data resources to obtain information relevant to suspected PFAS releases;
- Conducted a site visit on 24 January 2019 and completed visual site inspections at locations where PFAS-containing materials were suspected of being stored, used, or disposed;
- Interviewed personnel during the site visit who are associated with Esler Field AASF, including a former facility commander, current/former maintenance supervisors, and a safety officer (onsite since 1996); and,

- Developed a preliminary conceptual site model (CSM) to outline the potential releases and pathways 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 potential or suspected fire training areas (FTAs) at the facility identified during the site visit
- **Section 3** – **Non-Fire Training Areas:** describes other locations of potential or suspected PFAS releases at the facility identified during the site visit
- **Section 4** – **Emergency Response Areas:** describes areas of potential or suspected PFAS releases 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 at 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

Esler Field AASF is located in central Louisiana off Louisiana Highway 116 (Esler Field Rd), in Rapides Parish, approximately 12 miles northeast of Alexandria (**Figure 1-1**). Esler Field encompasses approximately 1,991 acres and is immediately adjacent (south of) to the 12,889-acre Camp Beauregard Training Site, which is geographically separate from the 729-acre Camp Beauregard Cantonment Area. Esler Field was constructed in 1940 for the US Army Air Corps and was originally named Camp Beauregard Army Field. The Air Corps used the facility extensively through 1942. The facility was renamed Esler Army Airfield in 1941 to honor Lieutenant Esler. In 1945, the facility was reassigned directly to Third Air Force and began the process of deactivation. The facility was finally closed in 1946, and it remained Federal property until the 1950s, when it was ceded to the Rapides Parish Police Jury as surplus property. Under the Rapides Parish Police Jury, the facility served as the City of Alexandria's commercial airport until the 1990s, when commercial traffic was moved to Alexandria International Airport (LAARNG, n.d.).

In 2001, Rapides Parish Police Jury transferred the facility's management to the LAARNG in a 99-year lease, and the facility is now used for numerous training exercises. Currently, roughly 60 percent of the airport's operations are military, and the rest are civilian. Although Esler Field doesn't offer private jet passenger services, it does provide both military and civilian aircraft fuel

services. In December of 2011, the MMR Group, which previously based its aviation operations at Alexandria International Airport, completed work on its new corporate aviation facility at Esler Field. The facility includes 10,000 square feet of hangar space and 3,000 square feet of office space. MMR shares its facilities with Crest Industries, and the two groups currently support multiple aircraft.

1.5 Facility Environmental Setting

Esler Field AASF is located in the Upper West Gulf Coastal Plain physiographic region. The topography of the facility is considered gently rolling, and the elevations across the area range from approximately 60 to 140 feet above mean sea level. The higher elevations occur on the northern most portion of the facility, whereas lower elevations are located along the northern floodplain of Flagon Bayou, along the south and eastern boundaries of the facility (LAARNG, 2007).

1.5.1 Geology

In general, the geology of central Louisiana is composed of marine sediments deposited during fluctuating sea levels, and fluvial sediments deposited by the meandering Mississippi River system. These sediments dip less than five degrees toward the south-southeast, and their compositions range from clays to sands (US Army Environmental Hygiene Agency [USAEHA], 1994). The Oligocene to Miocene fluvial and marine deposits in the central portion of the State comprise, from oldest to youngest, the Catahoula Formation overlain by the Lena, Carnahan Bayou, and Dough Hills members of the Fleming Formation (USAEHA, 1994). The Catahoula formation contains thick sand beds that are interbedded with thinner clay layers (US Army Center for Health Promotion and Preventive Medicine [USACHPPM], 2004). The three members of the Fleming Formation consist of consolidated clays with discontinuous silts and sands (USAEHA, 1994).

As shown on **Figure 1-2**, most of Esler Field AASF is mapped as the Dough Hills Member of the Miocene Fleming Formation described as undifferentiated fluviatile silts and sands with calcareous brackish-water clays (US Geological Survey [USGS], 2019a). Immediately north and south are more recent Quaternary alluvial and fluvial deposits overlying the older Oligocene to Miocene sediments. These Quaternary deposits are composed of alternating clayey and sandy to gravely facies. The sandy to gravely facies have high porosity and permeability, which allow for greater rainwater infiltration. The clayey facies act as a surficial confining layer limiting infiltration into the underlying formations (USAEHA, 1994).

Soil borings advanced along the western boundary of Camp Beauregard Training Site (north of Esler Field) show sediments in a downward coarsening sequence from primarily silt at the surface, to sand, and eventually to sand and gravel at depths between 15 and 25 feet below ground surface (bgs). An abrupt facies shift from the overlying coarse sand and gravel to a stiff clay was identified across the investigation area at depths ranging from 25 feet to 35 feet bgs. The thickness of this clay layer was not determined due to direct push technology (DPT) rig refusal. Soil borings advanced near the southwestern boundary of Camp Beauregard were noted with sandy silts observed to fine downward into stiff silty clay and clay, where the DPT rig was refused at depths ranging between 15 and 26 feet bgs (USACE, 2014).

1.5.2 Soil

Surficial soils at Esler Field consist primarily of fine sandy loam and clay loam derived from marine and alluvial Quaternary deposits (US Department of Agriculture [USDA], Soil Conservation Service, 1980). Soils present at Esler Field include Beauregard silt loam (BeB), Caddo silt loam (Ca), Cahaba fine sandy loam (ChB), and the Libusse silt loam (LsB). The Beauregard, Caddo,

and Libusse silt loams have relatively low permeability, while the Cahaba is well drained and moderately permeable. All of these soil types are described as relatively acidic with slight erodibility (USDA, 2019).

1.5.3 Hydrogeology

Esler Field is underlain by the Coastal Lowlands aquifer system, locally known as the Miocene Fleming Formation. The Coastal Lowlands aquifer system consists of a gulf-ward thickening, heterogenous, unconsolidated to poorly consolidated wedge of discontinuous beds of sand, silt, and clay, with an approximate thickness of 2,000 feet thick in the vicinity of Esler Field. This system yields large quantities of water for agricultural, public supply, domestic, commercial, and industrial uses (USGS, 2009). The inferred direction of groundwater flow is north-northeast (**Figure 1-2**). It is possible that the groundwater may locally flow to the southeast, towards Flagon Bayou.

Underlying the Coastal Lowlands aquifer system is the Mississippi Embayment aquifer system, which is in poorly consolidated sedimentary rocks of Late Cretaceous to middle Eocene age. The two systems are separated by a thick, effective confining unit. Of the six aquifers contained within the Mississippi Embayment aquifer system, the Middle Claiborne aquifer is the most heavily used; it has a reported thickness in the vicinity of Esler Field, ranging from 600 to 800 feet. (USGS, 2019b).

Water to the facility and areas north, south, and west is supplied by the Water Works District No. 3 of Rapides Parish (WWD #3). WWD #3 distributes water sourced from seven groundwater wells (40 percent) and a surface water structure on Big Creek, in Grant Parish, Louisiana (60 percent), over 8 miles north of Esler Field. Two of the WWD #3's supply wells are located at Camp Beauregard. Two wells at Esler Field (#8 and #9) were drilled in 2007 to depths of 651 and 621 feet, respectively. These wells are offline due to methane, which is cost prohibitive to remove. However, well #8 (north of AASF) is used to supply the Esler Field maintenance facility's fire protection system water storage tank (French, 2020). Residents and businesses east of Esler Field are served by Buckeye Water District No. 50. The Buckeye District obtains all source water from five wells that range from 1,800 to 2,000 feet deep. Two wells (#1 and #2) are located northeast of Buckeye, off LA-115 (over seven miles east of Esler Field); three wells (#3, #4, and #5) are located in Libusse, Louisiana (approximately two miles south southwest of Esler Field) (Charrier, 2020).

An EDR™ report conducted a well search for a 1-mile radius surrounding the facility (Appendix A). Using additional online resources, such as state and local GIS databases, wells were researched to a 4-mile radius of the facility. A total of 23 wells were identified within 1 mile of the facility (EDR™, 2019), included in **Appendix A**). One well (named Esler Field Well No 2) is located on the northwest portion of the airfield in the same location as Esler Field Well #8 (**Figure 1-2**). Esler Field Well No 2 is reported as drilled in 1941 to a depth of 635 feet bgs and screened from 591 to 633 feet bgs. LAARNG reports this well is offline. Six wells are noted as USGS Louisiana Water Science Center wells, with depths ranging from 150 to 675 feet bgs, and they are installed in the Carnahan Bayou member of the Fleming Formation. The Carnahan Bayou unit is identified as a confined aquifer within the Coastal Lowlands aquifer system, with approximate depths to water ranging from 20 to 90 feet. Of the remaining sixteen wells, one well with a depth of 650 feet bgs is reported as destroyed (owner: LA National Guard immediately north of the facility), and fifteen wells are reported as plugged and abandoned (P&A). Eleven of the fifteen P&A wells were reported as test holes, with depths ranging from 260 to 706 feet bgs, and four of the fifteen wells were reported as monitoring wells owned by TEXACO and located in close proximity to the facility, with depths of 30 feet bgs (EDR™, 2019).

Based on the USEPA Unregulated Contaminant Monitoring Rule 3 (UCMR3) data, it was indicated that no PFAS were detected in a public water system above the 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.

1.5.4 Hydrology

Esler Field AASF is located in the Lower Flagon Bayou Watershed (**Figure 1-3**). Surface water in the vicinity of the facility consists of perennial and intermittent streams, open water bodies, and wetlands. The ground surface slopes to the south, toward Flagon Bayou, which flows east then northeast, discharging to Catahoula Lake. Catahoula Lake, covering over 46 square miles in LaSalle Parish, supports multiple species of waterfowl including duck, geese, and wading birds, and it is used for recreational fishing and hunting (Horst, 2019).

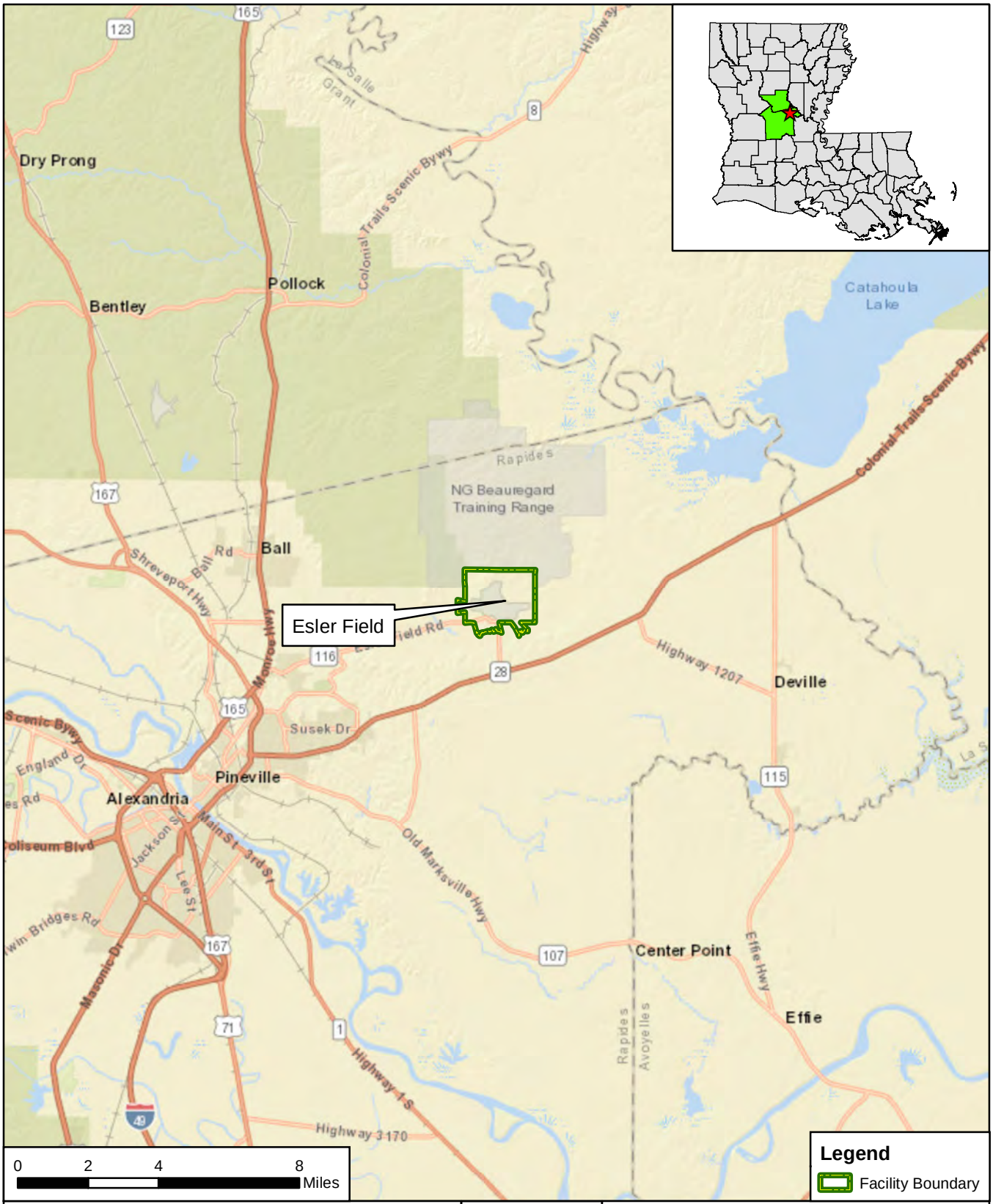
Wastewater from the facility is conveyed to the west via underground pipe to a small, square, lined sewage oxidation pond on the southwest corner of the facility.

1.5.5 Climate

Esler Field, located in north-central Louisiana, has a sub-tropical climate influenced by its proximity to the Gulf of Mexico. The average temperature (1981-2010) for Esler Field is 65 degrees Fahrenheit (°F), with an average daily low of 37°F in January to an average daily high of 94°F in August. Annual precipitation is 57.5 inches and is relatively evenly distributed, with the lowest precipitation from July to September (National Oceanic and Atmospheric Administration [NOAA], 2019). The mean annual relative humidity is 74 percent (LAARNG, 2007). The mean annual evaporation rate in central Louisiana is 45 inches (NOAA, 1982). Thunderstorm activity is most common during hurricane season (1 June–31 October), when tropical storms and hurricanes regularly develop in the Gulf of Mexico. The tropical disturbances cause high winds and excessive rainfall (LAARNG, 2007).

1.5.6 Current and Future Land Use

Esler Field AASF is currently leased from Rapides Parish and is primarily used for a variety of helicopter-related training activities (LAARNG, 2007). Access to the facility is restricted and controlled by fencing and gates. Reasonably anticipated future land use is not expected to change from the current land use. Residential areas are located approximately 1 mile to the west and 1 mile to the southeast.



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Base Map: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI,		PM	RG	10/29/2019

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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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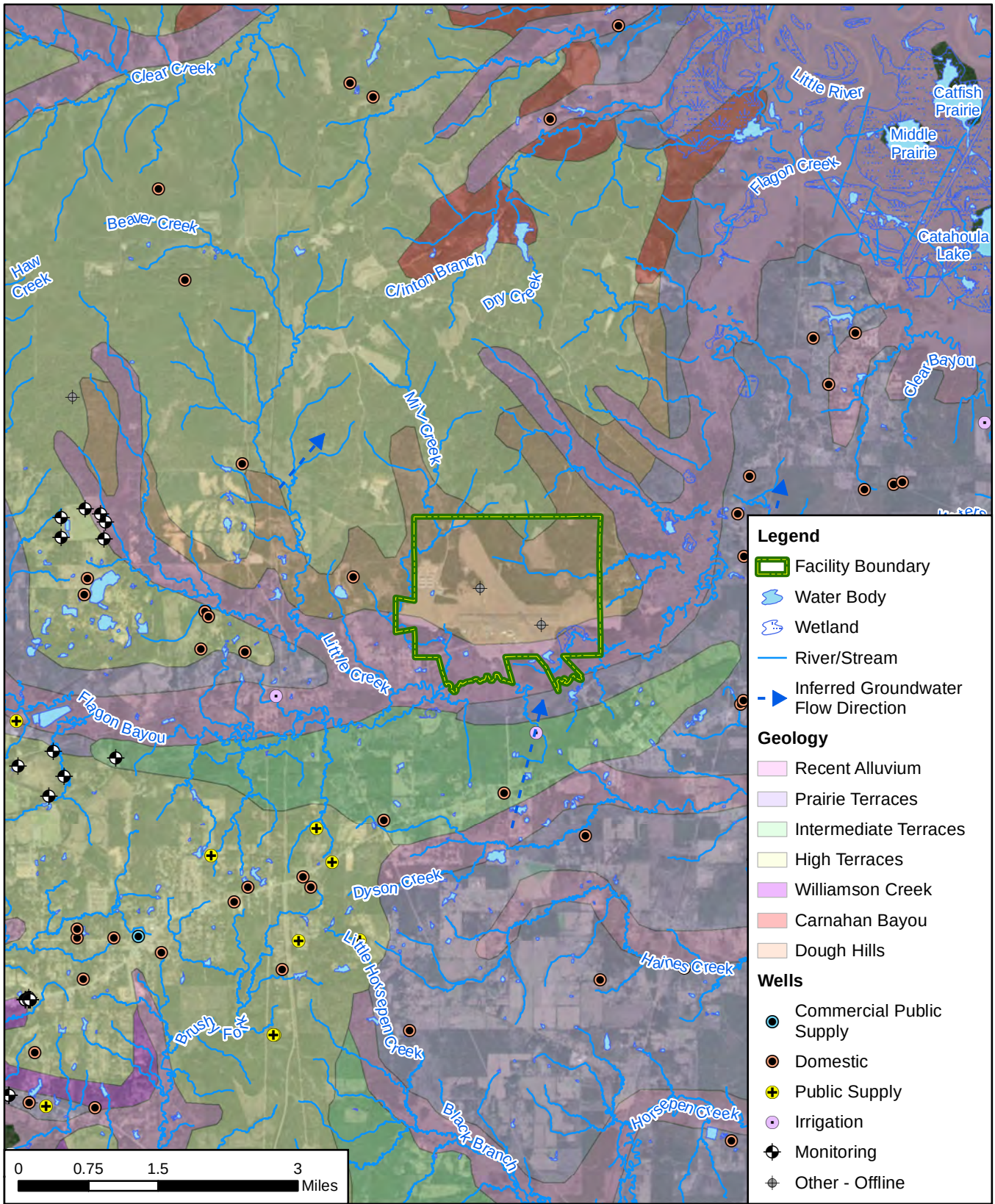

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Groundwater Features

AECOM
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Figure 1-2

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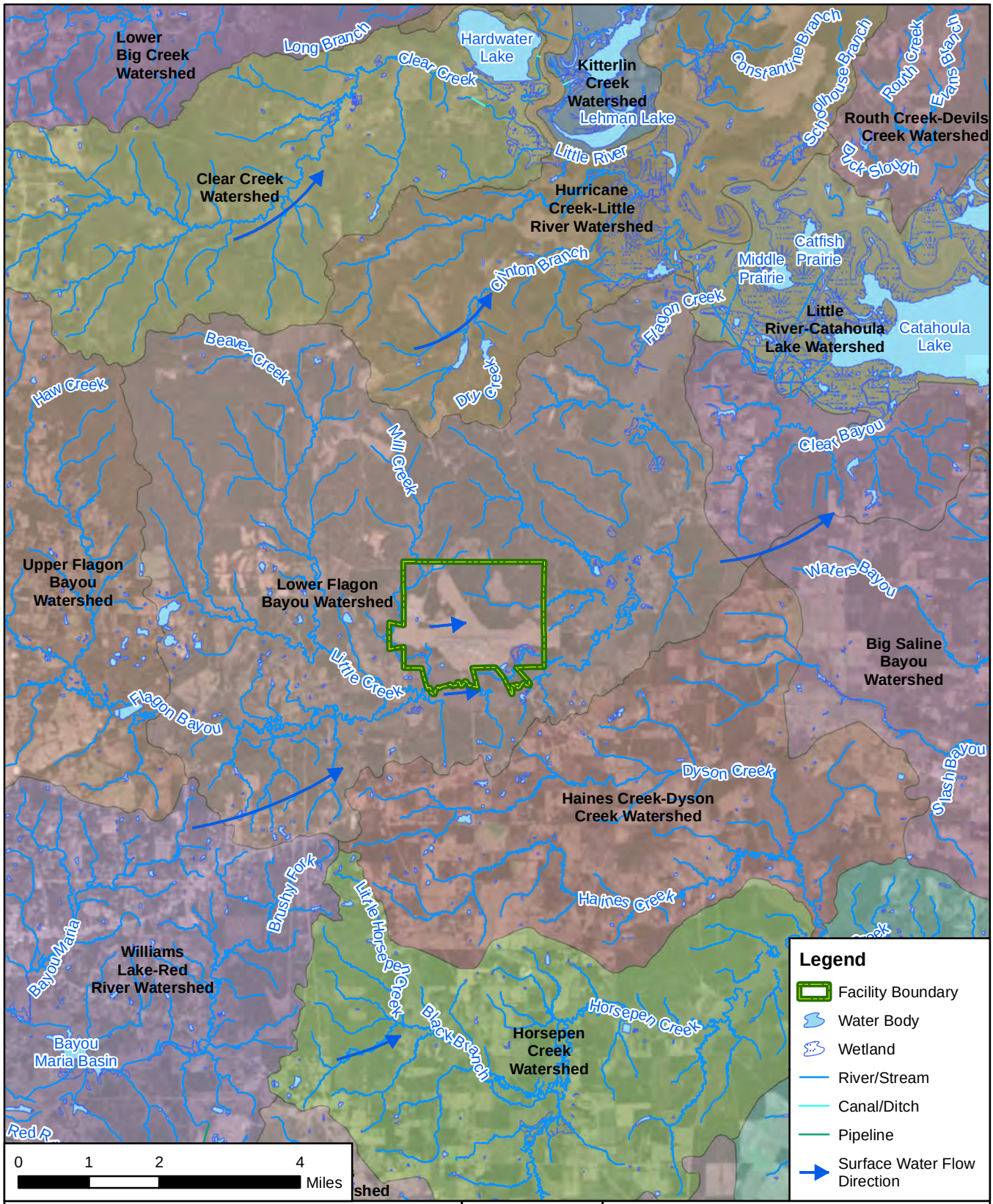

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Surface Water Features

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Figure 1-3

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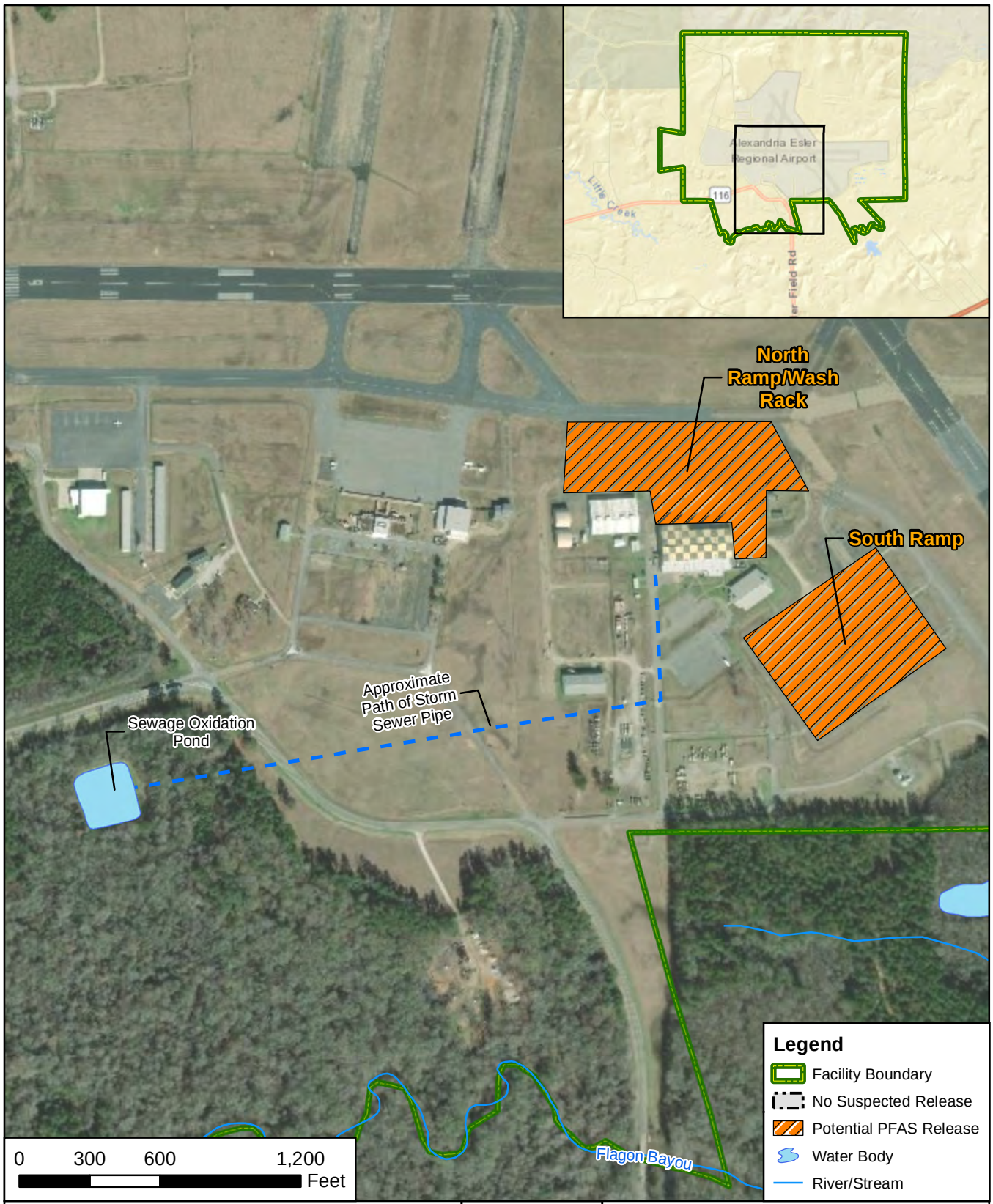
2. Fire Training Areas

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

2.1 North Ramp/Wash Rack and South Ramp

AASF personnel reported fire training at the north ramp/wash rack was conducted annually between 1996 and 2007. After the south ramp was constructed in 2005-2006, fire training also was conducted at the south ramp until 2007. The exact location of the training events held on the ramps varied from year to year. During these drills (held jointly with the local Holloway Volunteer Fire Department [VFD]), expired or near expired Tri Max™ foam carts were fully expended. After training, the expended carts were recharged with five-gallon buckets stored in the hazmat storage building (discussed in **Section 3.4**). Foam dispensed from Tri-Max™ carts during training was rinsed from the ramp down into a nearby stormwater drain. Drains convey stormwater southwest (north ramp) and west (south ramp) to an oil water separator and then to a square sewage oxidation pond located on the southwestern portion of the facility (discussed in **Section 3.2**). With the exception of these training exercises, AASF personnel reported no suspected release of AFFF or spill incident at these locations. The geographic coordinates for the north ramp/wash rack are 31° 23'27.15"N; 92°17'45.64"W, and the geographic coordinates for the south ramp are 31° 23'24.84"N; 92°17'38.92"W.



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Base Map: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI,		PM	RG	3/19/2020

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Fire Training Areas

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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. Information on these features obtained during the PA are included in **Appendices A and B**. Five non-FTAs where AFFF was stored and/or potentially released were identified during the PA. The AASF facilities consist of several buildings, including two hangars, a former firehouse, and hazardous storage. Facilities also include two concrete flight lines (north and south ramps), a wash rack (situated within the north ramp footprint), and a sewage oxidation pond. The non-FTAs are described below and shown on **Figure 3-1**, with photographs provided in **Appendix C**.

3.1 Hangar Buildings 6001 and 6002

Hangar Buildings 6001 (primary hangar built before 1955) and 6002 (built between 1955 and 1971) are located in close proximity to each other, in the south-central portion of the facility. The fire suppression systems in the hangars are water deluge (no foam). Three percent (%) Chemguard AFFF is stored in each building. To the best of their knowledge, AASF personnel (including the Safety Officer onsite since 1996, when AFFF was first brought to Esler Field) reported no suspected release of AFFF or spill incident at these locations. Due to AFFF storage in the hangars, they are identified as possible AFFF release locations. The geographic coordinates for the hangars are 31° 23'28.67"N; 92°17'46.84"W (6001) and 31° 23'30.01"N; 92°17'50.54"W (6002).

3.2 Sewage Oxidation Pond

Stormwater is conveyed from various points on the facility to an approximately 1.3-acre square, lined, sewage oxidation (oxidation) pond on the southwestern portion of the installation. With the exception of AFFF conveyed to the pond through the stormwater system during training between 1996-2007 (as described in **Section 2.1**), AASF personnel reported no AFFF release or spill incident at this location. LAARNG reports the sewage oxidation pond overflows at least once a year. The sewage oxidation pond is considered a possible secondary AFFF release location. The geographic coordinates for the sewage oxidation pond are 31° 23'18.34"N; 92°18'15.23"W.

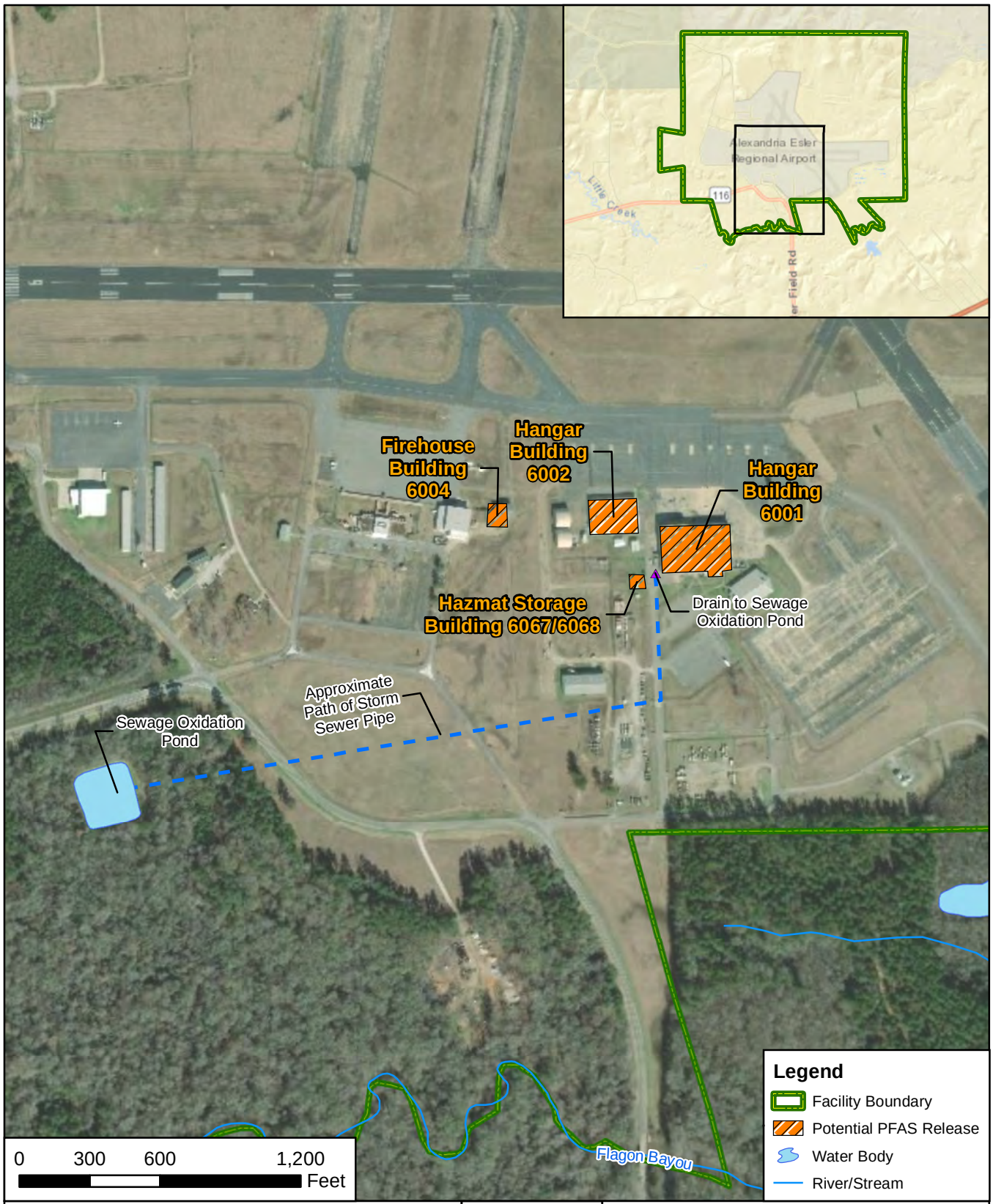
3.3 Firehouse Building 6004

The firehouse building was active from the late 1980s through the 1990s, when Esler Field was still Esler Regional Airport. According to personnel interviews, Building 6004 was a civilian firehouse run by the Holiday Village Fire Department (FD), and AFFF was stored in 5-gallon buckets within the building. The firehouse shut down in the late 1990s, and fire response is now currently handled through a pre-accident plan with the Holloway VFD. To the best of their knowledge, AASF personnel who had been working on site since 1996 reported no AFFF releases or spill incidents at this location. Due to AFFF storage in the building, it is identified as a possible AFFF release location. The geographic coordinates for the firehouse building are 31° 23'30.01"N; 92°17'56.20"W.

3.4 Hazmat Storage Building 6067/6068

AFFF was previously stored in a portable building before being moved to the Hazmat storage building (6067/6068), located just south of the primary hangar (6001). Currently, three containers of Chemguard 3% solution are stored in the hazmat building. During training from 1996 to 2007,

five-gallon buckets of AFFF were used to recharge the fire extinguisher carts located on the north and south ramps. To the best of their knowledge, AASF personnel who had been working on site since 1996 reported no AFFF releases or spill incidents at this location. Due to AFFF storage in the building, it is identified as a possible AFFF release location. The geographic coordinates for the hazmat storage building are 31° 23'27.15"N; 92°17'49.38"W.



CLIENT	ARNG			
NOTES	Preliminary Assessment for PFAS at Esler Field, LA			
REVISED	3/19/2020	GIS BY	GC	3/19/2020
SCALE	1:7,200	CHK BY	SS	3/19/2020
Base Map: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI,		PM	RG	3/19/2020

N

Non-Fire Training Areas

AECOM
12420 Milestone Center Drive
Germantown, MD 20876

Figure 3-1

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4. Emergency Response Areas

During the PA interviews, AASF personnel onsite since 1996 reported one emergency response area on the facility. The Holloway VFD responded to a potential electrical fire located at building 6004 (west of hangar 6002) sometime between 2005-2006. According to the interviews, AFFF was not used during this response.

5. Adjacent Sources

Off-site sources of PFAS located adjacent to Esler Field AASF were not identified during PA interviews (**Appendix B.1**) or in the EDR™ report (**Appendix A**).

6. Conceptual Site Model

Based on the PA findings, four AOIs were identified at Esler Field AASF: AOI 1 Sewage Oxidation Pond, AOI 2 North Ramp/Wash Rack and Hangar Buildings 6001 and 6002, AOI 3 South Ramp and AOI 4 Firehouse Building 6004 and Hazmat Storage Building 6067/6068. The AOIs are shown on **Figure 6-1**. The following sections describe the CSM components and the specific preliminary CSMs developed for AOIs 1, 2, 3 and 4. The CSM identifies 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 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 Esler Field AASF include site workers, construction workers, trespassers, off-facility residents, and off-facility recreational users. The preliminary CSM for Esler Field AASF indicates which specific receptors could potentially be exposed to PFAS.

6.1 AOI 1 Sewage Oxidation Pond

AOI 1 Sewage Oxidation Pond, located at the southwest corner of the facility, is connected to the North and South Ramps via the facility stormwater drain system. AFFF was released at the ramps during training on several occasions and then rinsed into ramp storm drains. The water then flows to an oil and water separator and is then conveyed to the Sewage Oxidation Pond. As a result, these training events may have potentially released PFAS to surface water, sediment, and surface soil at the Sewage Oxidation Pond. PFAS may have migrated from surface soil to subsurface soil and groundwater via leaching. Overflow of this lined pond would result in PFAS releases to surface soil and off-site surface water/sediment (specifically to tributaries to Flagon Bayou or Mill Creek) and potentially migrate via leaching to subsurface soil and groundwater.

Esler Field AASF receives its water from WWD #3. WWD #3's two supply wells at Esler Field are offline. Based on information provided by LA ARNG a third well is also offline, i.e., Esler Field No 2 discussed in **Section 1.5.3** and referenced in Appendix A EDR™ report. While the assumed groundwater flow is to the north-northeast, the specific hydrogeology beneath the facility is uncertain. It is unknown if there is communication between the shallow and deeper aquifers locally and if undocumented private supply wells may be downgradient of the facility.

The preliminary CSM for AOI 1 is presented on **Figure 6-2.** Potential PFAS exposure pathways resulting from releases at AOI 1 are described in **Table 6-1**:

Table 6-1: Exposure Pathways at AOI 1

Pathway	Receptor
Surface Soil	Considered a potentially complete pathway to site workers, construction workers and trespassers via ingestion or inhalation of dust
Subsurface Soil	Considered a potentially complete pathway to construction workers via ingestion or inhalation of dust
Surface Water and Sediment	Considered a potentially complete pathway to all receptors via ingestion
Groundwater	Considered a potentially complete pathway to construction workers and off-facility users of groundwater for potable water (residents and workers) via ingestion

6.2 AOI 2 North Ramp/Wash Rack and Hangar Buildings 6001 and 6002

AOI 2 has been identified as the North Ramp/Wash Rack and Hangar Buildings 6001 and 6002. AFFF is stored in Hangar Buildings 6001 and 6002. AFFF was released at the ramp/wash rack on several occasions and rinsed into drains on the ramp. Drainage from the ramp/wash rack is conveyed via underground piping to the Sewage Oxidation Pond. During training exercises, some PFAS may have been released to surface soil in adjacent unpaved areas, which could then migrate to the subsurface.

The preliminary CSM for AOI 2 is presented on **Figure 6-3.** Potential PFAS exposure pathways resulting from releases at AOI 2 are described in **Table 6-2**:

Table 6-2: Exposure Pathways at AOI 2

Pathway	Receptor
Surface Soil	Considered a potentially complete pathway to site workers, construction workers and trespassers via ingestion or inhalation of dust
Subsurface Soil	Considered a potentially complete pathway to construction workers via ingestion or inhalation of dust
Groundwater	Considered a potentially complete pathway to construction workers and off-facility users of groundwater for potable water (residents and workers) via ingestion

6.3 AOI 3 South Ramp

AOI 3 has been identified as the South Ramp. AFFF was released at the ramp on several occasions and rinsed into drains on the ramp. Drainage from the ramp is conveyed to the Sewage Oxidation Pond. During training exercises, some PFAS may have been released to surface soil in adjacent unpaved areas, which could then migrate to the subsurface or, during precipitation events, flow south overland to Flagon Bayou.

The preliminary CSM for AOI 3 is presented on **Figure 6-4.** Potential PFAS exposure pathways resulting from releases at AOI 3 are described in **Table 6-3**:

Table 6-3: Exposure Pathways at AOI 3

Pathway	Receptor
Surface Soil	Considered a potentially complete pathway to site workers, construction workers and trespassers via ingestion or inhalation of dust
Subsurface Soil	Considered a potentially complete pathway to construction workers via ingestion or inhalation of dust
Surface Water and Sediment	Considered a potentially complete pathway to all receptors via ingestion
Groundwater	Considered a potentially complete pathway to construction workers and off-facility users of groundwater for potable water (residents and workers) via ingestion

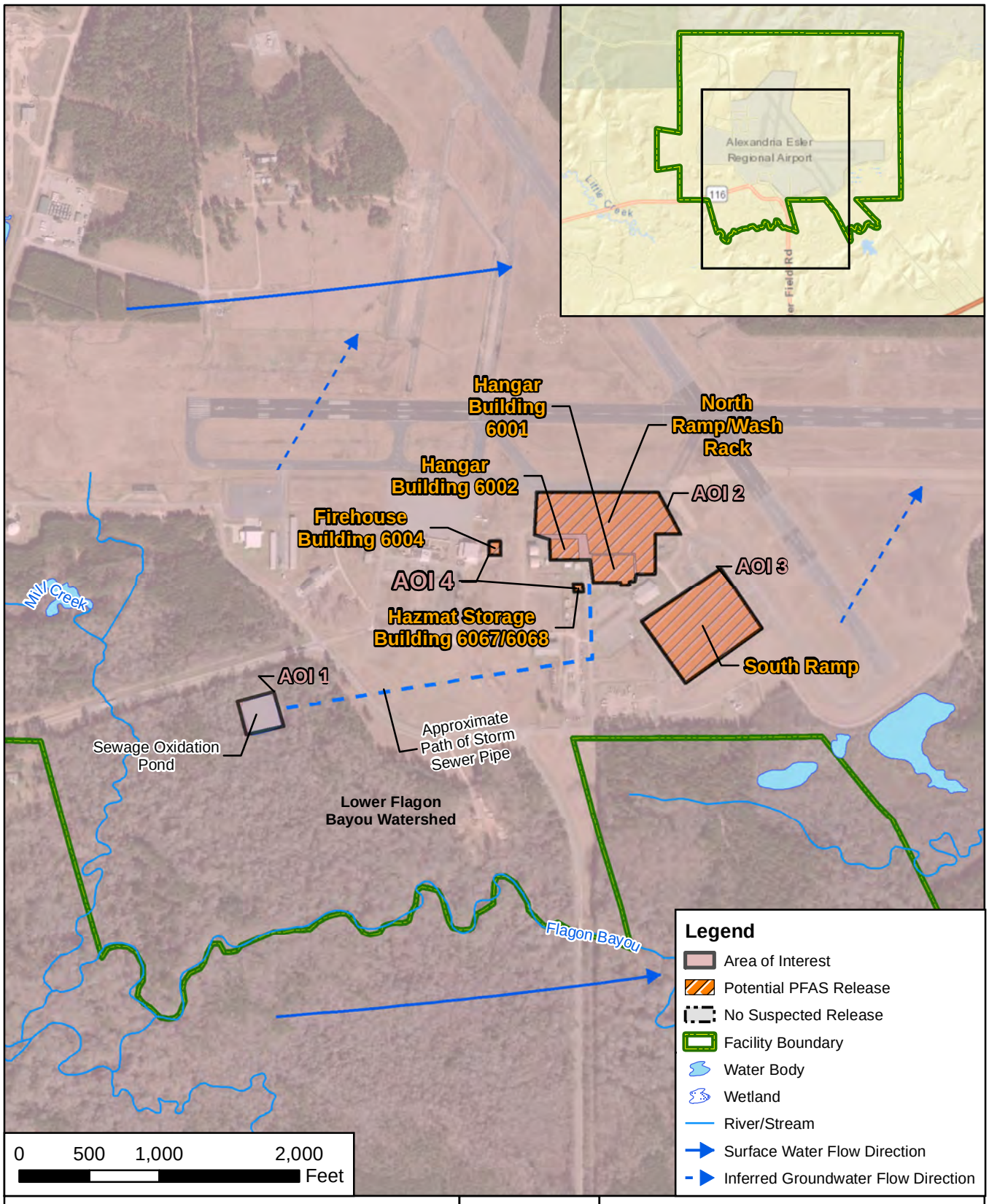
6.4 AOI 4 Firehouse Building 6004 and Hazmat Storage Building 6067/6068

AOI 4 has been identified as the Firehouse and Hazmat Storage Buildings. While no reported AFFF releases were identified at these buildings, the potential exists for leaks or spills associated with storage of AFFF. Incidental spills may have been released to the surrounding paved and soil covered areas, which could then migrate to the subsurface.

The preliminary CSM for AOI 4 is presented on **Figure 6-5**. Potential PFAS exposure pathways resulting from releases at AOI 4 are described in **Table 6-4**:

Table 6-4: Exposure Pathways at AOI 4

Pathway	Receptor
Surface Soil	Considered a potentially complete pathway to site workers, construction workers and trespassers via ingestion or inhalation of dust
Subsurface Soil	Considered a potentially complete pathway to construction workers via ingestion or inhalation of dust
Groundwater	Considered a potentially complete pathway to construction workers and off-facility users of groundwater for potable water (residents and workers) via ingestion



CLIENT	ARNG			
NOTES	Preliminary Assessment for PFAS at Esler Field, LA			
REVISED	3/19/2020	GIS BY	GC	3/19/2020
SCALE	1:12,000	CHK BY	SS	3/19/2020
Base Map: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI,		PM	RG	3/19/2020

N

Area of Interest

AECOM
12420 Milestone Center Drive
Germantown, MD 20876

Figure 6-1

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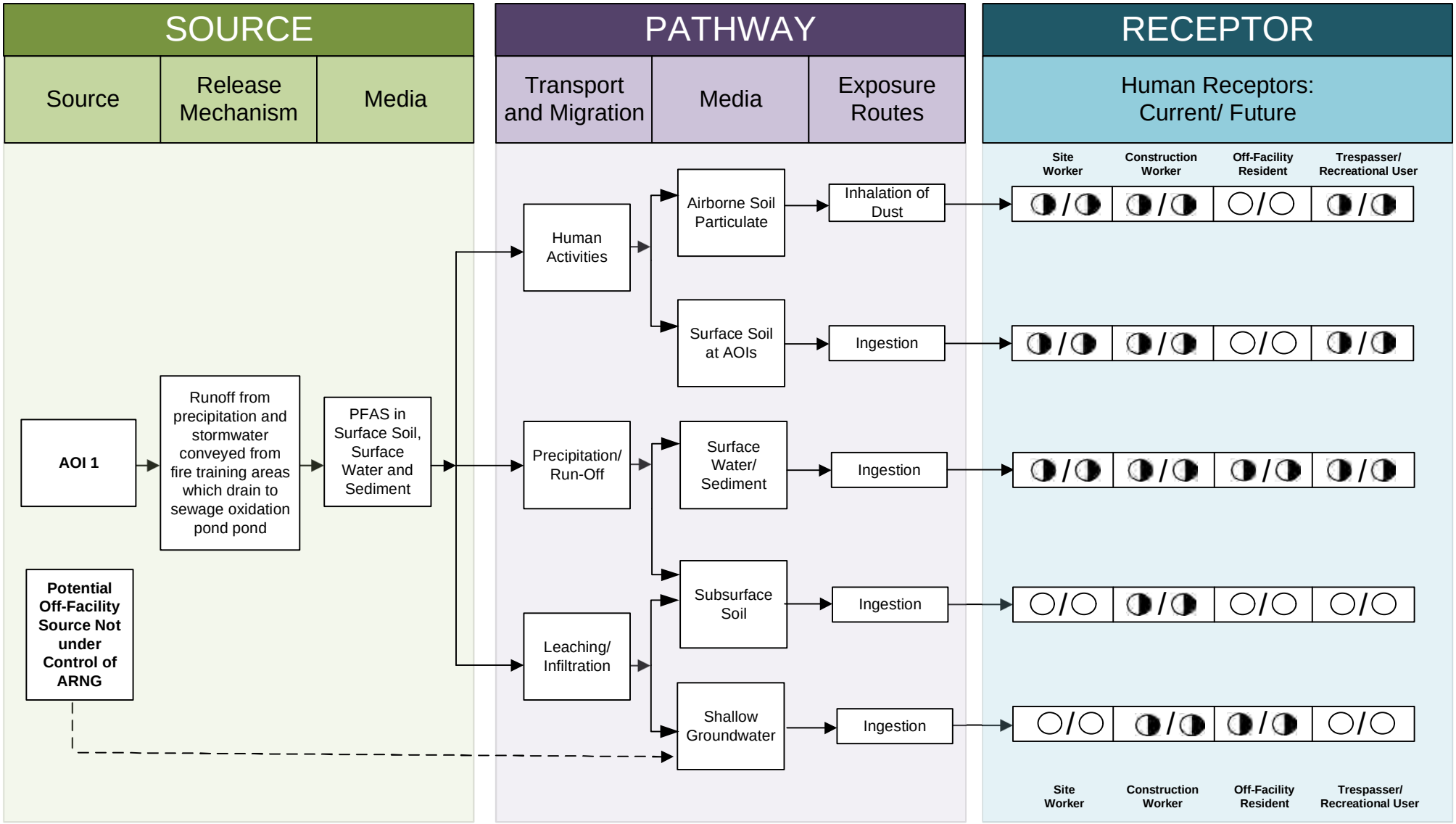
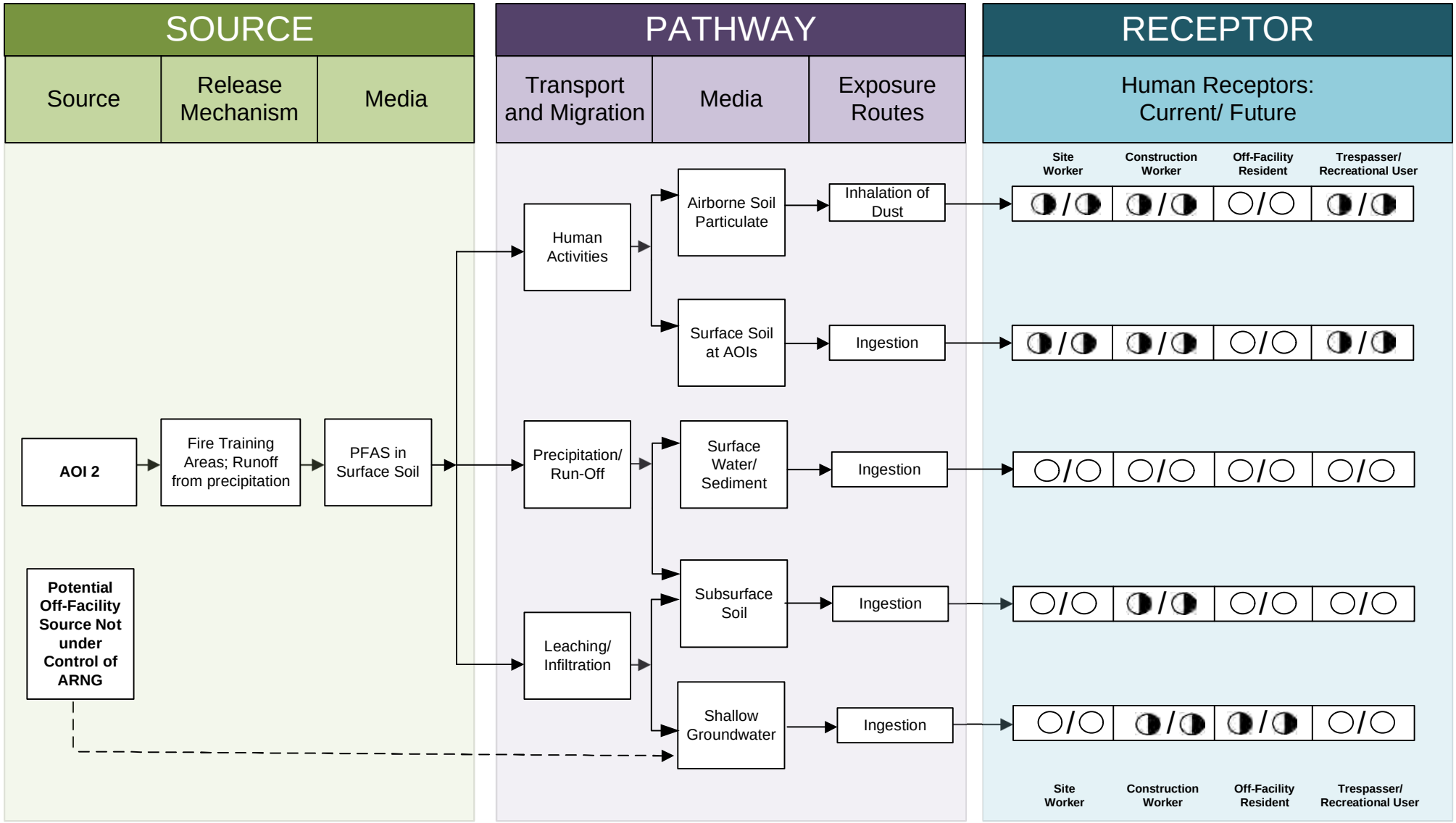


LEGEND

- 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 Sewage Oxidation Pond Pond at Esler Field AASF, LA

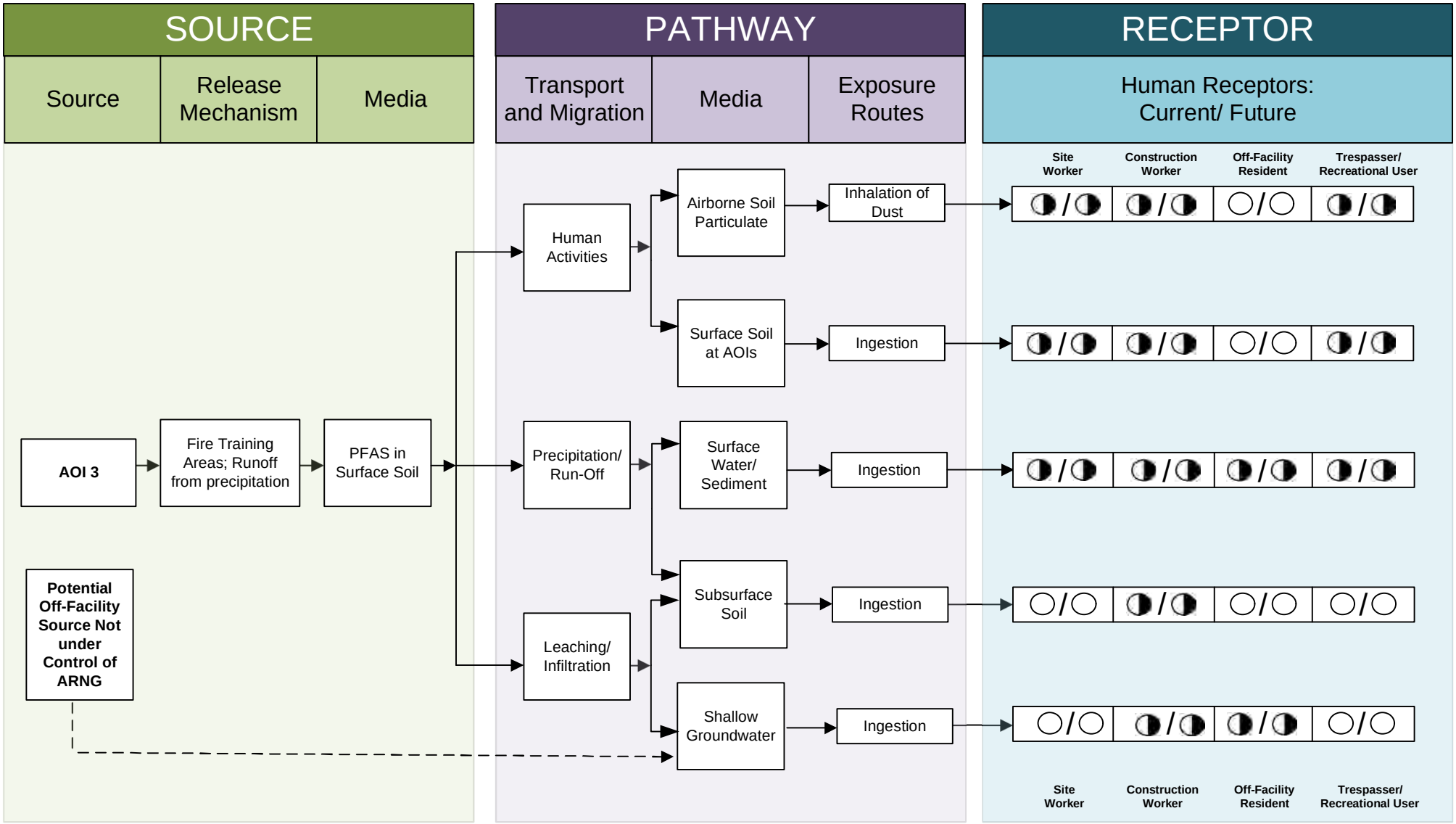


LEGEND

- 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 North Ramp/Wash Rack at Esler Field AASF, LA

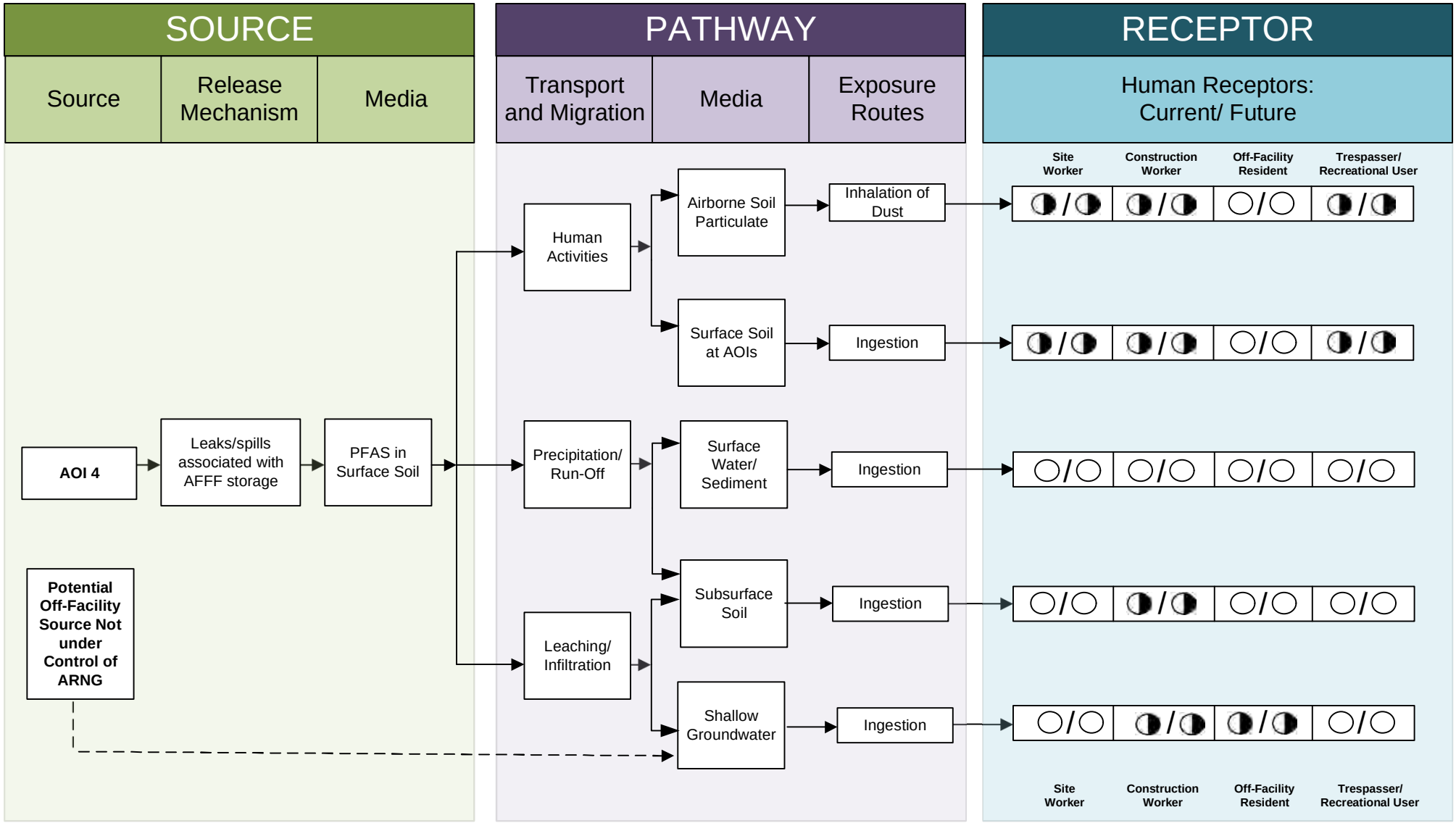


LEGEND

- 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 6-4
Preliminary Conceptual Site Model
AOI 3 South Ramp at Esler Field AASF, LA



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 6-5
Preliminary Conceptual Site Model
AOI 4 Firehouse Building 6004 and Hazmat Storage Building 6067/6068 at Esler Field AASF, LA

7. Conclusions

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

7.1 Findings

Four 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 Esler Field AASF

Area of Interest	Name	Used by	Potential Release Date
AOI 1	Sewage Oxidation Pond	LAARNG	Between 1996 and 2007
AOI 2	North Ramp/Wash Rack;	LAARNG jointly with the Holloway VFD;	North Ramp/Wash Rack training between 1996 and 2007;
	Hangar Buildings 6001 and 6002	LAARNG	hangar AFFF storage from 1980s to current
AOI 3	South Ramp	LAARNG jointly with the Holloway VFD	Between 2006 and 2007
AOI 4	Firehouse Building 6004;	LAARNG jointly with Holiday Village FD;	Between late 1980s and 1990s;
	Hazmat Storage Building 6067/6068	LAARNG	Since 1996

Based on potential PFAS releases at these AOIs, there is potential for exposure to PFAS contamination in media at or near the facility. The preliminary CSMs for Esler Field AASF, which present the potential receptors and media impacted, are shown on **Figures 6-2** through **6-5**.

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 by the facility or available during the PA on the use of PFAS in training, firefighting, or other non-traditional activities, or on 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. 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 was 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, retired and current personnel were interviewed, multiple persons were interviewed for the same potential source area, and potential source areas were visually inspected. **Table 7-2** summarizes the uncertainties associated with the PA.

Table 7-2: Uncertainties

Area of Interest	Source of Uncertainty
AOI 1 Sewage Oxidation Pond	The condition of the lining in the sewage oxidation pond is unknown.
AOIs 1, 2, and 3 Sewage Oxidation Pond, North Ramp/Wash Rack/Hangars, and South Ramp	Limited information was available on other types of AFFF (other than Chemguard 3%) that may have been used and the quantities released during training.
AOI 3 South Ramp	The underground pathway between the south ramp drains and the pond is unclear.
AOI 4 Firehouse Building 6004 and Hazmat Storage Building 6067/6068	No leaks or spills of AFFF were reported however uncertainty exists based on the potential for releases associated with historical and current AFFF storage.

7.3 Potential Future Actions

Interviews with LAARNG facility staff indicate that past ARNG activities might possibly have contributed PFAS contamination to soil, groundwater, surface water, or sediment at the facility or adjacent areas.

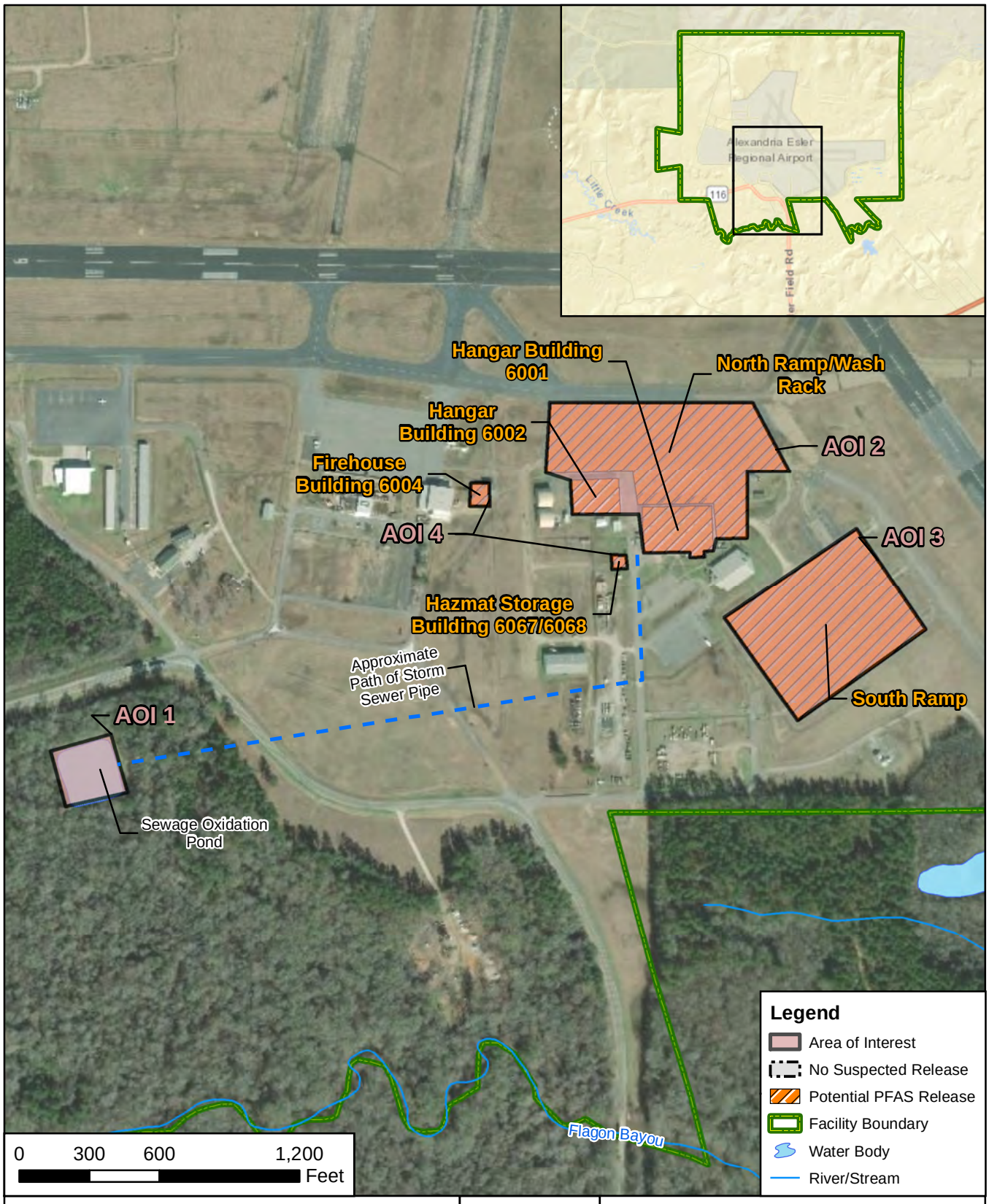
Interviews and records indicate that former LAARNG activities may have resulted in potential PFAS releases at the AOIs identified. Based on the preliminary CSMs developed for these AOIs, there is potential for receptors to be exposed to PFAS contamination in soil, groundwater surface water, and groundwater at the AOIs. **Table 7-3** 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 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	AOI Location	Rationale	Potential Future Action
AOI 1 Sewage Oxidation Pond	31° 23'18.34"N and 92°18'15.23"W	AFFF was used for fire training exercises and released to the ramps, which drain to the pond	Proceed to an SI, focus on soil, surface water, sediment and groundwater
AOI 2 North Ramp/Wash Rack and Hangar Buildings 6001 and 6002	31° 23'27.15"N and 92°17'45.64"W	AFFF was used for fire training exercises and released to the ramp/wash rack and it was stored in Hangars 6001/6002	Proceed to an SI, focus on soil and groundwater

Area of Interest	AOI Location	Rationale	Potential Future Action
AOI 3 South Ramp	31° 23'24.84"N and 92°17'38.92"W.	AFFF was used for fire training exercises and released to the ramp	Proceed to an SI, focus on soil, surface water, sediment and groundwater
AOI 4 Firehouse Building 6004 and Hazmat Storage Building 6067/6068	31° 23'30.01"N; 92°17'56.20"W. and 31° 23'27.15"N; 92°17'49.38"W.	AFFF stored in two buildings may have leaked or spilled	Proceed to an SI, focus on soil and groundwater



CLIENT	ARNG			
NOTES	Preliminary Assessment for PFAS at Esler Field, LA			
REVISED	3/19/2020	GIS BY	MS	3/19/2020
SCALE	1:7,200	CHK BY	SS	3/19/2020
Base Map: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI,		PM	RG	3/19/2020

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 Esler Field AASF include:

Environmental Data Resources™

- 2019 EDR™ Report Aerial Photo Decade Package, Esler Field, LA. April
- 2019 EDR™ Report Radius Map Report with GeoCheck®, Esler Field, LA. April
- 2019 EDR™ Report Radius Map Report with GeoCheck® Addendum, Esler Field, LA. April
- 2019 EDR™ Report Certified Sanborn® Map Report, Esler Field, LA. April

Water Resources Fact Sheet

USGS Water Resources of Rapides Parish Louisiana

Previous Investigations Completed at Adjacent ARNG Facility (Camp Beauregard)

2007 Camp Beauregard Integrated Natural Resources Management Plan

Appendix B
Preliminary Assessment Documentation

Appendix B.1
Interview Records

PA Interview Questionnaire - Other

Facility: Eslen
Interviewer: [redacted]
Date/Time: 1/25/19 @ 1000

Interviewee: [redacted] **Title:** **Phone Number** [redacted] **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:

Eslen Field AASF #2 1998 Planning
2005 - 06 moved in
Commander until 2011
Warrant Officer / Safety Officer 2011 - 2016 (Retired)

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?

	Known Uses
Once per year Crash Testing w/ BlackHawks	Use
Invited off-site Fire Rescue (6002?)	
& Holiday VFD, Acadian Ambulance (once?), CPDR Tech	Procurement
in front of Granulator Building on North Ramp	Disposition
Fired on 5-Ton truck then washed down	Storage (Mixed)
Outside of N Side of Hangar	Storage (Solution)
	Inventory, Off-Spec
No crashes / Incidents	Containment
No Fuel spills that used AFFF for clean-up	SOP on Filling
	Leaking Vehicles
Gave to [redacted], Volunteer Fire Dept 3-4 drums	Nozzle and Suppression System Testing
Environmental Storage Bldg (Brick, small)	Dining Facilities
	Vehicle Washing
No off-site disposal recalled	Ramp Washing
	Fuel Spill Washing and Fueling Stations
	Chrome Plating or Waterproofing

PA Interview Questionnaire - Other

Facility: Eglin / Beaurregard
Interviewer: [redacted]
Date/Time: 1/25/2019 0630

Interviewee: [redacted] **Title:** X See below X **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 No

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

[redacted] Instructional Pilot/OPS Supervisor 1993 - 2009
204th Group Commander 2010-12 (retired)
Contract Instructional Pilot 2012 - current

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?

	Known Uses
AFFF used in training on Ramp 1 @ wash rack Maybe @ Firestation Ramp by 6004 Bldg (Eglin)	Use
	Procurement
No Firefighting use recalled	Disposition
	Storage (Mixed)
One FTA on Ramp 1 North of Hangar 6001	Storage (Solution)
	Inventory, Off-Spec
Foam used in training Rinsed off Ramp 1 into drain @ wash rack	Containment
	SOP on Filling
	Leaking Vehicles
Recommended Retired Colonel [redacted] for add'l interviewee [redacted]	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: Esler/Beauregard
Interviewer: [redacted]
Date/Time: 1/29/2018 1000

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

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

[redacted] - Maintenance Supervisor [redacted]
Camp Beauregard 1956 - 1997 Esler 1997 - present
[redacted] - Maintenance Supervisor [redacted]
[redacted] - Maintenance Supervisor [redacted]

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?

	Known Uses
Trimax Extinguishers Camp Beauregard in 2000 then Brought to Esler Field	Use
	Procurement
Annual Training on North; South Ramps at Esler Field (South ramp built in 2005-06)	Disposition
	Storage (Mixed)
	Storage (Solution)
None used in active Firefighting	Inventory, Off-Spec
	Containment
Possibly used @ wash rack / mvc Rack (Near Bldg 1338)	SOP on Filling
	Leaking Vehicles
Stored in Bldgs 06067 / 0608 HazMat Storage Bldg	Nozzle and Suppression System Testing
Stored in Portable Bldg, then permanent Bldg South of Primary Hangar	Dining Facilities
	Vehicle Washing
	Ramp Washing
3% solution, no more than 3 "jugs" stored at one time (Chemguard)	Fuel Spill Washing and Fueling Stations
	Chrome Plating or Waterproofing

PA Interview Questionnaire - Other

Facility: _____
Interviewer: _____
Date/Time: _____

Currently have one "jug" w 3/4 full >5 years old

2 FTAs on Esler (North Ramp / South Ramp)

1 FTA on Beauregard (Wash Rack)

Volunteer Fire Dept ([redacted]) trained w/them on North Ramp @ various times

The on-site Fire House active in early to mid 1990's when [redacted] (retired) Esler Field was Esler Regional Airport ([redacted]) Worked @ Esler Airport [redacted]

Holloway VFD responded to an electrical fire @ Bldg 6004 during 2005-06, but no AFFF used

Esler Field have informal agreement w/ Holloway Fire Dept.

PA Interview Questionnaire - Other

Facility: Esler Field
Interviewer:
Date/Time: 1/24/2019 @ 0945

Interviewee: [redacted] **Title:** Instructor Pilot **Phone Number:** [redacted] **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:

Safety officer when AFFF was first purchased mid 90's (96-97)
(TriMax)
1 fire extinguisher per 3 aircraft (NR 420 Fire Regulations)
Typically had 2 extinguishers on ramp
- 4-6 extinguishers out currently (North/South Ramps)
- Beauregard - Facility No TriMax used ever (Halotron used)
No extinguishers fired @ Beauregard since ~1990
- Moved to Esler in 1996 TriMax was brought on some 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?

	Known Uses
- annually during drill weekend drained/expelled entire extinguisher (TriMax) on 3 times 96-07	Use
@ 6001 wash back on concrete in front of hangar then washed down drain (possible Oil/water Separator)	Procurement
	Disposition
	Storage (Mixed)
	Storage (Solution)
- Never used for emergencies	Inventory, Off-Spec
	Containment
- Secondary Hangar 6002 & Primary 6001	SOP on Filling
	Leaking Vehicles
- May be stored currently in 06067/06068	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: _____
Interviewer: _____
Date/Time: _____

Jacksonville (March 7, 2002)
Craig Florida Fire Training facility
Army Airfield (ASF #1)
run for aviation using AFFF
3-day course
(2 for Firefighter, fired large volumes over paved
Maxwell Drive) National Guard Hosted / Paid for it

PA Interview Questionnaire - Other

Facility: Eglin Field
Interviewer:
Date/Time: 11/25/2018

Interviewee: [redacted] **Title:** **Phone Number** [redacted] **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:

Civilian Manager @ Eglen Field - no response

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?

	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 – Fire Station

Facility: _____
Interviewer: _____
Date/Time: 1/24/2019 @ 0830

Interviewee: [redacted] **Title:** Training Officer **Phone Number:** [redacted] **Email:** [redacted]	Can your name/role be used in the PA Report? (Y) or N Can you recommend anyone we can interview? Y or N _____

1. Roles or activities with the Facility/years working at the Facility.
   Spoke w Fire Chief [redacted] 1997
   2003 w/ Prineville Fire
   Training assist w/ Suppression
   Opened Station on-site in 1995-1996 (Bld 327) Asst Chief [redacted] 1998
   Previously located on Bursa St. (Temp moved during construction Bld 825)

2. What can you tell us about the history of AFFF at the Facility? Was it used for any of the following activities, circle all that apply and indicate years of active use, if known? Identify these locations on a facility map.
   No Known use on Post of nearby vehicle
   Maintenance (e.g., ramp washing)
   Fire Training Areas
   Firefighting (Active Fire)
   Crash
   Fire Suppression Systems (Hangers/Dining Facilities)
   Fire Protection at Fueling Stations
   Non-Technical/Recreational/ Pest Management
   5 yrs of containers up until 2 years ago on trucks
   Database records since 1999 have no use

3. Are any current buildings constructed with AFFF dispensing systems or fire suppression systems? What are the AFFF/suppression system test requirements? What is the frequency of testing at the AFFF/suppression systems?
   N/A

4. Are fire suppression systems currently charged with AFFF or have they been retrofitted for use of high expansion foam?
   N/A

5. How is AFFF procured? Do you have an inventory/procurement system that tracks use?
   in 10 gallons on hand
   (stored @ Station 1)

PA Interview Questionnaire – Fire Station

Facility:_____
Interviewer:_____
Date/Time:_____

6. What type of AFFF has been/is being used (3%, 6%, Mil Spec Mil-F-24385, High Expansion)? Manufacturer (3M, Dupont, Ansul, National Foam, Angus, Chemguard, Buckeye, Fire Service Plus)?

   3 & 6 % unknown Manufacturer (various)

   (Use Class A Foam currently)

7. Is AFFF formulated on base? If so, where is the solution mixed, contained, transferred, etc.?

   n/a

8. Where is the AFFF stored? How is it stored (tanks, 55-gallon drums, 5-gallon buckets)? What size are the storage tanks? Is the AFFF stored as a mixed solution (3% or 6%) or concentrated material?

   5-gallon buckets
   Stored @ Station 1
   909 College Drive
   Pineville, LA

9. How is the AFFF transferred to emergency response vehicles, suppression systems, flightline extinguishers? Is/was there a specified area on the facility where vehicles are filled with AFFF and does this area have secondary containment in case of spills? How and where are vehicles storing AFFF cleaned/decontaminated?

   when need on vehicles 5-gallons on vehicles
   use foam reduction system

10. Provide a list of vehicles that carried AFFF, now and in the past, and where are/were they located?

    Engine 10, 20, Truck 3 & 4
    Truck 1
    on past (may/may not be on truck)

11. Any vehicles have a history of leaking AFFF? Do you/did you test the vehicles spray patterns to make sure equipment is working properly? How often are/were these spray tests performed and can you provide the locations of these tests, now and in the past?

    Tested during training
    No foam tanks used
    No recollection of leaks, if leaked would be
    on compartment & wiped up

PA Interview Questionnaire – Fire Station

Facility:_____
Interviewer:_____
Date/Time:_____

12. How many FTAs are/were on this facility and where are they? Locate on a map. How many FTAs are active and inactive? For inactive FTAs, when was the last time that fire training using AFFF was conducted at them? None on facility

13. What types of fuels/flammables were used at the FTAs?

N/A

14. What was the frequency of AFFF use at each location? When a release of AFFF occurs during a fire training exercise, now and in the past, how is/was the AFFF cleaned and disposed of? Were retention ponds built to store discharged AFFF? Was the AFFF trickled to the sanitary sewer or left in the pond to infiltrate?

No use to recollection or database records
Training off post

15. Are there mutual aid/use agreements between county, city, local fire department? Please list, even if informal. If formalized, may we have a copy of the agreement? Can you recall specific times when city, county, state personnel came on-post for training? If so, please state which state/county agency, military entity? Do you have any records, including photographs to share with us?

get copy from Chief Keesler
No training on post other than classroom

16. Did individual units come on-post with their own safety personnel, did they also bring their own AFFF? Was training with AFFF part of these exercises? How were emergencies handled under these circumstances?

No live fire training w/ AFFF
was on trucks while on post

PA Interview Questionnaire – Fire Station

Facility: _____
Interviewer: _____
Date/Time: _____

17. Did military routinely or occasionally fire train off-post? List units that you can recall used/trained at various areas. Unknown prior to 1996-97

18. Are there specific emergency response incident reports (i.e., aircraft or vehicle crash sites and fires)? If so, may we please copy these reports? Who (entity) was the responder?
No

19. Do you have records of fuel spill logs? Was it common practice to wash away fuel spills with AFFF? Is/was AFFF used as a precaution in response to fuel releases or emergency runway landings to prevent fires? No

20. Was AFFF used for forest fires or fire management on-post/off-post? If so, please describe what happened and who was involved? No

21. Can you provide any other locations where AFFF has been stored, released, or used (i.e. hangars, buildings, fire stations, firefighting equipment testing and maintenance areas, emergency response sites, storm water/surface water, waste water treatment plants, and AFFF ponds)?

PA Interview Questionnaire – Fire Station

Facility: _____
Interviewer: _____
Date/Time: _____

22. Are you aware of any other creative uses of AFFF? If so, how was AFFF used? What entities were involved?

Training use
Prince 35 Pearson Street station (Former) Site Road
Alexandria Fire Training Facility – Industrial loop ?
(Alex Municipal complex)

23. How is off-spec AFFF disposed (used for training, turned in, or given to a local Fire Station)? If applicable, do you know the name of the vendor that removes off-spec AFFF? Do you have copies of the manifest or B/L? Not disposed unless used during training exercises

24. Do you recommend anyone else we can interview? If so, do you have contact information for them?

No

[redacted]

From: [redacted]
Sent: Friday, January 10, 2020 2:25 PM
To:
Subject: Buckeye Water District No. 50_water sources

Dear Mr. [redacted],

Thank you for taking time to speak with me today. As I mentioned, AECOM is working for the Army National Guard at Esler Field and Camp Beauregard. This confirms information you provided, specifically that your District obtains all source water from 5 water wells that range from 1,800 to 2,000 feet deep. Two wells (#1 and #2) are located northeast of Buckeye off LA-115; three wells (#s 3, 4 and 5) are located in Libuse LA.

Best regards,

[redacted]
****
[redacted]
Principal Geologist
Geoenvironmental and Remediation Services

[redacted]

22A87-Esler Field

[redacted]

From: [redacted]
Sent: Wednesday, January 15, 2020 1:27 PM
To:
Cc:
Subject: FW: Water Works District No. 3 of Rapides Parish_water sources

Hi [redacted],
Thanks for calling today on behalf of Mr. [redacted] and agreeing to research the total depths of the 2 supply wells at Esler (#8 and #9) and the 2 at Camp Beauregard Cantonement Area (# 2 and #7). I am copying [redacted] as he is working with me on the Preliminary Assessment reports we are preparing for both of these facilities. I believe you also mentioned that one of the Esler wells is being targeted for plug and abandonment due to ongoing water quality issues. Would that be #9? If you have any additional information about when that is planned, please advise.

I had also asked Mr. [redacted] about information regarding other wells WWD#3 uses for their water supply, specifically locations and depths, particularly if they are within 4 miles of Esler or Beauregard facilities.

Lastly we would also be grateful if you are in a position to share results of any future PFAS sampling of one or more of the wells you mentioned you may be conducting, so we can provide those results to our Army National Guard clients accordingly.
Best regards,
[redacted]
****
[redacted]

From: [redacted]
Sent: Friday, January 10, 2020 2:45 PM
To:
Subject: Water Works District No. 3 of Rapides Parish_water sources

Dear Mr. [redacted],

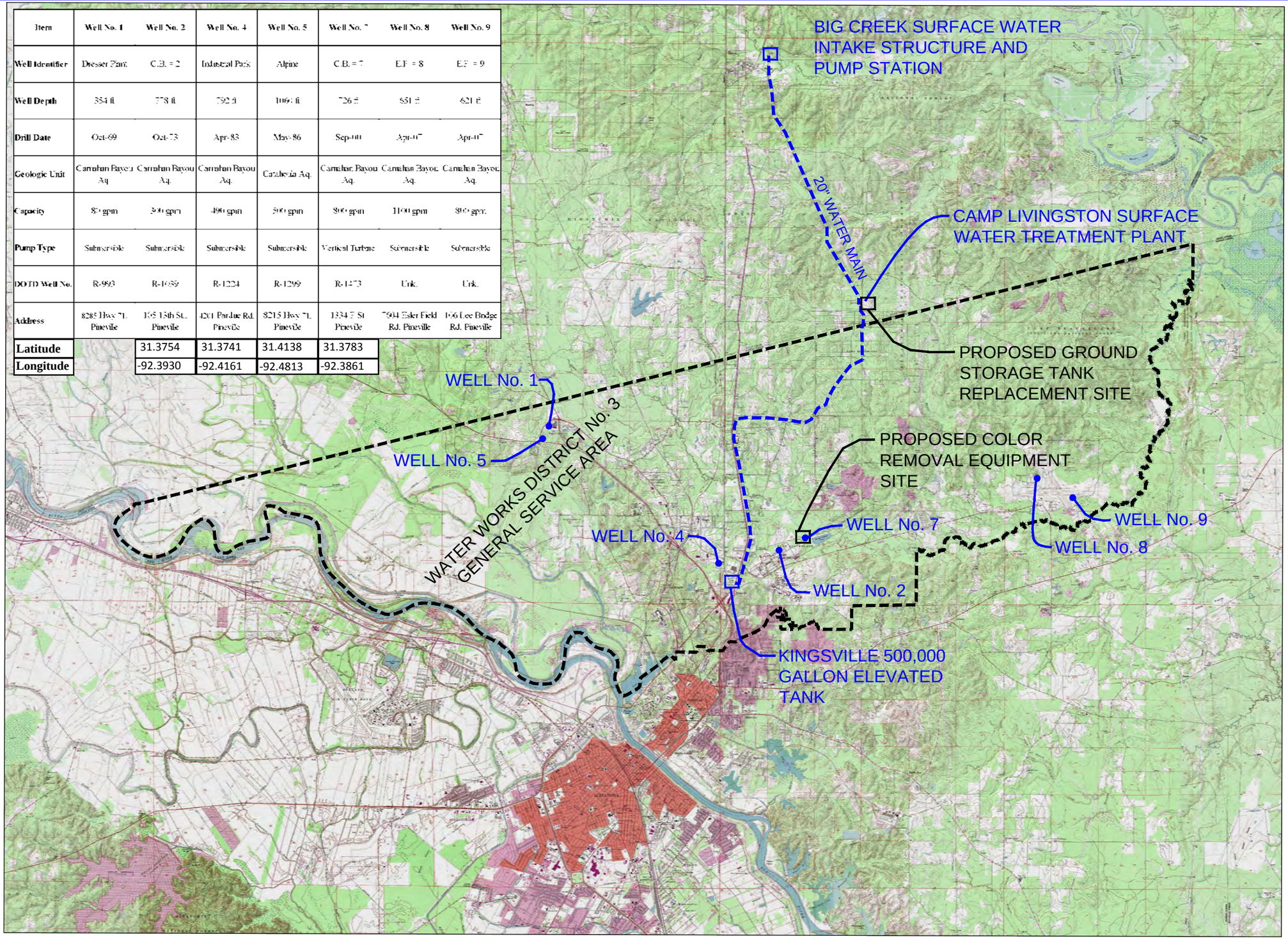
Thank you for taking time to speak with me today. As I mentioned, AECOM is working for the Army National Guard at Esler Field and Camp Beauregard. This confirms information you provided, specifically that your District obtains approximately 60% of its source water from surface water drawn from Big Creek in Grant Parish; 40% from groundwater including two wells at Camp Beauregard (#2 and #7) which require treatment to remove organic color. Two wells at Esler Field (#8 and #9) are offline due to methane which is cost prohibitive to treat. However, well #8 is used to supply Esler Field's maintenance facility's fire protection water storage tank.

I look forward to receiving any additional information you can provide about the depths of these wells; and, location/depth of other wells used by WWD#3, at your earliest convenience.

I was able to speak with Mr. [redacted] with the Buckeye Water District #50 regarding their wells, so I greatly appreciate you directing me to them.

Best regards,
Sarah

Item	Well No. 1	Well No. 2	Well No. 4	Well No. 5	Well No. 7	Well No. 8	Well No. 9
Well Identifier	Dresser Plant	C.B. = 2	Industrial Park	Alpine	C.B. = 7	E.P. = 8	E.P. = 9
Well Depth	854 ft	778 ft	792 ft	1169 ft	726 ±	851 ±	621 ±
Drill Date	Oct-69	Oct-73	Apr-83	May-86	Sep-01	Apr-07	Apr-07
Geologic Unit	Carnahan Bayou Aq.	Carnahan Bayou Aq.	Carnahan Bayou Aq.	Catahoula Aq.	Carnahan Bayou Aq.	Carnahan Bayou Aq.	Carnahan Bayou Aq.
Capacity	850 gpm	300 gpm	400 gpm	500 gpm	800 gpm	1100 gpm	800 gpm
Pump Type	Submersible	Submersible	Submersible	Submersible	Vertical Turbine	Submersible	Submersible
DOTD Well No.	R-993	R-1959	R-1224	R-1299	R-1473	Unk.	Unk.
Address	8285 Hwy 71, Pineville	135 15th St., Pineville	4201 Purdue Rd. Pineville	8215 Hwy 71, Pineville	1334 F St Pineville	7504 Esler Field Rd. Pineville	166 Lee Bridge Rd. Pineville
Latitude	31.3754	31.3741	31.4138	31.3783			
Longitude	-92.3930	-92.4161	-92.4813	-92.3861			



PAN AMERICAN ENGINEERS, LLC.
P.O. BOX 89 / 1717 JACKSON STREET
ALEXANDRIA, LA. 71309

SURFACE & GROUND WATER MAP

EXHIBIT No. 3

DATE: SEPTEMBER 2014

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: 1/24/2018 @ 1130

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

Source/Release Information

Site Name / Area Name / Unique ID: Eslin Fire 12

Site / Area Acreage:

Historic Site Use (Brief Description): Hangar / Range

Current Site Use (Brief Description): Hangar / Range

Physical barriers or access restrictions: 6' Fence, Gates

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):

FTA annually

2. Has usage been documented? Y / (N)

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

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

3a. Indicate what businesses are located near the site

4 Is this site located at an airport/flightline? (Y) / N

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

Need As-built for sewer system

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: Water Deluge
No AFF

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

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

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

Transport / Pathway Information

Migration Potential:

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

1a. If so, note observation and location:
Surface drainage is radial from runway intersection

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.

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:

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:

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:

West - ~ 5,400 FT single residences

Southeast - ~ 5,400 FT single Residences

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:

South, South-West ~ 2,000 FT

Visual Survey Inspection Log

Additional Notes FTA when AFFF used is concrete w/ drain. Area washed down w/ water following training exercises. Drainage flows to oil/water separator located on W/SW corner of Hangar. Lines flow South then west to an oxidation pond located in wooded area West of Fesler Air Field.

Photographic Log

Photo ID/Name	Date & Location	Photograph Description

Visual Site Inspection Checklist

Names(s) of people performing VSI: _____

Recorded by: _____

ARNG Contact: _____

Date and Time: _____

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

Source/Release Information

Site Name / Area Name / Unique ID: Water Works No. 3

Site / Area Acreage: _____

Historic Site Use (Brief Description): Water well (municipal) No. 7

Current Site Use (Brief Description): _____

Physical barriers or access restrictions: _____

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):

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

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

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

3a. Indicate what businesses are located near the site

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

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

[redacted] – GW for Water Works District No. 3

Well No. 7 + No. 2

7 → No. 079-1473

2 → No. 079-1039

One Million Gallon Reservoir

[redacted]

– also 3 wells @ Esler (No. 5, 9

LA 10 79017

USGS data

[redacted]

[redacted]

[redacted]

Other Significant Site Features:

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

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

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

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

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

Transport / Pathway Information

Migration Potential:

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

1a. If so, note observation and location:

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.

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:

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:

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:

Appendix B.3
Conceptual Site Model Information

Preliminary Assessment – Conceptual Site Model Information

Site Name: Esler Field AASF, LAARNG

Why has this location been identified as a site? Fire training with AFFF conducted on ramps, AFFF stored.

Are there any other activities nearby that could also impact this location? None identified

Training Events

Have any training events with AFFF occurred at this site? Yes

If so, how often? Annual

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? South to Flagon Bayou then east then north to Catahoula Lake

Average rainfall? 58 inches

Any flooding during rainy season? moderate

Direct or indirect pathway to ditches? Underground storm sewer drains west to pond

Direct or indirect pathway to larger bodies of water? Indirect. Flagon Bayou drains to Catahoula Lake

Does surface water pond any place on site? No

Any impoundment areas or retention ponds? Yes

Any NPDES location points near the site? Unknown

How does surface water drain on and around the flight line? Storm drains present on flight lines. Possible overland flow to surrounding grassy areas during storm events

Preliminary Assessment – Conceptual Site Model Information

Groundwater:

Groundwater flow direction? Unknown

Depth to groundwater? Unknown

Uses (agricultural, drinking water, irrigation)? Drinking, agricultural

Any groundwater treatment systems? No

Any groundwater monitoring well locations near the site? Unknown

Is groundwater used for drinking water? Yes

Are there drinking water supply wells on installation? Two wells onsite but not online

Do they serve off-post populations? Not currently

Are there off-post drinking water wells downgradient? Yes

Waste Water Treatment Plant:

Has the installation ever had a WWTP, past or present? Unknown

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

Do we understand the fate of sludge waste?

Is surface water from potential contaminated sites treated?

Equipment Rinse Water

1. Is firefighting equipment washed? Where does the rinse water go? OWS conveys water to pond

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? Training/nozzle testing with AFFF conducted annually 1996-2007 on North and South ramps

3. Other?

Preliminary Assessment – Conceptual Site Model Information

Identify Potential Receptors:

Site Worker Yes

Construction Worker Yes

Recreational User Offsite

Residential Offsite

Child Offsite

Ecological Yes

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

Documentation

Ask for Engineering drawings (if applicable).

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

Appendix C
Photographic Log

APPENDIX C – Photographic Log

Army National Guard, Preliminary Assessment for PFAS	Esler Field AASF	Pineville, Louisiana

Photograph No. 1

Description:

Photo of Wash Rack on north ramp of Hangar 6001.

Date: 01/24/19

Photograph No. 2

Description:

Photo of Wash Rack drains on north ramp of Hangar 6001.

Date: 01/24/19

APPENDIX C – Photographic Log

Army National Guard, Preliminary Assessment for PFAS	Esler Field AASF	Pineville, Louisiana

Photograph No. 3

Description:

Photo of oil/water separator manholes on west-southwest corner of Hangar 6001.

Date: 01/24/19

Photograph No. 4

Description:

Photo of north ramp of Hangar 6001.

Date: 01/24/19

APPENDIX C – Photographic Log

Army National Guard, Preliminary Assessment for PFAS	Esler Field AASF	Pineville, Louisiana

Photograph No. 5

Description:

Photo of AFFF fire extinguisher.

Date: 01/24/19

Photograph No. 6

Description:

Photo looking west at Esler Field from entrance to oxidation pond.

Date: 01/24/19

APPENDIX C – Photographic Log

Army National Guard, Preliminary Assessment for PFAS	Esler Field AASF	Pineville, Louisiana

Photograph No. 7

Description:

Photo of oxidation pond west of Esler Field.

Date: 01/24/19

Photograph No. 8

Description:

Photo of oxidation pond west of Esler Field.

Date: 01/24/19