FINAL
Preliminary Assessment Report
Camp Villere
Slidell, Louisiana

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

August 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
AECOM	AECOM Technical Services, Inc.
AFFF	aqueous film forming foam
amsl	above mean sea level
AOI	Area of Interest
ARNG	Army National Guard
bgs	below ground surface
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
Chemguard Supertrain	Chemguard SUPERTRAIN Training Foam
CSM	conceptual site model
DoD	Department of Defense
EDR™	Environmental Data Resources, Inc.™
FTA	fire training area
LAARNG	Louisiana Army National Guard
NGWA	National Ground Water Association
PA	Preliminary Assessment
PFAS	per- and poly-fluoroalkyl substances
PFOA	perfluorooctanoic acid
PFOS	perfluorooctanesulfonic acid
SDS	Safety Data Sheet
SI	Site Inspection
STFPD1	St. Tammany Fire Protection District No. 1
US	United States
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
VSI	visual site inspection

Executive Summary

The Army National Guard (ARNG) is performing Preliminary Assessments (PAs) and Site Inspections (SIs) for Perfluorooctanesulfonic acid (PFOS) and Perfluorooctanoic acid (PFOA) Impacted Sites at ARNG Facilities Nationwide. A PA for per- and polyfluoroalkyl substances (PFAS)-containing materials was completed for Camp Villere in Slidell, Louisiana, to assess potential PFAS release areas and exposure pathways to receptors. Camp Villere is constructed on a parcel of land owned in fee by the State of Louisiana.

The performance of this PA included the following tasks:

- Reviewed available administrative record documents and Environmental Data Resources, Inc. (EDR)™ report packages to obtain information relevant to potential PFAS releases, such as: drinking water well locations, historical aerial photographs, Sanborn maps, and environmental compliance actions in the area surrounding the facility;
- Conducted a site visit on 12 March 2019 and completed visual site inspections at locations where PFAS-containing materials were suspected of being stored, used, or disposed;
- Interviewed current and former Louisiana ARNG (LAARNG) Camp Villere personnel during the site visit including Assistant Operations Manager (since 2012), LAARNG environmental managers, and other operations staff. In addition, a senior staff member (since 2011) of the St. Tammany Fire Protection District No. 1 (STFPD1) was interviewed.
- Identified Area(s) or Interest (AOIs) and developed a conceptual site model (CSM) to summarize potential source-pathway-receptor linkages of potential PFAS in soil, groundwater, surface water, and sediment for each AOI.

One AOI related to a potential PFAS releases was identified at Camp Villere during the PA. The AOI is shown on **Figure ES-1** and described below:

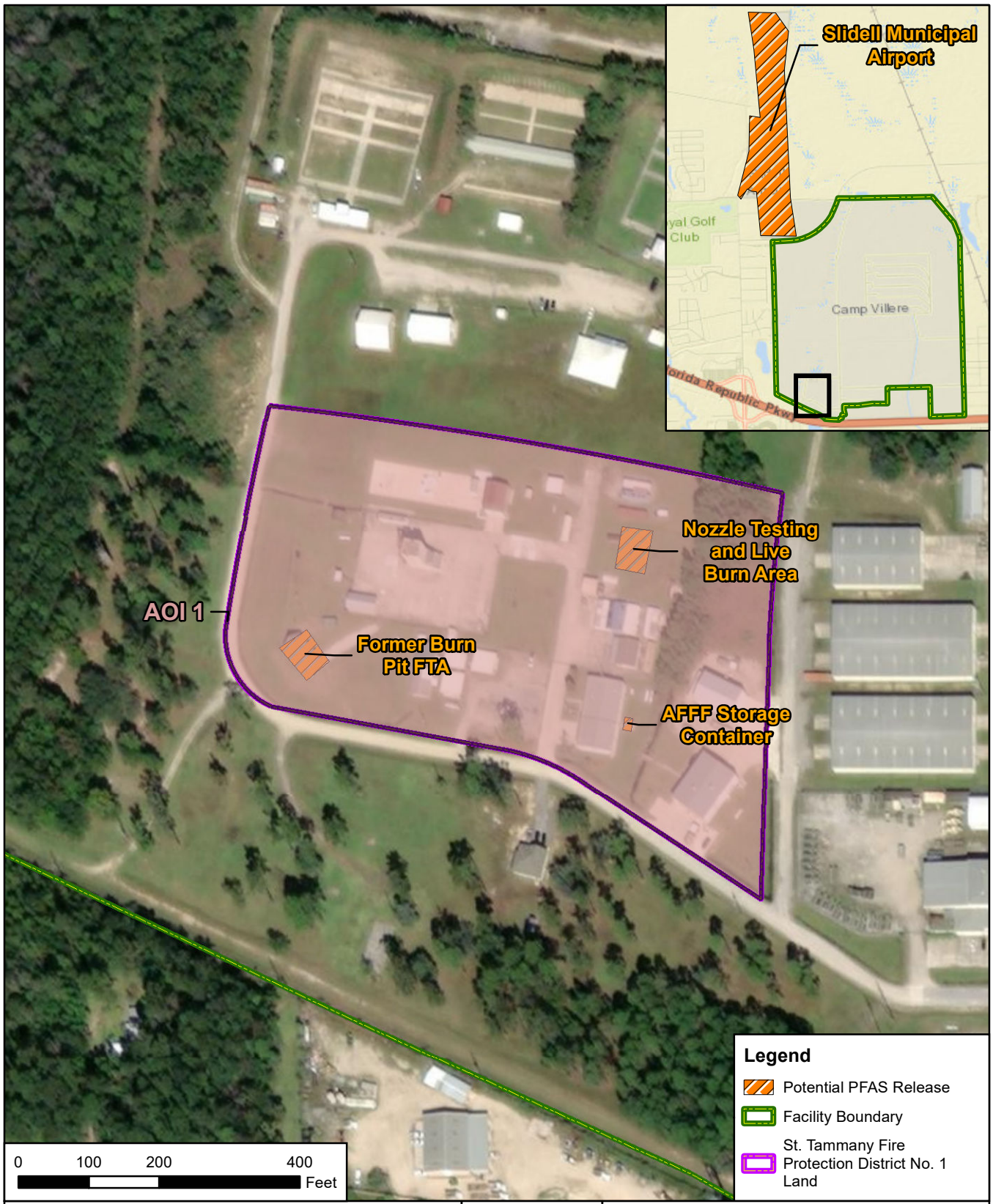
Table ES-1: Camp Villere PA AOI

Area of Interest	Name	Used by	Potential Release Date
AOI 1	Fire Training Areas & AFFF Storage	St. Tammany Fire Protection District No. 1	2008 - present

Based on documented releases of firefighting foam that potentially contains PFAS at this AOI, there is potential for exposure to PFAS in media at or near the facility. Potential off-facility sources of PFAS were identified. The preliminary CSM for Camp Villere is shown on **Figure ES-2**, which presents the potential receptors and media impacted.

The LAARNG has not used, stored, trained with or released AFFF, not only on this particular parcel of land, but throughout the entirety of Camp Villere. Potential PFAS releases are associated with St. Tammany Fire Protection District No. 1 (STFPD1) use of the property. Although real property accountability is be held by the Louisiana Department of Military Affairs, the property is not utilized for federal training and therefore there is no federal responsibility for the site. With no release due to federal training nor any federal interest in the real property, there is no authority to carry the site into the SI phase.

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 USEPA Health Advisory (HA) level 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.



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Base Map: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI,		PM	RG	7/8/2020

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Summary of Findings

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Figure ES-1

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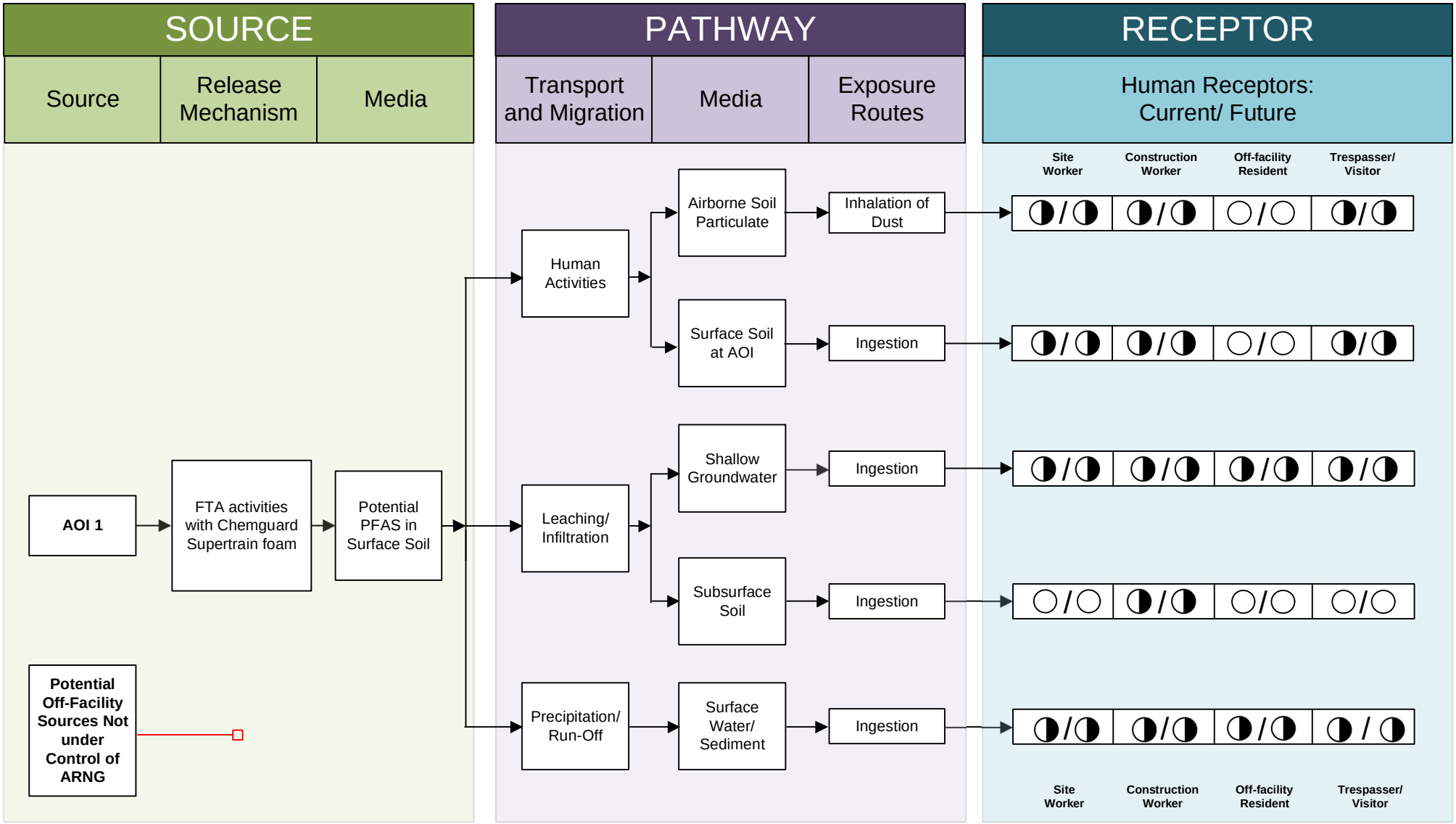


LEGEND

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

Note: The residential receptor refers to an off-facility receptor

Figure ES-2
Preliminary Conceptual Site Model
Camp Villere

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.

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 will vary. The regulatory framework at both federal and state levels continues to evolve. The US Environmental Protection Agency (USEPA) issued a Drinking Water Health Advisory (HA) for PFOA and PFOS in May 2016, but there are currently no promulgated national standards regulating PFAS in drinking water. The HA is 70 parts per trillion for PFOS and PFOA, individually or combined.

This report presents the findings of a PA for PFAS-containing materials at Camp Villere in Slidell, 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 known fire training areas (FTAs) as well as other locations where PFAS may have been released into the environment at Camp Villere. 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 and other firefighting materials.

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;
- Conducted a site visit on 12 March 2019 and completed visual site inspections (VSIs) at locations where PFAS-containing materials were suspected of being stored, used, or disposed;
- Interviewed current and former Louisiana ARNG (LAARNG) Camp Villere personnel during the site visit including the Assistant Operations Manager (since 2012), LAARNG environmental managers, and other operations staff. In addition, a senior staff member (since 2011) of the St. Tammany Fire Protection District No. 1 (STFPD1) was interviewed.
- 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.

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:

- **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 at each AOI.
- **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

Camp Villere (also referred to as the "facility") encompasses approximately 1,440 acres in St. Tammany Parish, Louisiana (**Figure 1-1**). The facility is three miles northwest of Slidell, Louisiana, approximately 30 miles northeast of New Orleans, Louisiana, and approximately 6 miles north of Lake Pontchartrain. Other neighboring towns include Lacombe to the west and Pearl River to the northeast. Interstate 12 runs immediately south of the facility, and Interstate 59 lies approximately 6 miles east. The following description of the facility and setting is primarily from the Phase II report (USACE, 2009).

Camp Villere was established in 1942 as a training site for Camp Plauche in New Orleans to provide additional training areas and firing ranges for the US Army. Throughout the 1940s, the facility was used as a rifle and pistol marksmanship training area for the soldiers at Camp Plauche and also as a training facility for reserve components of the services with their creation in the late 1940s (Daigle, 1978; ERG and USACE, 2007). From the 1950s to the 1970s, the US Army continued to use Camp Villere for training and ammunition storage; however, it was also used by the LAARNG, with control of the facility passing to the LAARNG in the late 1950s (Casey, 1983; ERG and USACE, 2007; Teague et al., 1995). A quitclaim deed dated 8 April 1975 (included in **Appendix A**) transferred approximately 1,710 acres of the over 6,000-acre facility from federal to State control. Changes in operations and the termination of land use agreements have since reduced the facility to its current size and usage. By 2009, approximately 671 acres of the facility were operational, whereas the remaining 946 acres were non-operational. By 2014, real property changes to Camp Villere further decreased the facility area. Only a small portion of the facility,

fewer than 100 acres, remains classified as non-operational. Under a cooperative endeavor with the State executed on 26 March 1992, the STFPD1 is a LAARNG tenant occupying a 6-acre parcel of land on Camp Villere. The facility boundary was also modified to exclude a Veterans Affairs cemetery on the southern boundary of Camp Villere (USACE, 2009). LAARNG staff note transfer of the 75-acre cemetery parcel was completed in 2013.

1.5 Facility Environmental Setting

Camp Villere is part of the East Gulf Coastal Plain physiographic region and is characterized as having gentle to flat topography. The elevation ranges from 15 feet to about 25 feet above mean sea level (amsl) on the facility. The highest elevations are in the northwest portion of the facility, and the lowest elevations are found in the south, generally more so in the southeast portion of the facility. Elevations at the firing ranges are approximately 20 feet amsl. Interstate 12, which is to the south of Camp Villere, can act like a dam during significant rain events and cause ponding along the southern border of the facility (ECC and Neel-Schaffer, Inc., 2003).

1.5.1 Geology

Camp Villere is in the north shore area of the Lake Pontchartrain basin. This area is underlain by the Prairie Terrace geologic formation of the Pleistocene series within the Coastal Plain geomorphic province. The Prairie Terrace is the youngest terrace in southeast Louisiana and is the first well-defined, shore-parallel terrace below the Holocene deltaic plain (USGS, 2002). Deposits from this series range from 100 to 500 feet thick and were formed by sea level variations resulting from glacial and interglacial processes (ERG and USACE, 2007). Overall, the Prairie Terrace dips to the south-southwest, with a slope that varies from two to ten feet per mile (Saucier, 1963). The lithology of the Prairie Terrace is difficult to generalize because sediments vary locally and regionally and have multiple depositional environments, such as fluvial, deltaic, and marine; however, generally, the formation consists of moderately to well-sorted, fine- to medium-grained sands with interbedded coarse sand, silt, and clay. The shallow terrace deposits underlying Camp Villere are composed primarily of clay with interbedded sand units. Alluvial deposits of the Holocene series found east and west of Camp Villere are associated with the streambeds of the Liberty Bayou and Bayou Bonfouca. The alluvial deposits consist of gray clay, silty clay, and some sand and gravel. **Figure 1-2** shows the surficial geology at and near Camp Villere (NWRC, 1998).

1.5.2 Hydrogeology

Regional System

Camp Villere overlies the Southern Hills regional aquifer system, which is composed of the surficial fluvial formations along river valleys and the series of terrace deposits in the region. The upper part of these terrace deposits includes the Prairie Terrace formation. The Southern Hills regional aquifer system is a sole-source aquifer system that supplies water to all of southeastern Louisiana and is usually first encountered between 60 and 100 feet below ground surface (bgs). This complex system comprises three aquifer systems named by the United States Geological Survey (USGS) (in downward stratigraphic order): Chicot Equivalent Aquifers, Evangeline Equivalent Aquifers, and Jasper Equivalent Aquifers.

These aquifer systems are broken down further into hydrogeological units. The Chicot Equivalent Aquifer system is composed of the Upland Terrace aquifer and the Upper Ponchatoula aquifer. The Evangeline Equivalent Aquifer system is composed of the Lower Ponchatoula aquifer, the Big Branch aquifer, the Kentwood aquifer, the Abita aquifer, the Covington aquifer, and the Slidell aquifer. The Jasper Equivalent Aquifer system is composed of the Tchefuncte aquifer, the Hammond aquifer, the Amite aquifer, and the Ramsey aquifer.

Regional groundwater flow in the Southern Hills aquifer system is to the south-southeast, with main pumpage centers in Covington and Slidell (ERG and USACE, 2007; USGS, 2002; USGS and LA DOTD, 2002). The southern boundary of the recharge area for the Southern Hills aquifer system is approximately 12 miles upgradient and north of Camp Villere (Lovelace, 2009).

Surficial Aquifer

The regional shallow surficial aquifer, overlying the Southern Hills regional aquifer system, is recharged through precipitation infiltration via soils. This aquifer, comprised of the upper Prairie Terrace formation, generally lies two feet or less below the loam soils at the ground surface. Shallow groundwater flow direction mimics topography and generally flows to the south. At Camp Villere, the surficial aquifer is encountered at slightly greater depths (approximately eight feet bgs) and is locally semi-confined by a silty clay/clay unit that is laterally continuous across the facility. However, a perched groundwater table, caused by the clay aquitard, is also present in parts of the facility.

Groundwater flows south toward Liberty Bayou and Vincent Creek. Underlying confining clay layers ranging from 60 to 100 feet thick separate the shallow groundwater from the deeper Chicot, Evangeline, and Jasper Aquifer systems (Tomaszewski and Lovelace, 2007). **Figure 1-2** outlines groundwater pathways and potential groundwater receptor areas.

Drinking water for Camp Villere is obtained from the City of Slidell. Several public supply wells are located downgradient within 1,600 feet of Camp Villere's southern boundary. An EDR™ report conducted a well search for a 1-mile radius surrounding the facility. Using additional online resources, such as State and local GIS databases, wells were researched to a 4-mile radius of the facility. One irrigation well is located approximately 900 feet downgradient of the southern facility boundary. One water supply well, ST-776, is located on Camp Villere. While ST-776 is currently not used, site personnel suggested it could be used in the future if municipal water supply becomes unavailable.

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. 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.

1.5.3 Hydrology

Camp Villere is approximately 6 miles north of Lake Pontchartrain and is within the lake's approximately 4,700-square-mile drainage basin (USGS, 2002). Two streams drain surface water from Camp Villere. The first is Vincent Creek, which is a perennial stream approximately 10 to 15 feet wide and 3 to 4 feet deep that drains the eastern portion of the facility. Vincent Creek exits the facility in the southeast corner and flows south-southeast to Bayou Bonfouca, which joins Bayou Vincent. Bayou Bonfouca continues south and then southwest, through Big Branch Marsh, and eventually to Lake Pontchartrain.

On the western side of the facility, the second stream, an unnamed intermittent stream, exits the southwest corner of the facility and flows south, eventually discharging to Liberty Bayou. Liberty Bayou joins Bayou Bonfouca approximately a half mile upstream from Lake Pontchartrain (US Census Bureau, 2010a and 2010b). The northwest portion of the facility drains either to the southwest or north toward off-facility detention ponds (MSE, 2001). The surface water pathways can be seen on **Figure 1-3**.

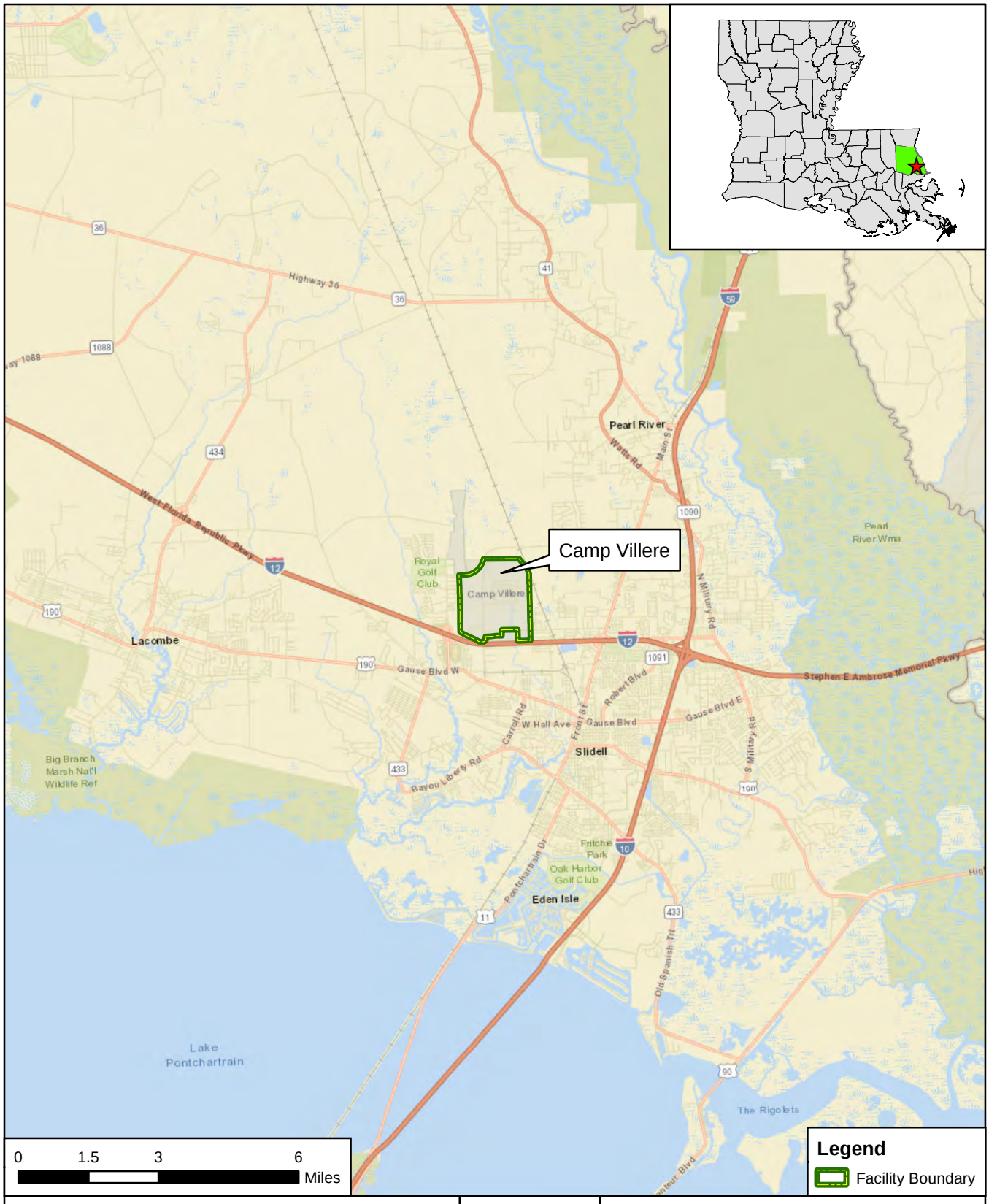
The National Wetlands Inventory maps some isolated wetland areas on the facility, including around the western edge of the Cantonment area (USFWS, 2019).

1.5.4 Climate

In general, Louisiana has a relatively constant, subtropical climate defined by long, hot, humid summers and short, mild winters. Due to its location approximately 6 miles north of Lake Pontchartrain in southeast Louisiana, conditions at Camp Villere are greatly influenced by its proximity to the Gulf of Mexico. The proximity to the Gulf of Mexico increases precipitation and humidity, stabilizes daily temperature variation, and makes the area prone to tropical storms and hurricanes. Temperatures reach their average daily high in July and August, surpassing 90 degrees Fahrenheit (°F). January is the coolest month, with an average high daily temperature of 61°F. Rainfall is fairly constant throughout the year; however, the highest precipitation totals generally occur in July and August, which have monthly averages of more than 6.5 inches of rainfall. The average annual rainfall is over 60 inches (US Climate Data, 2019).

1.5.5 Current and Future Land Use

Camp Villere currently serves to provide resources and training for soldiers in support of international, federal, and State missions, and it also has training facilities for additional Department of Defense (DoD) personnel, including the US Marine Corps, the US Coast Guard, the Naval Reserves, the Federal Bureau of Investigation, the Drug Enforcement Administration, and local police and fire departments, including STFPD1 which, under a cooperative endeavor with the State, is an LAARNG tenant occupying a 6-acre parcel of land on Camp Villere. Planned land use changes were not noted by facility personnel during the site visit.



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Base Map: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI,		PM	RG	4/2/2020

Facility Location

AECOM
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Germantown, MD 20876

Figure 1-1

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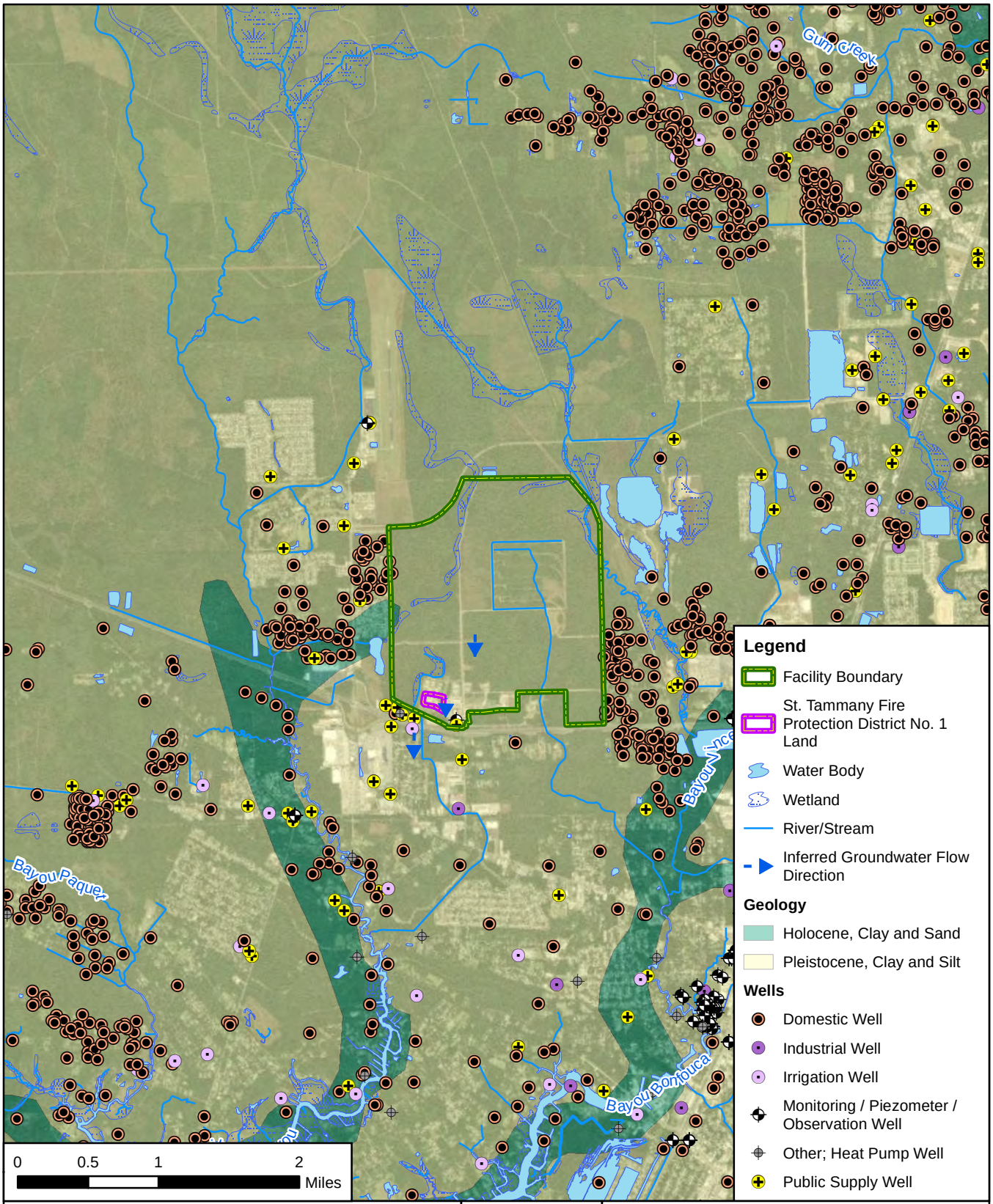

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Groundwater Features

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Figure 1-2

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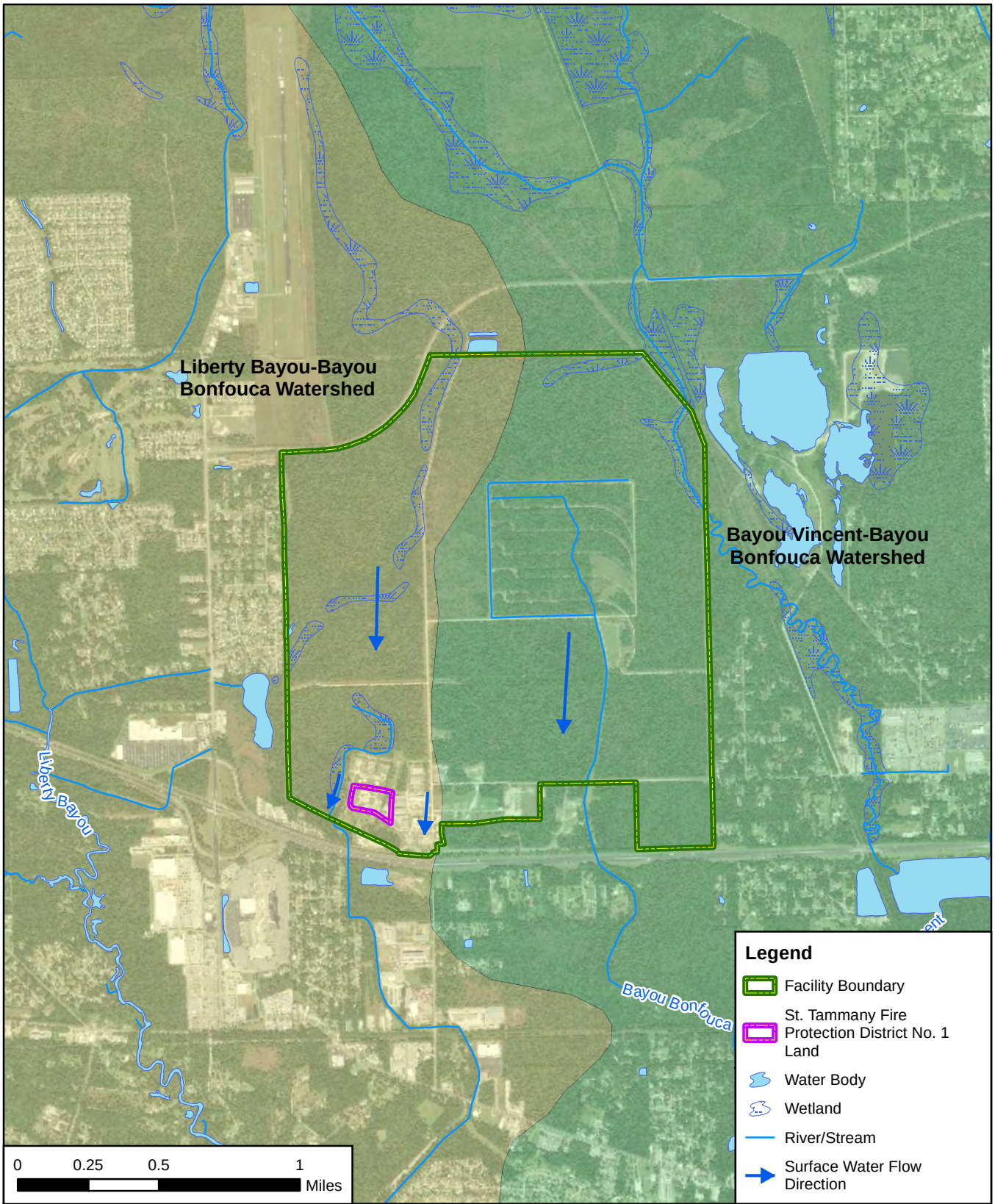

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Surface Water Features

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Figure 1-3

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2. Fire Training Areas

FTAs are considered areas where deliberate discharge of AFFF or other firefighting materials is performed for purposes of training personnel. Two particular FTAs were identified at Camp Villere during the PA (**Figure 2-1**). The FTAs are currently and historically operated by STFPD1 and include a current fire training structure/former burn pit and a separate nozzle testing and live burn area. STFPD1 began fire training activities at Camp Villere in 1998, however, only information from 2008 – 2019 was available during the PA.

2.1 Former Burn Pit FTA

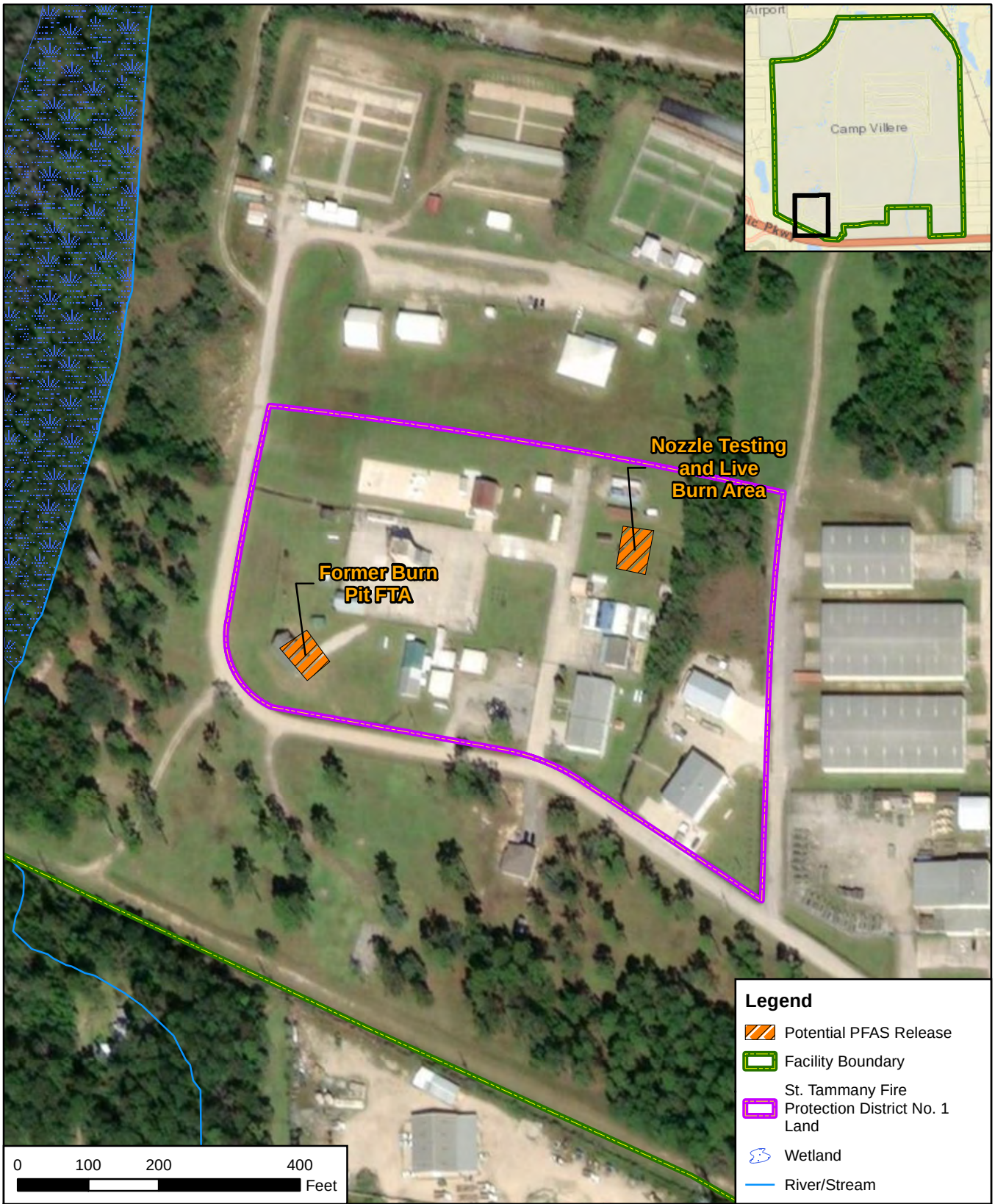
The Former Burn Pit FTA is located in the western end of the Cantonment area (**Figure 2-1**). The geographic coordinates of the approximate center of the area are 30°18'47.5"N; 89°49'03.2"W. According to an interview with the senior staff member of the STFPD1, training activities by STFPD1 using "Chemguard SUPERTRAIN Training Foam (Chemguard Supertrain)" have been conducted multiple times per year from at least 2008 to present. The exact chemical makeup of Chemguard Supertrain is unknown. However, the safety data sheet (SDS; **Appendix A**) for the product lists a proprietary fluorosurfactant as a part of the mixture. Therefore, the Chemguard Supertrain foam is assumed to contain PFAS. It was reported that approximately a combined 60-gallons per year of Chemguard Supertrain concentrate have been used between Former Burn Pit FTA and Nozzle Testing and Live Burn Area FTA, which is discussed below in **Section 2.2**.

The Former Burn Pit FTA is a former fire training pit, at which Chemguard Supertrain was released during live burns for STFPD1 training purposes. According to aerial imagery and the visual site inspection (VSI), a structure was built on top of the former training pit from 2015 – 2016. Firetrucks are washed at this location. However, a side container and a foam inductor are used during the training so that the firetruck tanks do not come into direct contact with the foam. Bare earth immediately surrounds all sides of this area, except for a concrete walkway off the northeast corner of the building. According to site personnel and field observations, an unlined drainage ditch runs to the west and south of the area, and eventually drains off-site to the east. This drainage ditch is completely vegetated with grass. No remediation activities have occurred at this FTA.

2.2 Nozzle Testing and Live Burn Area FTA

The Nozzle Testing and Live Burn Area FTA is located in the western end of the Cantonment area (**Figure 2-1**). The geographic coordinates of the approximate center of the area are 30°18'48.8"N; 89°48'57.8"W. According to an interview with the senior staff member of the STFPD1, nozzle testing and live burn activities have been conducted on multiple occasions by the STFPD1 using Chemguard Supertrain from at least 2008 to present. As noted above, a combined approximately 60-gallons of the concentrate have been used per year between Former Burn Pit FTA and Nozzle Testing and Live Burn Area FTA.

The small structure in this area was historically used for live burns, at which Chemguard Supertrain was released. Nozzle testing activities also occurred in this area. Bare earth with grass vegetation immediately surrounds all sides of this area. An unlined drainage ditch is located to the east of the area and runs to the south, eventually draining off-site. No remediation activities have occurred at this FTA.



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Fire Training Areas

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Figure 2-1

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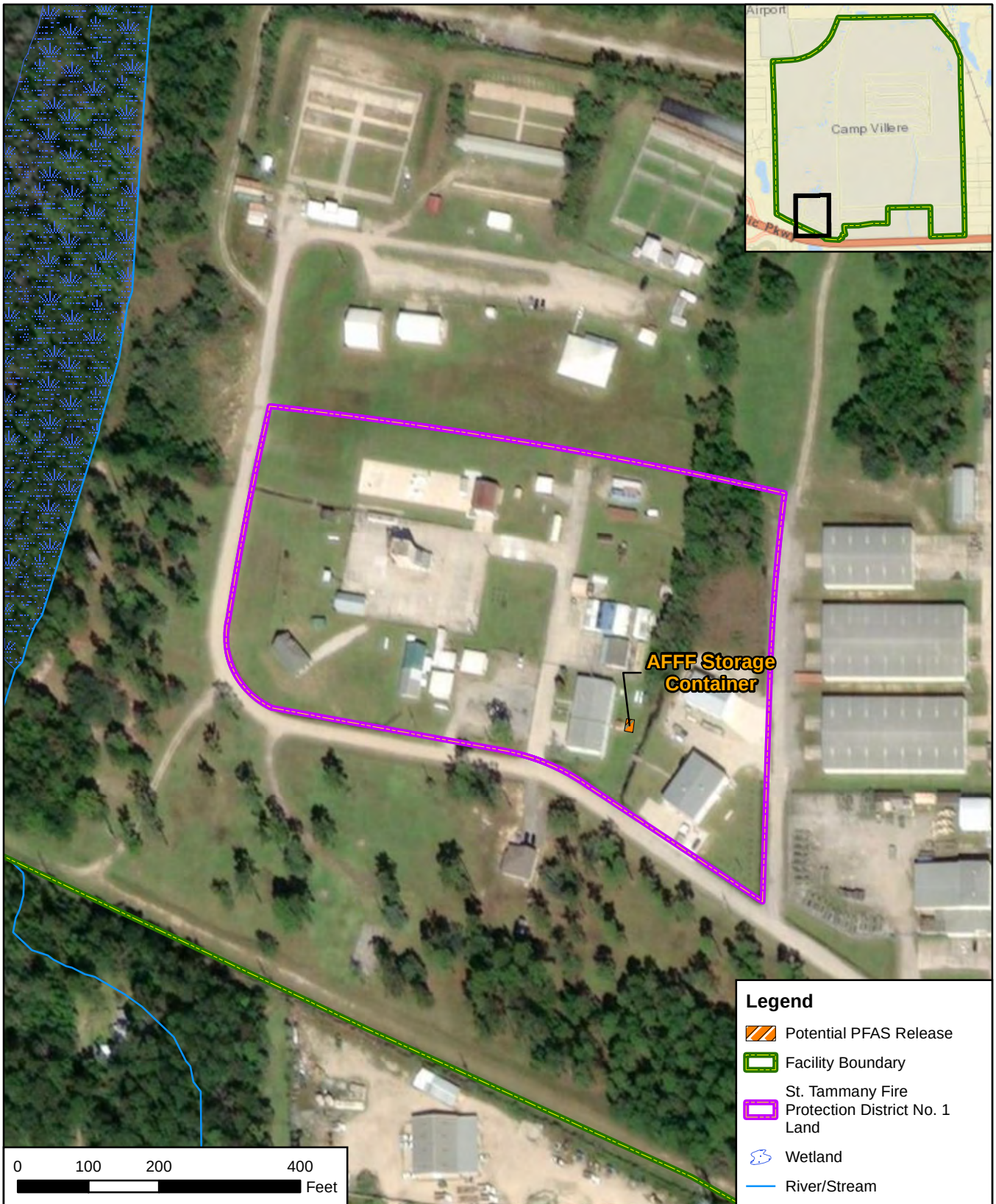
3. Non-Fire Training Areas

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**. One non-FTA where Chemguard Supertrain was stored was identified during the PA. A description of this non-FTA is presented below, and the non-FTA is shown on **Figure 3-1**.

3.1 AFFF Storage Container

The AFFF Storage Container (**Figure 3-1**) is located on the same STFPD1-occupied parcel as the Former Burn Pit FTA and Nozzle Testing and Live Burn Area FTA. The geographic coordinates at the approximate center of the building are 30°18’46.4’’N; 89°48’57.9’’W. Inside the AFFF storage container is a 250-gallon tank of Chemguard foam. During the site visit, approximately 1/3 of the tank was full. A senior staff member at the STFPD1 reported that this tank is re-filled as needed when the supply is used for fire training activities. There is no inventory or documentation kept for foam on-site.

The AFFF Storage Container is surrounded on all sides by bare earth. There was no evidence of staining or residue on the ground, and no evidence of corrosion or leaking inside the AFFF Storage Container.



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Base Map: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI,		PM	RG	4/24/2020

Non-Fire Training Areas

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Figure 3-1

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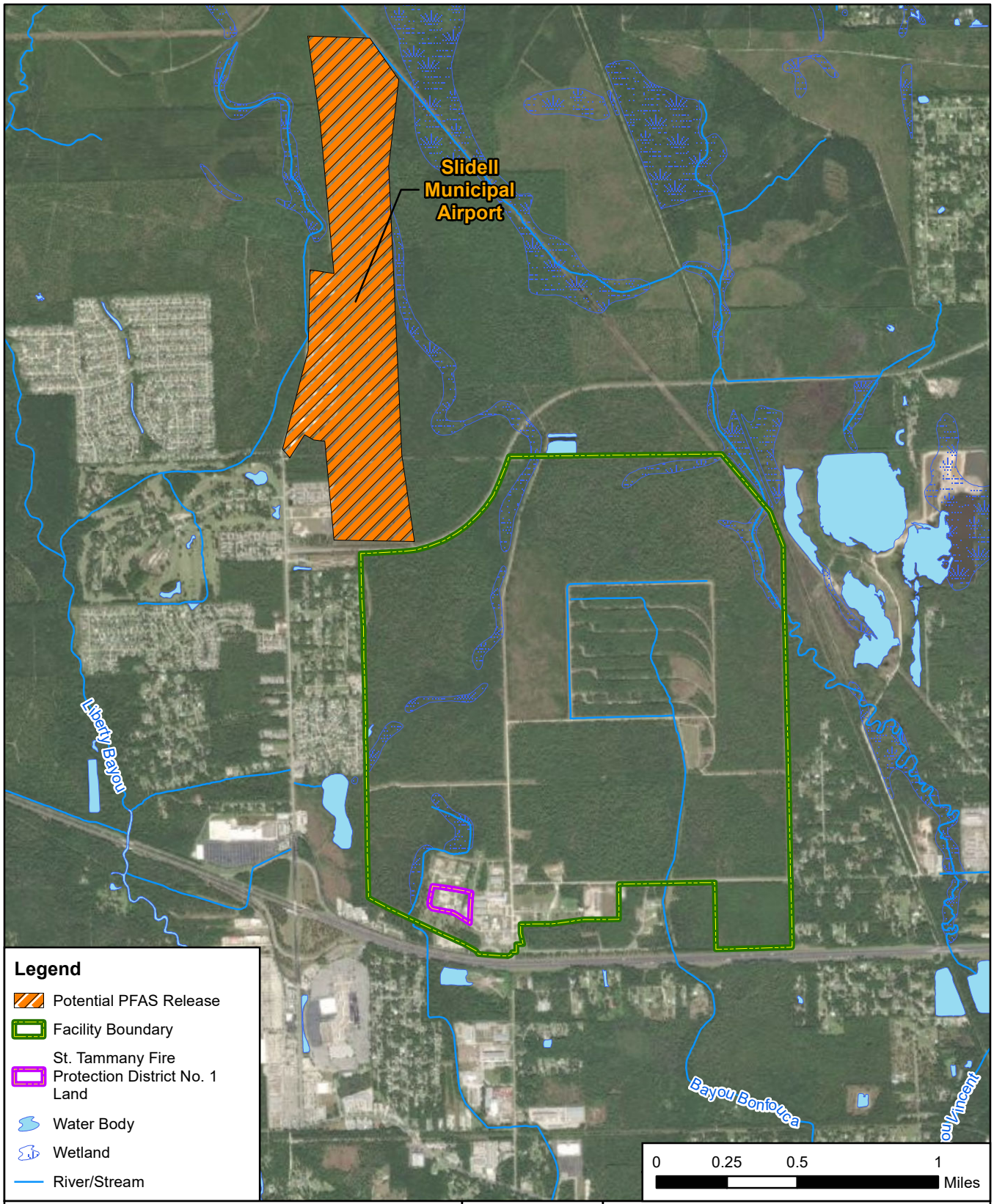
4. Emergency Response Areas

During the PA, no emergency response areas were identified through interviews or through the Environmental Data Resources, Inc. (EDR™) Reports within the Camp Villere facility within the past 15 years.

5. Adjacent Sources

5.1 Slidell Municipal Airport

The Slidell Municipal Airport is located upgradient and adjacent to the facility's northern boundary. No information was obtained during the PA about potential PFAS sources at the Slidell Municipal Airport. However, storage and use of AFFF is common at airports, therefore, the area is shown as a potential adjacent source on **Figure 5-1**.



CLIENT	ARNG			
NOTES	Preliminary Assessment for PFAS at Camp Villere, LA			
REVISED	7/8/2020	GIS BY	MS	7/8/2020
SCALE	1:31,680	CHK BY	PD	7/8/2020
Base Map: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS,		PM	RG	7/8/2020

N

Adjacent Source

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, one AOI was identified at Camp Villere: Fire Training Areas and AFFF Storage which are currently and historically operated by STFPD1. The AOI location is shown on **Figure 6-1**. The following sections describe the CSM components and the specific preliminary CSM developed for AOI 1. 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.

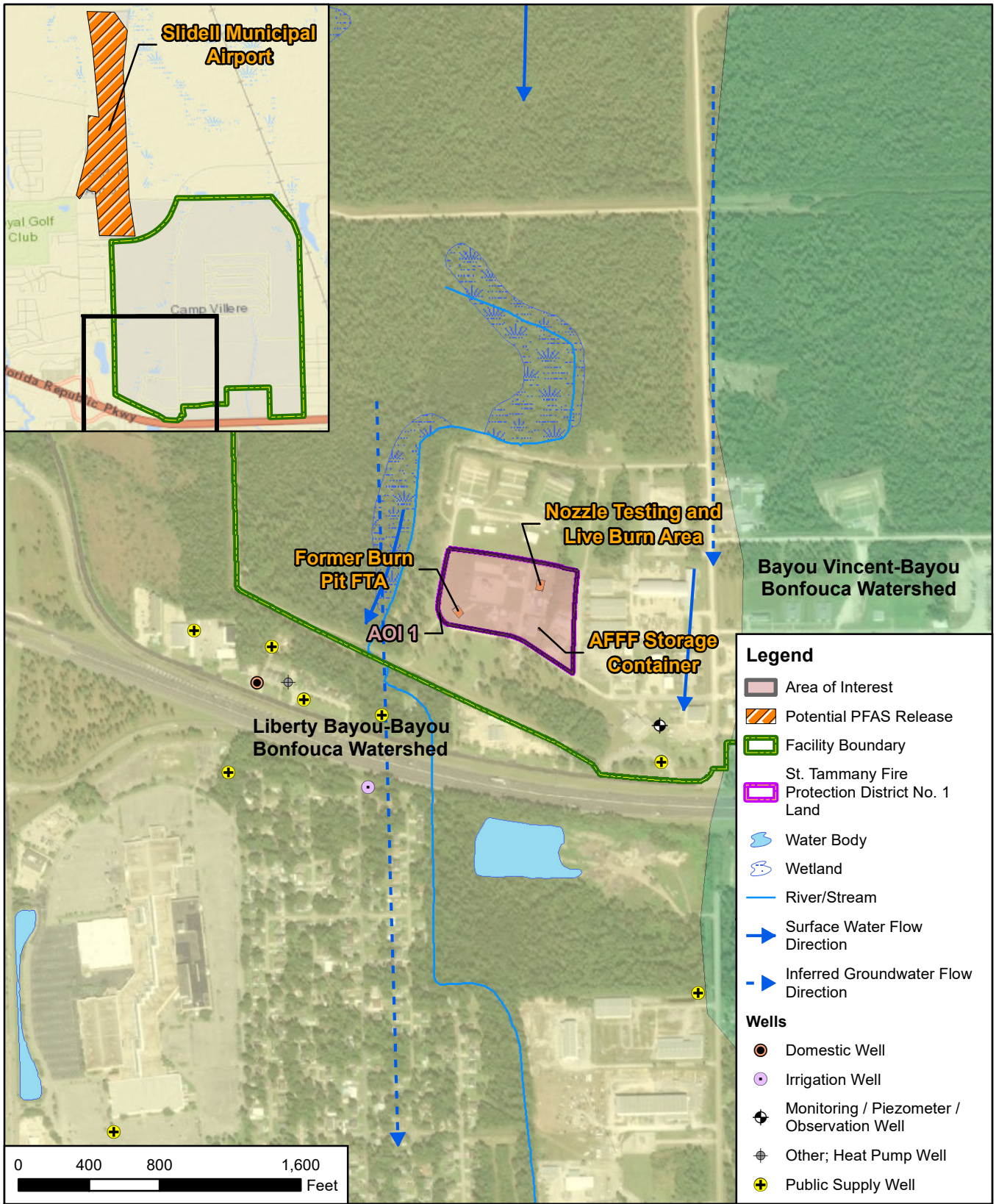
In general, the potential PFAS exposure pathways are ingestion and inhalation. Human exposure via the dermal contact pathway may occur, and current risk practice suggests it is an insignificant pathway compared to ingestion. However, exposure data for dermal pathways is sparse and continues to be the subject of PFAS toxicological study (NGWA 2018). Receptors at Camp Villere include site workers, construction workers, residents, recreational users, and trespassers. The preliminary CSM for Camp Villere indicates which specific receptors could potentially be exposed to PFAS.

6.1 AOI 1 – Fire Training Areas & AFFF Storage

AOI 1 includes FTAs and AFFF storage maintained and operated by STFPD1, which encompasses the Former Burn Pit FTA (Section 2.1), the Nozzle Testing and Live Burn Area FTA (Section 2.2) and the AFFF Storage Container (Section 3.1). Releases of approximately 60 gallons per year of PFAS-containing Chemguard Supertrain foam to the soil by STFPD1 have occurred from at least 2008 to present. Additionally, there is the potential for PFAS to have been released during operation of the FTA from 1998 – 2008, but no information from that time period was gathered during the PA. No remediation activities have occurred at AOI 1.

PFAS are water soluble and readily migrate from soil to groundwater. Since Chemguard Supertrain may contain PFAS, PFAS releases at AOI 1 have potentially occurred. PFAS may migrate from the surface soil to the shallow groundwater, which ranges in depth from 2.7 to 12.6 feet bgs. Drinking water for Camp Villere is obtained from the City of Slidell. One public supply well is located approximately 700 feet downgradient of AOI 1. Four other public supply wells and one domestic well are located downgradient to cross-gradient of AOI 1 within 1,600 feet. One irrigation well is located approximately 1,200 feet downgradient of AOI 1. One water supply well, ST-776, is located on Camp Villere. While ST-776 is currently not used, site personnel suggested it could be used in the future if municipal water supply becomes unavailable.

Ground-disturbing activities to surface soil at AOI 1 may result in site worker, construction worker, and trespasser exposure to potential PFAS contamination. Ground disturbing activities to subsurface soil could result in construction worker exposure. Therefore, the exposure pathways for inhalation of soil particles and ingestion of soil are potentially complete for these receptors. Based on the south to southeastern groundwater flow direction at Camp Villere, drinking water wells downgradient or cross-gradient may be impacted by Chemguard Supertrain releases at AOI 1. Therefore, the exposure pathway for groundwater to all receptors is potentially complete. Ephemeral drainage ditches flow around the AOI 1 area and eventually off-facility to the south; therefore, surface water and sediment exposure pathways to all receptors are potentially complete. The preliminary CSM for AOI 1 is shown on **Figure 6-2**.



CLIENT	ARNG			
NOTES	Preliminary Assessment for PFAS at Camp Villere, LA			
REVISED	7/8/2020	GIS BY	MS	7/8/2020
SCALE	1:9,600	CHK BY	PD	7/8/2020
Base Map: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI,		PM	RG	7/8/2020

Areas of Interest

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Figure 6-1

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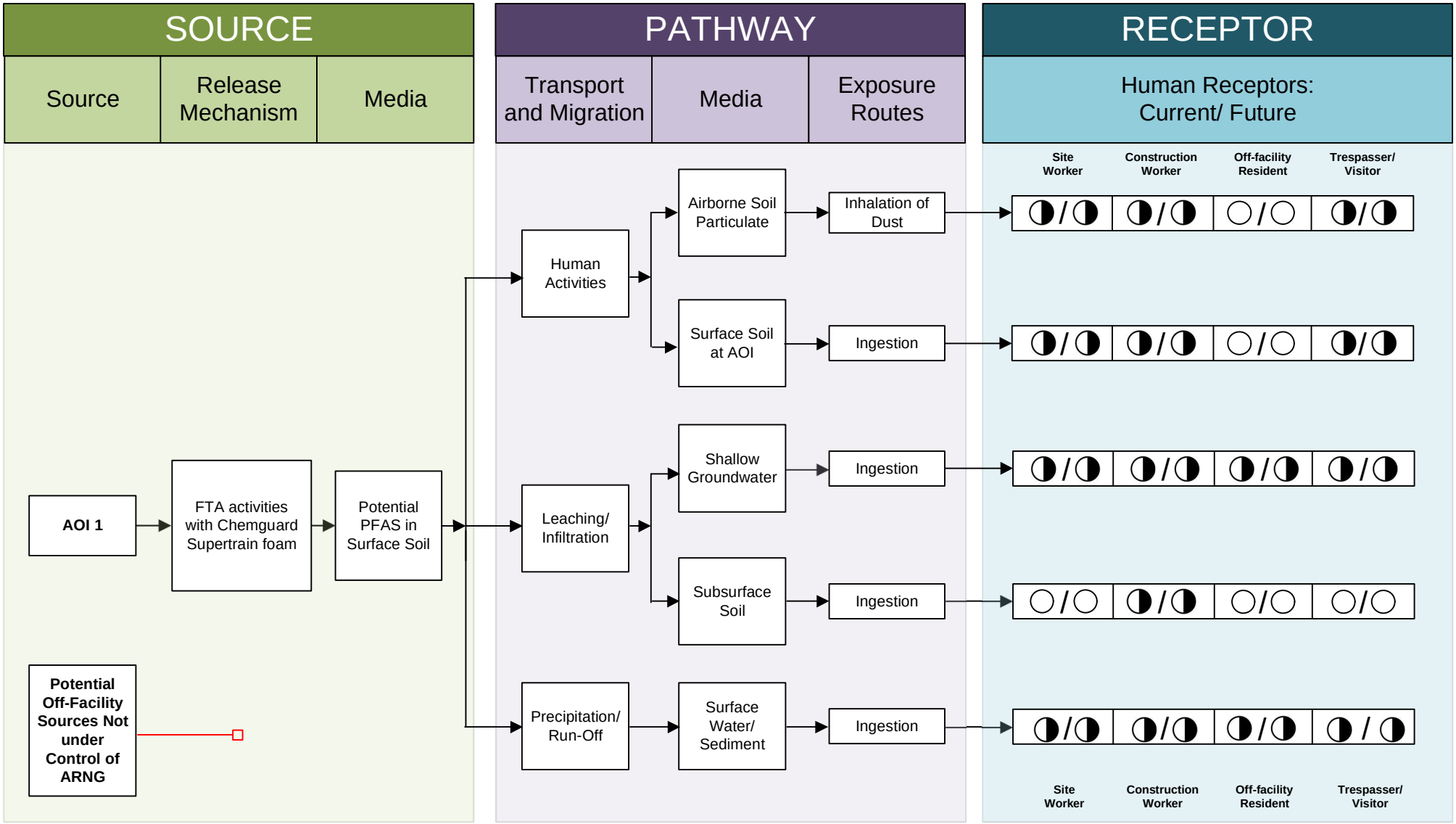


LEGEND

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

Note: The residential receptor refers to an off-facility receptor

Figure 6-2
Preliminary Conceptual Site Model, AOI 1
Camp Villere

7. Conclusions

This report presents a summary of available information gathered during the PA on the use and storage of Chemguard Supertrain foam and other PFAS-related activities at Camp Villere. The PA findings are based on the information presented in **Appendix A** and **Appendix B**.

7.1 Findings

One AOI related to potential PFAS release was identified at Camp Villere based on PA data. This AOI is summarized in **Table 7-1** below and shown on **Figure 7-1**:

Table 7-1: Camp Villere PA AOI

Area of Interest	Name	Used By	Release Dates
AOI 1	Fire Training Areas & AFFF Storage	St. Tammany Fire Protection District No. 1	2008 – present

Potential off-facility sources of PFAS were identified during the PA.

Based on reported Chemguard Supertrain releases at this AOI, there is potential for exposure to PFAS contamination in media at or near the facility. The preliminary CSM for Camp Villere is shown on **Figure 6-2**, which presents the potential receptors and media impacted.

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 based on all available information, including: previous environmental reports, EDRs™, observations made during the VSI, and interviews. Interviews of personnel with direct knowledge of a facility generally provided the most useful insights regarding a facility's historical and current PFAS-containing materials. Sometimes, the provided information was vague or conflicted with other sources. Gathered information has a degree of uncertainty due to the absence of written documentation, the limited number of personnel with direct knowledge due to staffing changes, the time passed since PFAS were first used (1969 to present), and a reliance on personal recollection. Inaccuracies may arise in potential PFAS release locations, dates of release, volume of releases, and the concentration of foam 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 within the PA

Area of Interest	Source of Uncertainty
AOI 1	The exact chemical makeup of the Chemguard Supertrain foam used at Camp Villere is unknown. The SDS lists a proprietary fluorosurfactant as an ingredient; Therefore, it is assumed that the foam contains PFAS.
General	The history of STFPD1 activities at the installation prior to 2008 is unknown. The FTAs used by the STFPD1 have been in use since 1998.

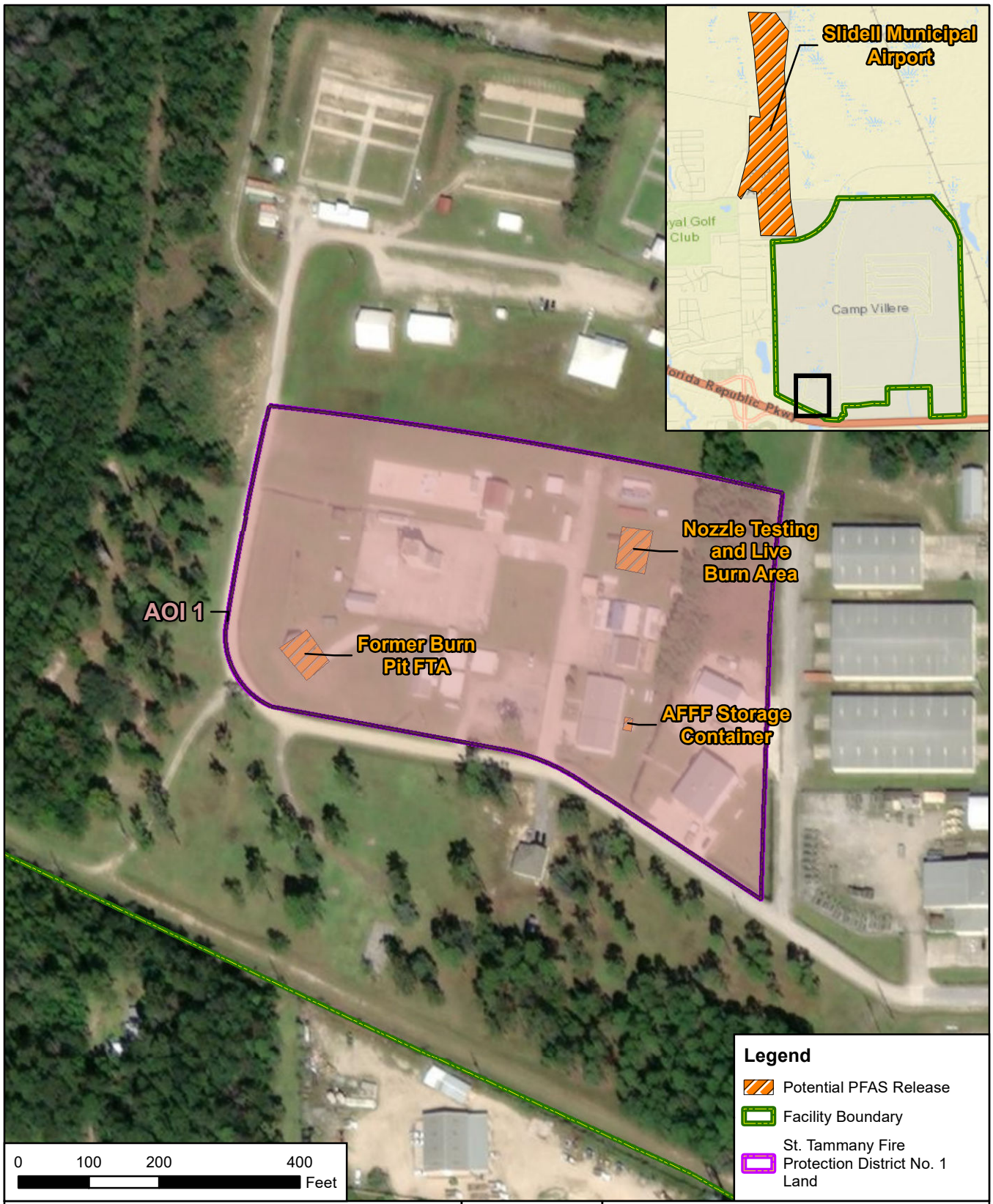
7.3 Potential Future Actions

Interviews and records (covering 2008 to present) indicate that current or former ARNG activities have not resulted in potential PFAS releases at the AOI identified during the PA. STFPD1 activities have resulted in potential PFAS releases at the AOI. Based on the preliminary CSMs developed for this AOI, there is potential for receptors to be exposed to PFAS contamination in soil, groundwater, surface water and sediment. **Table 7-3** summarizes the rationale used to determine if the AOI should be considered for further investigation under the CERCLA process and undergo an SI.

The LAARNG has not used, stored, trained with or released AFFF, not only on this particular parcel of land, but throughout the entirety of Camp Villere. Potential PFAS releases are associated with St. Tammany Fire Protection District No. 1 (STFPD1) use of the property. Although real property accountability is be held by the Louisiana Department of Military Affairs, the property is not utilized for federal training and therefore there is no federal responsibility for the site. With no release due to federal training nor any federal interest in the real property, there is no authority to carry the site into the SI phase.

Table 7-3: Rationale

Area of Interest	AOI Location	Rationale	Potential Future Action
AOI 1 Fire Training Areas & AFFF Storage	30°18’48.5”N; 89°49’01.4”W	PFAS-containing foam was released from 2008 – present.	No ARNG authority for SI at Camp Villere AOI 1 (St Tammany Fire Protection District No.1).



CLIENT	ARNG			
NOTES	Preliminary Assessment for PFAS at Camp Villere, LA			
REVISED	7/8/2020	GIS BY	MS	7/8/2020
SCALE	1:2,400	CHK BY	PD	7/8/2020
Base Map: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI,		PM	RG	7/8/2020

Summary of Findings

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Figure 7-1

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8. References

Daigle, O.J., Jr., Major General. 1978. Camp Villere Master Plan. Submitted to the Louisiana Army National Guard. On file at Camp Villere, Slidell, LA.

ECC (Ecological Communication Corporation) and Neel-Schaffer, Inc. 2003. Final Endangered Species Management Plan, Camp Villere, Louisiana. DACA63-02-T-005.

ERG (Environmental Research Group, LLC) and USACE (U.S. Army Corps of Engineers Fort Worth District). 2007. Final Integrated Natural Resources Management Plan, 2006–2010.

Lovelace, John. 2009. "Groundwater Status in Louisiana." Presentation prepared for the USEPA Region 6 2009 Ground Water Summit. Louisiana Water Science Center, U.S. Geological Survey.

MSE (Millennium Science and Engineering, Inc.). 2001. Environmental Assessment for the Integrated Natural Resources Management Plan at Camp Villere, Louisiana.

National Ground Water Association (NGWA). 2018. *Groundwater and PFAS: State of Knowledge and Practice*. January.

NWRC (National Wetlands Research Center). 1998. Geology_NWRC_1998. Based on scanned version of a 1:500,000 scale hard copy of the Geologic Map of Louisiana for the Louisiana Geological Survey (LGS).

Saucier, R.T. 1963. Recent Geomorphic History of the Pontchartrain Basin. Louisiana State University Press.

Teague, J.A., N.C. McInnis, and R.P. Martin. 1995. Louisiana Army National Guard, Threatened and Endangered Species: Natural Areas Survey, Camp Villere. The Nature Conservancy, Baton Rouge, LA.

Tomaszewski, T.J., and J.K. Lovelace. 2007. Effects of Hurricane Katrina's Storm Surge on the Quality of Shallow Aquifers near the Northern Shoreline of Lake Pontchartrain, Southeastern Louisiana.

US Climate Data. Climate – Slidell, Louisiana. Accessed October 2019. Available at https://www.usclimatedata.com/climate/slidell/louisiana/united-states/usla0438. 2019.

USACE. 2009. Draft Final Operational Range Assessment Program: Phase I Qualitative Assessment Report, Camp Villere, Louisiana. DoD Contract Number W912DR-05-D-0004.

United States Environmental Protection Agency (USEPA). 1991. *Guidance for Performing Preliminary Assessments under CERCLA.* September.

US Census Bureau. 2010a. TIGER/Line Shapefile, 2010, count, St. Tammany Parish, LA. Current Area Hydrography Shapefile.

US Census Bureau. 2010b. TIGER/Line Shapefile, 2010, count, St. Tammany Parish, LA. Linear Hydrography County-based Shapefile.

USFWS (U.S. Fish and Wildlife Service). 2019. National Wetlands Inventory Wetlands Mapper. Available at: https://www.fws.gov/wetlands/data/mapper.HTML.

USGS (U.S. Geological Survey). 2002. "Environmental Atlas of Lake Pontchartrain Basin." USGS Open File Report 02-206. http://pubs.usgs.gov/of/2002/of02-206/index.html (accessed 4 December 2012).

USGS and LA DOTD (Louisiana Department of Transportation and Development). 2002. Groundwater Status in Louisiana. Presentation dated 30 January 2002.

Appendix A
Data Resources

Data Resources will be provided separately on CD. Data Resources for Camp Villere include:

Camp Villere AFFF Release Documentation

- 2019 Interview List Correspondence and GIS Data Request

Previous Investigations Completed at Camp Villere

- 2003 Endangered Species Management Plan
- 2007 Integrated Natural Resources Management Plan
- 2009 Operational Range Assessment Program: Phase I Qualitative Assessment Report

Camp Villere Installation Maps

- Camp Villere Installation Map
- Camp Villere Cantonment Area Map

Chemical Data Sheets

- Chemguard Supertrain Foam SDS

Environmental Data Resources™

- 2019 Camp Villere EDR™ Report

Other

- Quitclaim Deed

Appendix B
Preliminary Assessment Documentation

Appendix B.1
Interview Records

Preliminary Assessment Sign-In Sheet

Camp Villere

Rank	Name	Position	Years at the Facility	Phone Number/Email	May AECOM use your name in the PA Report?
SM	[redacted]	Asst Opp Manager	7	[redacted]	Yes
	[redacted]	LAARNG Env		[redacted]	Yes
	[redacted]	UTES-V	15	[redacted]	Yes
	[redacted]	Training Officer	8	[redacted]	Yes
	[redacted]	Regional Coordinator		[redacted]	Yes [redacted]

PA Interview Questionnaire – Fire Station

Facility: Camp Villere
Interviewer: [redacted]
Date/Time: 3/12/19

Sign-in Sheet

Interviewee: [redacted] **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

1. Roles or activities with the Facility/years working at the Facility.

   Fire Training Officer. 8 years.

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.

   Maintenance (e.g., ramp washing)
   Fire Training Areas — "Chemguard" foam. Sheet from manufacturer included in notes. Looks like could be AFFF containing.
   Firefighting (Active Fire)
   Crash
   Fire Suppression Systems (Hangers/Dining Facilities)
   Fire Protection at Fueling Stations
   Non-Technical/Recreational/ Pest Management

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?

   NO. Water systems, ABC systems, Dry chemical systems.

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

   NO.

5. How is AFFF procured? Do you have an inventory/procurement system that tracks use?

   NO. Only bought very rarely as needed.
   ^ "Chemguard" foam

PA Interview Questionnaire – Fire Station

Facility: Camp Villere
Interviewer: [redacted]
Date/Time: 3/12/19

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)?

Chemguard Supertrain . . . suspected to contain PFAS . . .

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

No

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?

Stored in one large tank ~250 gallons in a Conex box by the FTA.

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?

Trucks washed at the training area (FTA).

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

Trucks don't hold AFFF. A side container is used during training activity, so only the hoses contact the AFFF.

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?

N/A.

PA Interview Questionnaire – Fire Station

Facility: Camp Villere
Interviewer: [redacted]
Date/Time: 3/12/19

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?

One FTA. Located on map.

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

Variety.

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?

Estimated 60-gal per year at FTA.

Foam would have infiltrated or possibly entered unlined drainage ditches. Site visit showed that releases would have likely infiltrated, not run off.

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?

Many other entities come on-site for training but mostly for classroom work. Only local fire dept. does foam training on-site.

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. Chemguard only used.

PA Interview Questionnaire – Fire Station

Facility: Camp Villere
Interviewer: P. Donahoe
Date/Time: 3/12/19

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

N/A.

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?

N/A.

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?

N/A.

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)?

No.

PA Interview Questionnaire – Fire Station

Facility: Camp Villere
Interviewer: P Donahoe
Date/Time: 3/12/19

22. Are you aware of any other creative uses of AFFF? If so, how was AFFF used? What entities were involved? NO.
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? N/A
24. Do you recommend anyone else we can interview? If so, do you have contact information for them?

PA Interview Questionnaire - Other

Facility: Camp Villere
Interviewer: [redacted]
Date/Time: 3/12/19

Sign-in Sheet

Interviewee: SM [redacted]
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:

Asst. Operations Manager. 7 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
No known AFFF releases.	Use
	Procurement
	Disposition
	Storage (Mixed)
	Storage (Solution)
	Inventory, Off-Spec
	Containment
	SOP on Filling
	Leaking Vehicles
	Nozzle and Suppression System Testing
	Dining Facilities
	Vehicle Washing
	Ramp Washing
	Fuel Spill Washing and Fueling Stations
	Chrome Plating or Waterproofing

PA Interview Questionnaire - Other

Facility: Camp Villere
Interviewer [redacted]
Date/Time: 3/12/19

Interviewee: [redacted] **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

Sign-in Sheet

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

UTES employee. 15 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
None known.	Use
- No fueling @ UTES	Procurement
- Water suppression in buildings	Disposition
- ABC extinguishers	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

Appendix B.2
Visual Site Inspection Checklists

Visual Site Inspection Checklist

Names(s) of people performing VSI:

Recorded by: [redacted]

ARNG Contact:

Date and Time:

Method of visit (walking, driving, adjacent):

Source/Release Information

Site Name / Area Name / Unique ID: (Camp Villere) - Fire Training Site

Site / Area Acreage:

Historic Site Use (Brief Description): FTA

Current Site Use (Brief Description): FTA

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):

Not sure. Chemguard foam - possibly contains PFAS?

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:

Visual Survey Inspection Log

Other Significant Site Features: N/A

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:
Possible. Drainage ditches flow off-site eventually. However inspection showed that infiltration at the FTA is more likely.

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

2a. If so, please note observation and location:
Unlined drainage ditches around FTA.

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

3a. If so, please note the location:
One well on-site. Not currently used for potable. Need more info.

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):

FTA pit was built on top of. FTA tower now.

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

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

Some concrete, mostly 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:

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:

Visual Survey Inspection Log

Additional Notes Unlined drainage ditches
Foam sprayed on grass looks like it would just infiltrate
Search & rescue building is on top of old fire training pit - one possible area. Other possible area is over to the east of the FTA circled on ~~map~~ map.

Photographic Log

Photo ID/Name	Date & Location	Photograph Description
	2:08	Chemguard foam storage box
	2:16	other "possible" foam spray area

This facility started for fire training 1998
Chief [redacted] started in 2008. So 10 year gap during which we don't have info.

Appendix B.3
Conceptual Site Model Information

Preliminary Assessment – Conceptual Site Model Information

Site Name: Camp Villere

Why has this location been identified as a site?

Local fire department trains with foam on-site

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

No

Training Events

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

If so, how often? About 60-gallons used per year

How much material was used? Is it documented? Approximately 480-gal during past 8 years.

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? Ephemeral unlined drainage ditches around FTA

Average rainfall? 62.92 inches

Any flooding during rainy season? Yes

Direct or indirect pathway to ditches? Ephemeral ditches around the FTA

Direct or indirect pathway to larger bodies of water? Drainage eventually south to Lake Pontchartrain

Does surface water pond any place on site? Wetlands in the range areas of the site

Any impoundment areas or retention ponds? No

Any NPDES location points near the site? Unknown

How does surface water drain on and around the flight line? N/A

Preliminary Assessment – Conceptual Site Model Information

Groundwater:

Groundwater flow direction? South

Depth to groundwater? 0 feet – 25 feet in the area

Uses (agricultural, drinking water, irrigation)? Not currently using GW on site.

Any groundwater treatment systems? No

Any groundwater monitoring well locations near the site? Unknown

Is groundwater used for drinking water? Not currently. It was in the past. Well on-site is out of commission.

Are there drinking water supply wells on installation? Yes, one. It is not currently used.

Do they serve off-post populations? No

Are there off-post drinking water wells downgradient? There are private wells to the southwest, southeast, and south of the installation.

Waste Water Treatment Plant:

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

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

Do we understand the fate of sludge waste? N/A

Is surface water from potential contaminated sites treated? N/A

Equipment Rinse Water

1. Is firefighting equipment washed? Where does the rinse water go?
Yes, washed at the FTA. Water infiltrates into soil.

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?
No, only used during training activities.

3. Other? FTA activities use about 60-gal of foam per year at the designated training area.

Preliminary Assessment – Conceptual Site Model Information

Identify Potential Receptors:

Site Worker Potential

Construction Worker Potential

Recreational User N/A

Residential Potential

Child Potential(residential)

Ecological Potential

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

Private homes, businesses

Documentation

Ask for Engineering drawings (if applicable).

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

Appendix C
Photographic Log

APPENDIX C – Photographic Log

Army National Guard, Preliminary Assessment for PFAS	Camp Villere	Slidell, Louisiana

Photograph No. 1

Description:

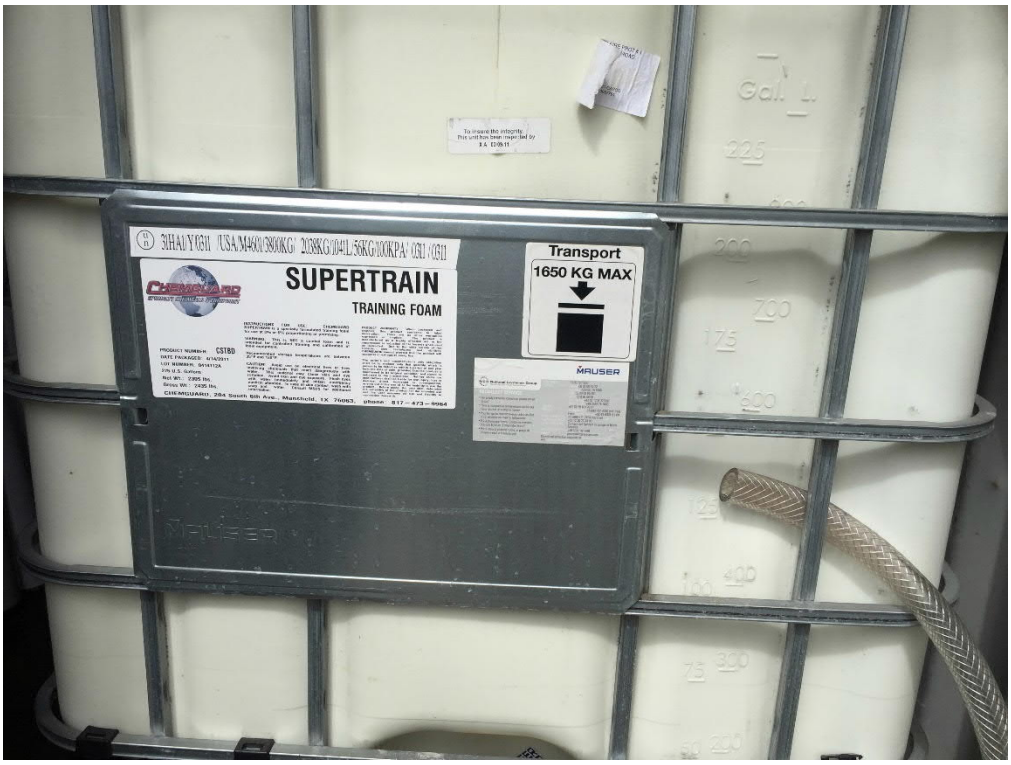
Location of fire training activities which encompasses AOI 1 & 2.

(view to W)

Photograph No. 2

Description:

Foam storage tank in the Storage Container.



APPENDIX C – Photographic Log

Army National Guard, Preliminary Assessment for PFAS	Camp Villere	Slidell, Louisiana

Photograph No. 3

Description:

Unused potable well at the facility.