FINAL
Preliminary Assessment Report Army Aviation Support Facility #1, Hammond, 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
amsl	above mean sea level
ANG	Air National Guard
AOI	Area of Interest
ARNG	Army National Guard
bgs	below ground surface
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CSM	conceptual site model
EDR™	Environmental Data Resources, Inc.™
FTA	fire training area
LA	Louisiana
LAARNG	Louisiana Army National Guard
PA	Preliminary Assessment
PFAS	per- and poly-fluoroalkyl substances
PFOA	perfluorooctanoic acid
PFOS	perfluorooctanesulfonic acid
SI	Site Inspection
US	United States
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency

Executive Summary

The Army National Guard (ARNG) is performing Preliminary Assessments (PAs) and Site Inspections (SIs) for Perfluorooctanesulfonic acid (PFOS) and Perfluorooctanoic acid (PFOA) Impacted Sites at ARNG Facilities Nationwide. A PA for per- and polyfluoroalkyl substances (PFAS)-containing materials was completed for the current Army Aviation Support Facility (AASF) #1 in Hammond, Louisiana (LA) to assess potential PFAS release areas and exposure pathways to receptors. The current AASF #1 is located on 150 acres of land that is part of a parcel owned by the Hammond Municipal Airport and leased by the Louisiana ARNG (LAARNG). 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 personnel during the site visit associated with AASF #1 activities including current LAARNG AASF #1 facility building manager (since 2015), aircraft maintenance supervisor (since 1986) and aircraft maintenance support (since 1989); and interviewed the City of Hammond Fire Chief (with department since 2000).
- 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.

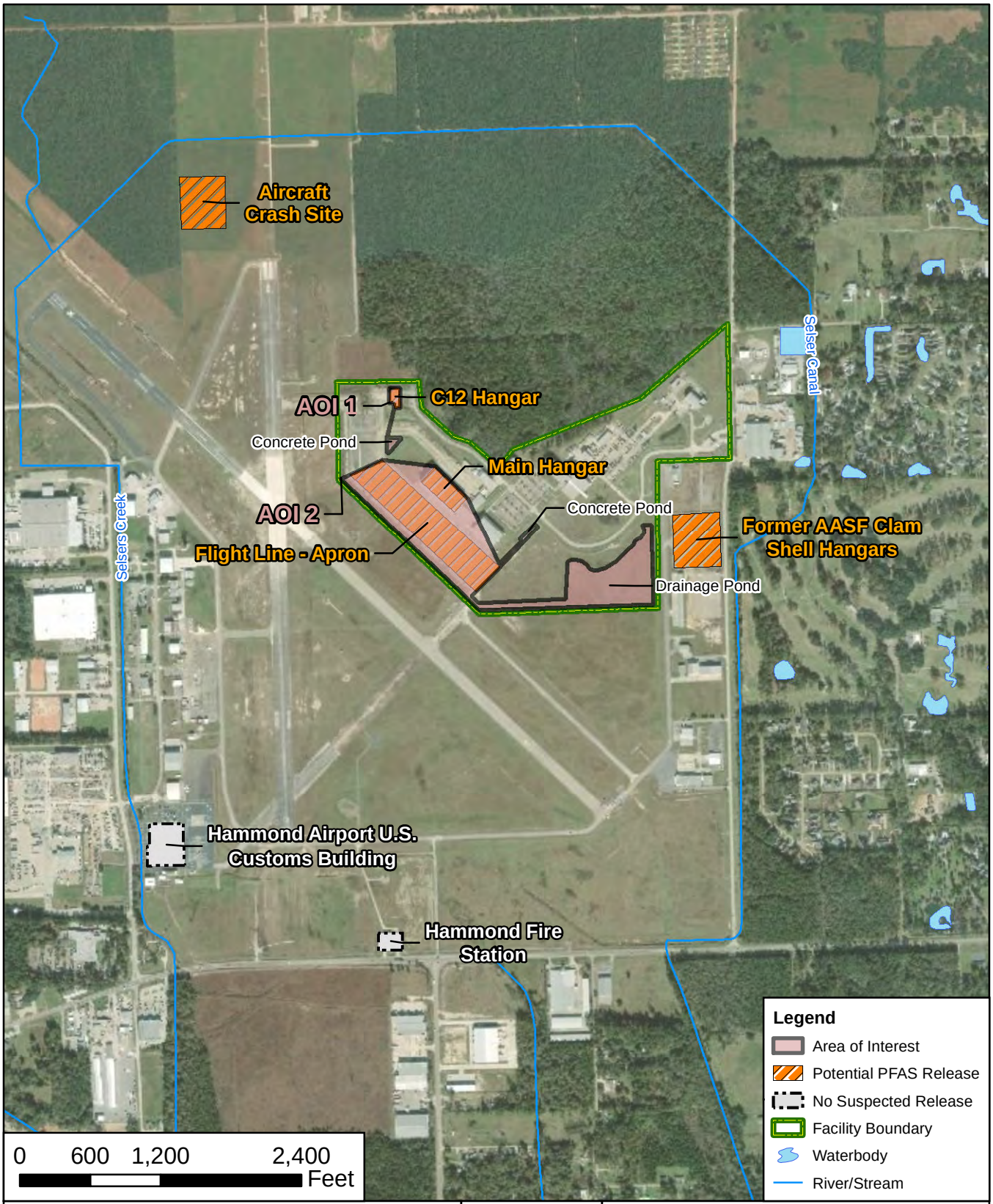
Two AOIs related to potential PFAS releases were identified at Hammond AASF #1 during the PA. The AOIs are shown on **Figure ES-1** and described below:

Table ES-1: Hammond AASF #1 PA AOIs

Area of Interest	Name	Used by	Potential Release Date
AOI 1	C12 Hangar	LAARNG	2007 – present
AOI 2	Main Hangar and Flight Line-Apron	LAARNG	2007 – present

Based on the potential for spills, leaks, or discharges of AFFF at these AOIs, there is potential for exposure to PFAS contamination in media at or near the facility. The preliminary CSM for Hammond AASF #1, which presents the potential receptors and media impacted, is shown on **Figure ES-2**. Based on the US Environmental Protection Agency (USEPA) Unregulated Contaminant Monitoring Rule 3 (UCMR3) data, it was indicated that no PFAS were detected in a public water system above the USEPA's lifetime 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.

ARNG evaluates the need for an SI at Hammond AASF #1 based on the potential receptors, the potential migration of PFAS contamination off the facility, and the availability of resources.



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Base Map: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS,		PM	RG	6/12/2020

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Summary of Findings

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Figure ES-1

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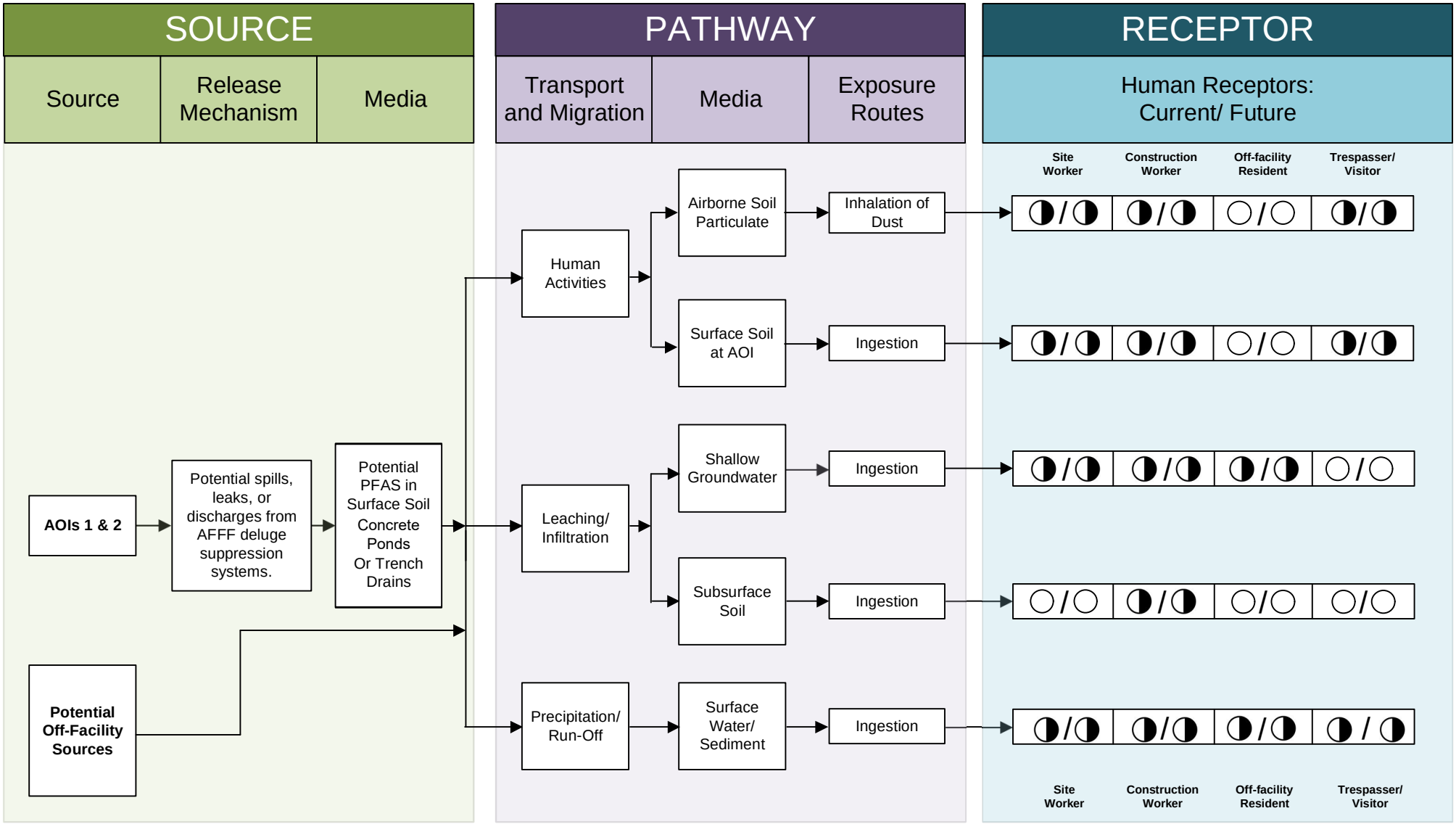


LEGEND

- 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, AOIs 1 & 2
Hammond AASF #1

1. Introduction

1.1 Authority and Purpose

The Army National Guard (ARNG)-Installations & Environment Division is the lead agency in performing *Preliminary Assessments (PAs) and Site Inspections (SIs) for Perfluorooctanesulfonic acid (PFOS) and Perfluorooctanoic acid (PFOA) at Impacted Sites at ARNG Facilities Nationwide*. This work is supported by the United States (US) Army Corps of Engineers (USACE) Baltimore District and their contractor AECOM Technical Services, Inc. (AECOM) under Contract Number W912DR-12-D-0014, Task Order W912DR17F0192, issued 11 August 2017.

The ARNG is assessing potential effects on human health related to processes at facilities that used per- and poly-fluoroalkyl substances (PFAS) (a suite of related chemicals), primarily in the form of aqueous film forming foam (AFFF) released as part of firefighting activities, although other PFAS sources are possible. In addition, the ARNG is assessing businesses or operations adjacent to the ARNG facility (not under the control of ARNG) that could potentially be responsible for a PFAS release.

PFAS are classified as emerging environmental contaminants that are garnering increasing regulatory interest due to their potential risks to human health and the environment. PFAS formulations contain highly diverse mixtures of compounds. Thus, the fate of PFAS compounds in the environment varies. The regulatory framework at both federal and state levels continues to evolve. The US Environmental Protection Agency (USEPA) issued Drinking Water Health Advisories for PFOA and PFOS in May 2016, but there are currently no promulgated national 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 the current Army Aviation Support Facility (AASF) #1 in Hammond, LA, in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended, the National Oil and Hazardous Substances Pollution Contingency Plan (40 Code of Federal Regulations Part 300), and Army requirements and guidance.

This PA documents the known fire training areas (FTAs) as well as other locations where PFAS may have been released into the environment at Hammond AASF #1 (also referred to as the “facility”). The term PFAS will be used throughout this report to encompass all PFAS 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;
- 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 personnel during the site visit associated with AASF #1 activities including current Louisiana ARNG (LAARNG) AASF #1 facility building manager (since 2015), aircraft maintenance supervisor (since 1986) and aircraft maintenance support (since 1989), the City of Hammond Fire Chief (with department since 2000), a representative from the LAARNG

Environmental Management Office, and the LAARNG Southern Region Environmental Coordinator;

- 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 for the AOIs and the facility
- **Section 7** –**Conclusions:** summarizes the data findings and presents the conclusions of the PA
- **Section 8** – **References:** provides the references used to develop this document
- **Appendix A** – Data Resources
- **Appendix B** – Preliminary Assessment Documentation
- **Appendix C** – Photographic Log

1.4 Facility Location and Description

Hammond AASF #1 is co-located with Hammond Northshore Regional Airport and an Air National Guard (ANG) facility. The AASF #1 is just north of Highway 190 at 1399 Industrial Park Road Hammond, LA 70701, in Tangipahoa Parish (**Figure 1-1**).

AASF #1 is located on 147 acres of land owned by the Hammond Municipal Airport. Operations at Hammond AASF #1 began in 2009; the land was previously undisturbed.

1.5 Facility Environmental Setting

Hammond AASF #1 lies within the Gulf Coast Physiographic Province, a region characterized by gently sloping, low relief land. The landscape has been formed primarily by fluvial deposits. There are numerous marshes, swamps, and lakes in the vicinity of AASF #1, and the regions streams are characterized as sluggish (USACE, 2011). The elevation of the facility is approximately 45 feet above mean sea level (amsl).

1.5.1 Geology

Hammond AASF #1 is located within the East Gulf Coastal Plain section of the Coastal Plain Physiographic province of Louisiana. Specifically, the facility is located above Pleistocene Terrace deposits, which make up approximately 20 percent (%) of Louisiana's surficial geology. The geology is characterized by unconsolidated sediments of lithologic variability as a result of the alluvial depositional environment, with intermittent occurrences of back-swamp deposits. This setting produced deposits exhibiting vertical and lateral stratigraphic changes over short distances (ERM, 2014). The terraces are a result of the paleo-Mississippi River (USACE, 2011).

1.5.2 Hydrogeology

Hammond AASF #1 is located within the Coastal Lowlands Aquifer system. These aquifers consist of primarily alluvial and deltaic deposits that are as much as 13,000 feet deep in southern Louisiana. Underneath the Hammond area lies the Chicot Equivalent, Evangeline Equivalent, and the Jasper Equivalent Aquifer Systems. The primary aquifer used in the Hammond area is the Tchefuncta aquifer, which is a part of the Jasper Equivalent Aquifer System. Groundwater flow at the facility (**Figure 1-2**) is inferred to be to the south (ERM, 2014).

Municipal water supplies in this area are obtained from wells with depths of 2,500 to 2,600 feet below ground surface (bgs). In a 2009 investigation, groundwater was encountered at depths between 5 to 20 feet bgs at the neighboring ANG facility. The shallowest water bearing unit occurs at 7 to 18 feet bgs (ERM, 2014).

No potable wells are located within AASF #1 facility boundary. The facility receives potable water from a municipal source. Three industrial use wells and one irrigation well are located within the facility. 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. The EDR™ report (**Appendix A**) lists two public supply wells, one to the west-southwest, and one to the east-northeast, at distances of 0.87 miles and 0.91 miles, respectively. Several domestic wells are listed on the EDR™ within 1 mile of the facility boundaries. These wells are typically screened in the Chicot Equivalent Aquifer System.

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

1.5.3 Hydrology

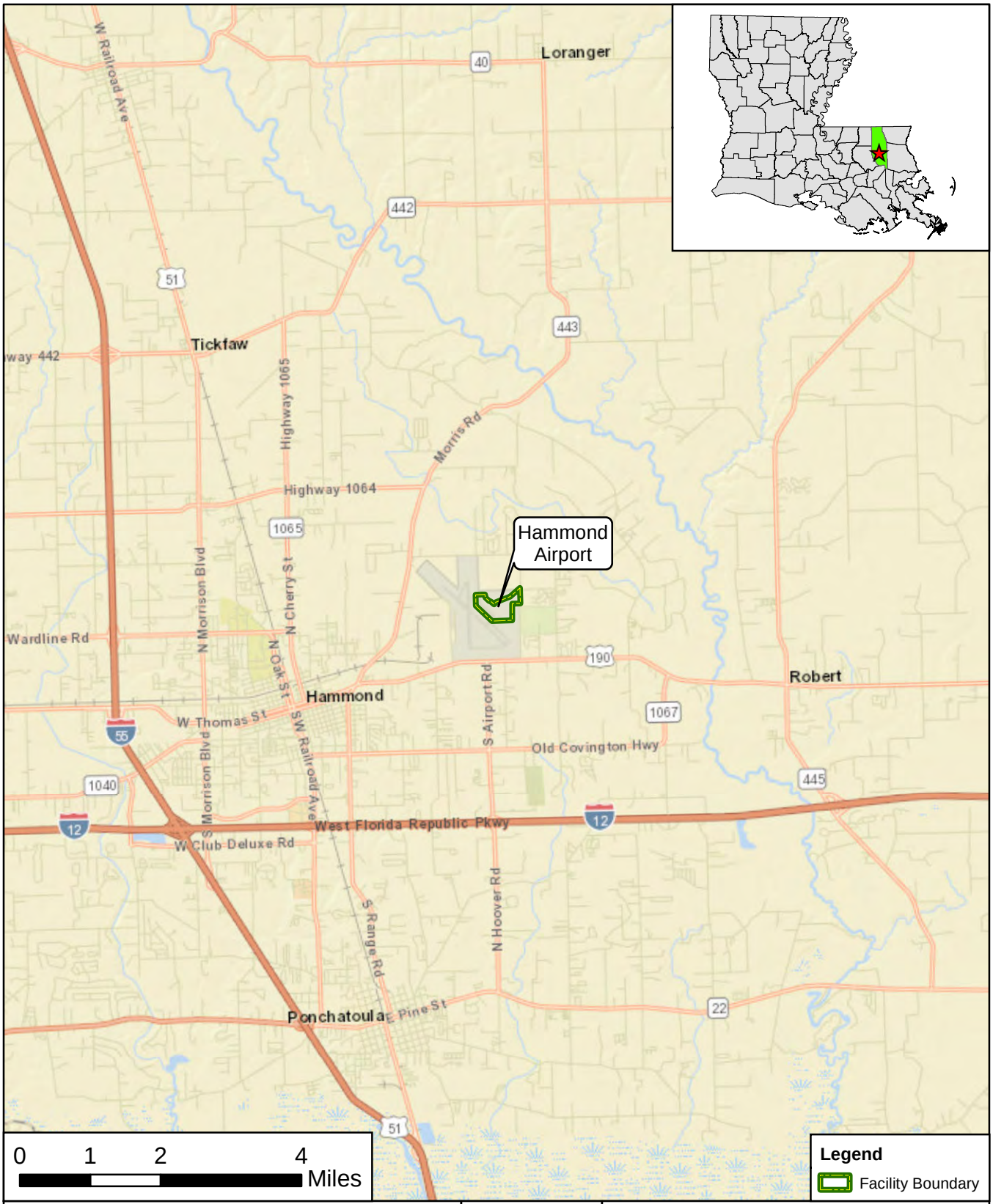
Hammond AASF #1 is located in the Lower Mississippi Lake Maurepas watershed, in a former wetlands area. There are no natural surface water bodies at the facility. A drainage channel flows along the western and southern boundaries of the facility (**Figure 1-3**). The watershed eventually drains to Lake Maurepas, which drains to Lake Pontchartrain and ultimately to the Gulf of Mexico.

1.5.4 Climate

The climate in Hammond, LA is humid and warm. The average annual temperature is 66.75 degrees Fahrenheit (°F). Seasonally, temperatures vary, with average summer highs of 91.3°F and average winter lows of 63°F. Average precipitation is 62.72 inches per year (US Climate Data, 2019).

1.5.5 Current and Future Land Use

Hammond AASF #1 is a controlled access facility and is adjacent to both the Hammond Northshore Regional Airport and an ANG facility. The Hammond Airport is owned by the city of Hammond and is a public use, joint civil-military, general aviation airport. AASF #1 has been operational since 2009, and it houses and maintains aircraft. Future land use is not anticipated to change.



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Base Map: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI,		PM	RG	4/28/2020

Facility Location

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Figure 1-1

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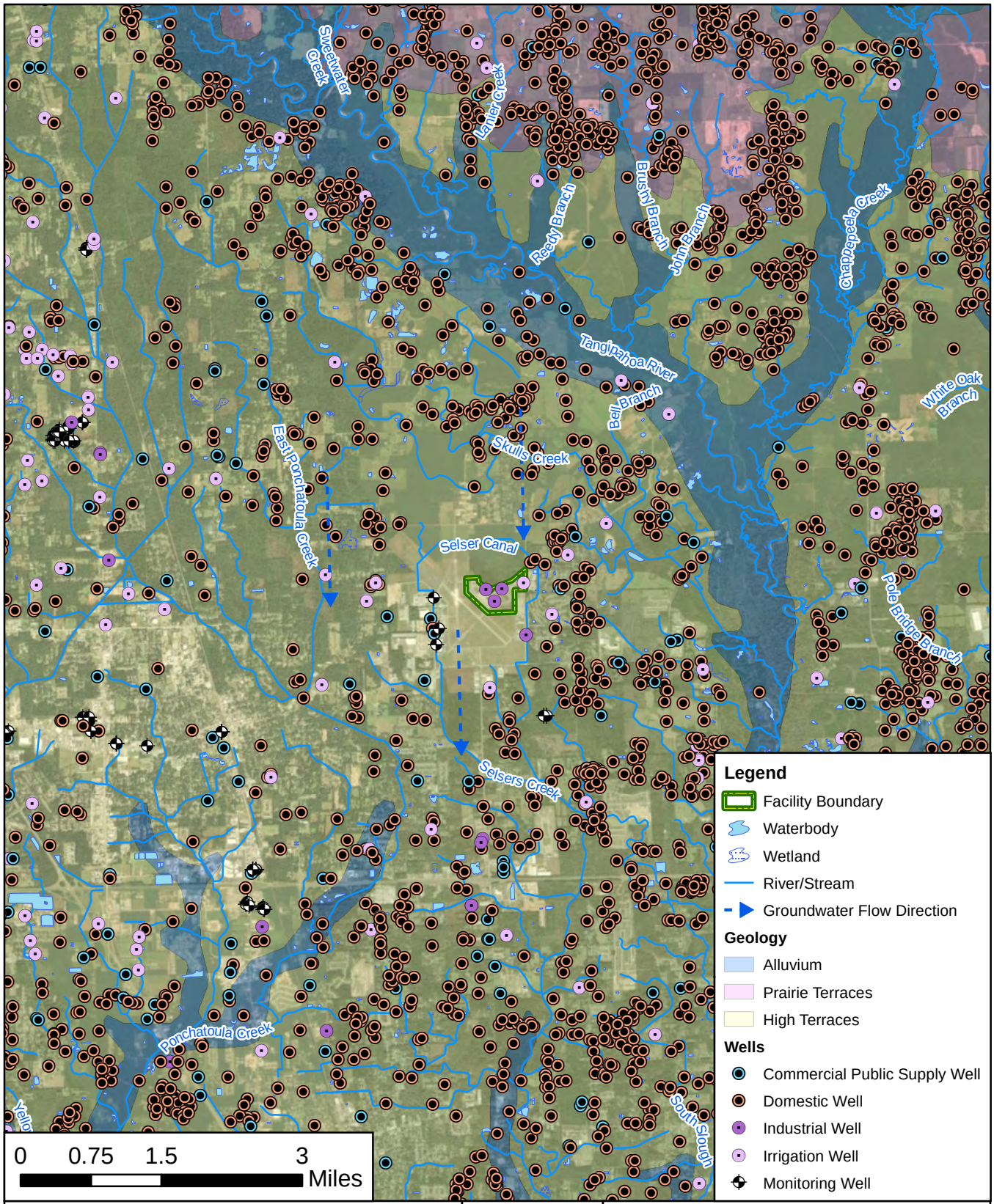

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Groundwater Features

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Figure 1-2

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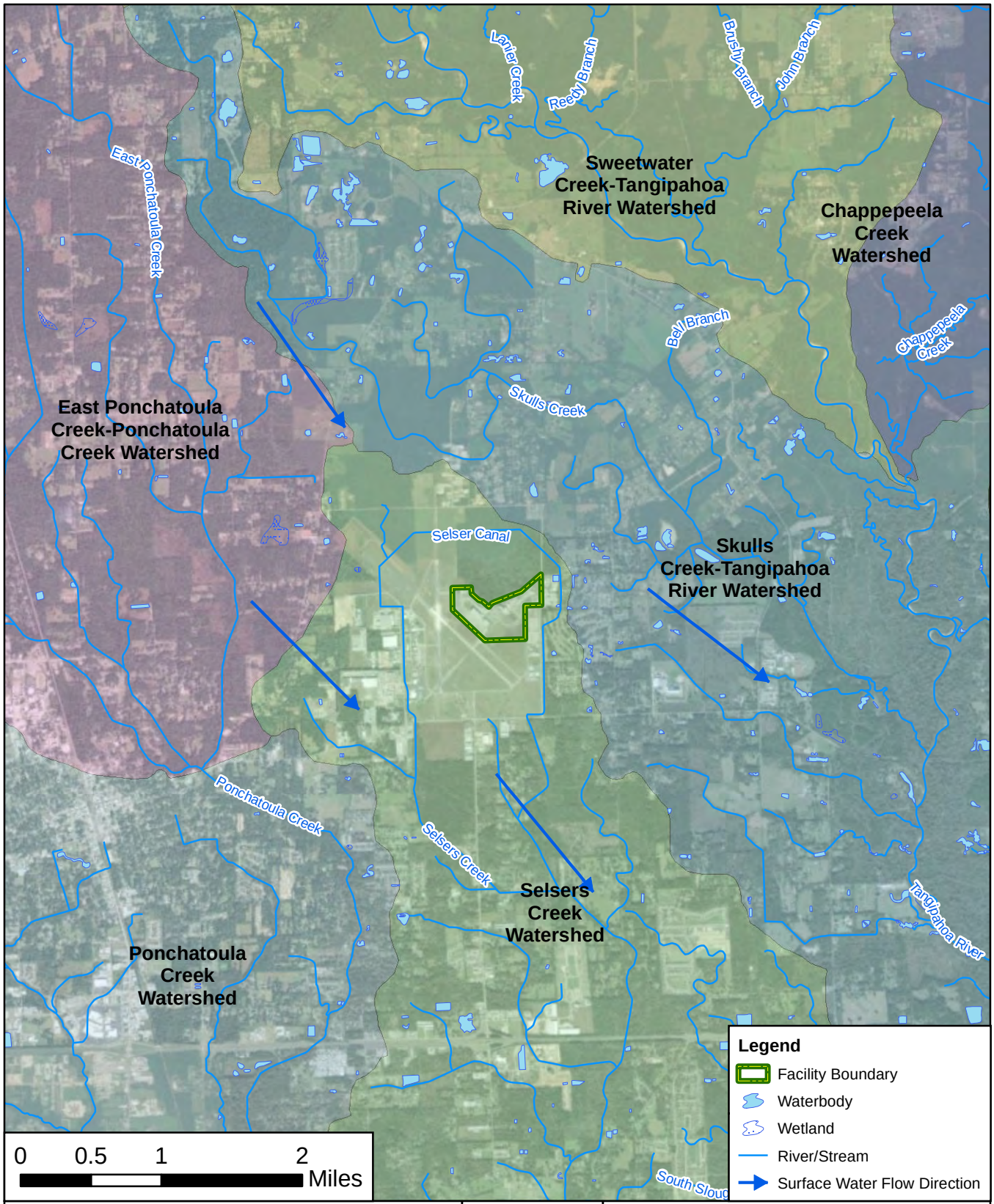

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Surface Water Features

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Figure 1-3

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2. Fire Training Areas

No FTAs were identified at Hammond AASF #1 during the PA. According to interviews with staff at the facility, no fire training that includes suppression has been conducted since base operations began in 2009. Training activities are limited to fuel shut offs and other procedures that do not involve AFFF or other suppression materials. The City of Hammond Fire Chief identified an off-site FTA that is approximately 3.1 miles southwest of the facility. This off-site FTA is discussed in **Section 5.3**.

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

3.1 C12 Hangar

The C12 Hangar houses C12 aircraft maintenance operations. The geographic coordinates of the approximate center of the building are 30°31'31.4"N; 90°24'57.2"W. According to aerial imagery, the C12 Hangar was constructed between 2007 and 2009. According to interviews with site personnel in conjunction with the VSI (**Appendix B**), the hangar is charged with a Chemguard AFFF suppression deluge system with a 441-gallon-capacity tank. The system is manually operated by a hose inside the hangar, and the AFFF storage tank is located in a small utility building outside of the C12 Hangar.

During the site visit it was reported that every two years, a "full flow" test of the system is conducted using a replacement environmentally friendly foam that is not AFFF. Further details regarding this replacement foam were not able to be gathered during the PA. During these tests, the replacement foam is flowed through the system in a contained loop so that no foam is released to drains or the environment. It is unknown whether an initial acceptance test of the suppression system was conducted, which may have left behind residual PFAS.

There have been no reported releases of the AFFF suppression system in the C12 Hangar. Evidence of slight leaking was observed underneath the AFFF tank in the utility room. A drip pan was staged underneath the tank. According to information obtained during the site visit, the leak is intermittent, the AFFF tank has not leaked to the extent of needing to be refilled, and the drip pan has never been full to the point of needing to be emptied. During the VSI, AFFF residue was observed in the drip pans. The utility room has a concrete floor, and no floor drains were observed. Photographs are included in **Appendix C**.

3.2 Main Hangar

The Main Hangar houses helicopter maintenance operations. The geographic coordinates of the approximate center of the building are 30°31'31.4"N; 90°24'57.2"W. According to aerial imagery, the Main Hangar was constructed between 2007 and 2009. According to interviews with site personnel in conjunction with the VSI (**Appendix B**), the hangar is charged with a Buckeye 3% AFFF concentrate suppression deluge system fed by a 999-gallon tank. The tank is located in a small building outside of the Main Hangar.

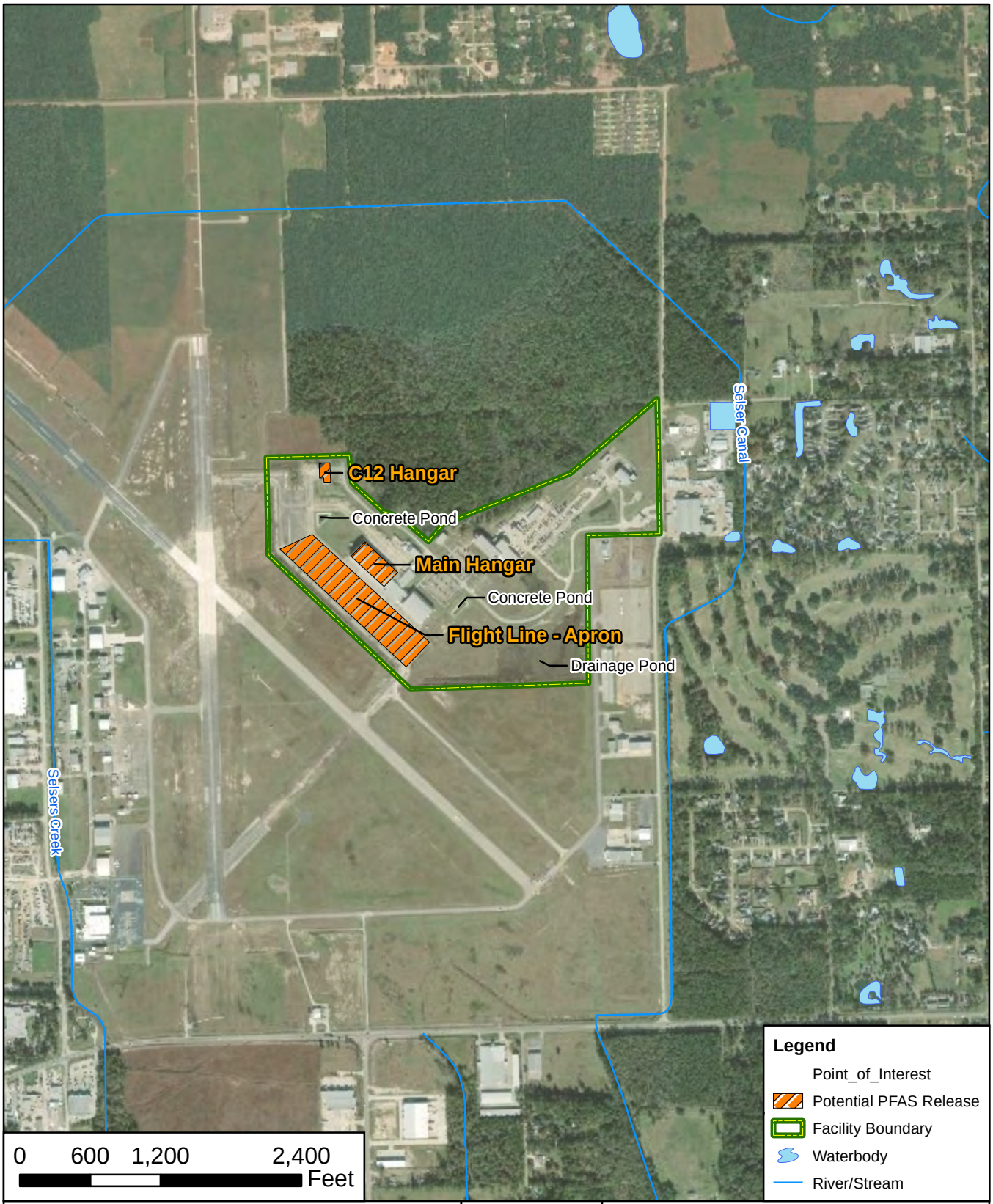
It was reported that every two years a "full flow" test of the system is conducted using a replacement environmentally friendly foam which is not AFFF. Further details regarding this replacement foam were not able to be gathered during the PA. During these tests, the replacement foam is flowed through the system in a contained loop so that no foam is released to drains or the environment. It is unknown whether an initial acceptance test of the suppression system was conducted, which may have left behind residual PFAS.

There have been no reported releases of the AFFF suppression system in the Main Hangar. In 2016 the bladder in the tank ruptured and was replaced. During this replacement, it was reported that a contractor removed and replaced the AFFF inside the tank. There is no documentation for

this activity. Evidence of slight leaking and corrosion/staining was observed underneath the tank on the concrete floor, underneath the feeder pipes to the hangar, and at the joints of the pipes. Drip pans are in place to catch any leaks from the pipes. According to interviews with site personnel, the leaks are intermittent and have never warranted a refill of the AFFF tank. The drip pans have never been full to the point of needing to be emptied. During the VSI. AFFF residue was observed in the drip pans. The utility room has a concrete floor and no floor drains were observed. Photographs are included in **Appendix C**.

3.3 Apron

The Apron is located outside of the Main Hangar and the C12 Hangar. During the VSI, six Tri-Max™ 30 wheel mounted firefighting units were observed on the flight line. A photograph is included in **Appendix C**. According to interviews with site personnel, these units have never been discharged. Training is conducted annually with one designated unit that is only filled with soap and water. Inspections are performed annually on the Tri-Max™ units, during which the AFFF is removed from the units, containerized, and replaced with new product. The old AFFF is turned in to the appropriate state agency.



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Non-Fire Training Areas

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Figure 3-1

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4. Emergency Response Areas

No emergency response areas at the facility were identified during the PA through interviews or document review. All emergency services for the Hammond AASF #1 are provided by the Hammond Fire Department, which also services the co-located ANG Station and the Municipal Airport. One off-facility emergency response area is addressed in **Section 5.2**.

5. Adjacent Sources

Seven potential off-facility sources of PFAS not under control of the LAARNG were identified during the PA. A description of each potential off-facility source is presented below, and locations are shown on **Figure 5-1**.

5.1 Former AASF Clam Shell Hangars

The Former AASF Clam Shell Hangars were temporary structures that were operational from 2006 to 2010, adjacent to the eastern boundary of the current Hammond AASF #1. Four hangars appear on the aerial imagery. According to interviews with site personnel, approximately seven Tri-Max™ 30 units were staged near the Clam Shell Hangars during this time. However, there were no reports of AFFF releases during this time. The City of Hammond Fire Chief reported knowledge of nozzle testing activities using water, not AFFF, at this location. The Former AASF Clam Shell Hangars are considered a potential PFAS release area.

5.2 Aircraft Crash

The City of Hammond Fire Chief reported knowledge of a fatal crash involving a single small aircraft on 14 October 2015, in which an unknown amount of AFFF was used during the emergency response. The crash location was identified to the northwest of the facility at a distance of approximately 0.35 miles (Times-Picayune, 2015). The Aircraft Crash site is considered a potential PFAS release area.

5.3 405 South Oak Street

The City of Hammond Fire Chief, a LAARNG Environmental Management representative, and the LAARNG Southern Region Environmental Coordinator reported occasional off-facility training with AFFF by Hammond Fire Department and LAARNG personnel. The amount of AFFF used and the frequency of these events is unknown. The training location was reported at 405 South Oak Street, approximately 3 miles to the southwest of the facility boundary. 405 South Oak Street is considered a potential PFAS release area.

5.4 Nickel Plating

The City of Hammond Fire Chief reported knowledge of chrome and nickel-plating operations in the local area. During desktop review, a nickel-plating company, Electroless Nickel Plating, was identified to the southwest of the facility at a distance of approximately 5.45 miles. Electroless Nickel Plating is considered a potential PFAS release area.

5.5 Chrome Plating

During desktop review, a chrome-plating company, The Chrome Shop, was identified to the southeast of the facility at a distance of approximately 11.9 miles. The Chrome Shop is considered a potential PFAS release area.

5.6 Hammond Airport US Customs Building

During the interviews conducted for this PA LAARNG Environmental Management personnel reported that the US Customs Building at the Hammond Regional Airport had an AFFF-charged fire suppression system. US Customs personnel were not able to provide further information. The building is located approximately 0.62 miles to the southwest of the facility. No information was

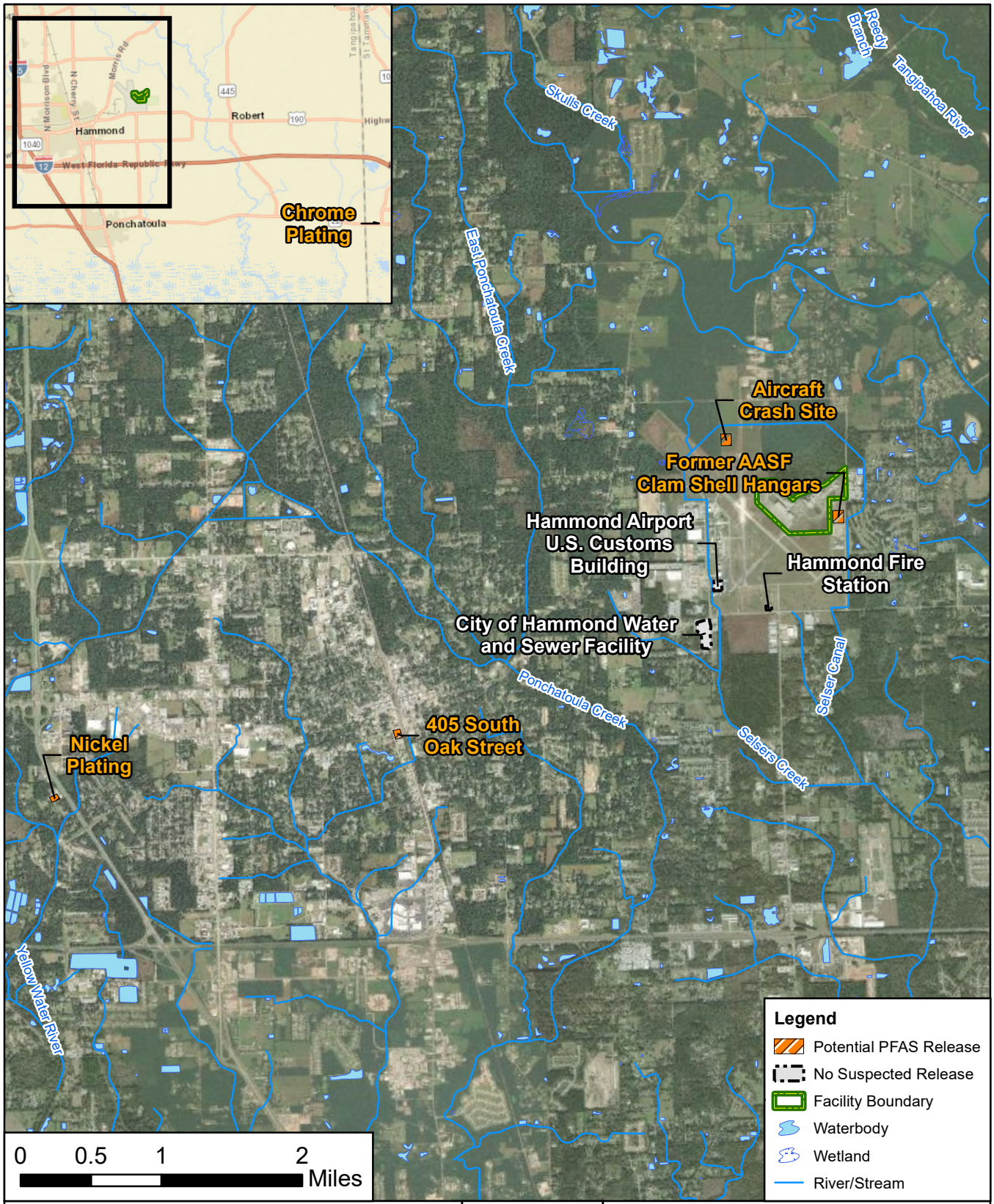
gathered during the PA about potential PFAS presence or use at the Hammond Regional Airport, other than at the US Customs Building. The Hammond Airport US Customs Building is considered an area with no suspected release.

5.7 Hammond Fire Station

The Hammond Fire Station has bulk storage of AFFF and houses firetrucks that hold AFFF. Information on the amount and type of AFFF stored at the station was not obtained during this PA. There were no reported leaks, spills, or releases of AFFF at the Hammond Fire Station. The building is located approximately 0.54 miles to the south of the facility. The Hammond Fire Station is considered an area with no suspected release.

5.8 City of Hammond Water and Sewer

Municipal sewer and wastewater treatment facilities have the potential to receive PFAS from any source within the treatment district. The City of Hammond Water and Sewer maintenance facility is located approximately 0.95-miles to the southwest of the facility, however, no information regarding treatment or discharge of wastewater by the City of Hammond was gathered during this PA. The City of Hammond Water and Sewer facility is considered an area with no suspected release.



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Adjacent Sources

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Figure 5-1

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6. Preliminary Conceptual Site Model

Based on the PA findings, two non-FTAs were identified as AOIs where PFAS may have been incidentally spilled or discharged to the ground surface. As such, these AOIs may be potential PFAS source areas. The AOIs are shown on **Figure 6-1** and summarized below.

The following AOIs were identified as potential PFAS source areas at Hammond AASF #1:

- AOI 1 – C12 Hangar, and
- AOI 2 – Main Hangar and Flight Line-Apron.

The following sections describe the CSM components and the specific preliminary CSMs developed for each AOI. 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 (National Ground Water Association, 2018). Receptors at Hammond AASF #1 include site workers, construction workers, residents, recreational users, and trespassers. The preliminary CSMs for the AOIs indicate which specific receptors could potentially be exposed to PFAS.

PFAS are water soluble and readily migrate from soil to groundwater. PFAS may migrate from the surface soil to the shallow groundwater, which is assumed to be from 5 to 20 ft bgs. Based on the southerly groundwater flow direction a potential exists for impacts to on- and off-facility wells from ARNG activities at these AOIs. Specifically, three industrial wells and one irrigation well are located at the facility; two commercial supply wells and one domestic well are located down to cross-gradient within one mile; and, greater than 15 additional domestic wells are located down to cross-gradient within 1 – 3 miles.

6.1 AOI 1 – C12 Hangar

AOI 1 is the C12 Hangar which houses aircraft maintenance operations. There have been no documented releases of AFFF at the C12 Hangar; however, bulk AFFF has been stored and handled since approximately 2007 to ensure readiness of the deluge fire suppression system in the hangar. Additionally, every two years, a closed loop full flow of the system is conducted using a replacement environmentally friendly foam that is not AFFF. As a result of these management and storage activities, there is the potential for PFAS to have been released to the environment. No remediation activities have occurred at AOI 1. PFAS may have entered trench drains in the hangar which drain to on-facility concrete-lined ponds, and potentially off-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, site workers via ingestion of public water supply, and off-facility users of groundwater for potable water (residents and workers) via ingestion

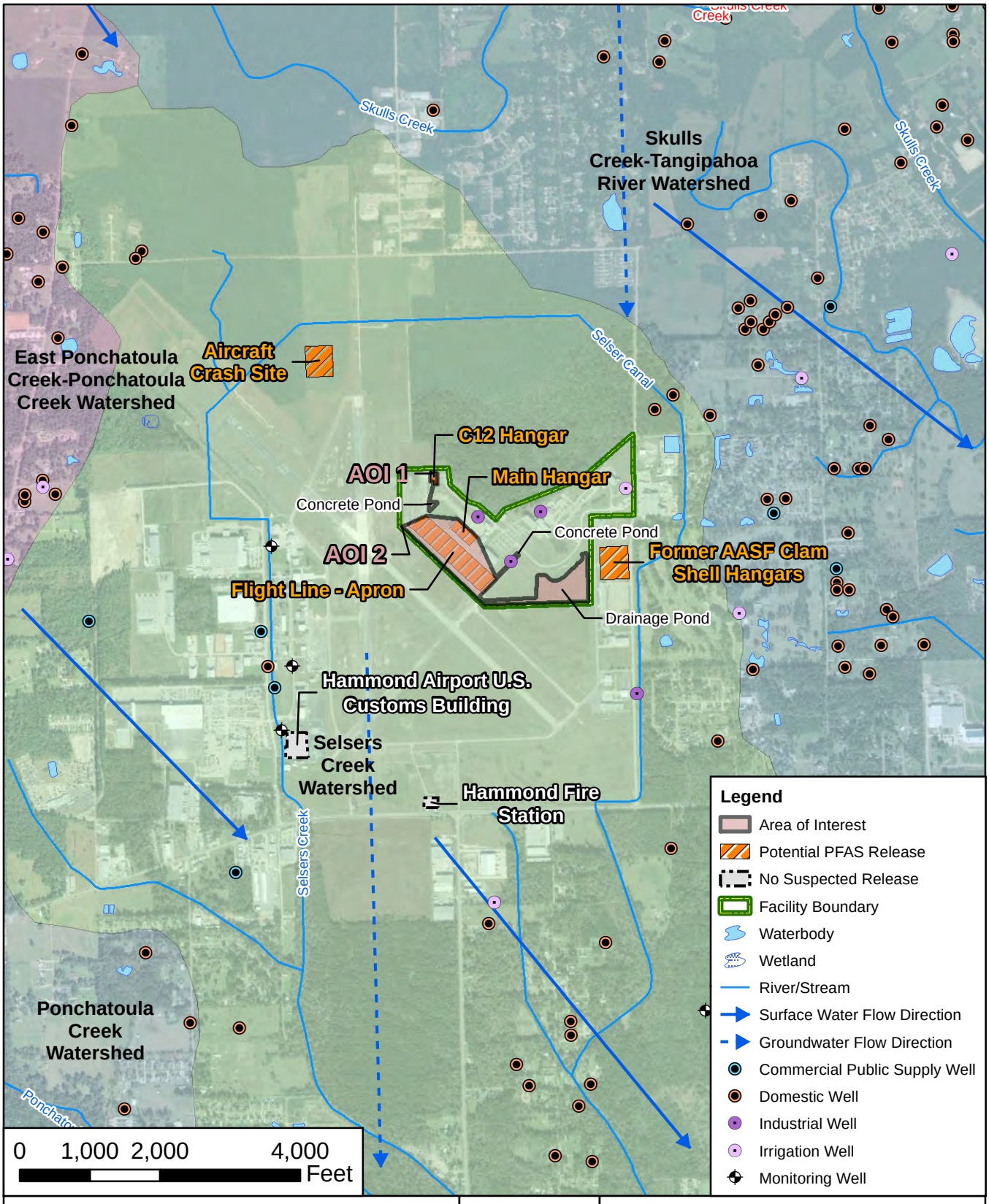
6.2 AOI 2 – Main Hangar and Flight Line-Apron

AOI 2 is the Main Hangar and Flight Line-Apron. There have been no documented releases of AFFF at the Main Hangar and on the Flight Line-Apron; however, bulk AFFF has been stored and handled at the Main Hangar since approximately 2007 to ensure readiness of the deluge fire suppression system, and every two years a closed loop full flow of the system is conducted using a replacement environmentally friendly foam that is not AFFF. Additionally, in 2016 a bladder rupture in the 999-gallon AFFF storage tank occurred. Little information was available regarding the management of AFFF during this event. The VSI also confirmed the presence of six Tri-Max™ 30 units staged on the Apron. As a result of these activities, there is the potential for PFAS to have been released to the environment. No remediation activities have occurred at AOI 2. PFAS may have entered trench drains in the hangar which drain to on-facility concrete-lined ponds, and potentially off-facility. PFAS from the Flight Line-Apron may have entered the stormwater trench running along the southern boundary of the facility which terminates at a drainage pond in the southeast corner of the facility.

The preliminary CSM for AOI 2 is presented on **Figure 6-2.** 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
Surface Water and Sediment	Considered a potentially complete pathway to all receptors via ingestion
Groundwater	Considered a potentially complete pathway to construction workers, site workers via ingestion of public water supply, and off-facility users of groundwater for potable water (residents and workers) via ingestion



CLIENT	ARNG			
NOTES	Preliminary Assessment for PFAS at Hammond AASF, LA			
REVISED	6/12/2020	GIS BY	GC	6/12/2020
SCALE	1:24,000	CHK BY	PD	6/12/2020
Base Map: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS,		PM	RG	6/12/2020

N

Areas of Interest

AECOM
12420 Milestone Center Drive
Germantown, MD 20876

Figure 6-1

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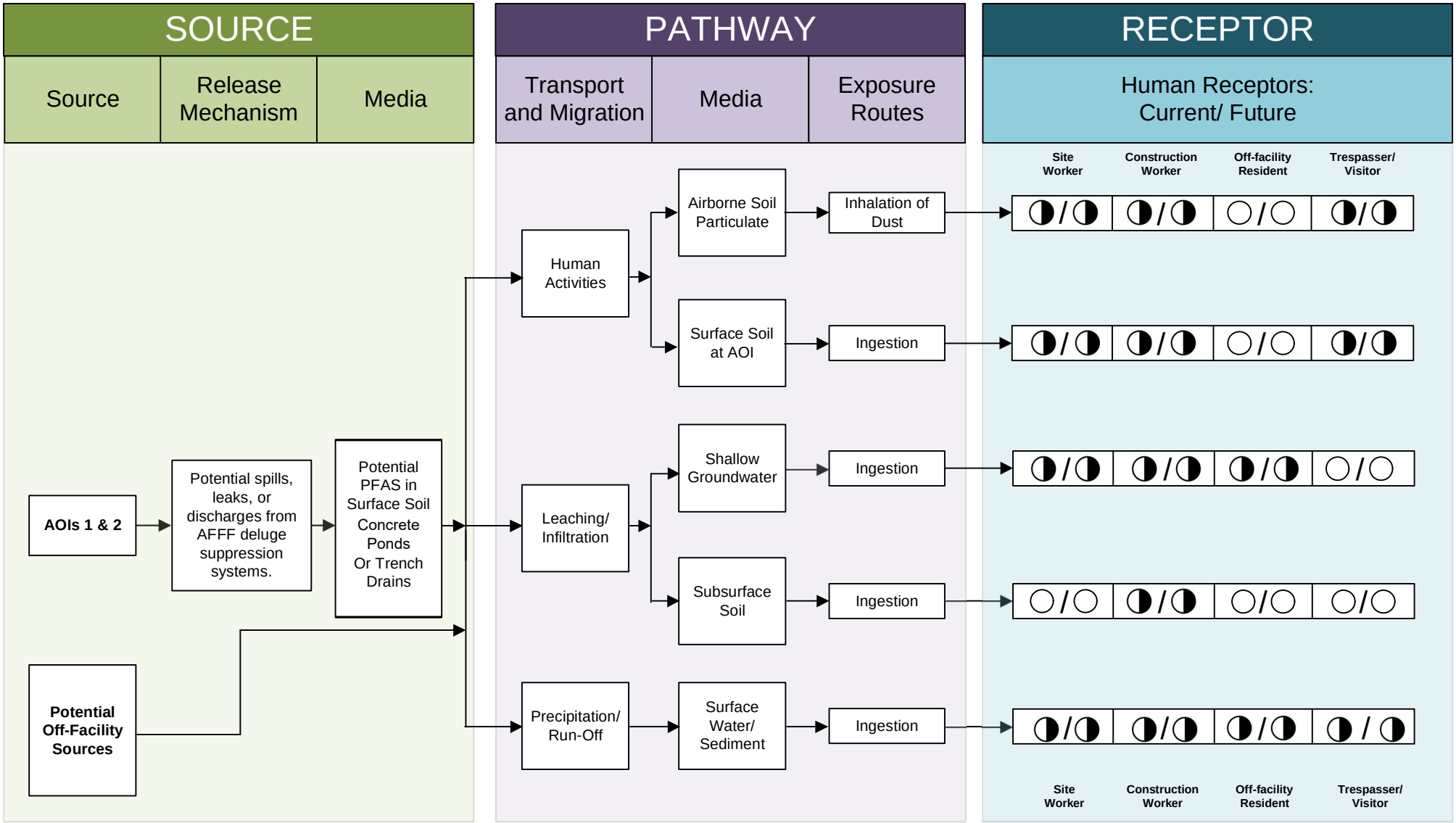


LEGEND

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

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

Figure 6-2
Preliminary Conceptual Site Model, AOIs 1 & 2
Hammond AASF #1

7. Conclusions

This report presents a summary of available information gathered during the PA with respect to the use and storage of AFFF and other PFAS-related activities at Hammond AASF #1. The PA findings are based on the information presented in **Appendix A** and **Appendix B**.

7.1 Findings

Two AOIs related to potential PFAS releases were identified at Hammond AASF #1 based on PA data. These AOIs are summarized below and shown on **Figure 7-1**:

Table 7-1: Hammond AASF #1 PA AOIs

Area of Interest	Name	Used by	Potential Release Date
AOI 1	C12 Hangar	LAARNG	2007 – present
AOI 2	Main Hangar and Flight-Line Apron	LAARNG	2007 – present

Based on the potential for PFAS releases at these AOIs, there is potential for exposure to PFAS contamination in media at or near the facility. The preliminary CSMs for Hammond AASF #1 are 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 with respect to the use of PFAS in training, firefighting, other non-traditional activities, or 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 Hammond AASF #1 began operations (2009 – present), and a reliance on personal recollection. There is also a possibility the PA has missed a source of PFAS, as the science of how PFAS may enter the environment continually evolves.

In order to minimize the level of uncertainty, readily available data regarding the use and storage of PFAS were reviewed, current personnel were interviewed, multiple persons were interviewed for the same potential source area, and potential source areas were visually inspected.

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

Table 7-2 Summary of Uncertainty

Area of Interest	Source of Uncertainty
AOI 2 - Main Hangar	There is little information or documentation available about the bladder rupture and the subsequent foam replacement procedure.

Area of Interest	Source of Uncertainty
AOI 2 - Apron	There is little information available on the procedure for changing out AFFF in the Tri-Max™ units.
AOIs 1 and 2 – C12 Hangar and Main Hangar	Details regarding the type of foam used during the "full flow" tests of the suppression systems are unknown.
AOIs 1 and 2 – C12 Hangar and Main Hangar	It is unknown whether an initial acceptance test was conducted following the installation of the suppression systems.

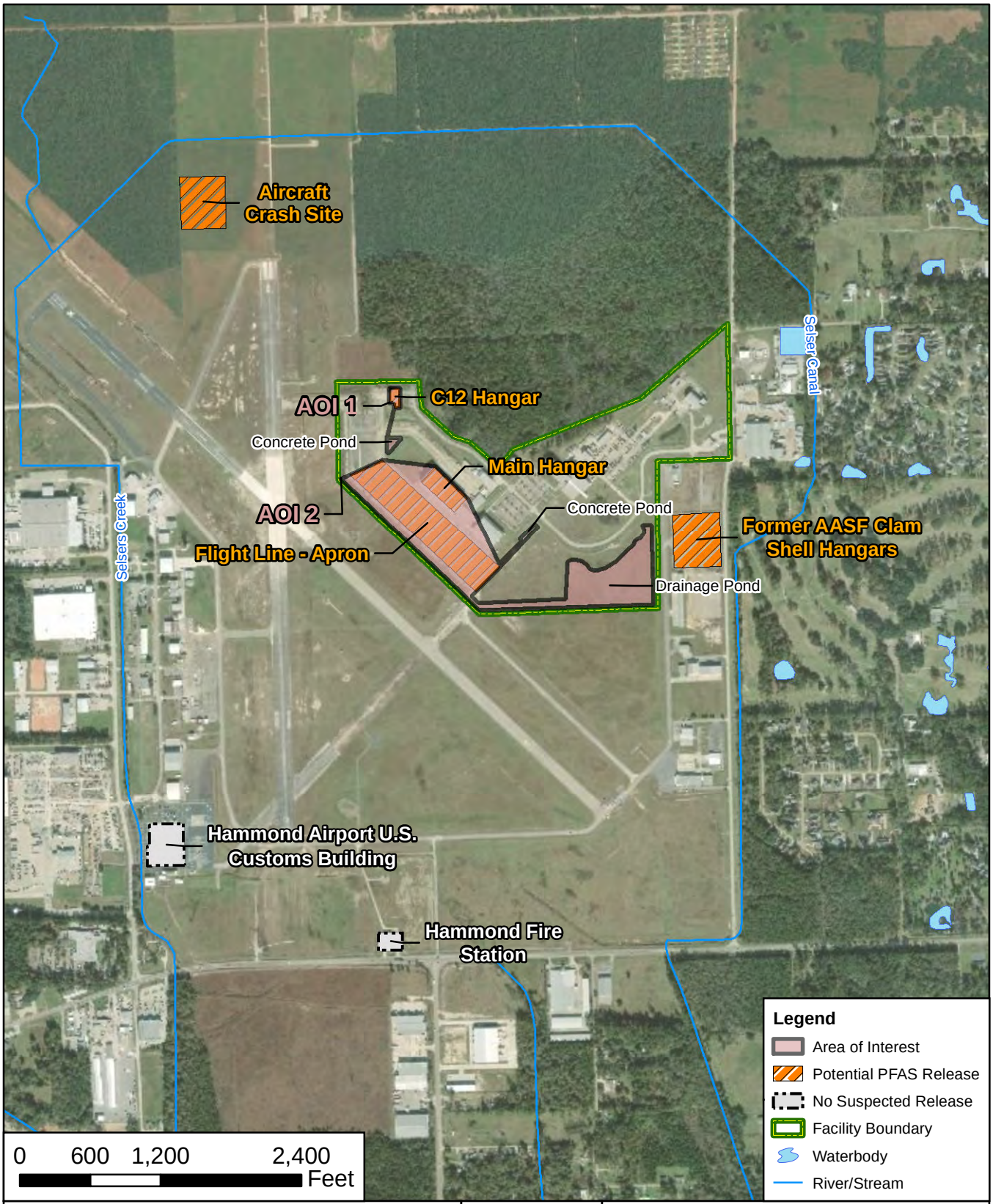
7.3 Potential Future Actions

Interviews and records (covering 2006 – present) indicate that current or former ARNG activities may have resulted in potential PFAS releases at the AOIs identified during the PA. 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 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.

Table 7-3: PA Findings Summary

Area of Interest	AOI Location	Rationale	Potential Future Action
AOI 1 – C12 Hangar	30°31'31.4"N; 90°24'57.2"W	AFFF storage and handling from 2007 – present.	Proceed to an SI, focus on soil, groundwater, surface water, and sediment.
AOI 2 – Main Hangar and Flight Line-Apron	30°31'31.4"N; 90°24'57.2"W	AFFF storage and handling from 2007 – present, and 2016 bladder rupture in AFFF tank.	Proceed to an SI, focus on soil, groundwater, surface water, and sediment.

ARNG evaluates the need for an SI at Hammond AASF #1 based on the potential receptors, the potential migration of PFAS contamination off the facility, and the availability of resources.



CLIENT	ARNG			
NOTES	Preliminary Assessment for PFAS at Hammond AASF, LA			
REVISED	6/12/2020	GIS BY	GC	6/12/2020
SCALE	1:14,400	CHK BY	PD	6/12/2020
Base Map: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS,		PM	RG	6/12/2020

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 the Hammond AASF #1 include:

Environmental Data Resources, Inc.™ Report

- 2019 Hammond AASF #1 EDR™ Report

Appendix B
Preliminary Assessment Documentation

Appendix B.1
Interview Records

PA Interview Questionnaire - Other

Facility: Hammond AASF
Interviewer: [redacted]
Date/Time: 3/12/19

Interviewee: Facility + Aircraft Maintenance Staff **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:

ISG [redacted] - Aircraft Maintenance Supervisor - 33 yrs
CSM [redacted] - Aircraft Maintenance Support - 30 years
SSG [redacted] - Facility Bldg. Manager - 4 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?

(See attached note sheets)	**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

(1)

Hammond 08:15 - 3/12/18

2009 ops begin. wetlands before that

Suppression in meeting hangar and C12 hangar
↳ not sure what type AFFF is in it

Clamshell hangars used to be here - no suppression
↳ Trimaxes were there @ least [redacted]
7 of them

- There was never a full scale suppression test at the hangars
- Full flow every 2 years = not using AFFF
  ↳ they use substitute "environmentally friendly material" what is that called... ? It is contained during these tests. No releases to environment.
- 3 years ago bladder in the suppression system ruptured. AFFF was loaded on trailer of contractor and taken off-site.
- System leaks?
  Constant leaks / dripping - they collect it with drip pans. They just let it dry out and haven't done anything with it yet.
  The drips are so low in volume that they don't have to refill tanks. It has never gotten to the soil.
- Trimaxes - 30-gallons
  - Annual training (one unit only) filled with water and soap only. No AFFF.

(2)

- Annual inspections on the trimaxes.
- Sgt. Maj. [redacted] replaces the AFFF in the trimaxes and it will be turned into the state.
  - currently in containers with secondary containment
  - probably change these routinely, but not sure.
- Never shot AFFF from the trimaxes

- Hangars = trench drains on each side of the hangars. Go to retention ponds which are concrete lined. There is a valve to drain the ponds which happens "sometimes"
  - used to be rubber lined ponds - concrete over top

(*)

- There are some fire extinguishers of powder in hangars

- No AFFF discharged @ clamshell area
- No AFFF stored on-site. Just order it when they change it out.
- No fuel spills

PA Interview Questionnaire - Environmental Manager

Facility: Hammond AASF
Interviewer: [redacted]
Date/Time: 3/12/19

See Sign-in sheet

Interviewee: [redacted] and [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.

[redacted] LA ANG Environmental Management Office : Southern Region Env. Coordinator

2. Where can I find previous facility ownership information?

Operations began in 2009.

Hammond Municipal Airport owns the land (pre-visit questionnaire)

3. What can you tell us about the history of PFAS including aqueous film forming foam (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
Fire Training Areas
Firefighting (Active Fire)
Crash
Fire Suppression Systems (Hangers/Dining Facilities) → Main Hangar, C12 Hangar
Fire Protection at Fueling Stations
Non-Technical/Recreational/ Pest Management — Trimaxes on flight line
Metals Plating Facility
Waterproofing Uniforms (Laundry Facilities)
Other

4. Fill out CSM Information worksheet with the Environmental Manager.

5. 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 the AFFF/suppression system? Do you have "As Built" drawings for the buildings?

Main Hangar

C12 Hangar

PA Interview Questionnaire - Environmental Manager

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

6. Are fire suppression systems currently charged with AFFF or have they been retrofitted for use of high expansion foam? If retrofitted, when was that done?

Yes, currently.

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

N/A. Not used, so don't need to regularly procure.

8. 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)?

[redacted] Unknown.

9. 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?

Not stored on-site.

10. 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?

Now on the base.

PA Interview Questionnaire - Environmental Manager

Facility: Hammond AASF
Interviewer: [redacted]
Date/Time: 3/12/19

11. When a release of AFFF occurs during a fire training exercise, now and in the past, how is 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?

N/A

12. Can you recall specific times when city, county, and/or state personnel came on-post for training? If so, please state which state/county agency or military entity? Do you have any records, including photographs to share with us?

No.

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

Occasionally. 405 South Oak St.

14. Did individual units come 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?

N/A

15. 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?

Unsure.

PA Interview Questionnaire - Environmental Manager

Facility: Hammond AASF
Interviewer: [redacted]
Date/Time: 3/12/19

16. 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.

17. Was AFFF used for forest fires or fire management on-post/off-post? If so, please describe what happened and who was involved?

No.

18. Are there mutual aid/use agreements between county, city, and local fire department? Please list, even if informal. If formalized, may we have a copy of the agreement?

N/A

19. 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 treatment plants, and AFFF ponds)?

No.

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

No.

PA Interview Questionnaire - Environmental Manager

Facility: Hammond AASF
Interviewer: [redacted]
Date/Time: 3/12/19

21. Are there past studies you are aware of with environmental information on plants/animals/ groundwater/soil types, etc., such as Integrated Cultural Resources Management Plans or Integrated Natural Resources Management Plans?

Spill Plan

22. What other records might be helpful to us (environmental compliance, investigation records, admin record) and where can we find them?

None.

23. Do you have or did you have a chrome plating shop on base? What were/are the years of operation of that chrome plating shop?

No.

24. Do you know whether the shop has/had a foam blanket mist suppression system or used a fume hood for emissions control? If foam blanket mist suppression was used, where was the foam stored, mixed, applied, etc.?

Unknown.

25. 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?

Removed by contractor.

No documentation.

PA Interview Questionnaire - Environmental Manager

Facility: Hammond AASF
Interviewer: [redacted]
Date/Time: 3/12/19

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

[redacted] set up all additional interviews.

PA Interview Questionnaire – Fire Station

Facility: Hammond AASF
Interviewer: [redacted]
Date/Time: 3/12/19

sign-in sheet

Interviewee: [redacted] **Title:** Hammond Fire Cheif **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.

Hammond Fire Cheif of Training + Safety. 19 years.

Hammond Fire covers ARNG + ANG facilities here.

Note: ~~Fire~~ Fire fighting facilities are not on Hammond AASF (ARNG) property

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 uses known.

AFFF is at the site, but no releases known.

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

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?

Main Hangar and C12 Hangar.

Systems never discharged.

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

Currently charged.

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

N/A.

PA Interview Questionnaire – Fire Station

Facility: Hammond AASF
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)?

Unknown.

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?

No bulk storage.

Charged in Suppression systems and trimaxes.

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?

N/A.

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

N/A

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: Hammond AASF
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?

None.

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?

N/A

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?

N/A

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.

PA Interview Questionnaire – Fire Station

Facility: Hammond AASF
Interviewer: [redacted]
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.

off-post @ 405 S. Oak Street.

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 reports. See ANG PFAS reports for info.

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: Hammond AASF
Interviewer: [redacted]
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?

Contractor removes.

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

(1)

Hammond 08:15 - 3/12/19

2009 ops begin. wetlands before that.
Suppression in meeting hangar and C12 hangar
↳ not sure what type AFFF is in it
Clamshell hangars used to be here - no suppression
↳ Trimaxes were there @ last [redacted]
7 of them

- There was never a full scale suppression test at the hangars
- Full flow every 2 years = not using AFFF
  ↳ they use substitute "environmentally friendly material" what is that called... ? It is contained during these tests. No releases to environment.
- 3 years ago bladder in the suppression system ruptured. AFFF was loaded on trailer of contractor and taken off-site.
- System leaks?
  Constant leaks / dripping - they collect it with drip pans. They just let it dry out and haven't done anything with it yet.
  The drips are so low in volume that they don't have to refill tanks. It has never gotten to the soil.
- Trimaxes - 30-gallons
  - Annual training (one unit only) filled with water and soap only. No AFFF.

(2)

- Annual inspections on the trimaxes.
- Sgt. Maj. [redacted] replaces the AFFF in the trimaxes and it will be turned into the State.
  - currently in containers with secondary containment
  - probably change these routinely, but not sure.
- Never shot AFFF from the trimaxes

- Hangars = trench drains on each side of the hangars. Go to retention ponds which are concrete lined. There is a valve to drain the ponds which happens "sometimes"
  - used to be rubber lined ponds - concrete over top
- There are some fire extinguishers of powder in hangars

- No AFFF discharged @ clamshell area
- No AFFF stored on-site. Just order it when they change it out.
- No fuel spills

Fire Dept.

- Training activities done but not involving any suppression - just fuel shut-offs, etc..
- Fire Dept. covers ARNG, ANG, & airport

- Semi-annual inspections of lines and valves
- NFPA annual inspections also by contractors

Fire Chief

- no other suppression systems
- Two trucks w/ AFFF in tanks
- On airfield there was one crash w/ foam used
  ↳ 10/14/15 (ANG property)
- No off-site responses of AFFF off-base except interstate crash 10-15 years ago
- They train off-base @ 405 S. Oak Street
- Customs has AFFF suppression - but they declined to be interviewed
- October 2018 - water training
- They do nozzle test - and chief thinks they are not testing with foam, but maybe in the area where clamshells used to be if they ever did
- Trucks tested off-site.

(4)

Industry in this area?

- Shell facility in Robert does fire training (Fire chief)
- Coffee can manufacturing nearby
- Chrome + Nickel plating on the other side of town.

- They have an irrigation well (or three?)

- [redacted] has an ~~water~~ env. report from 2005 - 2006
- There is a spill plan (showing runoff)
- They will email to us.
- Hammond has municipal wells about 2 miles to the west.
- Municipal Water

(5)

Photos

9:13 - 9:15 Suppression tank

Wash rack inside main hangar goes to oil-water separator

9:22 Trimax on flight line.

9:35 Chemical storage behind main hangar
AFFF used to stored here. Gone now
Suppression system has ABC in this building

9:42 retention pond

9:45 C12 hangar stuff
Foam tank. No bladder issue

10:00 Main hangar detention pond

10:13 Kitchen suppression system. K-Class. Non-AFFF

10:35 Old area - clamshell area

Preliminary Assessment Sign-In Sheet

Hammond AASF

Rank	Name	Position	Years at the Facility	Phone Number/Email	May AECOM use your name in the PA Report?
15G	[redacted]	Aircraft Maint Supervisor	33	[redacted]	Yes
CSM		Aircraft Maint Supv	30		Yes
		Facility Maint			yes
55G		Facility Bldg Mngr	4		Yes
		LA/NG ENV			Yes
		Hammond Fire Chief of Training/Safety	19		
		Southern Regional ENVIR Coordinator			Yes

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: 3/12/19

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

Source/Release Information

Site Name / Area Name / Unique ID: (Hammond AASF) - C12 Hangar

Site / Area Acreage:

Historic Site Use (Brief Description): C12 Hangar

Current Site Use (Brief Description): C12 Hangar

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):

No releases identified during PA.

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:

AASF

Visual Survey Inspection Log

Other Significant Site Features:

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

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

AFFF loaded. Never discharged.

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

Minor leaks into drip pans. See notes for Main Hangar.

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

Never.

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

Drains to retention ponds.

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.

ANG

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

Visual Survey Inspection Log

Significant Topographical Features: N/A - Building.

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:

Visual Site Inspection Checklist

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

Recorded by: [redacted]

ARNG Contact: [redacted]

Date and Time: 3/12/19

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

Source/Release Information

Site Name / Area Name / Unique ID: (Hammond AASF) - Main Hangar

Site / Area Acreage:

Historic Site Use (Brief Description): Helicopter hangar

Current Site Use (Brief Description): Helicopter hangar

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):

No releases identified during PA.

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:

AASF

Visual Survey Inspection Log

Other Significant Site Features:

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

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

AFFF loaded. Never discharged.

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

Minor leaks into drip pans. Not enough to warrant putting more AFFF into suppression system.

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

Never - except bladder rupture in system 3 years ago. Contractor removed AFFF.

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

Drains go to OWS or retention ponds.

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.

ANG

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

Visual Survey Inspection Log

Significant Topographical Features: N/A - Hangar Building

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: Hammond AASF

Why has this location been identified as a site?

AFFF is charged in two fire suppression systems on site, and there are trimaxes on site.

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

Fire training in Robert, LA about 2.5 miles to east, coffee can manufacturing nearby, chrome and nickel plating on the other side of town. *Air National Guard facility is adjacent to Hammond AASF.*

Training Events

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

If so, how often? N/A

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

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

Surface water flows along the southern boundary of the facility and discharges to the east.

Surface Water:

Surface water flow direction? East

Average rainfall? 62.72 inches per year

Any flooding during rainy season? Yes

Direct or indirect pathway to ditches? Yes

Direct or indirect pathway to larger bodies of water?

Does surface water pond any place on site? No natural ponds

Any impoundment areas or retention ponds? Two retention ponds marked on the map

Any NPDES location points near the site? Unknown

How does surface water drain on and around the flight line? Ditch on the edge of the flight line. Marked on map.

Preliminary Assessment – Conceptual Site Model Information

Groundwater:

Groundwater flow direction? Unknown

Depth to groundwater? 0 – 10 feet

Uses (agricultural, drinking water, irrigation)? Irrigation

Any groundwater treatment systems? No

Any groundwater monitoring well locations near the site? Yes

Is groundwater used for drinking water? No

Are there drinking water supply wells on installation? No

Do they serve off-post populations? N/A

Are there off-post drinking water wells downgradient?
Domestic water wells on all sides of the site.

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?

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?
N/A

2. Are nozzles tested? How often are nozzles tested? Where are nozzles tested? Are nozzles cleaned after use? Where does the rinse water flow after cleaning nozzles?
Nozzles tested only with water, as reported by fire chief.

3. Other?

Preliminary Assessment – Conceptual Site Model Information

Identify Potential Receptors:

Site Worker No

Construction Worker No

Recreational User No

Residential No

Child No

Ecological No

Note what is located near by the site (e.g. daycare, schools, hospitals, churches, agricultural, livestock)?
Homes, businesses, a University to the west

Documentation

Ask for Engineering drawings (if applicable).

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

Appendix C
Photographic Log

APPENDIX C – Photographic Log

Army National Guard, Preliminary Assessment for PFAS	Hammond AASF	Hammond, Louisiana

Photograph No. 1

Description:

Fire Suppression System AFFF tank, Main Hangar.

Date taken: 12 March 2019

Photograph No. 2

Description:

Drip pans for AFFF drips from Fire Suppression System, Main Hangar.

Date taken: 12 March 2019

APPENDIX C – Photographic Log

Army National Guard, Preliminary Assessment for PFAS	Hammond AASF	Hammond, Louisiana

Photograph No. 3

Description:

Fire Suppression System specifications, Main Hanger.

Date taken: 12 March 2019

Photograph No. 4

Description:

Corrosion on pipes and floor, Fire Suppression System tank store room, Main Hangar.

Date taken: 12 March 2019

APPENDIX C – Photographic Log

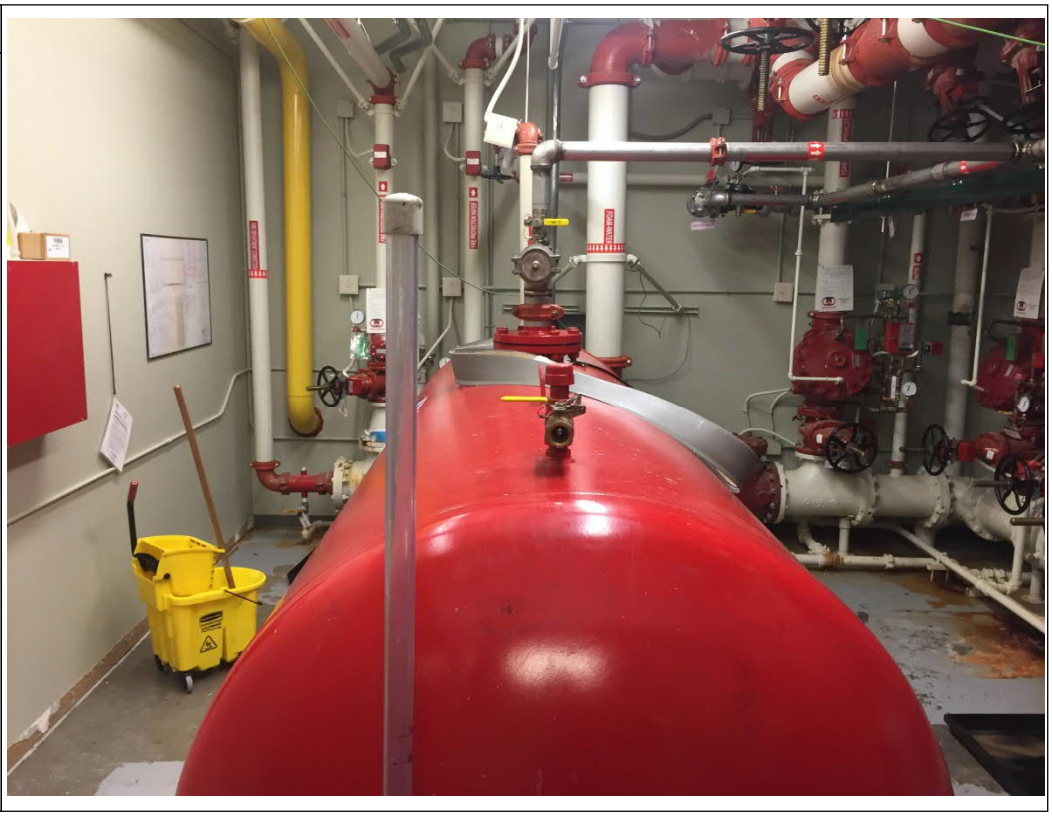
Army National Guard, Preliminary Assessment for PFAS	Hammond AASF	Hammond, Louisiana

Photograph No. 5

Description:

Fire Suppression System tank store room, Main Hangar.

Date taken: 12 March 2019



Photograph No. 6

Description:

Trimax unit on Main Hangar flight line.

Date taken: 12 March 2019

APPENDIX C – Photographic Log

Army National Guard, Preliminary Assessment for PFAS	Hammond AASF	Hammond, Louisiana

Photograph No. 7

Description:

Chemical storage trailer behind Main Hangar with secondary containment system and ABC suppression system. Formerly used for AFFF storage.

Date taken: 12 March 2019

Photograph No. 8

Description:

Fire Suppression system for the chemical storage building.

Date taken: 12 March 2019

APPENDIX C – Photographic Log

Army National Guard, Preliminary Assessment for PFAS	Hammond AASF	Hammond, Louisiana

Photograph No. 9

Description:

Foam Suppression System, C12 Hangar (hose operated, not automatic).

Date taken: 12 March 2019

Photograph No. 10

Description:

Fire Suppression System, C12 Hangar.

Date taken: 12 March 2019

APPENDIX C – Photographic Log

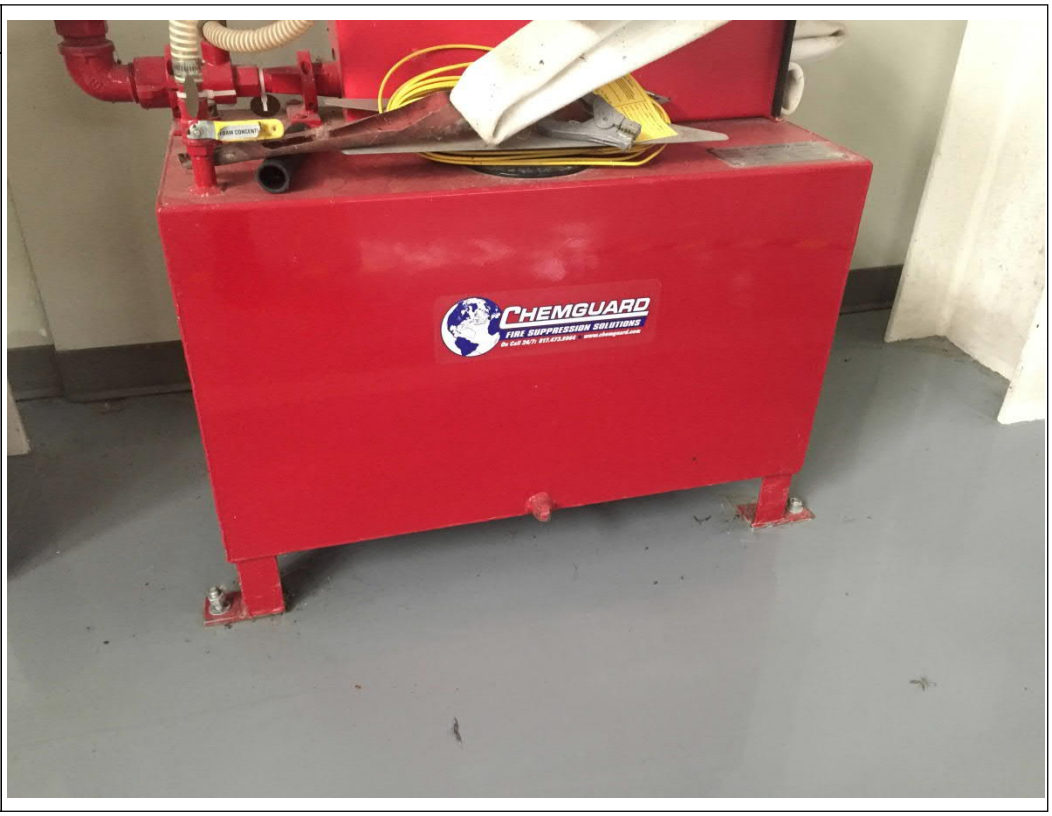
Army National Guard, Preliminary Assessment for PFAS	Hammond AASF	Hammond, Louisiana

Photograph No. 11

Description:

Foam Suppression System, C12 Hangar (hose operated, not automatic).

Date taken: 12 March 2019



Photograph No. 12

Description:

Fire Suppression System, C12 Hangar.

Date taken: 12 March 2019

APPENDIX C – Photographic Log

Army National Guard, Preliminary Assessment for PFAS	Hammond AASF	Hammond, Louisiana

Photograph No. 13

Description:

Drip pan underneath Fire Suppression System AFFF tank, C12 Hangar.

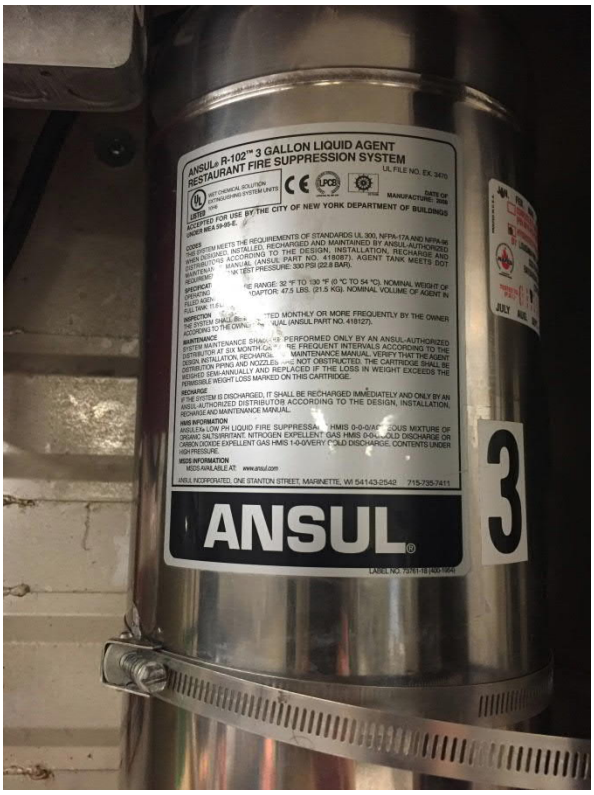
Date taken: 12 March 2019

Photograph No. 14

Description:

Mess Hall Fire Suppression System. K-class fire extinguisher (restaurant/kitchen use).

Date taken: 12 March 2019



APPENDIX C – Photographic Log

Army National Guard, Preliminary Assessment for PFAS	Hammond AASF	Hammond, Louisiana

Photograph No. 15

Description:

Location of former AASF. Formerly contained temporary "Clam Shell" hangars. No Fire Suppression Systems present.

Date taken: 12 March 2019

Photograph No. 16

Description:

Location of former AASF. Formerly contained temporary "Clam Shell" hangars. No Fire Suppression Systems present.

Date taken: 12 March 2019