FINAL
Preliminary Assessment Report
Kankakee Army Aviation Support Facility #2
Kankakee, Illinois

Perfluorooctane-Sulfonic Acid (PFOS) and Perfluorooctanoic Acid (PFOA) Impacted Sites
ARNG Installations, Nationwide

February 2021

Prepared for:

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

UNCLASSIFIED

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Acronyms and Abbreviations

°F	degrees Fahrenheit
AASF	Army Aviation Support Facility
AECOM	AECOM Technical Services, Inc.
AFFF	aqueous film forming foam
AOI	area of interest
ARNG	Army National Guard
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
EDR™	Environmental Data Resources, Inc.
FAA	Federal Aviation Administration
FTA	fire training area
HEF	high expansion foam
ILARNG	Illinois Army National Guard
PA	Preliminary Assessment
PFAS	per- and poly-fluoroalkyl substances
PFOA	perfluorooctanoic acid
PFOS	perfluorooctanesulfonic acid
SI	Site inspection
UCMR3	Unregulated Contaminant Rule 3
US	United States
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
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 Kankakee Army Aviation Support Facility #2 (AASF) (also referred to as the "facility") in Kankakee, Illinois, to assess potential PFAS release areas and exposure pathways to receptors. The AASF is constructed on a parcel of land owned by the Kankakee Valley Airport Authority and leased to the State of Illinois, Department of Military Affairs for the use by the Illinois ARNG (ILARNG) for the term that began in 2009 and ends in 2059.

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 6 November 2019 and completed visual site inspections at locations where PFAS-containing materials were suspected of being stored, used, or disposed; and
- Interviewed current ILARNG personnel, ILARNG environmental managers, and operations staff.

No Areas of Interest related to potential PFAS releases were identified at the AASF during the PA. The summary of PA findings is shown on **Figure ES-1**.

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

Based on the documented absence of the use/release of PFAS-containing materials at the AASF, evidence does not support current or former ILARNG activities having contributed to PFAS contamination in soil, groundwater, surface water, or sediment at the AASF or adjacent area. Therefore, the AASF will not move forward in the Comprehensive Environmental Response, Compensation, and Liability Act process.

CLIENT	ARNG			
NOTES	Preliminary Assessment for PFAS at Kankakee AASF, IL			
REVISED	1/11/2021	GIS BY	MS	1/11/2021
SCALE	1:9,600	CHK BY	JW	1/11/2021
Base Map: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS,		PM	RG	1/11/2021

Summary of Findings

AECOM
12420 Milestone Center Drive
Germantown, MD 20876

Figure ES-1

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1. Introduction

1.1 Authority and Purpose

The Army National Guard (ARNG) G9 is the lead agency in performing Preliminary Assessments (PAs) and Site Inspections (SIs) for Perfluorooctanesulfonic acid (PFOS) and Perfluorooctanoic acid (PFOA) at Impacted Sites at ARNG Facilities Nationwide. This work is supported by the United States (US) Army Corps of Engineers (USACE) Baltimore District and their contractor AECOM Technical Services, Inc. (AECOM) under Contract Number W912DR-12-D-0014, Task Order W912DR17F0192, issued 11 August 2017.

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

PFAS are classified as emerging environmental contaminants that are garnering increasing regulatory interest due to their potential risks to human health and the environment. PFAS formulations contain highly diverse mixtures of compounds. Thus, the fate of these 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 Drinking Water Health Advisories for PFOA and PFOS in May 2016, but there are currently no promulgated national standards regulating PFAS in drinking water. In the absence of federal maximum contaminant levels, some states have adopted their own drinking water standards for PFAS.

This report presents findings of a PA for PFAS-containing materials at Kankakee Army Aviation Support Facility #2 (AASF) (also referred to as the “facility”) in Kankakee, Illinois 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 US Department of the Army requirements and guidance.

This PA documents the known locations where PFAS may have been released into the environment at the AASF. The term PFAS will be used throughout this report to encompass all PFAS chemicals being evaluated, including PFOS and PFOA, which are key components of AFFF.

1.2 Preliminary Assessment Methods

The performance of this PA included the following tasks:

- Reviewed available administrative record documents and Environmental Data Resources, Inc. (EDR)™ report packages to obtain information relevant to potential PFAS releases, such as: drinking water well locations, historical aerial photographs, Sanborn maps, and environmental compliance actions in the area surrounding the facility;
- Conducted a site visit on 6 November 2019 and completed visual site inspections (VSIs) at locations where PFAS-containing materials were suspected of being stored, used, or disposed; and
- Interviewed current Illinois ARNG (ILARNG) personnel, ILARNG environmental managers, and operations staff.

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 Fire Training Areas (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

The AASF is in Kankakee County in northeast Illinois (**Figure 1-1**). The cities of Bradley, Kankakee, Otto and Aroma Park are all within 10 miles of the AASF. The AASF is adjacent to the Greater Kankakee Airport. The AASF is accessible from the west via S 500E Road.

At present, the AASF has a total land area of approximately 30 acres. The AASF is constructed on a parcel of land owned by the Kankakee Valley Airport Authority and leased to the State of Illinois, Department of Military Affairs for the use by the ILARNG for the term that began in 2009 and ends in 2059. The AASF provides aviation intermediate-level and aviation unit-level aircraft maintenance support.

1.5 Facility Environmental Setting

Kankakee County is in northeast Illinois located in the Central Lowlands physiographic province. This province is characterized by a generally high altitude surrounded by lowlands. The physiographic province is split into two physiographic sections, the Till Plains Section and the Great Lakes Section. Within the Till Plains Section is the Kankakee Till Plain, where the AASF is located. The AASF lays in an outwash plain formed by glacial floods with variable gradients, volumes and velocities. Surficial deposits in the area are predominantly made of outwash sand and gravel from the Henry/Atherton Formation but can include different types of fill material and alluvium. It is common to find bedrock exposed along the Kankakee River. Surficial deposits are

less than 200 feet thick, however deposits can be found in the Kankakee River lowland at less than 50 feet (USGS, 1999).

1.5.1 Geology

The AASF is in northeast Illinois in an area that was a part of the Wisconsin glaciation period. This area is characterized by unconsolidated glacial drift deposits with various thicknesses overlying dolomitic bedrock. The Henry Formation, which is a very predominate formation in the area, is approximately 5 to 25 feet thick with sandy, gravelly silt with various beds of sand and gravel. The Henry Formation most commonly has thin sheet like deposits wedging out in the up-ice direction beneath diamicton formations. As the sheets face away from the moraine areas in the down-ice direction they can be found in thinner amounts. In many major areas of drainage leading away from moraines and around lakes there can be ribbonlike deposits found. In areas adjacent to major valleys mound like and sheet like deposits can also be found (Hansel and Johnson, 1996). The other formation in the area is known as the Wedron Formation, which can be found in the uplands. The Wedron Formation has multiple diamiction units containing lenses of clay, sand, gravel, silt, humic material and wood. It intertwines with the Mason Group such as Peoria Silt and Henry Formation. Thickness of the two formations average just under 100 feet but can reach depths of nearly 300 feet. The diamiction range of the Wedron Formation for texture vary from fine to coarse with gravel-sized clasts from two percent up to 20 percent. Colors of the formation range from gray, red gray, gray brown, or red brown (Hansel and Johnson, 1996).

1.5.2 Hydrogeology

There are multiple aquifers in the vicinity of the AASF. The regional groundwater flow generally follows local flow such as the Kankakee and Iroquois Rivers which has a south-eastern direction. Underneath the glacial drift soils around the facility, there is a shallow overburden aquifer composed of Silurian dolomite. In deeper aquifer areas, Cambrian and Ordovician bedrock aquifers can be found in isolated areas from shallow aquifers. They are separated by low-permeability shale beds from the Maquoketa Group. The Cambrian-Ordovician aquifer has numerous layers that can be repetitive such as sandstone, limestone and dolomite. Throughout the entire region, the different layers of the Cambrian and Ordovician strata are hydraulically interconnected and function as one aquifer (USGS, 1999).

No potable water wells are located within the boundary of the AASF; however, there are several other/unknown wells located upgradient, side gradient, and down gradient of the facility (**Figure 1-2**). The State of Illinois does not provide specific well type information (i.e. domestic well, industrial well, etc.).

Drinking water for the AASF is supplied by the City of Kankakee, which sources most of the water from the surface water in the Kankakee River or from surrounding lakes and rivers (City of Kankakee, 2017). The Kankakee River is approximately 2 miles to the east of the facility, and it is unknown if the surface water intakes are upgradient or downgradient of the facility (**Figure 1-2**). The USEPA Unregulated Contaminant Monitoring Rule 3 (UCMR3) data indicate that PFOS/PFOA were not detected in a public water system above the USEPA HA within a 20-mile radius of the facility. 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

The AASF is west of where the Kankakee and Iroquois Rivers meet (**Figure 1-3**). The northern half of the property slopes to the northeast and the southern half of the property slopes to the

southeast. Surface water runoff gathers in ditches in multiple locations at the facility. This water runoff on the northeast side eventually reaches the Kankakee River while flow to the southeast eventually reached the Iroquois River. The infiltration and streamflow in this area have quite a variance based on soil type. In some locations, there is a more clay-based soils, which results in slower infiltration of precipitation and less ground-water discharge creating greater variations in streamflow. In other locations along the Kankakee River, the soil is mostly compromised of sand, which creates poorly drained land and small ponds along the river. This natural storage of water affects streamflow as the water tends to stay in place in these poorly drained areas (USGS, 1999).

1.5.4 Climate

The climate at the AASF has four defined seasons with a variation in temperatures. The summers at the AASF are long, warm, and humid with a lot of rainfall. The winters are freezing, windy with cloud cover almost year around. Temperatures vary from average highs of 60.6 degrees Fahrenheit (°F) to average lows of 41.3 °F. The average annual temperature is 50.95 °F. Average precipitation is 39.13 inches of rain (World Climate, 2019).

1.5.5 Current and Future Land Use

The AASF is a controlled access facility and is adjacent to the Greater Kankakee Airport. Reasonably anticipated future land use is not expected to change from the current land use; however, future infrastructure improvements, land acquisitions, and land use controls at the Greater Kankakee Airport and surrounding areas are unknown.

CLIENT	ARNG			
NOTES	Preliminary Assessment for PFAS at Kankakee AASF #2, IL			
REVISED	4/29/2020	GIS BY	MS	4/29/2020
SCALE	1:63,360	CHK BY	JW	4/29/2020
Base Map: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI,		PM	RG	4/29/2020

Facility Location

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Figure 1-1

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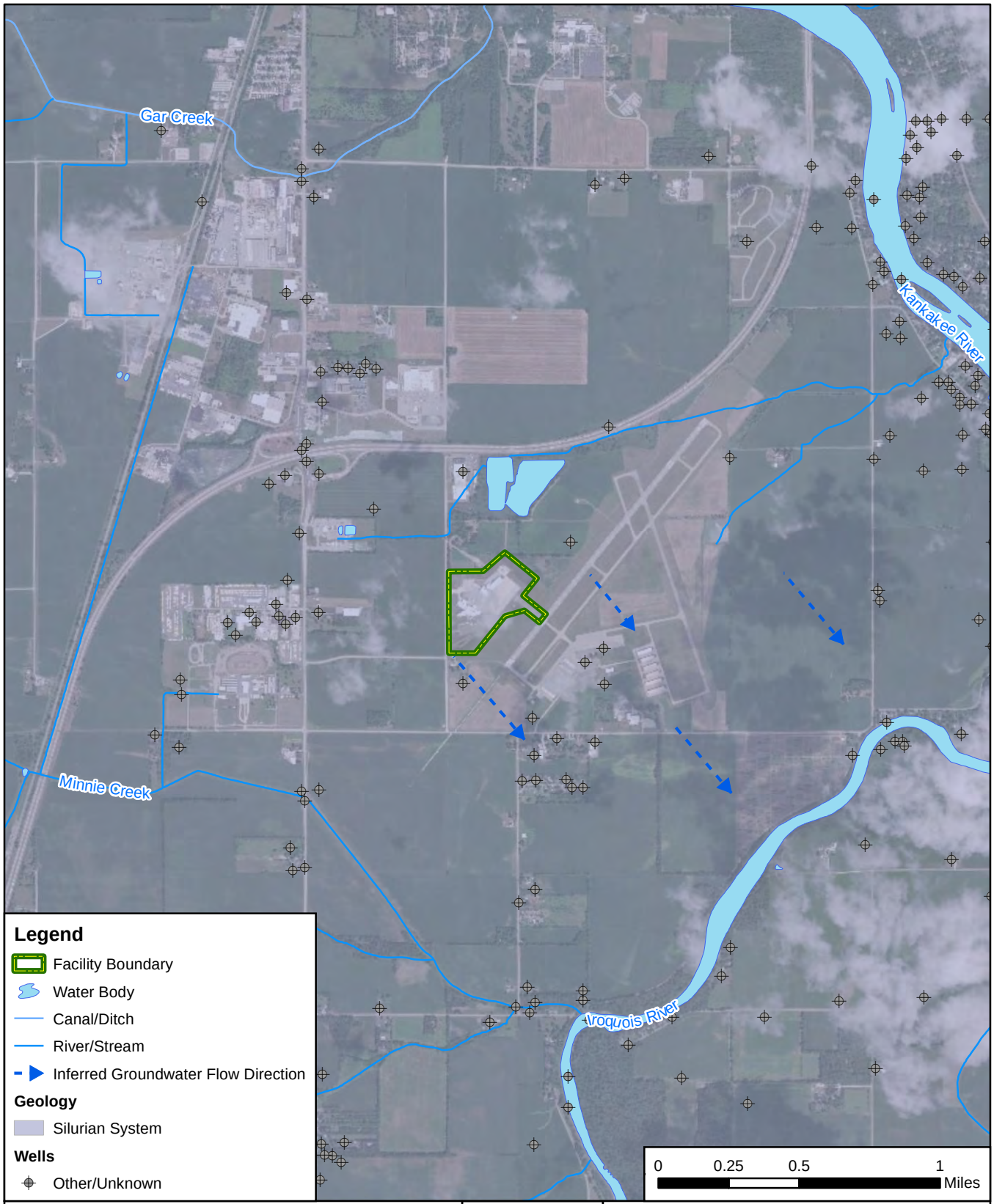

CLIENT	ARNG			
NOTES	Preliminary Assessment for PFAS at Kankakee AASF #2, IL			
REVISED	4/29/2020	GIS BY	MS	4/29/2020
SCALE	1:31,680	CHK BY	JW	4/29/2020
Base Map: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS,		PM	RG	4/29/2020

Groundwater Features

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Figure 1-2

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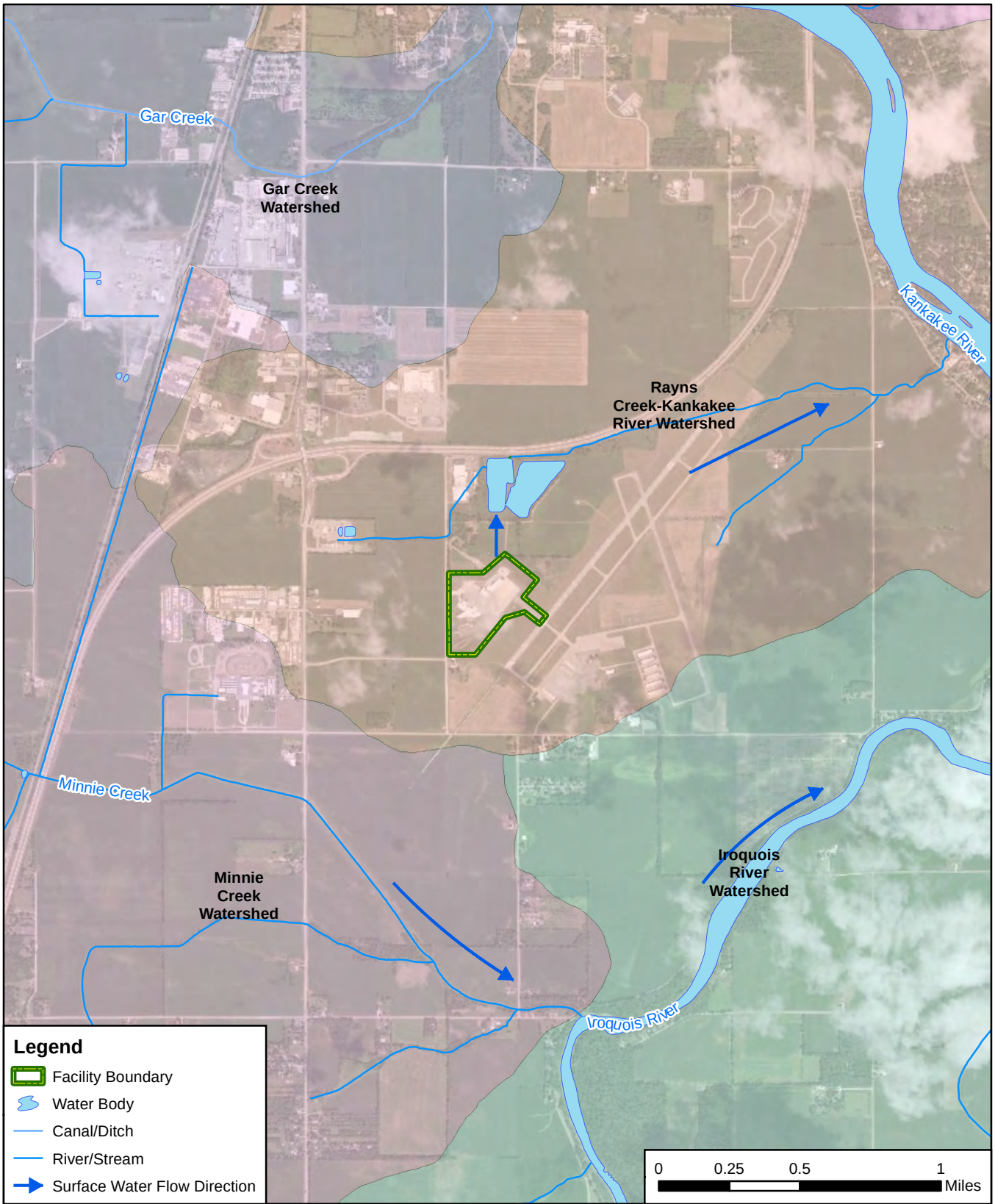

CLIENT	ARNG			
NOTES	Preliminary Assessment for PFAS at Kankakee AASF #2, IL			
REVISED	4/29/2020	GIS BY	MS	4/29/2020
SCALE	1:31,680	CHK BY	JW	4/29/2020
Base Map: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS,		PM	RG	4/29/2020

Surface Water Features

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Figure 1-3

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2. Fire Training Areas

No FTAs were identified within the facility during the PA through interviews (**Appendix B**) or document review (**Appendix A**). All off-site training occurs at Fort McCoy, which is located 11 miles west of Tomah, Wisconsin and just over 300 miles to the northwest of the AASF.

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**.

Two non-FTAs where Jet-X high expansion foam (HEF) was potentially released at the AASF were identified during the PA. However, further evaluation of Jet-X HEF indicates that no PFAS are present in the material. Therefore, neither of the non-FTAs are considered potential source areas for PFAS. A description of each non-FTA is presented below and shown on **Figure 3-1**. Interview records appear in **Appendix B**. Photographs appear in **Appendix C**.

3.1 Main Hangar

In 2017, the Main Hangar was built which contains a fire suppression system supplied by a 400-gallon tank filled with two percent Jet-X HEF. The geographic coordinates are 41°04'09.6"N and 87°51'23.4"W. Upon installation of the fire suppression system, there was one full hangar release suppression system test, conducted by a contractor. The hangar doors were closed during the test, and the HEF went down the trench drains, which flow to an oil/water separator at the north side of the facility boundary. Water from the oil/water separator drains to the stormwater conveyance system, which discharges to an existing pond approximately 500 feet north and off the facility. The pond is connected to a tributary that flows to the Kankakee River (**Figure 3-1)**. There has been no additional maintenance of the fire suppression system since its original installation. There are currently three Purple K mobile fire extinguishers located at the facility around the ramp area.

3.2 Cold Storage Hangar

In 2017, the Cold Storage Hangar was built which contains a fire suppression system supplied by a 300-gallon tank filled with two percent Jet-X HEF. This fire suppression system uses a separate fire suppression system than the Main Hangar. The Cold Storage Hangar is located northeast of the Main Hangar. The geographic coordinates are 41°04'12.3"N and 87°51'20.7"W. Upon installation of the fire suppression system, there was one full hangar release suppression system test conducted, by a contractor. The hangar doors were closed during the test, and the HEF went down the trench drains, which flow to an oil/water separator at the north side of the facility boundary. Water from the oil/water separator drains to the stormwater conveyance system, which discharges to an existing pond approximately 500 feet north and off the facility. The pond is connected to a tributary that flows to the Kankakee River (**Figure 3-1)**.

In the Cold Storage Hangar fire suppression system room, two 55-gallon drums of two percent Jet-X HEF were present; one of the drums was half full and the other drum was completely full. There was no visible leaking or discoloration on the concrete.

CLIENT	ARNG			
NOTES	Preliminary Assessment for PFAS at Kankakee AASF #2, IL			
REVISED	1/11/2021	GIS BY	MS	1/11/2021
SCALE	1:6,000	CHK BY	JW	1/11/2021
Base Map: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS,		PM	RG	1/11/2021

N

Non-Fire Training Areas

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Figure 3-1

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4. Emergency Response Areas

No emergency response areas or incidents were identified within the AASF during the PA through interviews (**Appendix B**), historical document review, or the EDR™. The Kankakee Fire Department responds to all emergencies at the facility and Greater Kankakee Airport; there were no reported emergencies at the airport. The Kankakee Fire Department was called once to the AASF to respond to smoke coming from a closet with electronic communication equipment; however, there was no fire and the closet was just ventilated to remove the smoke.

5. Adjacent Sources

Two potential off-facility sources of PFAS adjacent to the AASF, not under the control of the ARNG, were identified during the PA. Based on interviews with ILARNG personnel (**Appendix B**) and historical document review, the identified adjacent area with potential AFFF releases are outside the AASF boundaries. The description of the adjacent source is presented below and are shown on **Figure 5-1**.

5.1 Greater Kankakee Airport Hangars

The Greater Kankakee Airport geographic coordinates are 41°03'55.0"N and 87°50'55.3"W. The current Greater Kankakee Airport has been officially serving the Kankakee community since 1962 and is owned and operated by the Kankakee Valley Airport Authority. The AASF is adjacent to the Greater Kankakee Airport. The airport is home to private hangars housing helicopter, single engine aircraft, ultralights, and turbine powered aircraft. The geographic coordinates of the areas where the Greater Kankakee Airport Hangars are located are 41° 3'55.12"N and 87°51'4.71"W; and 41° 3'56.24"N and 87°50'42.14"W. There is also an official Federal Aviation Administration (FAA) Light Sport Repair Station located at the Greater Kankakee Airport. The FAA Light Sport Repair Station offers services of sport pilot examinations for powered parachute, sport pilot training in fixed-wing aircraft and powered parachute as well as inspection, maintenance, and heavy maintenance and other engine services. Due to the unknown nature of whether the private hangars have fire suppression systems and the maintenance that is performed at the repair station; the Greater Kankakee Airport has been identified as an adjacent source.

5.2 Township Firehouse

There is a Township Firehouse located southeast of the AASF that is used by the volunteer fire department. The geographic coordinates are 41°3'42.60"N and 87°50'56.71"W. There was no information obtained through interviews or online research that described if firetrucks or firefighting equipment are stored at the firehouse. However, there is a potential that AFFF could be stored at the firehouse or on firetrucks; therefore, the Township Firehouse has been identified as an adjacent source.

CLIENT	ARNG			
NOTES	Preliminary Assessment for PFAS at Kankakee AASF #2, IL			
REVISED	1/11/2021	GIS BY	MS	1/11/2021
SCALE	1:8,400	CHK BY	JW	1/11/2021
Base Map: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS,		PM	RG	1/11/2021

N

Adjacent Sources

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Figure 5-1

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6. Preliminary Conceptual Site Model

Based on the PA findings, no AOIs were identified at the AASF. A conceptual site model 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.

Based on the findings of this PA, no PFAS sources originate at the AASF or from activities associated with the AASF; therefore, there is no complete exposure pathway to potential receptors.

7. Conclusions

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

7.1 Findings

Based on information obtained during interviews conducted with facility personnel who have been familiar with the facility since 2017 and reviewed documentation, no AOIs related PFAS releases were identified at the AASF. While adjacent sources were identified, evidence obtained during the PA does not support that current or former ARNG facility activities have contributed to PFAS contamination in soil, groundwater, surface water, or sediment. Therefore, the pathways to all human receptors are incomplete. A summary of the PA findings is presented on **Figure 7-1**.

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 was first used (1969 to present), and a reliance on personal recollection. Inaccuracies may arise in potential PFAS release locations, dates of release, volume of releases, and the concentration of HEF 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 7-1** summarizes the uncertainties associated with the PA.

Table 7-1: Uncertainties

Area of Interest	Source of Uncertainty
AOI 2	One of the 55-gallon drums of two percent Jet-X HEF was half-full. Personnel did not know where or when the HEF was used.

7.3 Potential Future Actions

Based on the documented absence (2017 to present) of the storage, use or release of PFAS-containing materials at the AASF, no AOIs were identified during the PA. Evidence does not support that current or former ARNG activities have contributed to PFAS contamination to soil,

groundwater, surface water, or sediment at the facility or adjacent areas. Therefore, the facility will not move forward in the CERCLA process.

CLIENT	ARNG			
NOTES	Preliminary Assessment for PFAS at Kankakee AASF, IL			
REVISED	1/11/2021	GIS BY	MS	1/11/2021
SCALE	1:9,600	CHK BY	JW	1/11/2021
Base Map: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS,		PM	RG	1/11/2021

Summary of Findings

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Figure 7-1

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8. References

City of Kankakee. 2017. *Kankakee Division Water Quality Report, PWSID# IL0915030*.

Hansel, Ardith K., and W. Hilton Johnson. 1996. *Wedron and Mason Groups: Lithostratigraphic Reclassification of Deposits of the Wisconsin Episode, Lake Michigan Lobe Area*: Illinois State Geological Survey Bulletin 104, 116 p.

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

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

United States Geological Survey (USGS). 1999. *Environmental Setting of the Upper Illinois River Basin and Implications for Water Quality.* Accessed January 2020.

World Climate. 2019. *Average Weather Data for Kankakee, Illinois.* Available at http://www.worldclimate.com/climate/us/illinois/kankakee (Accessed 14 December 2019).

Appendix A
Data Resources

Data Resources will be provided separately on CD. Data Resources for Kankakee AASF #2, Illinois.

Kankakee AASF #2 Leases, Licenses, and Permits

- 2009 Kankakee AASF #2 Lease

Kankakee AASF #2 Documentation

- 2016 Stormwater Pollution Prevention Plan – Kankakee AASF #2
- 2016 Spill Prevention Control and Countermeasure Plan – Kankakee AASF #2

EDR Report

- 2020 Kankakee AASF #2 Report

Appendix B
Preliminary Assessment Documentation

Appendix B.1
Interview Records

PA Interview Questionnaire - Other

Facility: Kankakee AASF #2, Illinois
Interviewer: [redacted]
Date/Time: 11/6/2019, 1100

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

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

Has been the [redacted] for 2 years at the facility.

PFAS Use: Identify accidental/intentional release locations, time frame of release, frequency of releases, storage container size (maintenance, fire training, firefighting, buildings with suppression systems (as builts), fueling stations, crash sites, pest management, recreational, dining facilities, metals plating, or waterproofing). How are materials ordered/purchased/disposed/shared with others?

- Facility opened on November 4, 2017. Construction took 3 years to build it. All buildings at the AASF #2 are new.
- **<u>Fire Suppression System</u>**
  - The main hangar has a 400-gallon tank of 2% Jet-X high expansion foam (HEF) which was tested with a full release upon installation
  - The cold storage hangar has a 300-gallon tank of 2% Jet-X HEF which was tested with a full release upon installation
  - Both releases had the hangar doors were closed, and the foam went down the drains in the floor
  - The floor drains/ trench drains lead to an oil/water separator at the north side of the facility boundary, which then goes to the stormwater system and then to an existing pond approximately 500 feet north of the AASF #2
  - Bulk high expansion foam found stored in the cold storage building- 2 55-gallon drums of Jet-X HEF, one was full and the other was half full
  - No other maintenance has been performed since initial testing
  - Interviewees do not recall testing
- **<u>Fire Extinguishers</u>**
  - Three mobile fire extinguishers (purple k) are placed on ramp areas and have never been dispensed
  - Kankakee Fire Department does emergency response: no airport fire department

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

PA Interview Questionnaire - Other

Facility: Kankakee AASF #2, Illinois
Interviewer: [redacted]
Date/Time: 11/6/2019, 1100

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

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

[redacted] has been at the facility for 1 year and serves as the [redacted].

PFAS Use: Identify accidental/intentional release locations, time frame of release, frequency of releases, storage container size (maintenance, fire training, firefighting, buildings with suppression systems (as builts), fueling stations, crash sites, pest management, recreational, dining facilities, metals plating, or waterproofing). How are materials ordered/purchased/disposed/shared with others?

- **<u>Emergency Response</u>**
  - One time the fire department was called to the facility for smoke coming from a closet with electronic communication type equipment. There was no actual fire, so the closet was just ventilated
  - Kankakee FD, no airport FD
  - No emergency response
- **<u>Fire Training</u>**
  - No actual exercises performed at the AASF #2; just video training
  - Off-site training occurs at Fort McCoy which is 11 miles west of Tomah, Wisconsin or just over 300 miles northwest of the AASF
- **<u>Adjacent Sources</u>**
  - There are several private and corporate hangars; it is unknown if they have fire suppression systems on south side of the airport
  - No crop-dusting planes to the best of Mr. McCormick's knowledge
- Waste water treatment plant on north side of town; not close to the facility
- The AASF #2 obtains water from the City of Kankakee

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

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: 11/6/2019 11am

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

Source/Release Information

Site Name / Area Name / Unique ID: Kankakee AASF #2

Site / Area Acreage: approximately 39 acres

Historic Site Use (Brief Description): The original 38.88 acre property was acquired in 1958, and the Armory facility, which also held the shop, was built in 1960. In 2003 a new AASF shop facility was constructed. The facility consists of a storage hangar, repair hangar, shops, and a two story office area. Exterior features are vehicle parking areas, roads, aircraft parking and taxiways, and a 90 ft. clear-span bridge. A fire suppression system (3 AFFF systems and 1 water system) are present at the shop.

Current Site Use (Brief Description): The AASF #2 supports the Illinois Army National Guard (ILARNG).

Physical barriers or access restrictions: Access to the area is restricted to ILARNG.

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):

Main Hangar and Cold Storage Hangar test upon installation of the fire suppression system. Main Hangar had a full release of 400-gallons of 2% Jet-X HEF and the Cold Storage Hangar had a full release of 300-gallons of Jet-X HEF. Both hangars had doors closed and foam went down the drains to the oil/water separator.

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

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

Documented in interview documents

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

3a. Indicate what businesses are located near the site

Greater Kankakee Airport, county jail and residental are adjacent.

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

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

Greater Kankakee Airport

Visual Site Inspection Checklist

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:

The fire suppression systems have 2% Jet-X HEF tanks.

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

Hangar fire suppression system full release after installation in 2017

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

The fire suppression systems have one 300-gallon and one 400-gallon tank of 2% Jet-X HEF.

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

The floor drains lead to an oil/water separator then to a pond north of the facility boundary.

Transport / Pathway Information

Migration Potential:

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

1a. If so, note observation and location:

Surface water flows to the north towards the pond north of the facility boundary.

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:

There are 26 domestic wells and 8 monitoring wells are located within 2 miles of the site.

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

4a. If so, please note the location:

Kankakee River is located 2 miles to the east of the site.

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

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

N/A

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

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

Yes, Greater Kankakee Airport and the Township Firehouse are potential sources of PFAS ajacent to the AASF #2.

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

Visual Site Inspection Checklist

Significant Topographical Features:

1. Has the infrastructure changed at the site/area? Y / **N**

1a. If so, please describe change (ex. Structures no longer exist):

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

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

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

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

4. Does the site/area exhibit any areas of ponding or standing water? Y / **N**

4a. If yes, describe the location and extent of the ponding:

Receptor Information

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

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

The facility has controlled access

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:

Residents to the south

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

Additional Notes

Photographic Log

Photo ID/Name	Date & Location	Photograph Description
1	9/10/19, located north of the hangar	The near manholes lead to the oil/water separator while the far pair of manholes leads to the bypass tank.
2	9/10/19, located inside a room in the hangar	AFFF fire suppression system sprinkler system located in the hangar.
3	9/10/19, located inside a room in the hangar	These are the two 500-gallon tanks that hold 3% AFFF concentrate that supplies the hangar.
4	9/10/19, located inside a room in the hangar	Mobile Halon fire extinguisher used on the flight line.
5	9/10/19, located inside a room in the hangar	Halon and Purple K mobile fire extinguishers used on the flight line.

Appendix B.3
Conceptual Site Model Information

Preliminary Assessment – Conceptual Site Model Information

Site Name: Kankakee AASF #2

Why has this location been identified as a site?
Facility is an aviation support site with aircraft hangars, high probability of release due to asset type and historical site usage.

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

Training Events

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

If so, how often? *All off-site training occurs at Fort McCoy which is located 11 miles west of Tomah, Wisconsin*

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

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

Surface Water:

Surface water flow direction? *To the north*

Average rainfall? *39.13 inches*

Any flooding during rainy season? *No*

Direct or indirect pathway to ditches? *Direct to the pond located to the north of the site*

Direct or indirect pathway to larger bodies of water? *Indirect to the Kankakee River*

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

Any impoundment areas or retention ponds? *There is a pond on the north side.*

Any NPDES location points near the site? *Yes*

How does surface water drain on and around the flight line? *Surface water drains to the north on the northern half of the flight line and to the south on the southern half.*

Groundwater:

Groundwater flow direction? *To the southeast*

Depth to groundwater? *unknown*

Uses (agricultural, drinking water, irrigation)? *Not used.*

Any groundwater treatment systems? *None known*

Any groundwater monitoring well locations near the site? *There are several unknown wells to the within a two mile radius of the facility.*

Preliminary Assessment – Conceptual Site Model Information

Is groundwater used for drinking water? *Drinking water is supplied by the City of Kankakee which sources water from surface water of the Kankakee River, and via other lakes and rivers.*

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? *There are several unknown wells to the within a two mile radius of the facility.*

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?
N/A

2. Are nozzles tested? How often are nozzles tested? Where are nozzles tested? Are nozzles cleaned after use? Where does the rinse water flow after cleaning nozzles?
N/a

3. Other?

Identify Potential Receptors:

Site Worker *No*

Construction Worker *No*

Recreational User *Yes*

Residential *Yes*

Child *Yes*

Ecological *No*

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

Documentation

Ask for Engineering drawings (if applicable). Has there been a reconstruction or changes to the drainage system? When did that occur? *There is no known reconstruction to the AASF #2.*

Appendix C
Photographic Log

APPENDIX C – Photographic Log

Army National Guard, Preliminary Assessment for PFAS	Kankakee AASF #2	Illinois

Photograph No. 1

Description:

Fire suppression system sprinkler heads in the Main Hangar.

Photograph No. 2

Description:

Trench drains in the Main Hangar that lead to an oil/water separator then to the stormwater system.

APPENDIX C – Photographic Log

Army National Guard, Preliminary Assessment for PFAS	Kankakee AASF #2	Illinois

Photograph No. 3

Description:

The fire suppression system foam bladder tank that supplies the Main Hangar.

Photograph No. 4

Description:

Purple K fire extinguisher that are found on the ramp areas at the Kankakee AASF #2.

APPENDIX C – Photographic Log

Army National Guard, Preliminary Assessment for PFAS	Kankakee AASF #2	Illinois

Photograph No. 5

Description:

The fire suppression system foam bladder tank that supplies the Cold Storage Hangar.

Photograph No. 6

Description:

Two 55-gallon drums of 2% Jet-X High Expansion Foam found in the Cold Storage Hanger fire suppression system room. There was no visible leaking or corrosion on the floor.