FINAL
Preliminary Assessment Report
Dade City Readiness Center
Dade City, Florida

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

August 2020

Prepared for:

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

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Acronyms and Abbreviations

°F	degrees Fahrenheit
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
CFR	Code of Federal Regulations
CSM	conceptual site model
EDR	Environmental Data Resource
FLARNG	Florida Army National Guard
FTA	fire training area
gpm	gallons per minute
NAVD	North American Vertical Datum
NOAA	National Oceanic and Atmospheric Administration
PA	Preliminary Assessment
PFAS	per- and poly-fluoroalkyl substances
PFOA	perfluorooctanoic acid
PFOS	perfluorooctanesulfonic acid
RC	Readiness Center
SI	Site inspection
UCMR3	Unregulated Contaminant Monitoring Rule 3
US	United States
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
USDA	United States Department of Agriculture
VSI	visual site inspection

Executive Summary

The United States (US) Army Corps of Engineers (USACE) Baltimore District on behalf of the Army National Guard (ARNG) G9, Cleanup Branch contracted AECOM Technical Services, Inc. (AECOM) to perform *Preliminary Assessments (PAs) and Site Inspections (SIs) for Perfluorooctanesulfonic acid (PFOS) and Perfluorooctanoic acid (PFOA) Impacted Sites at ARNG Facilities Nationwide*. The ARNG is assessing potential effects on human health related to processes at facilities that used per- and poly-fluoroalkyl substances (PFAS) (a suite of related chemicals), primarily in the form of aqueous film forming foam (AFFF) released during firefighting activities or training, although other PFAS sources are possible.

AECOM completed a PA for PFAS at Dade City Readiness Center (RC) in Dade City, Florida, to assess potential PFAS release areas and exposure pathways to receptors. Historical aerial imagery of the current Dade City RC Boundary depicts an armory as early as 1967. The current lease for Dade City RC, which began in 1968, is extended for a period of 99 years between Florida ARNG (FLARNG) and the Internal Improvement Fund of the state of Florida. Based on the USEPA Unregulated Contaminant Monitoring Rule 3 (UCMR 3) data, it was indicated that PFAS were detected in a public water system above the USEPA Health Advisory level within 20 miles of the facility.

The performance of this PA included the following tasks:

- Reviewed data resources to obtain information relevant to suspected PFAS releases
- Conducted a 1-day site visit on 7 February 2019
- Interviewed current Dade City RC personnel during the site visit including FLARNG operations staff and Pasco County Fire Rescue Station No. 24 staff
- Completed visual site inspections (VSIs) at known or suspected PFAS release locations and documented with photographs

One area, Dade City RC Armory, has been identified as No Suspected Release (**Figure ES-1**). Based on the documented absence (1955-present) of the use or release of PFAS-containing materials at Dade City RC, no areas of interest (AOIs) were identified during the PA. Evidence does not indicate that current or former ARNG activities contributed PFAS contamination to soil, groundwater, surface water, or sediment at the facility or adjacent areas. Dade City RC will not move forward in the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) process.

CLIENT	ARNG			
NOTES	Preliminary Assessment for PFAS at Dade City Readiness Center, FL			
REVISED	1/29/2020	GIS BY	MS	1/29/2020
SCALE	1:1,200	CHK BY	MG	1/29/2020
Base Map: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics,		PM	RG	1/29/2020

N

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 United States (US) Army Corps of Engineers (USACE) Baltimore District on behalf of the Army National Guard (ARNG) G9, Cleanup Branch contracted AECOM Technical Services, Inc. (AECOM) to perform *Preliminary Assessments (PAs) and Site Inspections (SIs) for Perfluorooctanesulfonic acid (PFOS) and Perfluorooctanoic acid (PFOA) Impacted Sites at ARNG Facilities Nationwide* under Contract Number W912DR-12-D-0014, Task Order W912DR17F0192, issued 11 August 2017. The ARNG is assessing potential effects on human health related to processes at their facilities that used per- and poly-fluoroalkyl substances (PFAS) (a suite of related chemicals), 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.

This report presents findings of a PA for PFAS at Dade City Readiness Center (RC) in Dade City, Florida, in accordance with the CERCLA, as amended, the National Oil and Hazardous Substances Pollution Contingency Plan (40 Code of Federal Regulations [CFR] Part 300), and USACE requirements and guidance.

This PA documents the potential locations where PFAS may have been released into the environment at Dade City RC (also referred to as “the facility”). The term PFAS will be used throughout this report to encompass all PFAS chemicals being evaluated, including PFOS and PFOA, which are key components of AFFF.

1.2 Preliminary Assessment Methods

The performance of this PA included the following tasks:

- Reviewed data resources to obtain information relevant to suspected PFAS releases
- Conducted a 1-day site visit on 7 February 2019
- Interviewed current Dade City RC personnel during the site visit including Florida ARNG (FLARNG) operations staff and Pasco County Fire Rescue Station No. 24 staff
- Completed visual site inspections (VSI) at known or suspected PFAS release locations and documented with photographs

1.3 Report Organization

This report has been prepared in accordance with the USEPA *Guidance for Performing Preliminary Assessments under CERCLA* (USEPA 1991). The report sections and descriptions of each are as follows:

- **Section 1** – **Introduction:** identifies the project purpose and authority and describes the facility location, environmental setting, and methods used to complete the PA.
- **Section 2** – **Fire Training Areas:** describes the 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** – **Conceptual Site Model:** describes the pathways of PFAS transport and receptors at each area of interest (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

Dade City RC is located at 38017 Live Oak Avenue, Dade City, Florida in Pasco County, western central Florida (**Figure 1-1**). The facility is surrounded by urban and suburban developments.

The facility contains an armory with dining, office space, and an associated vehicle storage and light maintenance area. The facility perimeter is bordered entirely by fences. The Dade City RC has a 99-year lease from the Internal Improvement Fund of the state of Florida that began in 1968. An armory and vehicles appear in aerials of the Dade City RC property as early as 1967. Drinking water is supplied to the facility via public utilities.

1.5 Facility Environmental Setting

Pasco County is characterized by discontinuous highlands in the form of ridges separated by broad valleys and is divided into five areas: the Coastal Swamps, the Gulf Coastal Lowlands, the Brooksville Ridge, the Tsala Apopka Plain, and the Western Valley. Dade City RC is located within the Western Valley (Austin 1982).

The Western Valley extends the length of Pasco county on its eastern side and turns west at the termination of the Brooksville Ridge, uniting with the Gulf Coastal Lowlands at Zephyrhills Gap. It contains the valleys of the Withlacoochee and Hillsboro Rivers and consists mainly of poorly drained sand soils. The vegetation Is mainly longleaf pine and sawpalmetto. Most of the soils in the Western Valley have a loamy subsoil ranging from acid to alkaline over short distances. Much of the water falling on Pasco county is returned to the atmosphere by evaporation and transpiration; the remainder enters the ground and ultimately flows into the Gulf of Mexico (Austin 1982).

1.5.1 Geology

Pasco County is underlain by several thousand feet of sedimentary rocks, principally limestones. Geological formation ages for Paso and Hernando counties include Eocene, Oligocene, Miocene, and Pleistocene Series.

The Eocene age formations include Lake City Limestone, Avon Park Limestone, Inglis Formation, Williston Formation, and the Crystal River Formation. The Lake City and Avon Park Limestone lithology consists of soft to hard, fossiliferous, brown limestone with dark brown beds of dolomitic limestone at irregular intervals. These dark brown beds of dolomitic limestone contain more sulfate than water from overlying formations. The thickness of the Avon Park Limestone in the Pasco County area ranges from 50 to about 500 feet. The portion of the dolomitic zone about 100 feet below the top of the Avon Park Limestone is highly permeable and yields large quantities of water to surrounding wells. The Inglis Formation lithology consists of brown to gray, fossiliferous, hard, dolomitic limestone, overlies the Avon Park Limestone, and attains a thickness of 40 to 60 feet. The formation is highly permeable over the area and yields large quantities of water to wells. Wells that produce more than 1,000 gallons per minute (gpm) generally penetrate the Inglis Formation. The Inglis Formation is overlain by the Williston Formation, which is overlain by the Crystal River Formation. The Crystal River and Williston Formations exhibit similar lithology and hydrology. Lithologically, the formations are generally white to tan, soft chalky, coquinoid limestones. The formations attain a thickness of 100 to 150 feet and are not an important source of water in the area.

The Oligocene Series Formation include the Suwannee Limestone, which overlies the Crystal River Formation. Lithology in this formation is generally white to yellow, fine-grained, fossiliferous limestone. Lower parts of the formation are harder, denser, and less fossiliferous than the upper part. The Suwannee Limestone is a very permeable, productive aquifer. Most domestic and many irrigation wells produce from the lower part of the Suwannee Limestone.

The Miocene Series Formation include the Hawthorn Group and Tampa Limestone, which overlies the Suwannee Limestone. Lithology in this formation is a white to gray, sandy, fossiliferous limestone. Thickness of the formation in the area is erratic due to irregular erosional surfaces. The Tampa Limestone is not a major source of water in Pasco county (Wetterhall 1964). The Hawthorn Group is thin and discontinuous in the south, and generally absent toward the north, except for a few erosional remnants associated with the ridges. The limestone units beneath the clastic deposits of the Cypress head Formation and the Hawthorn Group in this region can include the Suwannee Limestone of Oligocene age, and Ocala Limestone and Avon Park Formation of Eocene age (Trommer 2009).

The Pleistocene Series formation include undifferentiated deposits of sand and clay which overlie the Tampa Limestone. These sediments consist of interbedded sands and clays, which reach a maximum thickness of 250 feet. A few small domestic wells produce water from the sand. The water generally contains concentrations of iron and are likely to be highly colored (Wetterhall 1964).

1.5.2 Hydrogeology

The Principal hydrogeologic units within the watershed are the surficial aquifer, the intermediate confining unit, the Upper Floridan aquifer, middle confining unit, and the Lower Floridan aquifer (Trommer 2009). The discussion below focuses on the uppermost aquifer as it is the most likely to be affected by PFAS releases.

The surficial aquifer system consists of Miocene to Holocene, siliciclastic deposits that are contiguous with the land surface. The clastics are usually quartz sand, silty sand, and kaolinitic to

smectitic clay. The surficial aquifer is most likely to occur as a distinct hydrostratigraphic unit along the Brooksville Ridge, or other upland areas, where low permeability clays of the Hawthorn Group, or its residuum, separate the surficial aquifer from the underlying Upper Floridan aquifer. The downward movement of water into the Upper Floridan aquifer is retarded by these lower permeability units; however, the collapse of surficial sediments into voids in the underlying limestone has produced numerous breaches in the clays that act as vertical conduits for the movement of water from the surficial to the Upper Floridan aquifer (DeWitt 2011).

Generally, high recharge rates occur where limestone is near the land surface, or where overlying sediments lack low-permeability materials. The occurrences of sinkholes and associated internal drainage of surface waters also result in higher recharge to the Floridan aquifer. Lower recharge rates occur where confining materials overlying the aquifer retard downward vertical movement of water, or where an upward water-level gradient exists between the Floridan and surficial aquifers (DeWitt 2011). The depth to water table at Dade City RC is approximately 3.5 to 6 feet (United States Department of Agriculture [USDA] 2019). Locally at Dade City RC, the groundwater flow direction is predominantly to the northeast (**Figure 1-2**). There are several public supply wells southeast and upgradient of the facility within a half mile radius. Based on the USEPA UCMR3 data, it was indicated that PFAS were detected in a public water system above the HA within 20 miles of the facility (**Appendix A**).

1.5.3 Hydrology

Dade City RC is within the Dobes Hole Lake Watershed, which is a subwatershed of the Duck Lake Watershed (**Figure 1-3**). Pasco County is located on the west coast of Central Florida, north of Tampa Bay. Withlacoochee River is the primary stream that flows through Pasco County, nearest Dade City RC.

Duck Lake Watershed is a predominantly deranged terrain, but there are some incidences of channelized connectivity. The area is typically represented by rolling hills surrounding relatively flat plains. Slopes can be significant along the ridges but are generally mild in the lower areas. The topography consistently slopes from the west towards the Withlacoochee River, located east of the watershed. Elevations range from approximately 57 feet (North American Vertical Datum [NAVD] 88) in the east to approximately 270 feet (NAVD 88) in the west. A low ridge defines the eastern boundary of Duck Lake Watershed and represents a break between the watershed and the Green Swamp/Withlacoochee River. Within the watershed, Dade City reflects significant developed areas drained by stormwater collection systems.

Hydrologically, the western areas in the watershed are typically internally drained through sandy, permeable soils or into depressional storage areas. Runoff flows toward the east by overtopping depressions or culvert connections. Numerous depressions are landlocked and either do not discharge or do so only under high stage conditions. Along the eastern portion of the watershed (east of Old Lakeland Highway and US 301), the hills give way to flatter, lower-lying topography that is dominated by wetlands. The western portion of the watershed discharges to these wetlands via numerous cross drains located beneath Old Lakeland Highway and US 301. Much of the wetlands systems have been modified for agricultural purposes. Duck Lake, located along the central-eastern boundary of the watershed, connects to these wetlands (Inwood Consulting Engineers 2015).

The wetland system generally flows from south to north via overland flow and culvert connections. Near Dade City, flow is consolidated into an excavated canal (Dade City Canal), which continues north until it exits the northeastern part of the watershed. Upon exiting the watershed, the canal continues northeast toward the Withlacoochee River. The Dade City Canal represents the primary discharge outlet for Duck Lake Watershed.

Under higher stages, Duck Lake provides an additional point of discharge via a culvert under Duck Lake Canal Road. Duck Lake discharges to the east via the culvert and a short length of canal that ultimately drains to the Withlacoochee River (Inwood Consulting Engineers 2015).

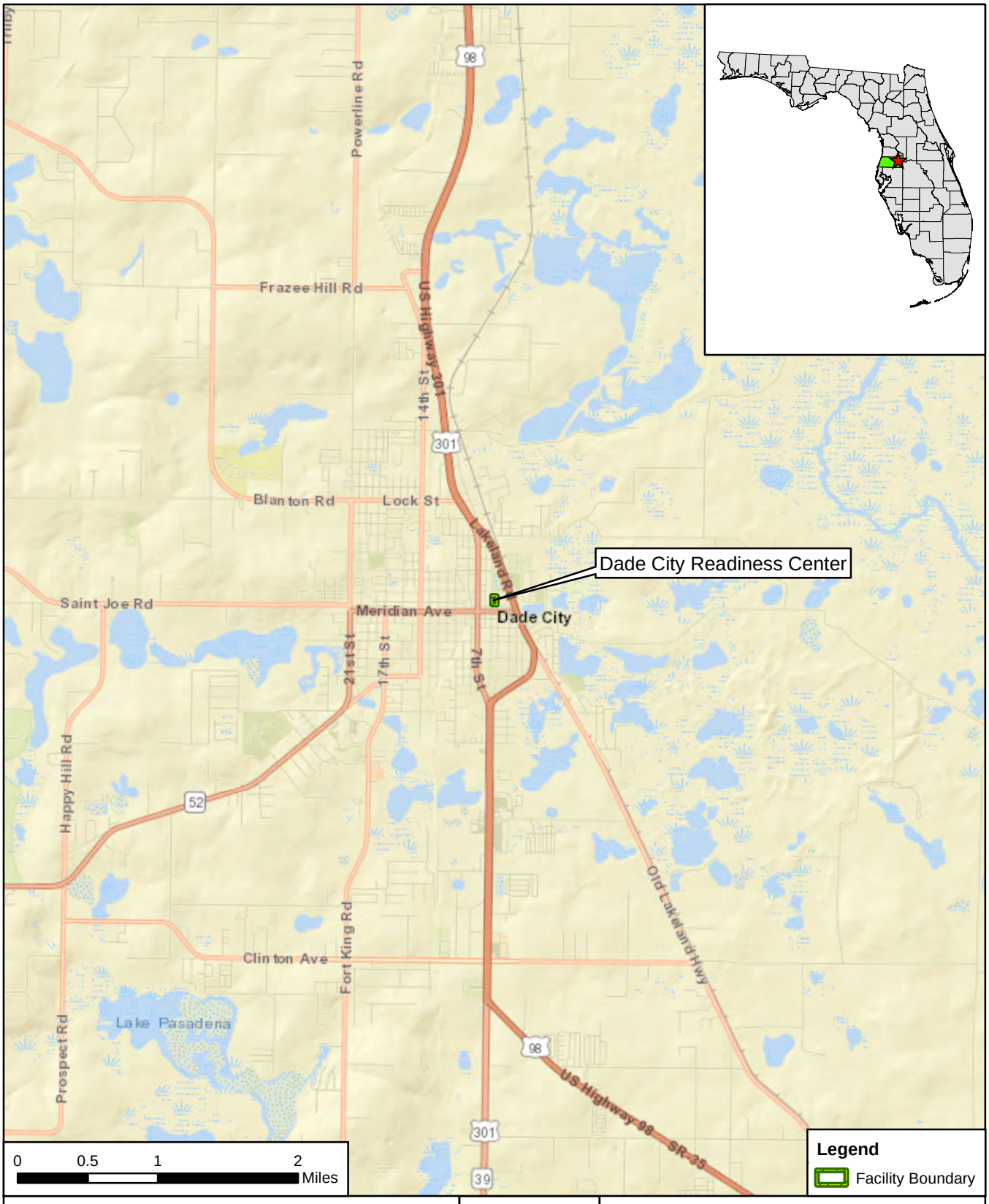
1.5.4 Climate

The climate at Dade City RC is subtropical, with warm humid summers and mild dry winters (Trommer 2009). In January, the average temperature is 70.1 degrees Fahrenheit (°F). June, July, and August have the highest average temperatures, at 90°F. The greatest mean monthly precipitation occurs in July and August. The average annual precipitation is 52.56 inches (National Oceanic and Atmospheric Administration [NOAA] 2019).

Rainfall varies seasonally between June and September from intense localized thunderstorms as well as occasional tropical storms. Winter frontal storms account for most of the rainfall from December through March (Trommer 2009).

1.5.5 Current and Future Land Use

Dade City RC currently contains an armory with dining, office space, and outdoor vehicle storage area for the ARNG. The armory complex includes parking areas. Access to the facility is controlled. Land use is not expected to change. Dade City is highly urbanized and consists of agricultural, wetland, and lower density urban land use types.



CLIENT	ARNG			
NOTES	Preliminary Assessment for PFAS at Dade City Readiness Center, FL			
REVISED	4/1/2019	GIS BY	MS	4/1/2019
SCALE	1:63,360	CHK BY	MG	4/1/2019
Base Map: Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI,		PM	RG	4/1/2019

Facility Location

AECOM
12420 Milestone Center Drive
Germantown, MD 20876

Figure 1-1

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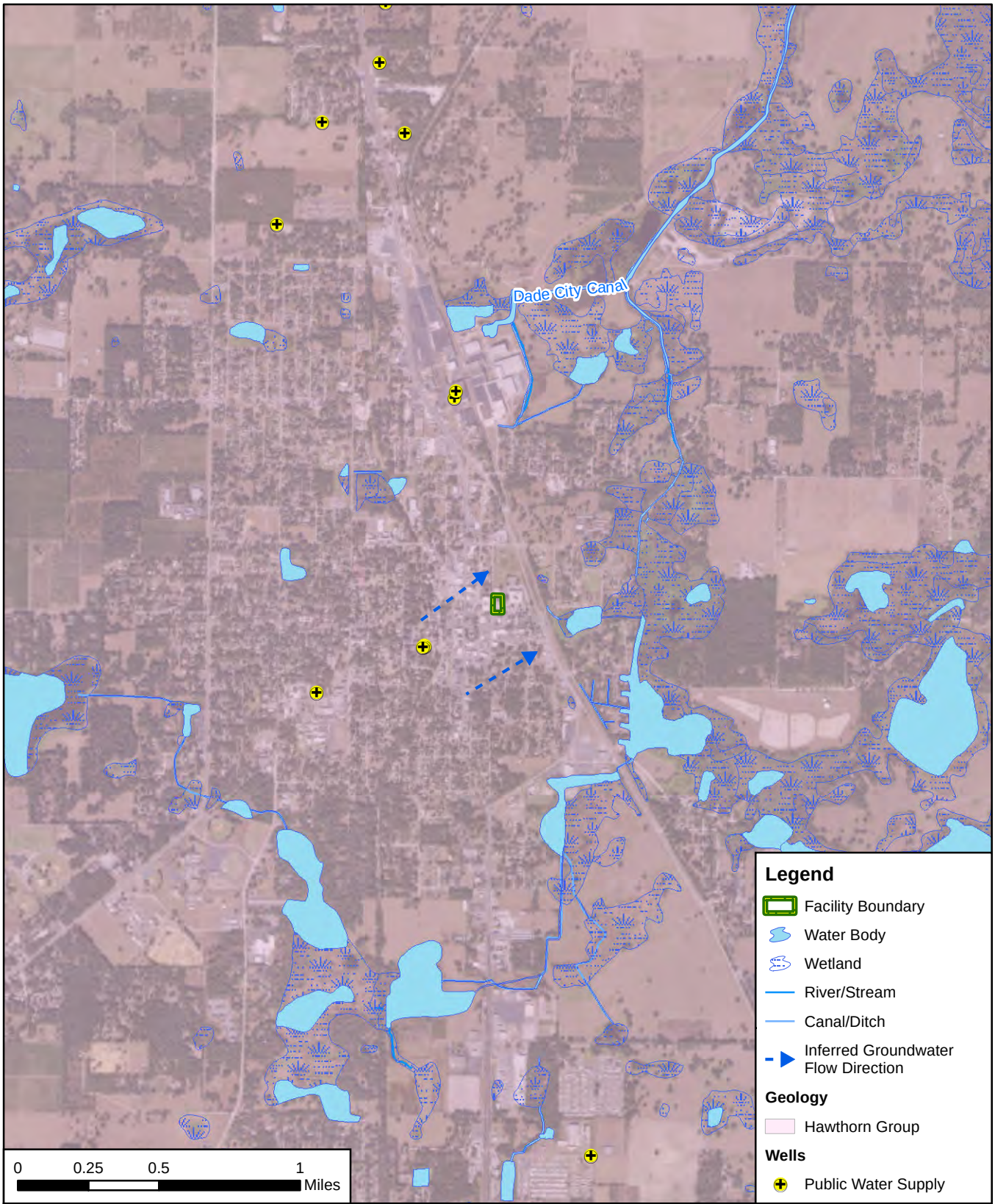

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SCALE	1:31,680	CHK BY	MG	5/30/2019
Base Map: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics,		PM	RG	5/30/2019

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Groundwater Features

AECOM
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Figure 1-2

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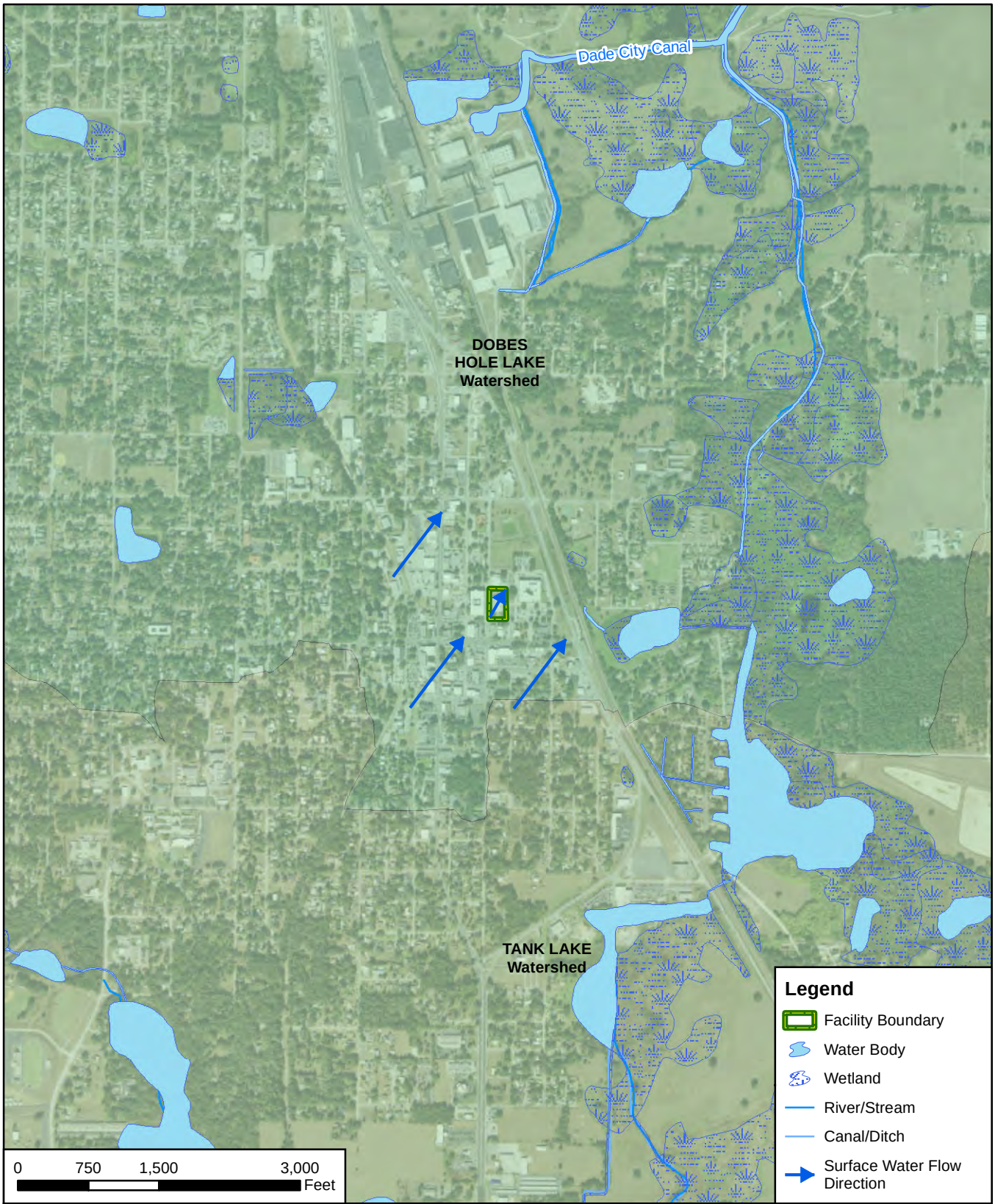

CLIENT	ARNG			
NOTES	Preliminary Assessment for PFAS at Dade City Readiness Center, FL			
REVISED	6/10/2019	GIS BY	MS	6/10/2019
SCALE	1:18,000	CHK BY	MG	6/10/2019
Base Map: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics,		PM	RG	6/10/2019

Surface Water Features

AECOM
12420 Milestone Center Drive
Germantown, MD 20876

Figure 1-3

Q:\Projects\ENV\GEARS\GEO\ARNG PFAS\900-CAD-GIS\920-GIS or Graphics\MXD\FL\Dade_City_RC\Dade_City_RC_PA_Figures\Fig_1-3_Dade_City_RC_Surface_Water.mxd

2. Fire Training Areas

Through Environmental Data Resource (EDR) Reports and interviews with Dade City RC personnel who had knowledge dating back to 2008, no FTAs were identified within the Dade City RC facility during the PA. Aerial photos covering 1952 to present show no sign of an FTA and development of the property has remained relatively unchanged from 1967 to present. Interview records appear in **Appendix B**.

3. Non-Fire Training Areas

One non-FTA where PFAS were potentially released was inspected during the PA. A description of the non-FTA is presented below, and the non-FTA is shown on **Figure 3-1**. Interview records appear in **Appendix B**. Photographs appear in **Appendix C**.

3.1 Armory

The Armory is located in the center of the facility property (**Figure 3-1**). The geographic coordinates are 28°21'56.59"N; 82°11'13.82"W. The armory is used for drills and is not outfitted with a fire suppression system. During the site visit, ABC Dry chemical extinguishers were found throughout the facility. The kitchen portion of the armory is outfitted with a fire suppression system. At the time of the visit and to interviewee knowledge dating back to 2008, the fire suppression system contained potassium carbonate solution. A potential PFAS release to the environment at the armory is not suspected.

CLIENT	ARNG			
NOTES	Preliminary Assessment for PFAS at Dade City Readiness Center, FL			
REVISED	1/29/2020	GIS BY	MS	1/29/2020
SCALE	1:1,200	CHK BY	MG	1/29/2020
Base Map: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics,		PM	RG	1/29/2020

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Non-Fire Training Area

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12420 Milestone Center Drive
Germantown, MD 20876

Figure 3-1

Q:\Projects\ENV\GEARS\GEO\ARNG PFAS\900-CAD-GIS\920-GIS or Graphics\MXD\FL\Dade_City_RC\Dade_City_RC_PA_Figures\Fig_3-1_Dade_City_RC_Non-Fire_Training_Areas.mxd

4. Emergency Response Areas

Based on interviews with FLARNG personnel, whose knowledge covers 2008 to present, and review of EDR Reports, no emergency response areas were identified within the Dade City RC facility during the PA. All emergency services for the current Dade City RC are provided by the Pasco County Fire Department. Information regarding emergency responses prior to interviewee knowledge is unknown. Interview records appear in **Appendix B**.

5. Adjacent Sources

One off-facility PFAS source adjacent to Dade City RC was identified during interviews. Pasco County Fire Department interviewees indicated they responded to a fire near the Dade City RC. No further information on the event was available. It is unknown whether the Pasco County Fire Department responded to the fire with AFFF. The firetrucks contain foam solutions on trucks in 5-gallon containers. The trucks are cleaned on site.

6. Preliminary Conceptual Site Model

Based on the PA findings, no PFAS release areas were identified, therefore there are no AOIs at Dade City RC. A conceptual site model (CSM) identifies three components necessary for potentially complete exposure pathways related to a site: (1) source, (2) pathway, and (3) receptor. If any of these elements are missing, the pathway is considered incomplete. Based on the findings of this PA, there are no PFAS sources that originate at Dade City RC or from activities associated with Dade City RC.

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 Dade City RC. The PA findings are based on the information presented in **Appendix A** and **Appendix B**.

7.1 Findings

No PFAS releases relating to current or historical activities at Dade City RC were identified during this PA. The following areas discussed in **Section 3** (**Figure 7-1**), and presented in **Table 7-1** below, were determined to have no suspected release:

Table 7-1: No Suspected Release Areas

No Suspected Release Area	Used by	Rationale for No Suspected Release Determination
Armory	FLARNG	Interviewees indicated the fire extinguishers located around the facility have been ABC dry chemical. Fire suppression system installed in the facility kitchen contains potassium carbonate.

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 on the disposition of PFAS or the use of PFAS in training, firefighting, or other non-traditional activities were not typically kept by the facility or available during the PA.

The conclusions of this PA are predominantly based on the information provided during interviews with personnel who had direct knowledge of the facility. Sometimes, the provided information was vague. Gathered information has a degree of uncertainty due to the absence of written documentation, the limited number of personnel with direct knowledge due to staffing changes, the time passed since PFAS were first used (1969 to present), and a reliance on personal recollection. There is also a possibility the PA 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: Uncertainties within the PA

Area Evaluated	Source of Uncertainty
Dade City RC	No or limited information was available on the use and/or storage of AFFF at the facility. Interviewees did not have knowledge prior to 2008; however, FLARNG confirmed no AFFF-containing materials were used at the facility since its construction

7.3 Potential Future Actions

Based on the documented absence (1955-present) of the use or release of PFAS-containing materials at Dade City RC, no AOIs were identified during the PA. Evidence does not indicate that current or former ARNG activities contributed PFAS contamination to soil, groundwater, surface water, or sediment at the facility or adjacent areas. Dade City RC will not move forward in the CERCLA process.

CLIENT	ARNG			
NOTES	Preliminary Assessment for PFAS at Dade City Readiness Center, FL			
REVISED	1/29/2020	GIS BY	MS	1/29/2020
SCALE	1:1,200	CHK BY	MG	1/29/2020
Base Map: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics,		PM	RG	1/29/2020

N

Summary of Findings

AECOM
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Germantown, MD 20876

Figure 7-1

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8. References

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United States Department of Agriculture (USDA). 2019. Custom *Soil Resource Report for Pasco County, Florida*: Natural Resources Conservation Service.

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Wetterhall, W.S., 1964. *Geohydrologic Reconnaissance of Pasco and Southern Hernando Counties, Florida, Florida*: Florida Geological Survey, Report of Investigation no. 34

Appendix A
Data Resources

Data resources will be provided separately on CD. Data resources for Dade City Readiness Center include:

Dade City Leases, Licenses, and Permits

- 1989 Armory Board, State of Florida Lease No. 2345 located at Dade City Armory, Florida

Environmental Data Resources, Inc™. Geocheck Report

- 2019 Environmental Data Resources, Inc™. Geocheck Report for Dade City Readiness Center, Florida

Miscellaneous Data Resources

- 1964 Geohydrologic Reconnaissance of Pasco and Southern Hernando Counties, Florida, Florida: Florida Geological Survey, Report of Investigation no. 34
- 1982 Soil Survey of Pasco County, Florida
- 2009 Surface-Water and Groundwater Interactions along the Withlacoochee River, West-Central Florida
- 2011 The Hydrology and Water Quality of Select Springs in the Southwest Florida Water Management District
- 2015 Watershed Evaluation Report: Duck Lake Watershed
- 2019 Soil Resource Report for Pasco County, Florida: Natural Resources Conservation Service
- Dade City USEPA Unregulated Contaminant Monitoring Rule 3 Data

Appendix B
Preliminary Assessment Documentation

Appendix B.1
Interview Records

PA Interview Questionnaire - Other

Facility: DADE CITY RC
Interviewer: [redacted]
Date/Time: 02/07/19 10 05

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

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

2008, DEPLOYED 2010, FARP'D 2012, CAME BACK 2018

SUPPLY

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

	Known Uses
• CONSTRUCTED IN 1952	Use
• INFANTRY UNIT, ARTILLERY, FSC	Procurement
• NO KNOWN USE OR STORAGE OF AFFF	Disposition
• ABC DRY CHEMICAL FOR BUILDING	Storage (Mixed)
• FIRE SUPPRESSION IN KITCHEN	Storage (Solution)
• CITY WATER TO FACILITY	Inventory, Off-Spec
• CITY FIRE DEPARTMENT PROVIDES SUPPORT	Containment
• LIGHT VEHICLE MAINT.	SOP on Filling
• NOT AWARE OF ANY EMERGENCY RESPONSE TO AREA.	Leaking Vehicles
• NO SUPPLY FOR OTHER UNITS	Nozzle and Suppression System Testing
• NO VEHICLE FIRES	Dining Facilities
• FIRE DEPARTMENT NEXT DOOR	Vehicle Washing
	Ramp Washing
	Fuel Spill Washing and Fueling Stations
	Chrome Plating or Waterproofing

PA Interview Questionnaire - Other

Facility: DADE CITY READINESS CENTER
Interviewer: [redacted]
Date/Time: 02/07/19 12 00

Interviewee: FIRE DEPARTMENT CREW **Title:** VARIES **Phone Number:** — **Email:** —	Can your name/role be used in the PA Report? Y or (N) Can you recommend anyone we can interview? Y or (N) _____

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

FIRE DEPARTMENT CREW FIRE & RESCUE

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

	Known Uses
• HAVE MIXED FOAM FORMING SOLUTION ON TRUCKS IN 5-GALLON	Use
• NO FIRE TRAINING WITH FOAM	Procurement
• ANNUAL TESTING DONE OFF SITE.	Disposition
• FIRE TRUCKS CLEANED ON SCENE	Storage (Mixed)
• RESPONDED TO FIRE NEAR DADE CITY RC. NO FURTHER INFORMATION	Storage (Solution)
• NO EMERGENCY RESPONSES TO DADE CITY RC.	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

Facility ST
Visual Survey Inspection Log

Recorded by: [redacted]
ARNG Contact: [redacted]
Date: 02/03/19

Site Name / Area Name / Unique ID: DADE CITY READINESS CENTER
Site / Area Acreage:
Historic Site Use (Brief Description): ARMORY
Current Site Use (Brief Description): ARMORY, DRILLS, LT. VEHICLE MAINT.

1. Was AFFF used at the site/area? Y (N)
   3a. If yes, document how AFFF was used and usage time (e.g., *fire fighting training 2001 to 2014*)

2. Has usage been documented? Y (N)
   2a. If yes, keep a record (place electronic files on a disk) N/A

Significant Topographical Features:

1. Has the infrastructure changed at the site/area? Y (N)
   1a. If so, please describe change: (*ex. Structures structures 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:

Migration Potential:

1. Does site/area drainage flow off installation? (Y) / N
   1a. If so, please note observation and location: TO NORTHEAST
2. Is there standing water or drainage issues within the site/area? Y (N)
   2a. If so, please note observation and location:

3. Is there channelized flow within the site/area? Y (N)
   3a. If so, please note observation and location:

4. Have man-made drainage channels been constructed within the site/area? Y (N)
   4a. If so, please note the location of the channel:

Additional Notes

Appendix B.3
Conceptual Site Model Information

Preliminary Assessment – Conceptual Site Model Information

Site Name: DADE CITY READINESS CENTER

Why has this location been identified as a site?

LT VEHICLE MAINT. ACTIVITIES. AFFF POSSIBLY STORED OR USED AT SITE IN PAST.

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

NO

Training Events

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

Surface water flow direction? NORTHEAST

Average rainfall? 53" ANNUAL

Any flooding during rainy season? NO

Direct or indirect pathway to ditches? NO

Direct or indirect pathway to larger bodies of water? NO

Does surface water pond any place on site? NO

Any impoundment areas or retention ponds? NO

Any NPDES location points near the site? NO

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

Preliminary Assessment – Conceptual Site Model Information

Groundwater:

Groundwater flow direction? NORTH EAST

Depth to groundwater? UNKNOWN

Uses (agricultural, drinking water, irrigation)? NO

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? NO

Are there off-post drinking water wells downgradient NO

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? N/A

Preliminary Assessment – Conceptual Site Model Information

Identify Potential Receptors:

Site Worker YES

Construction Worker YES

Recreational User NO

Residential YES

Child NO YES, SCHOOL 1/2 MILE RADIUS

Ecological NO

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

HOSPITAL / MEDICAL CLINICS, DETENTION CENTER, RESIDENTIAL, SCHOOL

Documentation

Ask for Engineering drawings (if applicable).

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

Appendix C
Photographic Log

Appendix C - Photographic Log

Army National Guard, Preliminary Assessment for PFAS	Dade City Readiness Center	Dade City, Florida

Photograph No. 1

Date 2/7/2019
Time 10:21

Description:
Facility Kitchen fire suppression system chemical, potassium carbonate solution.

Orientation:
South

Photograph No. 2

Date 2/7/2019
Time 10:22

Description:
Facility Kitchen Fire suppression, Potassium carbonate.

Orientation:
South

Appendix C - Photographic Log

Army National Guard, Preliminary Assessment for PFAS	Dade City Readiness Center	Dade City, Florida

Photograph No. 3

Date 2/7/2019

Time 10:22

Description:

Facility Kitchen Fire Suppression System.

Orientation:

Southwest