

FINAL Preliminary Assessment Report Building 835 Wendover Airport, Utah

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

August 2020

Prepared for:



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UNCLASSIFIED

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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
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
HA	Health Advisories
HAZMAT	Hazardous Materials
mg/L	milligrams per liter
NCO	Non-Commissioned Officer
PA	Preliminary Assessment
PFAS	per- and poly-fluoroalkyl substances
PFOA	perfluorooctanoic acid
PFOS	perfluorooctanesulfonic acid
ppt	parts per trillion
SAIC	Science Applications International Corporation
SI	Site Inspection
TDS	Total Dissolved Solids
UCMR3	Third Unregulated Contaminant Monitoring Rule
US	United States
USAAF	United States Army Air Force
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
UTARNG	Utah Army National Guard
VSI	visual site inspection
WRF	Water Reclamation Facility
WWTP	wastewater treatment plant

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 poly-fluoroalkyl substances (PFAS)-containing materials was completed for the Utah ARNG (UTARNG) Building 835 to assess potential PFAS release areas and exposure pathways to receptors. UTARNG leases from the Wendover Airport Building 835, also referred to as the “facility”, and an administrative building known as Building 807 in Wendover, Utah. Building 807 is and always has been administrative in nature and does not have a fire suppression system; therefore, it is not discussed further in this report. The performance of this PA included the following tasks:

- Reviewed available administrative record documents and Environmental Data Resources, Inc. (EDR)TM 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 1-day site visit on 17 July 2019 and completed visual site inspections at locations where PFAS-containing materials were suspected of being stored, used, or disposed.
- Interviewed current Wendover Airport personnel during the site visit, including the UTARNG Safety Non-Commissioned Officer /Hazardous Materials Training Manager, the UTANRG Environmental Resource Manager, and the Facilities Manager/Platoon Supervisor/Aviation Safety Officer.
- Identified an Area of Interest (AOI) 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 the AOI.

One AOI related to potential PFAS releases was identified at Building 835 during the PA. The AOI is shown on **Figure 6-1** and described in **Table ES-1** below:

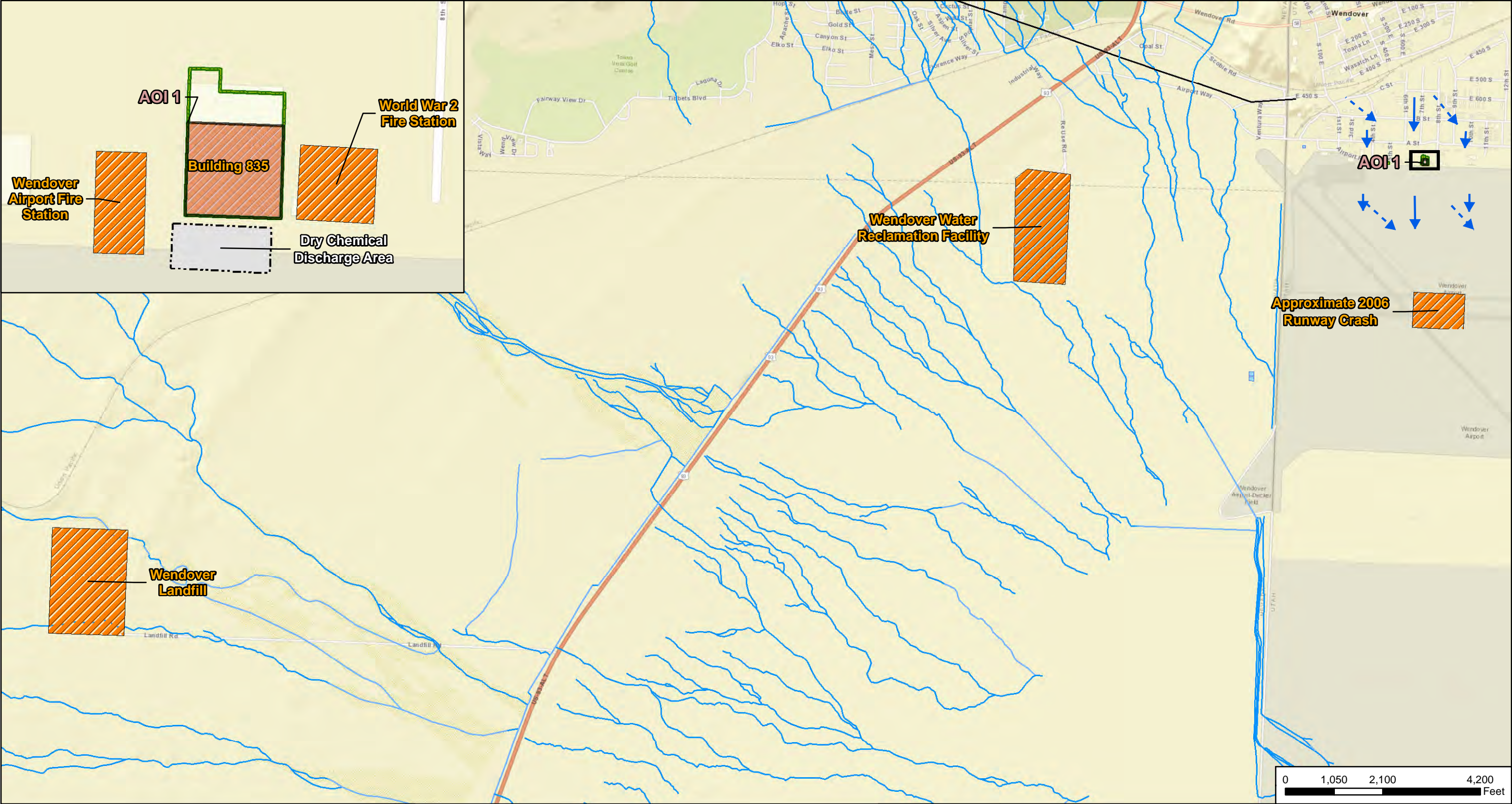
Table ES-1: AOI at Building 835

Area of Interest	Name	Used by	Release Dates
AOI 1	Building 835	UTARNG	After 2014

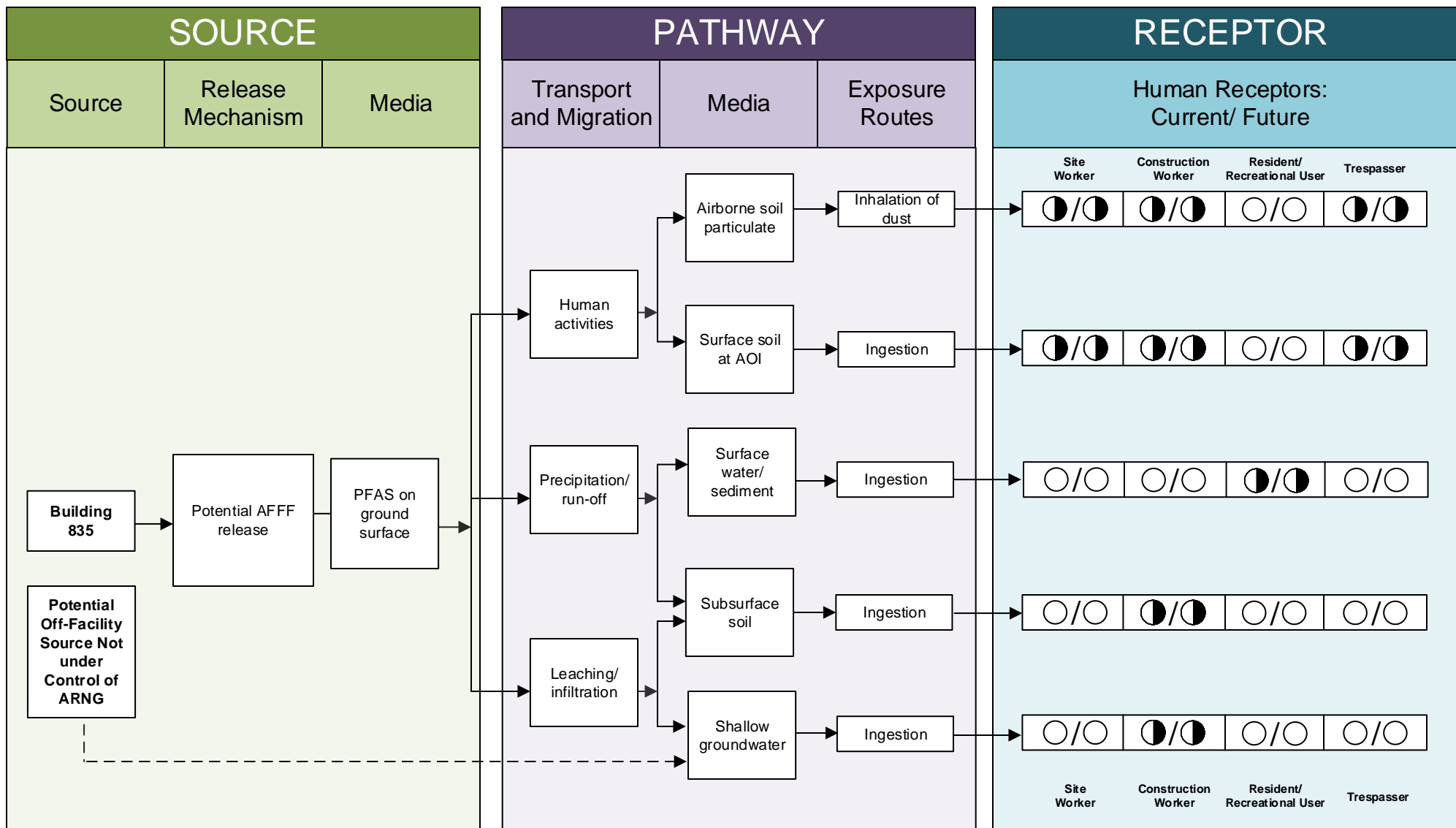
Two off-facility (non ARNG) fire training areas were identified as potential adjacent PFAS source areas: the Wendover Airport Fire Station to the west, and World War II Fire Station to the east. The Wendover Airport Fire Station is considered a potential adjacent PFAS source area due to its storage of AFFF used for emergency response and the maintenance of firefighting vehicles that carry AFFF. The World War II Fire Station is considered a potential adjacent PFAS source area due to its known storage of AFFF used for emergency response. It is assumed that the same maintenance and training activities that are reported to occur at the current fire station also occurred at the World War II Fire Station until 2014 when the current fire station was built. The Wendover Airport Runway directly south of the facility is considered a potential adjacent source area due to the use of AFFF to extinguish fires and for use in training. Due to a southerly surface flow direction and southeast groundwater flow direction, these potential adjacent PFAS source areas are unlikely to affect the facility. The three potential adjacent PFAS source areas are shown on **Figure ES-1**.

Based on the US Environmental Protection Agency (USEPA) Unregulated Contaminant Monitoring Rule 3 (UCMR 3) data, no PFAS were detected in a public water system above the USEPA lifetime Health Advisory (HA) within 20 miles of the facility (USEPA, 2017). 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 UCMR 3 but might be detected if analyzed today.

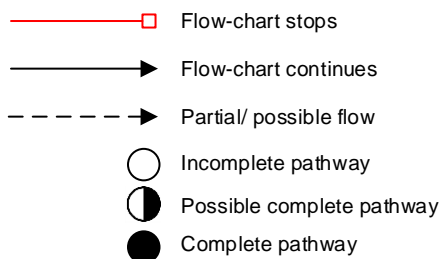
Based on information obtained during the PA, there is potential for exposure to PFAS contamination in media at or near the facility. The preliminary CSM for Building 835 is shown on **Figures ES-2**.



CLIENT ARNG					<div><div><div></div>Area of Interest</div><div><div></div>Potential PFAS Release</div><div><div></div>Facility Boundary</div><div><div></div>Water Body</div><div><div></div>River/Stream</div><div><div></div>Canal/Ditch</div><div><div></div>Pipeline</div><div><div></div>Surface Water Flow Direction</div><div><div></div>Inferred Groundwater Flow Direction</div></div>	<div><div>N</div></div>	Summary of Findings	
PROJECT Preliminary Assessment for PFAS at Wendover Airport, UT							<div><div>AECOM</div><div>12420 Milestone Center Drive Germantown, MD 20876</div></div>	Figure ES-1
REVISED	6/25/2020	GIS BY	MS	6/25/2020				
SCALE	1:25,200	CHK BY	AG	6/25/2020				
Base Map: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c)								
		PM	RG	6/25/2020				



LEGEND



Notes:

- The resident receptor refers to an off-site resident.
- Current risk practice suggests the exposure pathway for dermal contact is insignificant compared to ingestion, but supporting data is sparse and continues to be studied.

Figure ES-2
Preliminary Conceptual Site Model
Building 835, Wendover, UT

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) (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. In May 2016, the US Environmental Protection Agency (USEPA) issued Drinking Water lifetime HA of 70 parts per trillion (ppt) for individual and combined PFOA and PFOS in drinking water.

This report presents findings of a PA for PFAS-containing materials at the Utah ARNG (UTARNG) Building 835 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. UTARNG leases from the Wendover Airport Building 835, also referred to as the “facility”, and an administrative building known as Building 807 in Wendover, Utah. Building 807 is and always has been administrative in nature and does not have a fire suppression system; therefore, it is not discussed further in this report.

This PA documents the known fire training areas (FTAs) as well as additional locations where PFAS may have been released to the environment at the Wendover Airport. The term PFAS will be used throughout this report to encompass all PFAS chemicals being evaluated, including PFOS and PFOA, which are key components 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)TM 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 1-day site visit on 17 July 2019 and completed visual site inspections (VSIs) at locations where PFAS-containing materials were suspected of being stored, used, or disposed.
- Interviewed current Wendover Airport personnel during the site visit including the UTARNG Safety Non-Commissioned Officer (NCO)/Hazardous Materials (HAZMAT) Training Manager,

the UTANRG Environmental Resource Manager, and the Facilities Manager/Platoon Supervisor/Aviation Safety Officer.

- Identified an Area of Interest (AOI) 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 the 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 the 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 History

The facility is located in Tooele County, approximately 133 miles west of Salt Lake City, Utah. The facility is situated within the Wendover Airport at 345 Airport Apron, Wendover, Utah, 84083. The airport is positioned south of the city of Wendover and Interstate 80 (**Figure 1-1**).

The Wendover Airport was erected in 1943 by the US Army Air Forces (USAAF) to be used as a bombing brigade. Between 1940 and 1960, the site transitioned into the Wendover Air Force Auxiliary Field. Between 1957 and 1977, a total of 80,102.607 acres were disposed of to various parties, the majority of which went to the Bureau of Land Management and the city of Wendover. The remaining 16,894.293 acres became part of the Utah Test and Training Range, owned by the Department of Defense (MWH, 2014).

According to the Tooele County tax assessor, the airport comprises eight parcels totaling 1,692.39 acres owned by Tooele County. Building 835 is located within one of the eight airport parcels (parcel number 01-271-0-0007 totaling 490.32 acres) (Tooele County, 2019).

Building 835 is a large 21,858 square foot prefabricated steel building located at the north edge of the aircraft anchorage and at the east end of the original historic airfield row of hangars (MWH, 2014). The building was originally used as an aircraft maintenance hangar and ceased being under the control of the USAAF in 1972. Building 835 was subsequently used by the Air Force for dry storage of fuel tankers and other miscellaneous equipment until 2014, when the building was leased from the Wendover Airport and remodeled to its current state by the ARNG. The lease (included in **Appendix A**) does not require ARNG to accept responsibility for past airport activities. The ARNG first occupied the building in the summer of 2016, and the building began operations in February 2017.

1.5 Facility Environmental Setting

Building 835 occupies approximately 0.66 acres, approximately 95 percent (%) of which are impervious surfaces. The areas surrounding Building 835 are primarily vacant land to the north, and general aviation facilities at the Wendover Airport to the west, south, and east. The airport is surrounded by desert, much of which is public and Air Force land. There is a series of mineral evaporation ponds owned by Intrepid Potash and located approximately 5,000 feet east of the facility. The facility sits at an elevation of 4,237 feet above mean sea level, with a very slight general topographic gradient to the southeast. The Silver Island Mountains are located approximately 1.5 miles north of the facility, and the Bonneville Salt Flats are located approximately 5 miles northeast of the facility.

1.5.1 Soil

The soils at the facility generally consist of lacustrine deposits of the Pleistocene-aged Lake Bonneville, known as the Saltair-Playas complex (US Department of Agriculture [USDA], 2019). The Saltair-Playas complex consists of deep, poorly-drained, strongly saline soils located on the level or nearly level (0 to 1% slope) basin floors of the west desert. Soils are strongly calcareous, stratified lacustrine sediments of silt, clay, and sand. The surface layer consists of pale brown silt with areas covered by a thin layer of salt crystals (USDA, 2000).

1.5.2 Geology

The facility is located in the Basin and Range physiographic province. The geologic features of the province are complex and involve rocks that range in age from Precambrian to Holocene. The geologic history includes major episodes of sedimentation, volcanic activity, and tectonic deformation by both compressional and extensional forces. Groundwater is present in all the rock types in the province, however, basin-fill aquifers are the primary groundwater reservoirs (Prudic et al., 1993).

The area now occupied by the Wendover Airport was once inundated by Pleistocene-age Lake Bonneville, which covered much of the land surface of western Utah and eastern Nevada approximately 32,000 to 14,000 years ago. The Great Salt Lake is a shrunken remnant of this formerly vast lake. The lake shore and lake bed sediments deposited in Lake Bonneville form the surficial and near surface deposits of the Wendover Airport (Science Applications International Corporation [SAIC], 1989). Geology at the facility is characterized as mud flats. Geologic units are depicted on **Figure 1-2**.

1.5.3 Hydrogeology

Three aquifers are present in much of the northern Great Salt Lake Desert of which the facility is a part. An aquifer composed of crystalline salt and jointed lakebed deposits at and just beneath the land surface averages 25 feet in thickness, underlies about 1,650 square miles of desert floor, and yields brine. An aquifer of unknown thickness and extent is present in surficial and buried

alluvial fans along the mountain flanks and yields fresh to moderately saline water. The most extensive aquifer underlies the entire area where consolidated rocks are not exposed and is made up of unconsolidated to partly consolidated valley fill. This aquifer yields brine to wells completed at depths of 1,000 to 1,600 feet below land surface in the Bonneville Salt Flats area (Stephens, 1974).

Basin fill deposits constitute the primary hydrogeologic units in the region. Groundwater occurs in shallow unconfined units to a depth of approximately 40 feet below ground surface (bgs). Deeper hydrogeologic units are comprised of carbonate rocks that range in thickness from 500 to 25,000 feet (Bedinger, et al., 1990). Depth to water in the area ranges from near ground surface to 50 feet bgs. The general hydraulic conductivity of the basin fill deposits is 0.002 meters per day. Typical hydraulic gradients in the basin fill deposits are extremely flat and are approximately 0.005 meters per meter. Shallow groundwater flow direction at the site area is generally to the southeast (URS, 2015). Groundwater features are presented on **Figure 1-2**.

Water quality is characterized by the presence of dissolved solids and chemical constituents in solution. The major chemical constituents in the groundwater are calcium, magnesium, and sodium bicarbonate. Groundwater with higher Total Dissolved Solids (TDS) typically contains chloride as the primary anion (URS, 2015). In general, water under the desert floor contains 150,000 milligrams per liter (mg/L) or more of TDS (Stephens, 1974). According to the State of Utah Ground Water Quality Protection Program, groundwater containing greater than 10,000 mg/L of TDS is considered class IV ground water, which is also referred to as saline ground water, and is not used as a water supply source. An EDR™ report conducted a well search for a 1-mile radius surrounding the facility (**Appendix A**). Using additional online resources, such as state and local Geographic Information System databases, wells were researched to a 4-mile radius of the facility. The EDR™ database search returned a number of non-production groundwater wells in the vicinity of the facility (**Figure 1-2**). Drinking water supplies for Wendover, Utah and the facility come from developed springs located near Pilot Peak, which is approximately 35 miles north of Wendover, Utah (MWH, 2014).

Based on the USEPA Unregulated Contaminant Monitoring Rule 3 (UCMR 3) data, no PFAS were detected in a public water system above the HA within 20 miles of the facility (**Appendix A**). The HA is 70 ppt 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 UCMR 3 but might be detected if analyzed today.

1.5.4 Hydrology

The facility is located within the Great Salt Lake Basin, which dictates the flow of water in the region. Groundwater recharge most likely comes from mountain precipitation, which can enter alluvial sediments or bedrock fractures and flow down gradient to the lake basin. There is regional discharge of groundwater within the lake bed sediments to the surface, where it is evaporated, leaving salt and other evaporate deposits (URS, 2015).

Based on a desktop review of the National Wetlands Inventory online mapping system (<http://wetlands.fws.gov/>), the facility does not contain any mapped wetlands or surface waters. No surface water was observed during the site visit.

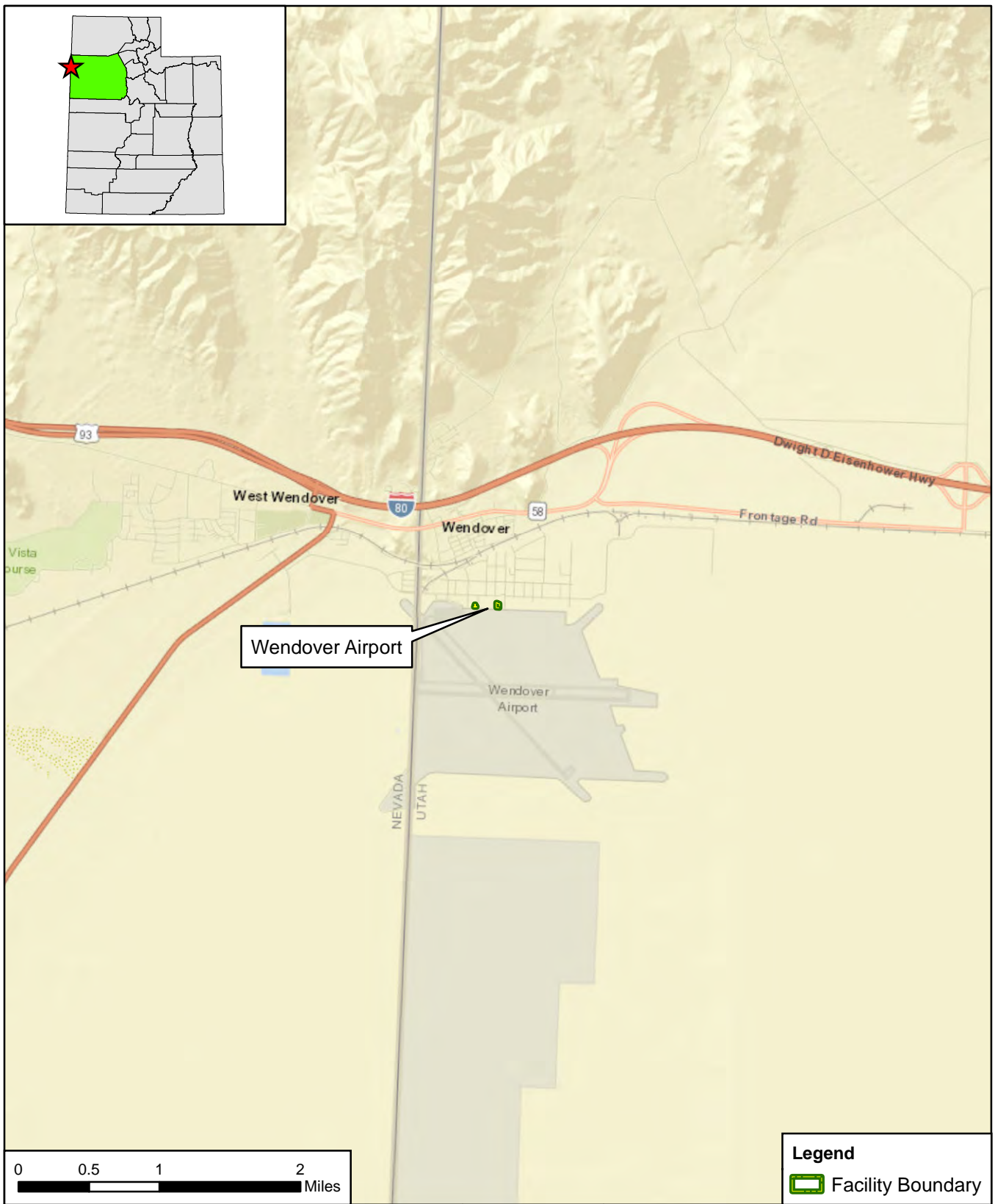
Surface water in the area of Wendover and the facility does not occur in permanent, naturally-occurring streams. Surface water does occur east of the facility in evaporation ponds used to commercially recover potash. Because of high evapotranspiration rates and low rainfall, surface water is only present at the facility during brief episodes following snow melt and storm events (Radian, 1996). During these events, surface water runoff generally drains from northwest to southeast. Surface water features are presented on **Figure 1-3**.

1.5.5 Climate

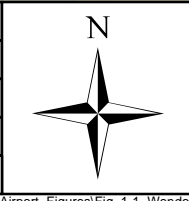
The facility is located in an area characterized by an arid climate. Winters are moderately to severely cold, and summers are hot and dry. Daily temperature fluctuations exceed 20 to 30 degrees Fahrenheit (°F) (NOAA, 2019). Average annual humidity ranges from about 30 to 40 percent over most of the region. Average annual precipitation ranges from about 4.5 to slightly more than 12 inches. Low humidity, abundant sunshine, and light to moderate winds result in rapid evaporation. Runoff is scant and reaches the desert floor only during or immediately after thunderstorms and periods of rapid snowmelt (Stephens, 1974).

1.5.6 Current and Future Land Use

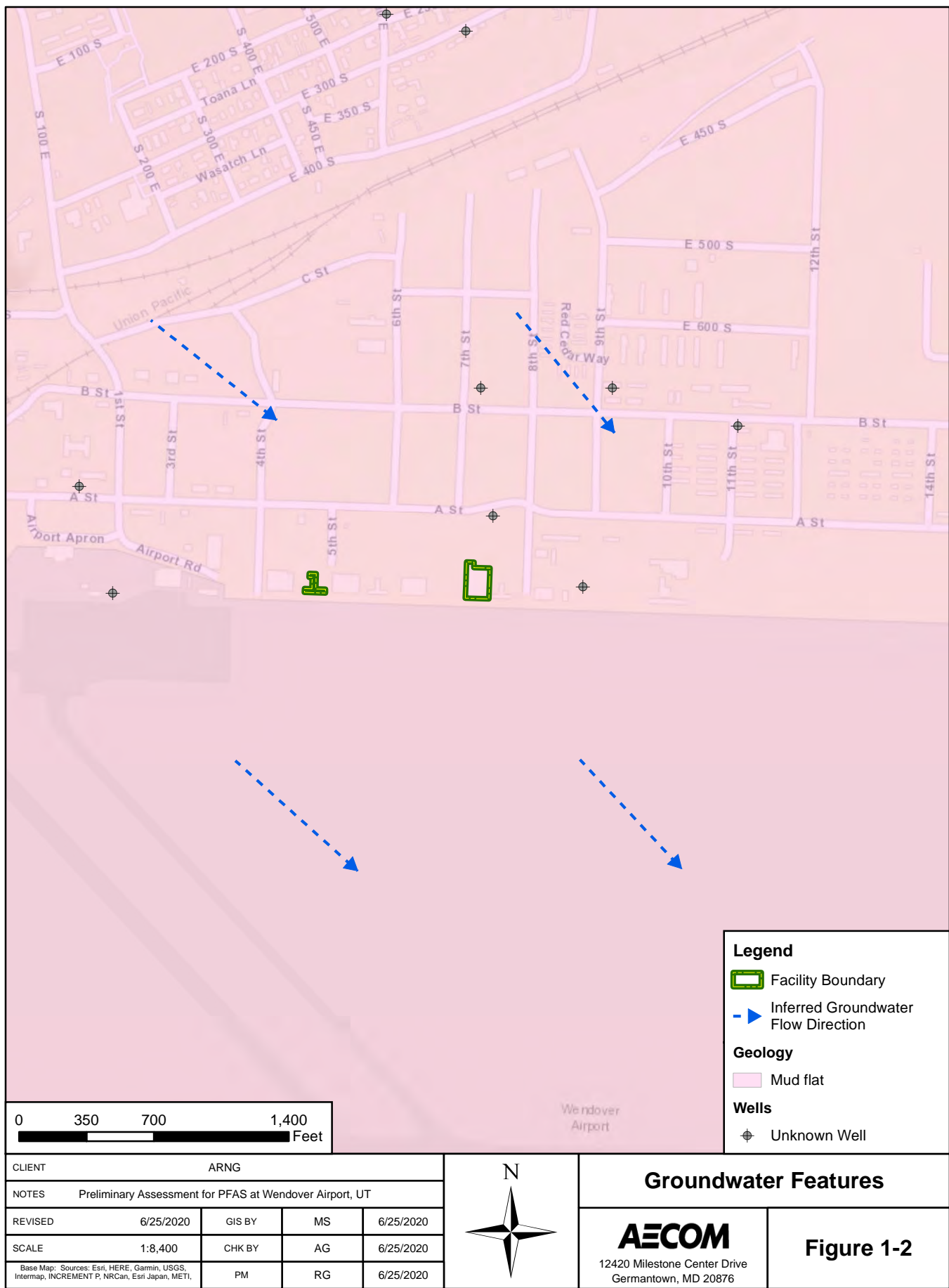
The facility is currently occupied by UTARNG and is comprised of a hangar, maintenance and storage areas, and an administrative office area. Reasonably anticipated future land use is not expected to change significantly from the current land use described above.

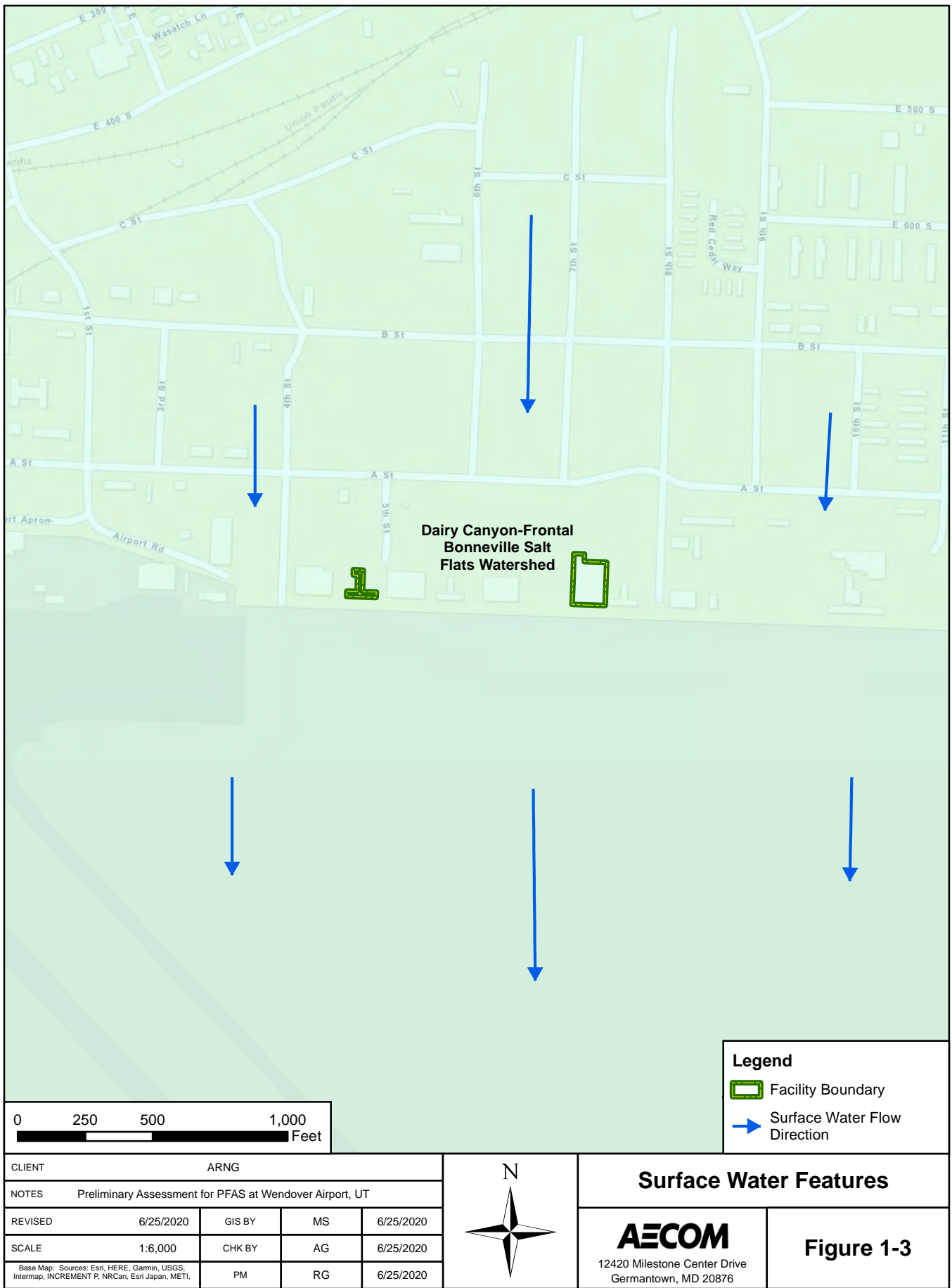


CLIENT	ARNG			
NOTES	Preliminary Assessment for PFAS at Wendover Airport, UT			
REVISED	4/2/2020	GIS BY	MS	4/2/2020
SCALE	1:63,360	CHK BY	AG	4/2/2020
Base Map: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI,		PM	RG	4/2/2020



Facility Location	
<p>12420 Milestone Center Drive Germantown, MD 20876</p>	<p>Figure 1-1</p>





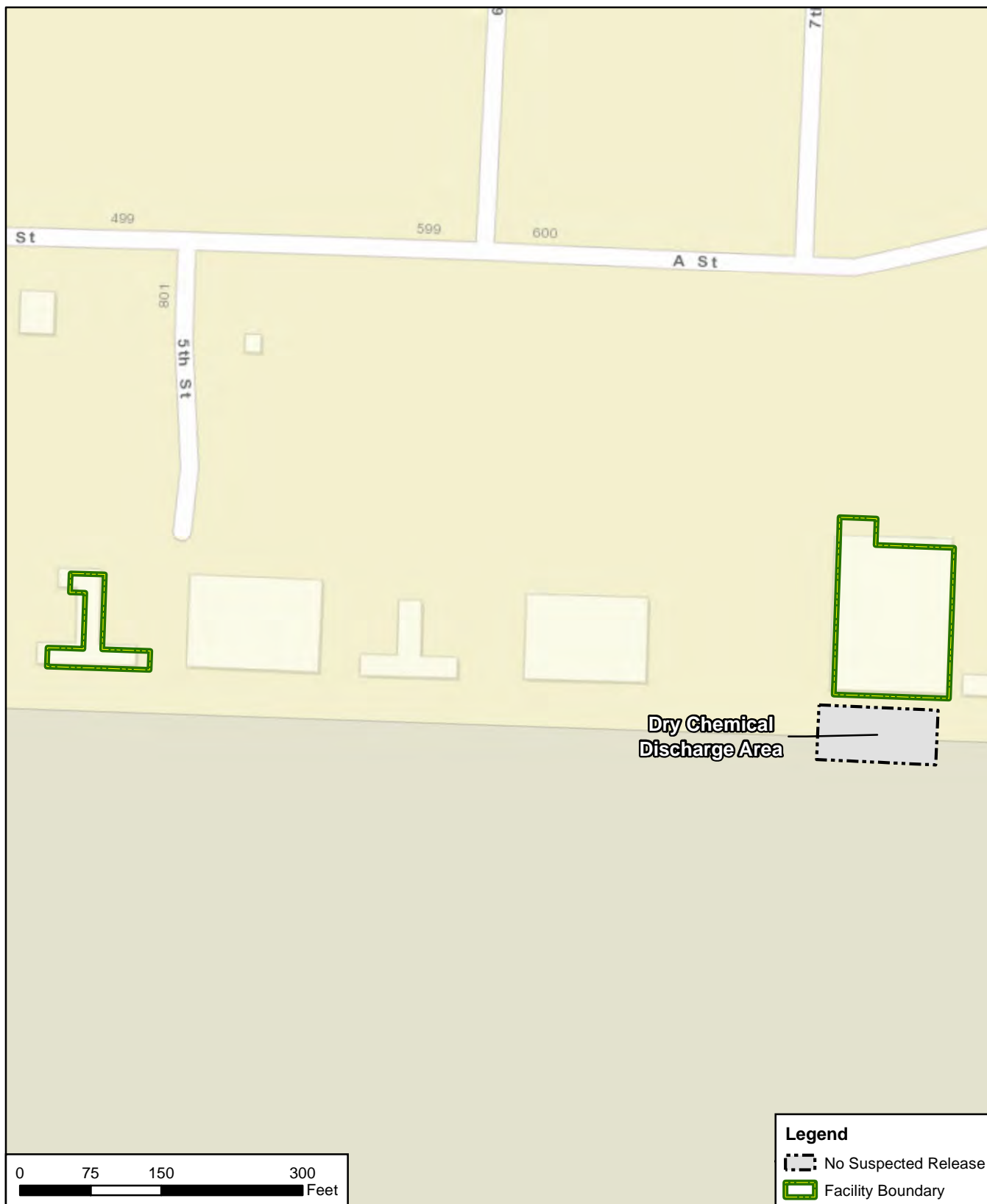
C:\Users\stankovichm\OneDrive - AECOM Directory\ARNG_PFAS_GIS_60552172\MXDs\UT\Wendover_Airport_Figures\Fig_1-3_Wendover_Airport_Surface_Water.mxd



2. Fire Training Areas

Building 835 does not have a fire suppression system. Fire suppression at the facility would be conducted with handheld Purple K dry chemical units (which are not anticipated to contain PFAS), or the UTARNG would receive assistance from the adjacent Wendover Airport fire station. UTARNG reported that training with Purple K is conducted annually to familiarize personnel with using the handheld units at the facility. Approximately six people spray the units on the ground outside the facility each year (**Figure 2-1**).

UTARNG personnel confirmed there have been no fire training activities with AFFF at the facility since at least 2016, when the ARNG first occupied the facility. Wendover Airport personnel were not aware of fire training activities having occurred in the building since at least 2006.

One historic and one current FTA used by non-UTARNG units exists within the vicinity of the UTARNG property and are discussed in **Section 5**.



CLIENT ARNG						Fire Training Area	
NOTES Preliminary Assessment for PFAS at Wendover Airport, UT						 12420 Milestone Center Drive Germantown, MD 20876	Figure 2-1
REVISED	6/25/2020	GIS BY	MS	6/25/2020			
SCALE	1:1,800	CHK BY	AG	6/25/2020			
Base Map: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI,		PM	RG	6/25/2020			

C:\Users\stankevichm\OneDrive - AECOM Directory\ARNG_PFAS_GIS_60552172\MXDs\UT\Wendover_Airport_Figures\Fig_2-1_Wendover_Airport_Fire_Training_Area.mxd

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 demonstration. Information on these features obtained during the PA are included in **Appendices A** and **B**. One non-FTA where AFFF could have been potentially stored and/or released was investigated during the PA, as described below and shown on **Figure 3-1**.

3.1 Building 835

Two mobile AFFF tanks were observed on either side of Building 835. According to the Facility Manager, the tanks were being stored for the aviation unit at West Jordan, Utah. Based on interviews and the photographs included with the Phase I ESA conducted in 2014, the mobile tanks were brought onsite after 2014. The mobile tanks were presumably full but have never been discharged, filled, or serviced, and are not intended for future use at the facility.



CLIENT		ARNG			
NOTES		Preliminary Assessment for PFAS at Wendover Airport, UT			
REVISED	6/25/2020	GIS BY	MS	6/25/2020	
SCALE	1:1,800	CHK BY	AG	6/25/2020	
Base Map: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI,		PM	RG	6/25/2020	



Non-Fire Training Area

AECOM
12420 Milestone Center Drive
Germantown, MD 20876

Figure 3-1

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4. Emergency Response Areas

No emergency response areas for incidents involving the use of AFFF were identified within the footprints of Building 835 during the PA. Emergency response locations have been identified in areas surrounding the facility and are described in **Section 5**.

5. Adjacent Off-Facility Sources

Several potential off-facility sources of PFAS adjacent to the facility were identified during the PA through interviews. A review of the EDR™ report for a 1-mile radius surrounding the Wendover airport (**Appendix A**) and historical document review revealed no adjacent sources. A description of each potential adjacent source identified during the PA interviews is presented below, and the sources are shown on **Figure 5-1**.

5.1 Wendover Airport Fire Station

The building adjacent to the facility on the west side was identified during the PA as the fire station for the Wendover Airport. The fire station reportedly has one firetruck that carries 1,500 gallons of water, 220 gallons of foam, and 550 gallons of dry chemicals. Fire training, equipment testing, nozzle testing, equipment washing, and line purging have occurred on the south side of the fire station since 2014. Approximate geographic coordinates for fire training activities (based on description) are 40°43'39.9"N; 114°01'59.8"W.

5.2 World War II Fire Station

The building adjacent to the facility on the east side was identified during the PA as the fire station used since World War II. According to the airport manager, the former fire station was used to store the firetruck and approximately 250 gallons of AFFF concentrate foam stored in 55-gallon drums until the new fire station was built in 2014. No discharges in the storage area were reported; however, fire training, equipment testing, nozzle testing, equipment washing, and line purging activities similar to those currently conducted at the new fire station are assumed to have taken place south of the World War II fire station. Approximate geographic coordinates for the AFFF storage (based on description) are 40°43'40.4"N; 114°01'56.3"W.

5.3 2006 Runway Crash

The Airport Manager stated there have been no major emergencies since 2006, apart from a small aircraft crash in early 2006 on the runway directly south of the facility. The fire was suppressed with foam by the Wendover Airport emergency services, although the quantity used is unknown. Approximate geographic coordinates for the crash (based on description) are 40°43'10.4"N; 114°01'57.9"W.

5.4 Wendover Water Reclamation Facility

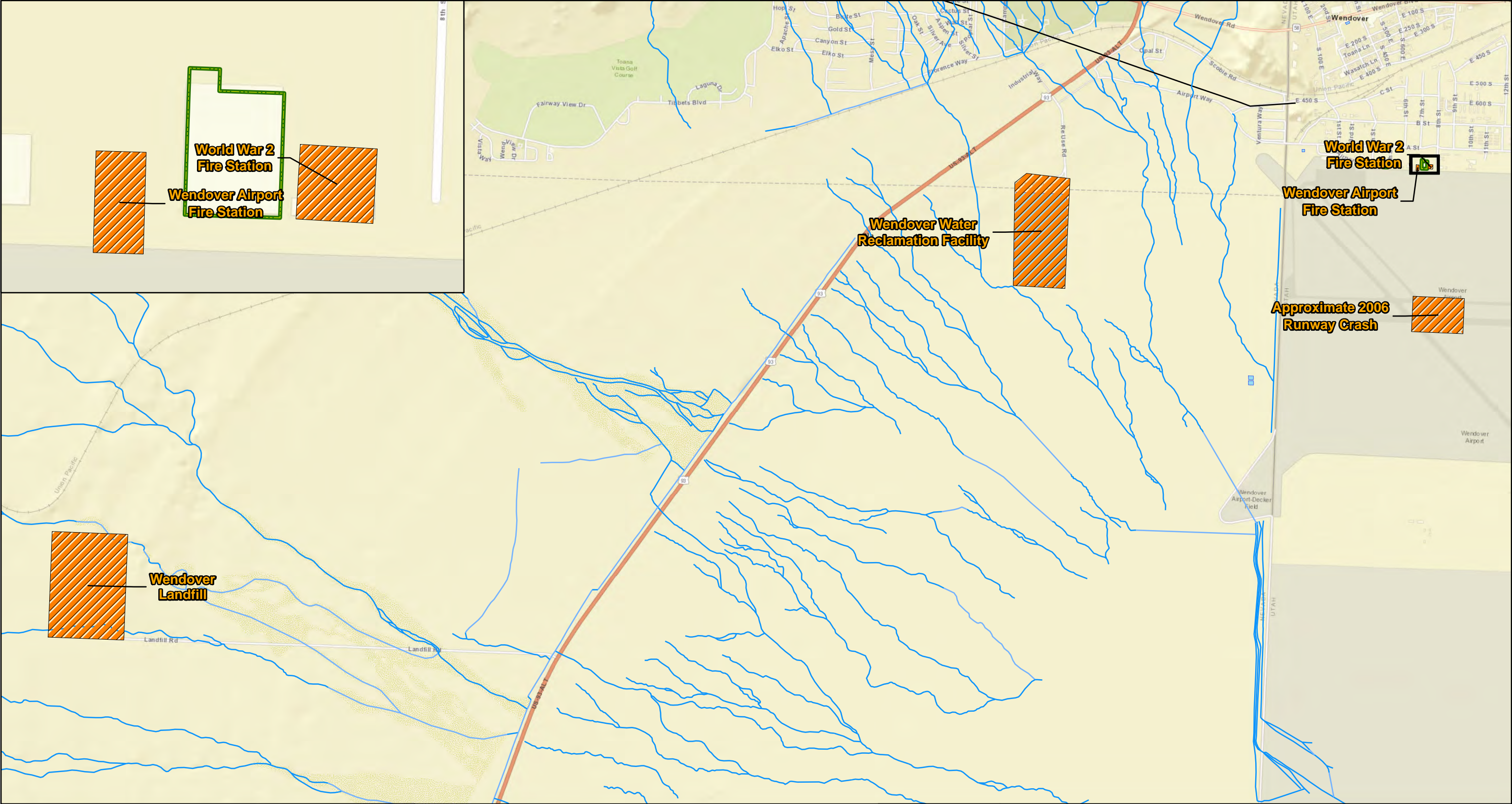
The Wendover Water Reclamation Facility (WRF) is located 1.5 miles southwest of Building 835. Approximate geographic coordinates for the Wendover WRF are 40°43'24.1"N 114°03'41.4"W. Wastewater from the city of is conveyed to the WRF where it is treated and reused for irrigation and compost. The WRF utilizes an activated sludge treatment process with filtration.

Wastewater treatment plants (WWTPs) are not usually a primary potential release area of PFAS, but sludges and liquids from areas of potential release that are treated at WWTPs may create a secondary source of contamination. Known AFFF releases at FTAs and emergency response locations in the area may contribute to PFAS in sludge and discharged, treated water from the WRF (Qua Engineering, Inc., 2004).

5.5 Wendover Landfill

There are no landfills within the footprint of the Wendover airport; however, there is a landfill associated with the city of Wendover. The Wendover Landfill is located approximately 5.6 miles southwest of Building 835, off Lincoln Highway. Approximate geographic coordinates for the Wendover Landfill are 40°42'05.7"N 114°08'00.3"W. The landfill is a disposal facility for construction/demolition debris, dry industrial waste, municipal solid waste, and automobile tires.

Landfills are not usually a primary potential release area of PFAS, but materials disposed of in landfills may create a secondary source of contamination. Such materials, to name a few, may include used AFFF storage containers, or products associated with waterproofing uniforms or boots. Known PFAS release areas in the city of Wendover may have contributed to waste-containing PFAS being disposed of at the landfill.



CLIENT		ARNG			
PROJECT		Preliminary Assessment for PFAS at Wendover Airport, UT			
REVISED	6/24/2020	GIS BY	MS	6/24/2020	
SCALE	1:25,200	CHK BY	AG	6/24/2020	
Base Map: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c)		PM	RG	6/24/2020	

Potential PFAS Release

Facility Boundary

Water Body

River/Stream

Canal/Ditch

Pipeline

0

1,050

2,100

4,200

Feet

N

Adjacent Sources

AECOM

12420 Milestone Center Drive
Germantown, MD 20876

Figure 5-1

6. Preliminary Conceptual Site Model

Based on the PA findings, Building 835 where the mobile AFFF units are stored is considered an AOI. The AOI and preliminary CSM for the AOI are shown on **Figures 6-1** and **6-2** and summarized below.

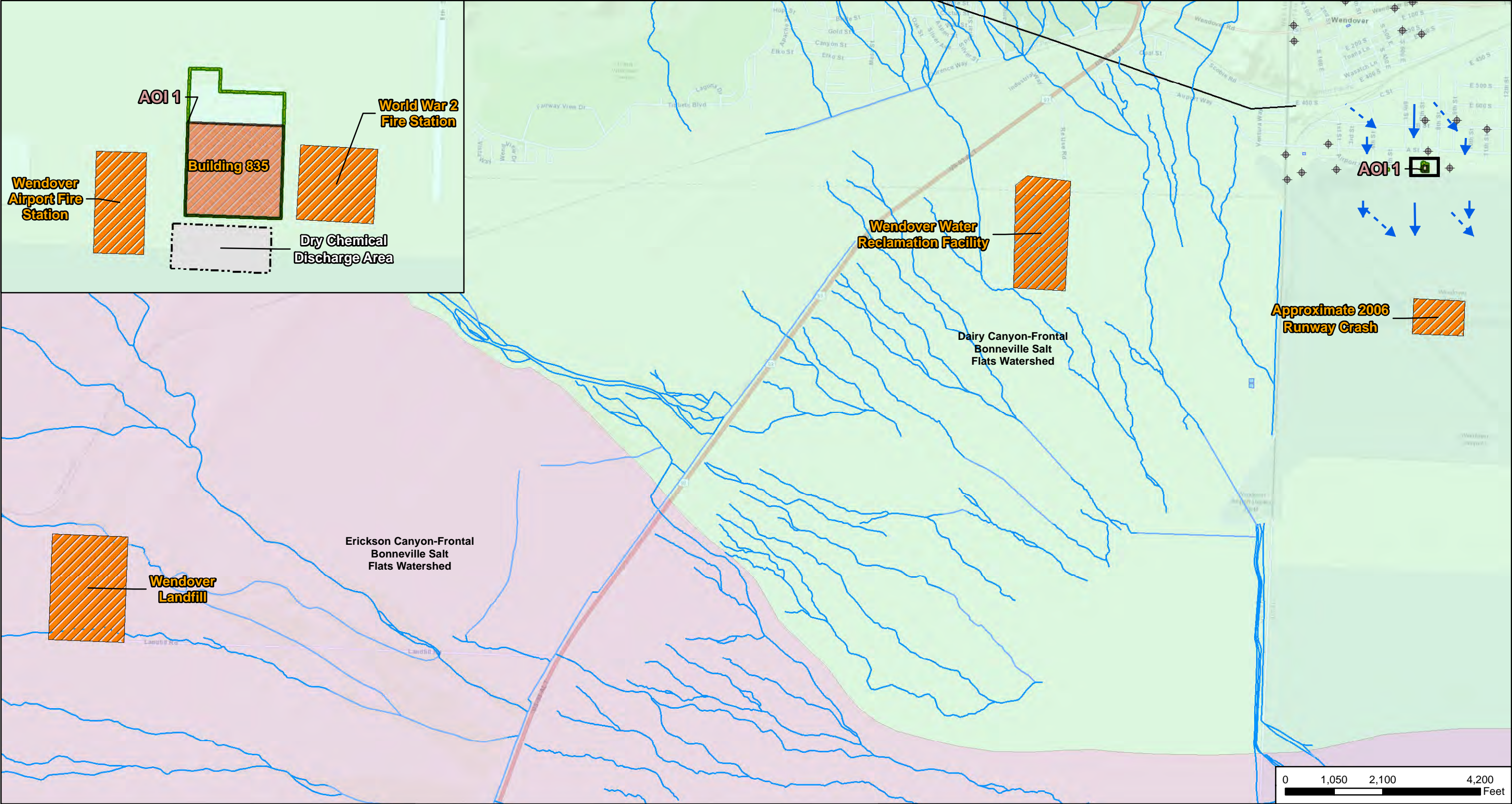
The following sections describe the CSM components and the specific CSM developed for the AOI. The CSM identifies the three components necessary for a potentially complete exposure pathway: (1) source, (2) pathway, (3) receptor. If any of these elements are missing, the pathway is considered incomplete.

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 is sparse and continues to be the subject of PFAS toxicological studies (National Ground Water Association, 2018). Receptors for the facility include site workers, construction workers, residents, and trespassers. The preliminary CSM for the AOI indicates which specific receptors could potentially be exposed to PFAS.

6.1 AOI 1: Building 835

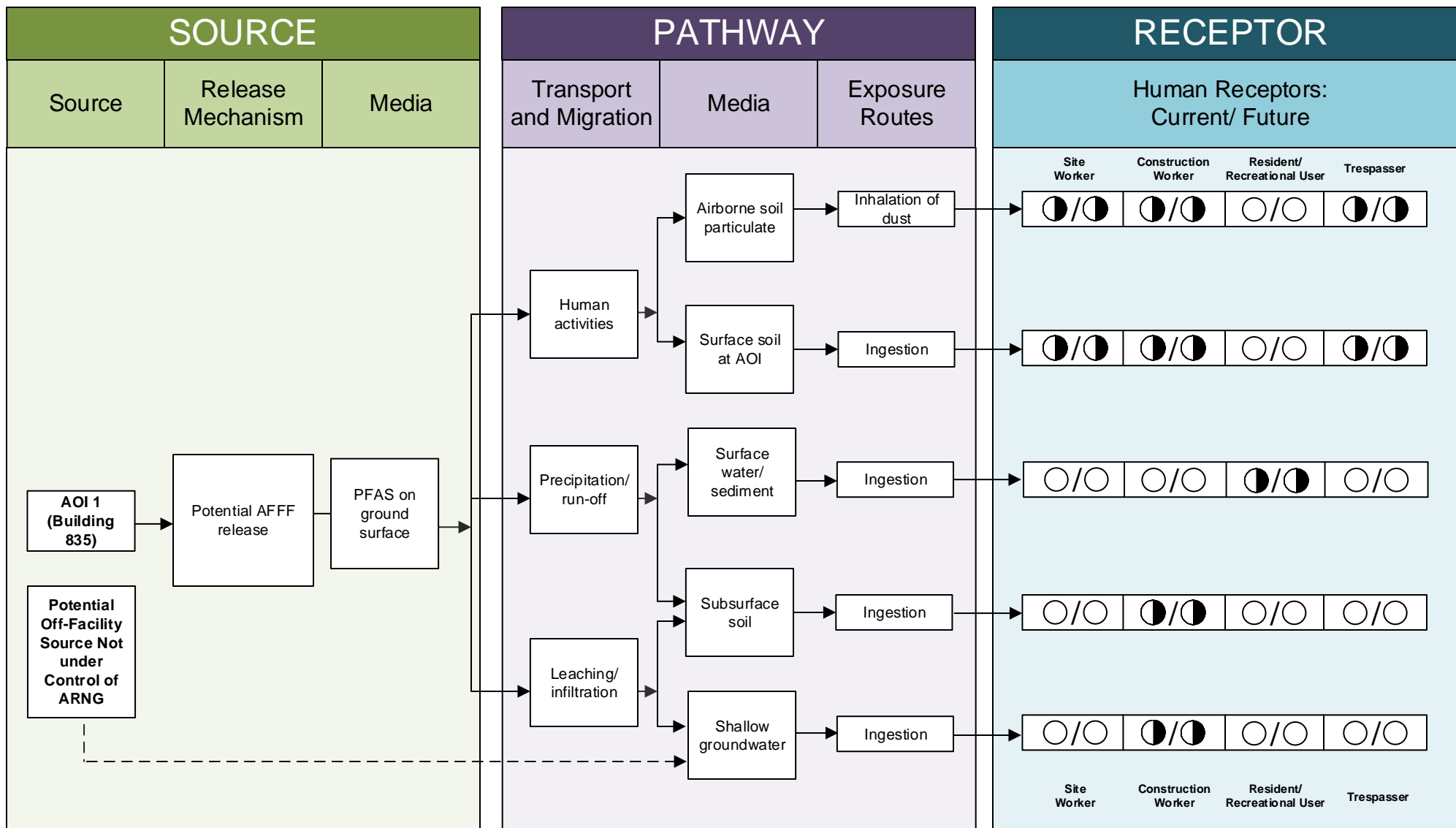
AOI 1 is Building 835 where the mobile AFFF Tanks are stored. The tanks were brought onsite after 2014 by another unit to be used for training; the tanks were reportedly not used but were left at the facility. The mobile tanks were presumably full but reportedly have never been discharged, filled, or serviced, and are not intended for future use at the facility.

Although there are no reported discharges from the tanks, it is possible that the tanks were discharged at or near the facility outside the knowledge of interviewed personnel. PFAS are water soluble and can migrate readily from soil to groundwater or surface water via leaching and runoff. If PFAS releases to the ground surface occurred, it would be possible for PFAS in surface water runoff to flow into adjacent unpaved surfaces and into surface soil. Any potential discharges from the tanks would likely have occurred on a paved surface; therefore, the pathway for potential exposure to PFAS contamination via inhalation of dust particles, or ingestion of surface soil during construction or maintenance, is considered partially complete at the AOI for site workers, construction workers, and trespassers. Ground-disturbing activities to subsurface soil could present another potentially complete exposure pathway to construction workers via ingestion of subsurface soil. Evaporation ponds to the east produce potash used for fertilizer which could potentially be used on food; therefore, the pathway for potential exposure to PFAS contamination from surface water via ingestion is complete for off-facility residents and recreational users. Depth to groundwater could be near surface to 50 feet bgs; therefore, the pathway for potential exposure to PFAS contamination from groundwater via ingestion is complete for construction workers. Drinking water supplies for Wendover, Utah and the facility come from developed springs located near Pilot Peak, which is approximately 35 miles north of Wendover, Utah (MWH, 2014); therefore, the exposure pathway for groundwater to the off-facility resident receptor via ingestion is not complete. The preliminary CSM for AOI 1 is shown on **Figure 6-2**.

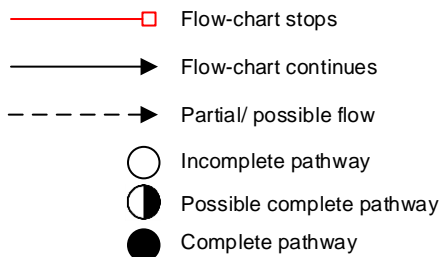


CLIENT					ARNG					<div><div><div></div>Area of Interest</div><div><div></div>Potential PFAS Release</div><div><div></div>Facility Boundary</div><div><div></div>Water Body</div><div><div></div>River/Stream</div><div><div></div>Canal/Ditch</div><div><div></div>Pipeline</div><div><div></div>Surface Water Flow Direction</div><div><div></div>Inferred Groundwater Flow Direction</div><div><div></div>Unknown Well</div></div> <div><div>N</div><div></div></div>	Area of Interest					
PROJECT											Preliminary Assessment for PFAS at Wendover Airport, UT					<div><div><div>AECOM</div><div>12420 Milestone Center Drive Germantown, MD 20876</div></div></div> <div>Figure 6-1</div>
REVISED					6/25/2020		GIS BY		MS		6/25/2020					
SCALE					1:25,200		CHK BY		AG		6/25/2020					
Base Map: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c)										PM		RG		6/25/2020		

C:\Users\stankevichm\OneDrive - AECOM Directory\ARNG_PFAS_GIS_60552172\MXDs\UT\Wendover_Airport_Figures\Fig_6-1_Wendover_Airport_AOI.mxd



LEGEND



Notes:

- The resident receptor refers to an off-site resident.
- Current risk practice suggests the exposure pathway for dermal contact is insignificant compared to ingestion, but supporting data is sparse and continues to be studied.

Figure 6-2
Preliminary Conceptual Site Model
AOI 1 (Building 835), Wendover, UT

7. Conclusions

This PA report presents a summary of available information gathered during efforts on the potential use and storage of AFFF at the facility. The PA findings are based on personnel interviews, environmental investigations, publications, historical documents, and the VSI. The PA findings are based on the information presented in **Appendix A**, **Appendix B**, and **Appendix C**.

7.1 Findings

One AOI related to a potential PFAS release was identified (**Table 7-1**) at Building 835 during the PA (**Figure 7-1**).

Table 7-1: AOI at Building 835

Area of Interest	Name	Used by	Release Dates
AOI 1	Building 835	UTARNG	After 2014

Based on the PA findings, there is potential for exposure to PFAS contamination in media at or near the facility. The preliminary CSM for AOI 1 is shown on **Figure 6-2**, which presents the potential receptors and media impacted.

Adjacent potential PFAS release areas were identified within the vicinity of Building 835. The fire station to the west of Building 835 reportedly has one truck that carries 1,500 gallons of water, 220 gallons of foam, and 550 gallons of dry chemicals. Fire training, equipment testing, nozzle testing, equipment washing, and line purging occur on the south side of the fire station. Fire training has taken place in this location since at least 2014. It is assumed that similar fire training and equipment maintenance activities were conducted at the World War II fire station east of the facility until 2014. The World War II Fire Station is considered a potential adjacent PFAS source area due to its storage of AFFF and the storage of a firetruck that carries AFFF. Lastly, the location of a 2006 plane crash on the runway south of the facility is considered a potential adjacent PFAS source area due to the usage of AFFF to respond to crash flames.

These potential adjacent sources are shown on **Figure 7-1**. Due to a southerly surface flow direction and southeast groundwater flow direction, the runway crash is unlikely to affect site media at the facility. However, based on proximity, there is a potential for PFAS releases at the two fire stations to affect the facility.

7.2 Uncertainty

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. Records were not typically kept by the ARNG on the use of PFAS in emergency response or by non-ARNG units during training events at ARNG facilities.

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. Gathered information has a degree of uncertainty due to the absence of written documentation, the limited number of personnel with direct knowledge due to staffing changes, the time passed since PFAS were first used (1969 to present), and a reliance on personal

recollection. Inaccuracies may arise in potential PFAS release locations. 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 at adjacent sources were reviewed, 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

Location	Source of Uncertainty
Wendover Airport Fire Station	The type, volume, and concentration of AFFF used during training at the FTA are unknown.
2006 Runway Crash	The exact location of the crash, and the type, volume, and concentration of AFFF used to extinguish the fire are unknown. The fate of AFFF sprayed in response to the crash is also unknown.
World War II Fire Station	Fire training, equipment testing, nozzle testing, equipment washing, and line purging activities similar to those currently conducted at the new fire station are assumed to have taken place south of the World War II fire station; however, the type, volume, and concentration of AFFF are unknown.
Wendover WRF	It is unknown exactly where treated wastewater is discharged.
Wendover Landfill	It is unknown whether PFAS-laden materials have been disposed of at this landfill.

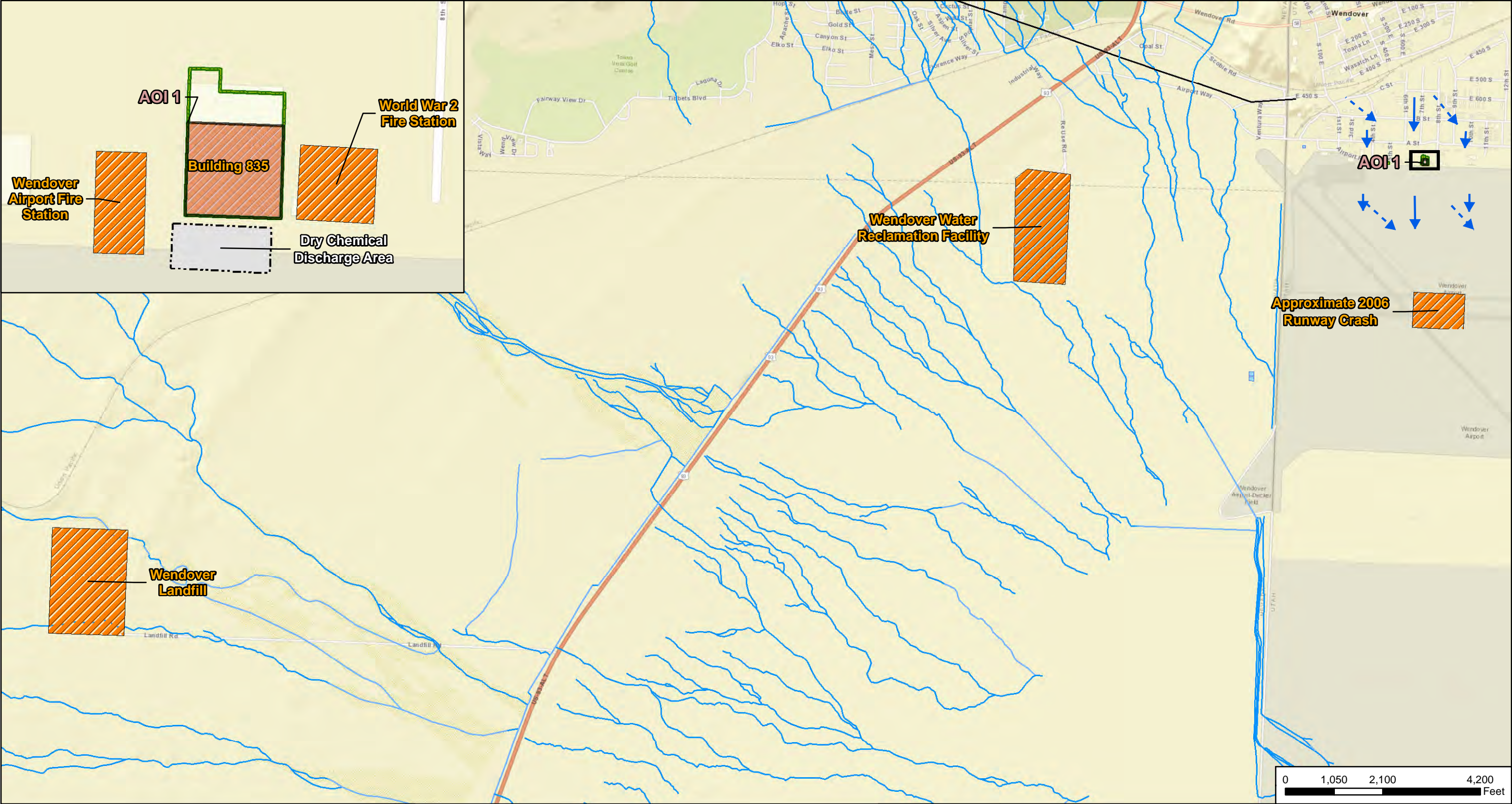
7.3 Potential Future Action












Interviews (with personnel whose tenure span 2006 to present) and records indicate that current or former ARNG activities may have resulted in potential PFAS releases at the AOI identified during the PA. Based on the preliminary CSM developed for the AOI, there is potential for exposure to PFAS contamination in surface soil to site workers, construction workers, and trespassers via ingestion and inhalation; subsurface soil to construction workers via ingestion; surface water and sediments to off-facility residents and off-facility recreational users via ingestion. **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: Building 835	40°43'40.8"N 114°01'58.2"W	Confirmed location of two mobile AFFF tanks. It is unknown if or where tanks were discharged.	Proceed to an SI, focus on soil, sediment, surface water, groundwater

ARNG will evaluate the need for an SI at Building 835 based on the potential receptors, the potential migration of PFAS contamination off the facility, and the availability of resources.



CLIENT ARNG					<div><div> Area of Interest</div><div> Potential PFAS Release</div><div> Facility Boundary</div><div> Water Body</div><div> River/Stream</div><div> Canal/Ditch</div><div> Pipeline</div><div> Surface Water Flow Direction</div><div> Inferred Groundwater Flow Direction</div></div>	<div><div>N</div></div>	Summary of Findings	
PROJECT Preliminary Assessment for PFAS at Wendover Airport, UT								
REVISED	6/25/2020	GIS BY	MS	6/25/2020				
SCALE	1:25,200	CHK BY	AG	6/25/2020				
Base Map: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c)								
		PM	RG	6/25/2020				
						<div><div> 12420 Milestone Center Drive Germantown, MD 20876</div></div>	Figure 7-1	

8. References

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<https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx> (Accessed September
2019).

Appendix A

Data Resources

Data resources will be provided separately on CD. Data resources include:

Environmental Documentation

- 2006, Site Screening Report. Wendover Air Force Auxiliary Field. Wendover, Utah. DERP-FUDS Site No. J08UT1001. Draft Final. Prepared for United States Army Corps of Engineers by EM-Assist, Inc. April, 2006.
- 2014, Phase I Environmental Site Assessment Wendover Airport, Lease of Buildings 807, 835, and 1831. Prepared for Utah National Guard by MWH Americas, Inc. August 14, 2014.
- 2016, Utah National Guard Memorandum: Summary of Soil and Groundwater Investigations at the Former Wendover Air Force Auxiliary Field (FUDS site #J09UT1001) June 27, 2016.

Lease Information

- 2014, Building 807 State of Utah Lease Obligation Record. Wendover Airport Property Renal Agreement Reference No. B-807-b (National Guard). September 29, 2014.
- 2014, Building 835 State of Utah Lease Obligation Record. Wendover Airport Property Renal Agreement Reference No. B-835-UTNG. September 29, 2014.
- 2019, Building 807 Amendment 1. Building 807 State of Utah Lease Obligation Record. Wendover Airport Property Renal Agreement Reference No. B-807-b (National Guard). March 22, 2019.
- 2019, Building 835 State of Utah Lease Obligation Record. Wendover Airport Property Renal Agreement Reference No. B-835-UTNG. September 29, 2014. March 22, 2019.

Environmental Data Resources, Inc.TM Report

- 2019 Environmental Data Resources, Inc.TM Geotcheck Report for Wendover Airport Hangar 5/Building 835.

Appendix B

Preliminary Assessment Documentation

Appendix B.1

Interview Records

PA Interview Questionnaire - Environmental Manager

Facility: Wendover Airport

Interviewer: [REDACTED]

Date/Time: 07/17/2019 / 0900

Interviewee: [REDACTED] Title: Deputy Environmental Program Manager (Water Engineer)/Environmental Resource Management 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)
<p>1. Roles or activities with the Facility/years working at the Facility.</p> <p>Deputy EPM (Water Engineer)/Environmental Resource Management. Has been involved with the property since 2014 when the building was acquired.</p>	
<p>2. Where can I find previous facility ownership information?</p> <p>Property was previously used as an Air Force Auxiliary Field, currently owned by Tooele County for the municipal airport. Building leased circa 2014.</p>	
<p>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.</p> <p>Maintenance Fire Training Areas Firefighting (Active Fire) Crash Fire Suppression Systems (Hangers/Dining Facilities) Fire Protection at Fueling Stations Non-Technical/Recreational/ Pest Management Metals Plating Facility Waterproofing Uniforms (Laundry Facilities) Other</p>	
<p>4. Fill out CSM Information worksheet with the Environmental Manager.</p>	
<p>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?</p> <p>No fire suppression in building; hand extinguishers only (dry chemical purple k).</p>	

PA Interview Questionnaire - Environmental Manager

Facility: Wendover Airport
Interviewer: [REDACTED]
Date/Time: 07/17/2019 / 0900

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?

Not Applicable.

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

Not Applicable.

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)?

None

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?

None 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?

None at this building.

PA Interview Questionnaire - Environmental Manager

Facility: Wendover Airport
Interviewer: [REDACTED]
Date/Time: 07/17/2019 / 0900

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?

No known releases.

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?

Not aware of any since the army leased the building.

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

None.

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?

Not Applicable.

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?

No known crashes on site since 2014.

PA Interview Questionnaire - Environmental Manager

Facility: Wendover Airport
Interviewer: [REDACTED]
Date/Time: 07/17/2019 / 0900

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 fuel spills since 2014.

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

Fire management is conducted by the municipal airport, separate from Building 835.

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?

Not applicable.

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)?

None.

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

None

PA Interview Questionnaire - Environmental Manager

Facility: Wendover Airport

Interviewer: [REDACTED]

Date/Time: 07/17/2019 / 0900

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?

Phase I ESA from acquisition assessment.

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

Will try to find Airfield Industrial Stormwater Pollution Prevention Plan.

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.?

Not Applicable.

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?

Not Applicable.

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

Not Applicable

PA Interview Questionnaire - Other

Facility: Wendover Airport
Interviewer: [REDACTED]
Date/Time: 07/17/2019 / 0900

Interviewee: [REDACTED] Title: <u>Facility Manager/U.A.S. Platoon</u> <u>Supervisor/Aviation Safety Officer</u> 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:	
2013-2019	
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 built), fueling stations, crash sites, pest management, recreational, dining facilities, metals plating, or waterproofing). How are materials ordered/purchased/disposed/shared with others?	
<p>The army started moving into the facility and used the building for storage in the summer of 2016. The first official occupancy and operations was in February 2017. No army operations in the building before that. Currently only fly Unmanned Aerial Systems (UAS) out of the building, no aircraft.</p> <p>The building has no fire suppression system; fire suppression would be conducted with fire extinguishers. In the event of an incident, the airfield fire truck or municipal fire department would help out. The Airfield fire station is next door to this location at the airport. No joint training.</p> <p>Mobile extinguishers are dry chemical purple k. There is annual training on the airground to spray the extinguishers (15% of people spray, which is approximately 6 people).</p> <p>Fuel containment cells are stored in a vehicle outside, but they are filled and defueled at the airfield. They have waste fuel for tests.</p> <p>Drain in building leads to oil/water separator. Unknown where it goes.</p> <p>Transient units; variable, combative life saving (CLS) training in hangar.</p> <p>No wash rack.</p>	

PA Interview Questionnaire - Other

Facility: Wendover Airport

Interviewer: [REDACTED]

Date/Time: 07/17/2019 / 0900

Interviewee: [REDACTED] Title: Airport Manager 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:	
2006-2019	
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 built), fueling stations, crash sites, pest management, recreational, dining facilities, metals plating, or waterproofing). How are materials ordered/purchased/disposed/shared with others?	
<p>The airport was originally built for army air corps, for fuel tank storage. Army air corps ceased using in 1972. Overall military presence ended in 1972, we are the first military unit to occupy since then. The rest of the time it operated as a municipal airport. The airport is not very active; one Boeing 737 comes in a day, some general aviation and business jets, a few military planes come in and refuel.</p> <p>Being a tenant, the facility would fall under the Industrial stormwater pollution prevention plan.</p> <p>Fire department next door; one truck that carries foam. 1500 gallons of water, 220 of foam, 550 of dry chem. Fire testing, nozzle testing, etc. only happens in front of the fire station. Wash down on ramp afterwards, purge lines. No major emergencies. Crash in early 2006 on active runway directly south of the facility, sprayed foam on it. Old fire station was used in WWII. Old fire truck with foam was stored in there, no discharges to James's knowledge. In addition to truck, approx. 250 gal of foam stored in 55 gal drums. Not aware of any releases in the storage area.</p> <p>Surrounding. Potash plant to NE, shipping plant, reclamation plant ½ miles west.</p> <p>Drinking water is supplied by the city. City wells are approx. 20-30 miles north of here. (Johnson Springs). City sewage. O/W separator plumbing unknown.</p> <p>There was an Air Force landfill by the city water reclamation plant to the east of the facility, northeast of the wastewater treatment plant. Removed because it was leaking.</p> <p>Surface water goes south, groundwater goes east/northeast.</p>	

Appendix B.2

Visual Site Inspection Checklists

Facility ST
Visual Survey Inspection Log

Recorded by:

ARNG Contact:

Date: 07/17/2019

Site Name / Area Name / Unique ID: Wendover Airport

Site / Area Acreage: 0.166 acres

Historic Site Use (Brief Description): 1943 USAAF Bombing brigade

Current Site Use (Brief Description): 1940-1960 Air Force Auxiliary Field, 1957-1977 distributed to city & BUM
UTARNG base of operations for maintenance & support of UAS

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)

None

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.)

Building Remodeled in 2014

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:

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 C

Photographic Log

Appendix C - Photographic Log

Army National Guard, Preliminary Assessment for PFAS		Building 835	4th St. Wendover, UT 84083
Photograph No. 1			
Date 7/17/2019 Time 10:51			
Description: Photograph depicts the exterior pavement/runway to the south of the facility.			
Orientation: South			
Photograph No. 2			
Date 7/17/2019 Time 10:47			
Description: Photograph depicts one of two mobile AFFF tanks in the hangar.			
Orientation: West			

Appendix C - Photographic Log

Army National Guard, Preliminary Assessment for PFAS		Building 835	4th St. Wendover, UT 84083
Photograph No. 3			
Date 7/17/2019 Time 10:48			
Description: Photograph depicts one of two mobile AFFF tanks observed in the hangar.			
Orientation: Southeast			
Photograph No. 4			
Date 7/17/2019 Time 10:51			
Description: Photograph depicts the west (municipal) portion of the Wendover Airport, with fire station and truck to the right.			
Orientation: West			