DUE DILIGENCE RESEARCH FOR SUPPLEMENTAL SOURCES OF PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS)

Stewart Air National Guard Base
Newburgh, New York

FINAL REPORT

Prepared for:

ANG Readiness Center
NGB/A4VR

U.S. Army Corps of Engineers
Omaha District

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Final Report

Due Diligence Research For Supplemental Sources of Per- and Polyfluoroalkyl Substances (PFAS)

Stewart Air National Guard Base Newburgh, New York

Prepared for:

U.S. Army Corps of Engineers, Omaha District
1616 Capitol Avenue, Suite 9000
Omaha, NE 68102-4901

ANG Readiness Center, NGB/A4VR
3501 Fetchet Avenue
Joint Base Andrews MD 20762-5157

Prepared by:

EA Engineering, Science, and Technology, Inc., PBC
221 Sun Valley Boulevard, Suite D
Lincoln, NE 68528

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AFCEC	Air Force Civil Engineer Center
AFCEE	Air Force Center for Environmental Excellence
AFFF	Aqueous film-forming foam
ANG	Air National Guard
ANGB	Air National Guard Base
AR	Administrative Record
ASD	Office of the Assistant Secretary of Defense
AW	Air Wing
BB&E	BB&E Inc.
bgs	Below ground surface
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
DoD	Department of Defense
EA	EA Engineering, Science, and Technology, Inc., PBC
EDR	Environmental Data Resources, Inc.
ft	Foot/feet
FY	Fiscal year
GAC	Granular activated carbon
IAP	International airport
IRP	Installation Restoration Program
NGB	National Guard Bureau
No.	Number
NRHP	National Register of Historic Places
NYDoT	New York Department of Transportation
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
OWS	Oil-water separator
PA	Preliminary Assessment
PFAS	Per- and polyfluoroalkyl substance
PFOA	Perfluorooctanoic acid
PFOS	Perfluorooctane sulfonate
POL	Petroleum, oils, and lubricants
RI	Remedial investigation

SAF/IE	The Assistant Secretary of the Air Force for Energy, Installations, and Environment
SHPO	State Historic Preservation Office
SI	Site inspection
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
U.S.	United States
Wood	Wood Environment and Infrastructure Solutions, Inc.

EXECUTIVE SUMMARY

This report presents the findings of due diligence research ("research") conducted to evaluate potential per- and polyfluoroalkyl substance (PFAS) sources other than aqueous film-forming foam (AFFF) and the likelihood of a potential release due to Air National Guard (ANG) activities at Stewart Air National Guard Base (ANGB) (herein referred to as the 'Base'), Newburgh, New York. The research processes used are consistent with, a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) preliminary assessment (PA) (United States [U.S.] Environmental Protection Agency [USEPA] 1991, 2005). The findings from the supplemental due diligence activities will be documented in this Due Diligence Research report which is comparable to a CERCLA PA report.

Research was conducted for potential products purchased by the ANG and processes that may have contained or utilized PFAS other than AFFF from as early as 1950 (see **Table ES-1**) (Plunkett 1986; Funderburg 2010). **Table ES-1** includes potential ANG shops, processes, and products based on the research in the Office of the Assistant Secretary of Defense (ASD) Phase 1 Assessment (ASD 2021). Research included reviewing publicly available documents such as the Air Force Civil Engineer Center (AFCEC) ANG Administrative Record (AR) and historical aerial photographs from Google Earth; obtaining a report from Environmental Data Resources, Inc. (EDR); and conducting interviews with personnel or others that have knowledge about the installation operations. Because this effort was desktop only, no site visits were conducted.

Both site-specific and general industry information sources were utilized during the preparation of this Due Diligence Research report to determine the potential for supplemental sources of PFAS-containing materials to have been present, used, or released at the Base. Documentation of PFAS use was not required historically because PFAS were considered benign so spill reporting to the USEPA was voluntary. Therefore, records documenting PFAS use or release during training, firefighting, or other activities, or disposition after release were not typically kept or are only available for recent occurrences (e.g., within the past few years). The conclusions of this Due Diligence Research report are based on reasonably available information, including previous environmental reports, public records, an EDR report (i.e., historical aerial photographs, area corridor report, well search report), property records, documents detailing observations made during previous visits to the Base area, and interviews. Information from interviews has a degree of uncertainty due to the absence of contemporaneous documentation, the limited number of personnel with direct knowledge due to staffing changes, the time passed since PFAS was first used, and a reliance on personal recollection.

More than 534 individual documents potentially pertaining to this Supplemental Sources of PFAS Due Diligence Research report were reviewed during the performance of this Due Diligence Research report. The information contained in these documents could not be independently verified. In addition to uncertainty and limitations associated with identifying site-specific PFAS sources and activities potentially releasing PFAS (i.e., operational history and timeframe of use for specific buildings/shops), limitations and uncertainties are present in the current published research regarding PFAS-containing materials. The most current peer reviewed information available at the time of writing has been utilized, but there may be PFAS source materials yet to be identified, or there may be currently identified potential source materials that do not generally contain PFAS. In general, data gaps associated with buildings/shops

recommended for further investigation are presented in **Section 4**.

The research evaluated 87 buildings/shops[1] at the Base for use of products that may have contained PFAS and the likelihood of a potential release (including discharge or disposition locations). In summary, the research identified the following:

- 82 buildings/shops where no further PFAS investigation, study, or cleanup is warranted and categorized as follows:
  - — 38 with no history or reasonable suspicion of PFAS in products,
  - — 25 that possibly had material (other than AFFF) potentially containing PFAS and no documented release reported[2] (the term "no documented release reported" means no documentation is known to exist that supports the existence of a release or threat of release of material potentially containing PFAS),
  - — Zero that had spill(s) documented with material (other than AFFF) potentially containing PFAS less than the reportable quantity (<one pound in 24 hours[3,4]) and presumed to pose no potential risk to human health or the environment, and
  - — 19 previously identified for further investigation due to AFFF release and no further investigation is recommended as part of this Non-AFFF Due Diligence effort.
- Five buildings/shops identified for further investigation due to documented or probable release, discharge, or disposition of material potentially containing PFAS and presumed to pose a potential risk to human health or the environment.

Table ES-2 includes the buildings/shops identified for further investigation of PFAS, the historical use, and associated Installation Restoration Program (IRP) site, as applicable. Four IRP sites were identified as potential sources of PFAS other than AFFF, as identified in **Appendix A**, and three are recommended for further investigation, as presented in **Table ES-2**

[1] The buildings/shops may include work or mishap areas such as aircraft aprons, flightlines, aircraft parking ramps, etc.
[2] Further investigation may be required if environmental sampling data suggests that an unreported release may have occurred.
[3] Considered Title 42, Section 9602, Designation of additional hazardous substances and establishment of reportable released quantities; regulations as a reasonable approach to assess the reportable quantity of potential PFAS containing material due to the lack of CERCLA regulation.
[4] If available, use the mass (or weight by volume) of the product and the total PFAS concentration in the product to estimate the necessary volume of the product to achieve a one-pound release of PFAS.

Table ES-1. Shops/Buildings, Processes, and Product Types Potentially Containing PFAS

Buildings/ Shops[1, 2]	Processes	Potential Product Types
- Automotive/hobby - Motor Pool	- Descaling/Parts cleaning - Lubricating maintenance	Defoamers; perfluoroalkyl; fluorochemicals
- Aircraft Maintenance Hangar - Non-Destructive Inspection (may include maintenance shops, such as survival inspection shops, munition, and maintenance shops, where applicable)	- Descaling/Parts cleaning - Lubricating maintenance	Defoamer; perfluoroalkyl; fluorochemicals
- Corrosion Control Body Shop - Paint stations/booths	- Descaling/Parts cleaning - Applying repellents and surfactants	Defoamers; fluorotelomer
- Chrome plating - Electroplating - Metal plating and etching	- Finishing, plating, and restoring metals	Fumetrol/Mist Suppressant
- Photograph Processing Shops	- Photograph processing	Photochemicals
- Housing/dormitory - Mess hall - Buildings	- Cleaning carpet/floors	Defoamer
- Carwash - Laundry/ housing laundry/dormitory laundry - Parachute/survival equipment	- Washing/finishing	Defoamer; water repellents (product was unclear)
- Housing/buildings/fuel bulk terminal; fuel dispensing with fire suppression systems (non-AFFF)	- Fire extinguishing	Fluoroalkyl surfactant/ Fluorosurfactant
- Entomology shop	- Storing, mixing, disposing of pesticides, herbicides, and fungicides	Insecticides, pesticides, herbicides, fungicides
- Grounds/golf course maintenance	- Storing, mixing, disposing of pesticides, herbicides, and fungicides	Insecticides, pesticides, herbicides, fungicides
- Wastewater Treatment Plants - Land Application Areas - Septic Drain Fields	- Collecting and Treating sewage/sludge disposal	Defoamer; PFAS containing waste
- Various shops (Life Support Shops, Mess Hall, etc.)	- Various processes (packaging, use of building and household products, renovating – removing carpet	Various packaging and coatings; removed carpet
- On-base Landfills - Construction Soil Stockpile Areas	- Disposal	Various packaging and coatings; removed carpet, PFAS containing waste

Notes:

- The list of buildings/shops, processes, and potential product types is based on Office of the Assistant Secretary of Defense 2021, 2025; Dewapriya et al. 2023; and Gaines 2022.
- Excludes closed military ranges addressed under the ANG Military Munitions Response Program based on lack of safety data sheets, source of supply data, and current science (Department of Defense 2022; Joint Ordnance Commanders Group 2020).

1) The buildings/shops may include work or mishap areas such as aircraft aprons, flightlines, aircraft parking ramps, etc.
2) Installation specific shops and processes identified during research and/or interviews as posing the potential to contain PFAS and not identified in the table above were still considered and incorporated into this report.

Table ES-2. Summary of Buildings/Shops Identified for Further Investigation

Numerical Reference[2]	Building/Shop[1] Number	Historical Building/Shop[1] Use	Likely[4] Release, Discharge, or Disposition Point (Documented Release Volume)[3]	Associated IRP Site(s)
36	208	Vehicle Maintenance Shop/Motor Pool	Documented Hydraulic Fluid Release (700 gallons)	TU004
37	209	Base Engineering Pavement and Grounds Facility	Probable OWS Release (no release documented)	N/A
53	400	Aircraft Engine Test Stand	Documented Oil Release (no volume documented)	N/A
56	403	Technical Laboratory Liquid Fuels Analysis POL – Operations Buildings	Probable OWS Release (no release documented), Documented Hazardous Waste Release (no volume documented)	N/A
86	N/A	Former Pesticide Disposal Site (IRP Site 2 [DP002])	Documented Hazardous Waste Release (no volume documented)	IRP Site 2 (DP002), SS005

Notes:
1) The buildings/shops may include work or mishap areas such as aircraft aprons, flightlines, aircraft parking ramps, etc.
2) Numerical Reference refers to the first column of **Appendix A** which assigns a numerical qualifier to identify buildings/shops along with work or mishap areas such as aircraft aprons, flightlines, aircraft parking ramps, etc.
3) Further discussion regarding material types and volumes are presented in **Section 4.**
4) The term "likely" is defined as it relates to a "probable" or "documented" release. The term "probable" indicates supporting evidence exists to establish a presumption that a release of material with the potential to contain PFAS may have occurred; the term "documented" indicates that reported documentation exists which details that a release of material with the potential to contain PFAS has occurred.
IRP = Installation Restoration Program
N/A = Not applicable
OWS = Oil/water separator
POL = Petroleum, oil, lubricants

1. INTRODUCTION

This report presents the findings of due diligence research ("research") conducted to evaluate supplemental sources of PFAS other than AFFF and the likelihood of a potential release due to ANG activities at the Base (**Figure 1-1**). The U.S. Army Corps of Engineers (USACE), Omaha District, has been designated as the service center to implement Due Diligence Research for Supplemental Sources of PFAS, other AFFF, at 141 ANG installations and/or geographically separated units for the ANG.

EA Engineering, Science, and Technology, Inc., PBC (EA) is conducting this research for the ANG under USACE Contract Number (No.) W9128F18D0026, Task Order No. W9128F23F0230. The task order is being executed in accordance with the USACE Performance Work Statement for Enterprise-Wide Due Diligence for Supplemental Sources of PFAS from Non-AFFF Sources at 141 ANG Installations and Geographically Separated Units, dated 30 August 2023 (USACE 2023).

The research processes used are consistent, with CERCLA PA (USEPA 1991, 2005). The findings from the supplemental due diligence activities are documented in this Due Diligence Research report which is comparable to a CERCLA PA report. The work was performed in accordance with the USEPA *Guidance for Performing Preliminary Assessments Under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA),* as amended by the Superfund Amendments and Reauthorization Act, the National Contingency Plan (40 Code of Federal Regulations Part 300); and USEPA guidance for PAs. The term "PFAS" will be used throughout this report to refer to the PFAS other than AFFF that may be present in the various products.

1.1. OBJECTIVE

The objective of the project is to determine where products potentially containing PFAS were stored, used, handled, and potentially released due to ANG activities at the Base. The research objective is to differentiate between sites that pose little or no potential risk to human health and the environment versus sites that are more likely to pose risk to human health and the environment; and to determine the need for further investigation or no further investigation for PFAS (USEPA 1991, 2005).

1.2. SCOPE AND LIMITATIONS

This report presents the findings from research conducted to evaluate potential PFAS sources other than AFFF and the likelihood of potential releases at the Base. It identifies potential media pathways and receptors (human and ecological) that might be threatened/affected by a potential release. The spatial boundary of this research consists of the Base boundary as shown on **Figure 1-1** and any additional areas associated with the Base where the ANG holds environmental liability. The earliest AFCEC ANG AR document for the Base is from 1982 while the most recent available record is from 2025.

This research is a desktop review, and no physical site visit was conducted to perform on-site

reconnaissance. This research may be limited by the quantity and quality of files readily available. Additionally, a lack of chemical and material content information for PFAS in product safety data sheets constrains the ability to assess the use of PFAS-containing products (Office of the Assistant Secretary of Defense [ASD] 2021; Department of Defense [DoD] 2023). Products containing PFAS may have been produced as early as approximately 1950 (Plunkett 1986; Funderburg 2010).

1.3. BACKGROUND

PFAS are classified as emerging chemicals of environmental concern by USEPA and DoD due to evolving identification of PFAS and evolving toxicity values and regulatory standards (DoD 2018). PFAS are a class of synthetic fluorinated chemicals that have been used in industry and consumer products since the 1950s (Plunket 1986; Funderburg 2010). PFAS are synthesized for many different uses, ranging from firefighting foams, coatings for clothes and furniture, to food contact substances. Many PFAS are also used in industrial processes and applications, such as in the manufacture of chemicals and other products. While the focus of the ANG has been responding to historical releases of PFAS due to AFFF, there are data to indicate that other products potentially containing PFAS have been in the DoD and ANG supply chains. The National Defense Authorization Act fiscal year (FY) 2023 required ASD to report on known or suspected contamination on or around installations resulting from the release of PFAS originating from sources other than AFFF.

1.4. PREVIOUS PFAS INVESTIGATIONS

A memorandum from The Assistant Secretary of the Air Force for Energy, Installations, and Environment (SAF/IE) dated 11 August 2016 directed the ANG to adopt a proactive policy that utilizes the CERCLA process when managing PFAS at installations (SAF/IE 2016). In response, ANG completed PAs to identify where AFFF containing PFAS was stored, handled, used, and potentially released at ANG installations. The PAs included focused research that was based on several Federal government documents noting the initial use of AFFF containing PFAS beginning in 1970 by the National Guard Bureau (NGB) (BB&E, Inc. [BB&E] 2016).

The AFFF-focused PA for the Base was completed in March 2016 (BB&E 2016). In 2018, the site inspection (SI) was completed at the Base to determine potential releases of AFFF based on USEPA Regional Screening Levels (RSLs) for PFAS screening in specific media (Wood Environment & Infrastructure Solutions [Wood] 2018). In 2019 and 2020, expanded SIs were completed at the Base to determine additional potential releases of AFFF based on USEPA RSLs for PFAS in specific media (Wood 2019, 2020). Groundwater analytical results indicated that perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA) concentrations exceeded the previous USEPA health advisory levels and the current screening levels. Soil analytical results indicate that PFOS and PFOA concentrations are below the previous screening levels but exceed the current screening level for PFOS and PFOA (Wood 2018, 2019, 2020; ASD 2025).

In May 2015, the City of Newburgh identified PFAS contamination in Lake Washington. The New York State Department of Health (NYSDOH) confirmed the presence of PFAS at Lake Washington in March of 2016. Following this, the New York State Department of

Environmental Conservation (NYSDEC) began to investigate the source of the contamination affecting Newburgh and, with NYSDOH, assisted the City to connect to an alternate water supply. On August 12, 2016, the NYSDEC determined that the Base is a source of PFAS to the local watershed. In response, the ANG sampled nearby Lake Washington, the drinking water reservoir for the City of Newburgh, during the 2019 and 2020 expanded SI to further evaluate pathways for PFAS to Recreation Pond and Lake Washington as well as to evaluate PFAS contributions to the stormwater drainage system. The samples collected revealed major PFAS impacts to Lake Washington, and the lake was temporarily decommissioned due to the PFAS impacts (Jacobs Engineering Group Inc. 2021). An interim stormwater treatment system using granular activated carbon and ion exchanges resins to treat PFAS in Recreation Pond and reduce PFAS impacts in Silver Stream was brought online on December 5, 2019. The treatment system is currently operating (Wood 2020; Jacobs Engineering Group Inc. 2021).

AFFF areas (also referred to as Potential Release Locations [PRLs] in previous reports) identified during the PA phase included PRLs 1 through 15. Thirteen of the PRLs (herein referred to as 'AFFF areas') proceeded to the SI Phase. AFFF Areas sampled during the SI and expanded SI (AFFF Areas 1-16) (**Figure 1-2**) that exceeded USEPA RSLs were validated as IRP Sites. These sites, as well as IRP Site 3 (LF003) Former Base Landfill, proceeded into the remedial investigation (RI) phase (USACE 2020, NGB 2023). The RI was initiated in December 2020 and is ongoing at the Base. The RI includes the Baseline Risk Assessment for Human Health and Ecological Risk Assessment (USACE 2020). The NGB continues to evaluate PFAS for further investigation based on USEPA RSLs following ASD guidance (ASD 2025).

1.5. METHODOLOGY

In general, the overall project research methodology uses data from three primary means to assess and document potential sources of PFAS other than AFFF, and to determine where releases may have occurred that are attributable to ANG activities (DoD 2023). This includes evaluation of potential release and migration pathways to soil, groundwater, and surface water, and exposure pathways to receptors. The three methods include:

- Current/historical records research using publicly available sources,
- Interviews with personnel or others familiar with the history and operations at the Base, and
- Assessment of an EDR report which included a five-mile radius search.

The basis of the data collection is represented in **Table 1-1**, which contains a list of ANG buildings/shops, processes, and products potentially containing PFAS. Buildings/shops may include work or mishap areas such as aircraft aprons, flightlines, aircraft parking ramps, etc. This list was used to support the identification of processes that involved the use of products potentially containing PFAS. The evaluation of the potential release or discharge of PFAS-containing materials considers a number of factors, including the disposition of materials to locations such as landfills, biosolids, etc.; discharge to oil water separators (OWSs), outfalls, etc.; migration pathways to media such as soil, groundwater, and surface water; and potential exposure pathways to receptors. The current and historical records search typically included a review of aerial photographs, environmental compliance documents, water and wastewater

system records, pesticide management plans, base planning documents, and any other available documents regarding the use, storage, and/or disposal of potential supplemental sources of PFAS. The AFCEC ANG AR (https://ar.cce.af.mil/) (webpage) was used to identify relevant documents and reports. Additional documents (e.g., base planning documents) were requested from the installation Environmental Manager, if necessary. During the document review process, information provided by reviewers (i.e., State regulators), was also reviewed.

As part of the assessment for additional investigation, AFFF areas and IRP sites were reviewed and correlated with the locations determined to have potential release of PFAS from sources other than AFFF. The AFFF areas investigated during the AFFF PFAS SI and expanded SI as well as inactive and active IRP sites identified as potential sources of PFAS other than AFFF are shown in **Figures 1-2** and **1-3**, respectively.

The research of current/historical records for activities included:

- A review of historical maps and Google Earth to determine building locations and temporal limits of specific building use; and
- Compilation of all known buildings and shops (and their known current and historic uses) to determine whether or not any of the buildings and shops may have been associated with the storage, use, or release of products potentially containing PFAS other than AFFF.

Interviews were conducted with installation personnel familiar with the history and operations of the installation. The interviews involved the use of an interview questionnaire (**Appendix B**) that was developed to support the identification of potential sources related to activities at the Base. Interviews targeted specific buildings based on the potential buildings and shops outlined in **Table 1-1**.

The research also included assessment of a report from EDR, which incorporates data for an area within a five-mile radius from the center point of the Base. The report contained information used to assess the environmental setting and potential migration and exposure pathways. The EDR report is discussed in **Section 3.3** and relevant excerpts from the EDR report are presented in **Appendix C**.

To compile the research effort, a standardized review format approved by USACE and NGB was used to summarize the findings. **Appendix A**, **Table A.1**, Installation Research Summary Table provides the format used to compile the research. The table includes a numerical reference to support identification of work or mishap areas that do not have a building number. The review format considered building/shop historical use, product use potentially containing PFAS, storage, use, and potential release of PFAS, whether or not a potential release, discharge, or disposition occurred, potential media pathway and receptor(s) where applicable, and recommendation for further investigation or no further investigation for PFAS. In addition, AFFF areas and IRP sites were associated with the buildings/shops when appropriate. The buildings/shops[1] were placed in

[1] The buildings/shops may include work or mishap areas such as aircraft aprons, flightlines, aircraft parking ramps, etc.

decision categories as described below:

- **A**: No history or reasonable suspicion of PFAS in products,
- **B**: Possibly had material (other than AFFF) potentially containing PFAS and no documented release reported[1] (the term "no documented release reported" means no documentation is known to exist that supports the existence of a release or threat of release of material potentially containing PFAS),
- **C**: Spill(s) documented with material (other than AFFF) potentially containing PFAS less than the reportable quantity (<one pound in 24 hours [2,3]) and presumed to pose no potential risk to human health or the environment,
- **D**: Documented or probable release, discharge, or disposition of material potentially containing PFAS other than AFFF and presumed to pose a potential risk to human health or the environment,
- **E**: Areas previously identified for further investigation due to AFFF release and no further investigation is recommended as part of this Non-AFFF Due Diligence effort.

The decision categories were then used to determine the extent to which each building/shop[4] (including discharge or disposition locations) required further investigation. Each building/shop received one of the following three determinations:

- No further response action planned is warranted (i.e., categories A, B, and C).
- Further investigation is warranted (i.e., category D).
- The building/shop was previously identified for further investigation due to AFFF releases (i.e., category E).

To further validate the decisions, rationales for decision category D were developed and are provided in **Section 4** (Findings). The due diligence research followed the guidance are provided in the *Federal Facilities Remedial Preliminary Assessment Summary Guide* (USEPA 2005) and *Guidance for Performing Preliminary Assessments Under CERCLA* (USEPA 1991). The findings from supplemental due diligence activities documented in this Due Diligence Research report are comparable to a CERCLA PA report. The decision categories developed for decision making purposes (i.e., Categories A through E) were used in place of the traditional Hazard Ranking System.

[1] Further investigation may be required if environmental sampling data suggests that an unreported release may have occurred.
[2] Considered Title 42, Section 9602, *Designation of additional hazardous substances and establishment of reportable released quantities; regulations* as a reasonable approach to assess the reportable quantity of potential PFAS containing material due to the lack of CERCLA regulation.
[3] If available, use the mass (or weight by volume) of the product and the total PFAS concentration in the product to estimate the necessary volume of the product to achieve a one-pound release of PFAS.
[4] The buildings/shops may include work or mishap areas such as aircraft aprons, flightlines, aircraft parking ramps, etc.

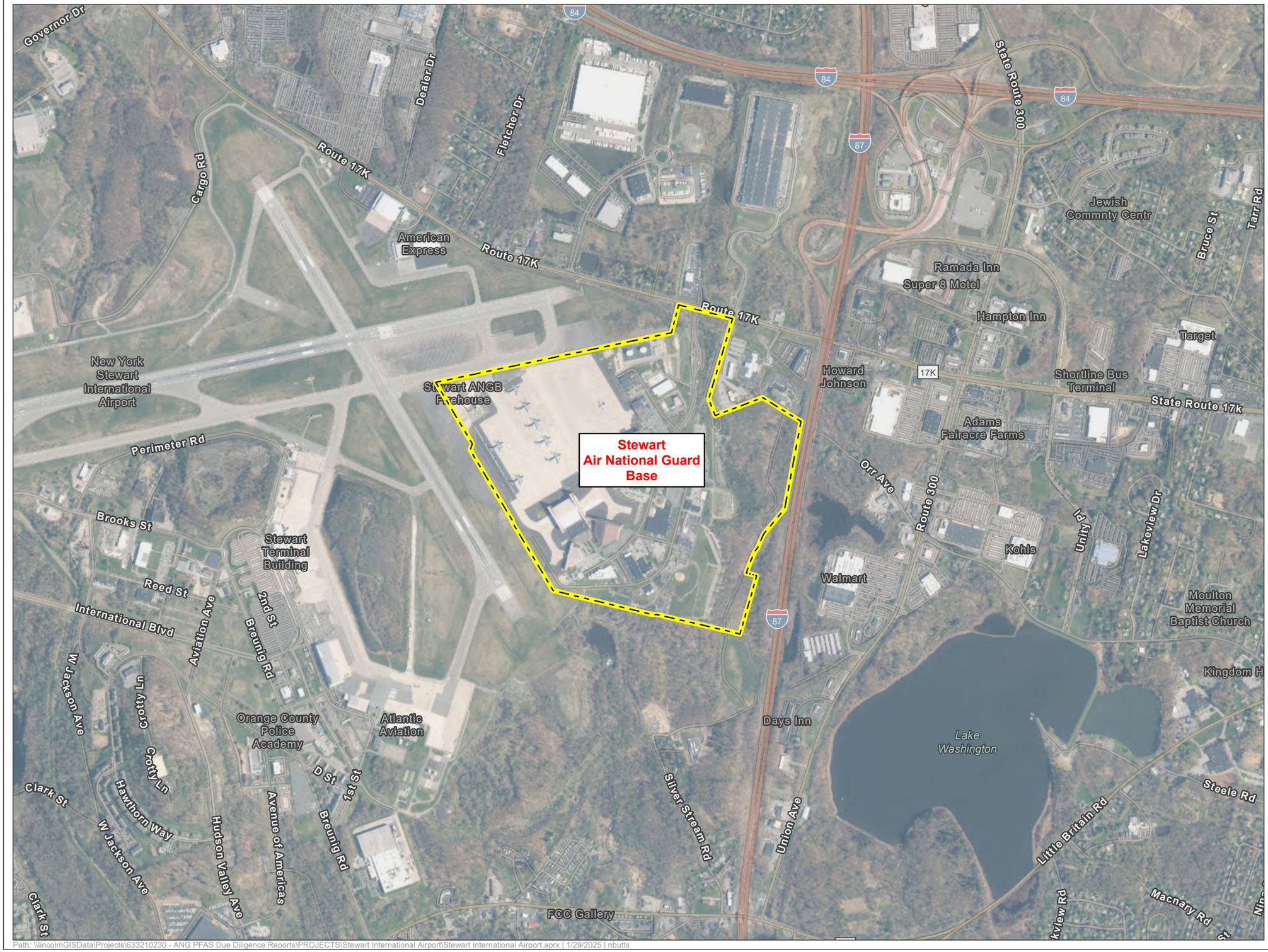
Table 1-1. Shops/Buildings, Processes, and Product Types Potentially Containing PFAS

Buildings/ Shops[1, 2]	Processes	Potential Product Types
- Automotive/hobby - Motor Pool	- Descaling/Parts cleaning - Lubricating maintenance	Defoamers; perfluoroalkyl; fluorochemicals
- Aircraft Maintenance Hangar - Non-Destructive Inspection (may include maintenance shops, such as survival inspection shops, munition, and maintenance shops, where applicable)	- Descaling/Parts cleaning - Lubricating maintenance	Defoamer; perfluoroalkyl; fluorochemicals
- Corrosion Control Body Shop - Paint stations/booths	- Descaling/Parts cleaning - Applying repellents and surfactants	Defoamers; fluorotelomer
- Chrome plating - Electroplating - Metal plating and etching	- Finishing, plating, and restoring metals	Fumetrol/Mist Suppressant
- Photograph Processing Shops	- Photograph processing	Photochemicals
- Housing/dormitory - Mess hall - Buildings	- Cleaning carpet/floors	Defoamer
- Carwash - Laundry/ housing laundry/dormitory laundry - Parachute/survival equipment	- Washing/finishing	Defoamer; water repellents (product was unclear)
- Housing/buildings/fuel bulk terminal; fuel dispensing with fire suppression systems (non-AFFF)	- Fire extinguishing	Fluoroalkyl surfactant/ Fluorosurfactant
- Entomology shop	- Storing, mixing, disposing of pesticides, herbicides, and fungicides	Insecticides, pesticides, herbicides, fungicides
- Grounds/golf course maintenance	- Storing, mixing, disposing of pesticides, herbicides, and fungicides	Insecticides, pesticides, herbicides, fungicides
- Wastewater Treatment Plants - Land Application Areas - Septic Drain Fields	- Collecting and Treating sewage/sludge disposal	Defoamer; PFAS containing waste
- Various shops (Life Support Shops, Mess Hall, etc.)	- Various processes (packaging, use of building and household products, renovating – removing carpet	Various packaging and coatings; removed carpet
- On-base Landfills - Construction Soil Stockpile Areas	- Disposal	Various packaging and coatings; removed carpet, PFAS containing waste

Notes:

- The list of buildings/shops, processes, and potential product types is based on Office of the Assistant Secretary of Defense 2021, 2025; Dewapriya et al. 2023; and Gaines 2022.
- Excludes closed military ranges addressed under the ANG Military Munitions Response Program based on lack of safety data sheets, source of supply data, and current science (Department of Defense 2022; Joint Ordnance Commanders Group 2020).

1) The buildings/shops may include work or mishap areas such as aircraft aprons, flightlines, aircraft parking ramps, etc.
2) Installation specific shops and processes identified during research and/or interviews as posing the potential to contain PFAS and not identified in the table above were still considered and incorporated into this report.



Legend

Installation Boundary

Date Saved: 1/29/2025
Projection: NAD 1983 StatePlane New York East FIPS 3101 Feet
Scale: 1:14,400

0 600 1,200
US Feet

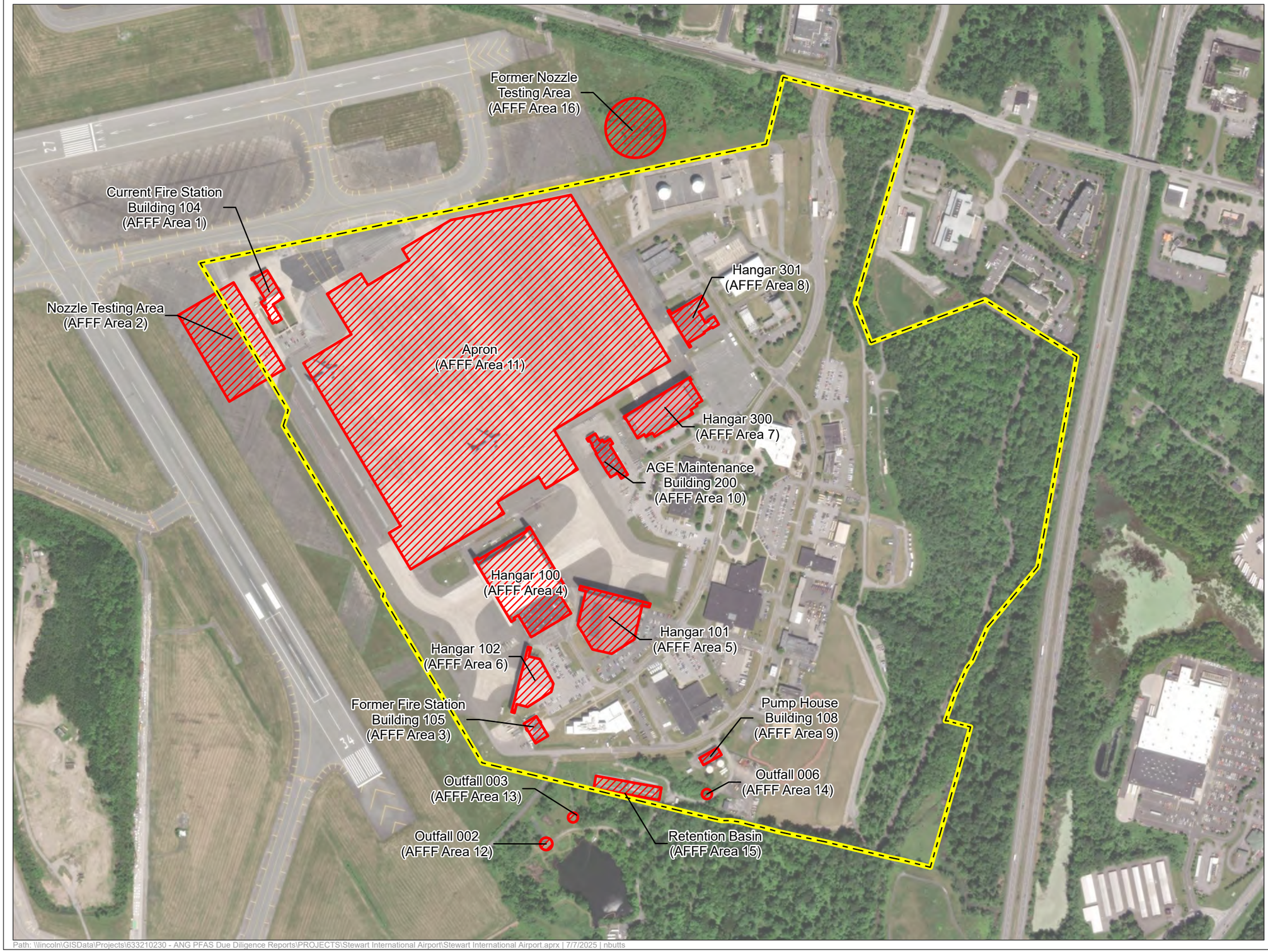
Data Sources: ESRI, USAF ANG

Stewart Air National Guard Base
Newburgh, Orange County, New York

Vicinity Map

Figure 1-1

Path: \\lincoln\GISData\Projects\633210230 - ANG PFAS Due Diligence Reports\PROJECTS\Stewart International Airport\Stewart International Airport.aprx | 1/29/2025 | nbutts



Legend

- AFFF Area
- Installation Boundary

Notes:
AFFF = Aqueous Film-Forming Foam

Date Saved: 7/7/2025
Projection: NAD 1983 StatePlane New York East FIPS 3101 Feet
Scale: 1:6,000

0 250 500
US Feet

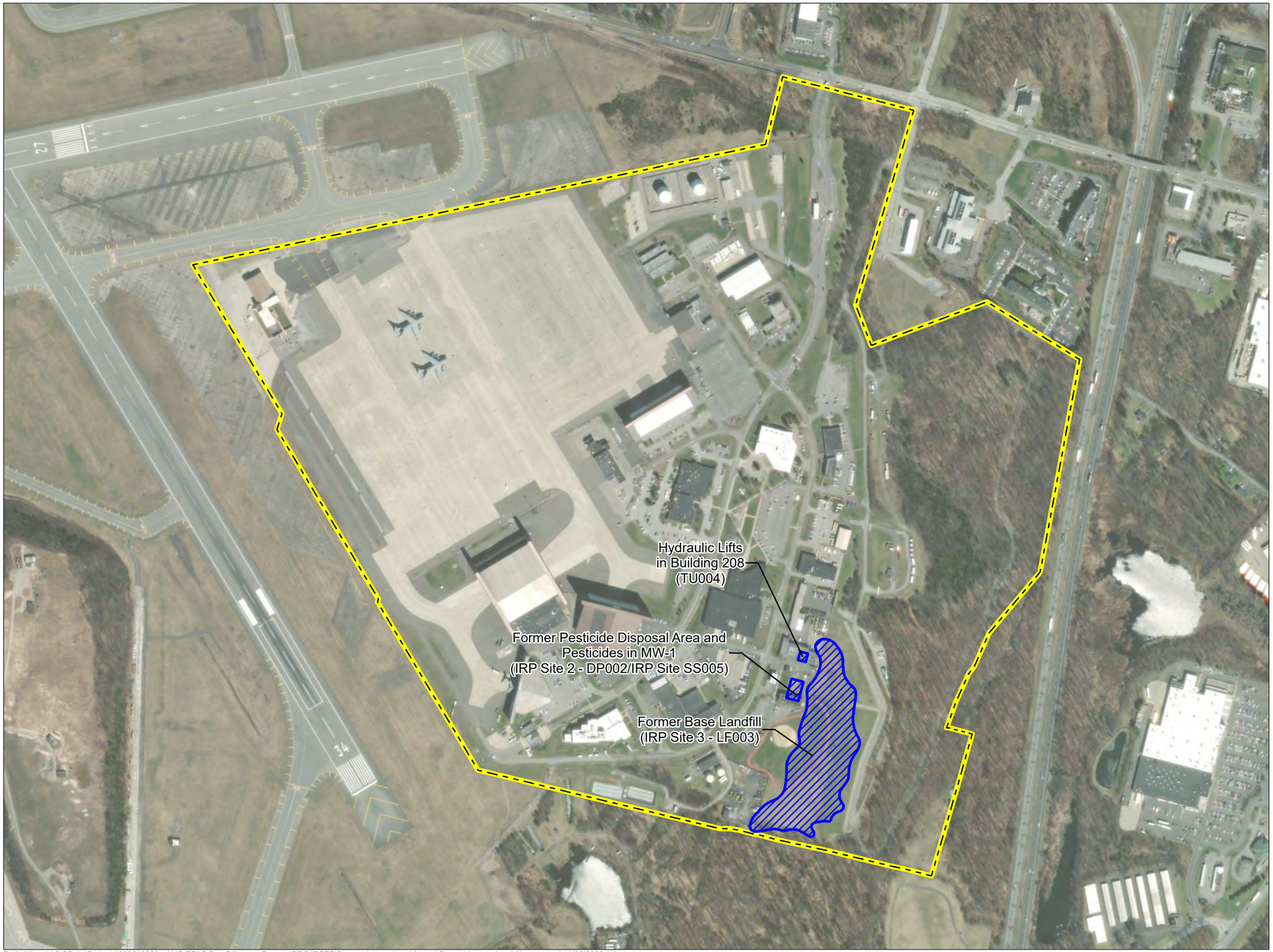
Data Sources: ESRI, USAF ANG, Wood Environmental and Infrastructure Solutions, Inc. (Wood). 2020

Stewart Air National Guard Base
Newburgh, Orange County, New York

Aqueous Film-Forming Foam Areas

Figure 1-2

Path: \\lincoln\GISData\Projects\633210230 - ANG PFAS Due Diligence Reports\PROJECTS\Stewart International Airport\Stewart International Airport.aprx | 7/7/2025 | nbutts



Legend

- Installation Restoration Program Site
- Installation Boundary

Notes:
IRP = Installation Restoration Program

Date Saved: 11/25/2025
Projection: NAD 1983 StatePlane New York East FIPS 3101 Feet
Scale: 1:6,000

0 250 500
US Feet

Data Sources: ESRI, USAF ANG, WSP USA Environment and Infrastructure, Inc. 2023, Radian Corporation 1994

Stewart Air National Guard Base
Newburgh, Orange County, New York

Installation Restoration Program Sites

Figure 1-3

Path: \\lincoln\GISData\Projects\633210230 - ANG PFAS Due Diligence Reports\PROJECTS\Stewart International Airport\Stewart International Airport.aprx | 11/25/2025 | nbutts

2. INSTALLATION DESCRIPTION

The Base is located in Newburgh, New York, at the Stewart International Airport (IAP) (**Figure 1-1**). The installation began operation in 1983 and comprises 280 acres (Wood Environmental and Infrastructure Solutions, Inc. [Wood] 2018).

2.1. FORMER MISSION AND LAND USE

The property is owned by the state of New York. In 1983, operation of the airport was transferred from the New York Metropolitan Transportation Authority to the New York Department of Transportation (NYDoT). At this time, the Air Force initiated a lease with the NYDoT with a license back to the state of New York to establish an ANG installation at Stewart IAP. From 1983 to 1985, the ANG flew and maintained Cessna O-2 aircraft. In July 1985, the 105th Air Wing (AW) began flying the C-5A "Galaxy" aircraft to conduct strategic airlift missions. These jet-powered aircraft were in use by the 105th AW until 2011, when the C-5 Galaxy was phased out and replaced with the Boing C-17 Globemaster III. In 1988, the U. S. Marine Corps Reserve Airlift Command obtained a lease from the Air Force to use a portion of the ANG installation for its air-to-air refueling mission. Hangars and support buildings were constructed to service the KC-130 "Hercules" aircraft (Air Force Center for Environmental Excellence [AFCEE] 2002).

The Base contained facilities that potentially had processes and product types listed in **Table 1-1**. Installation-specific shops and processes not identified in **Table 1-1**, that may include other potential products containing PFAS, were considered.

2.2. CURRENT LAND USE AND PROPERTY INFORMATION

The primary mission of the 105th AW at the Base is to provide peacetime and wartime inter-theater airlift operations using the Boeing C-17 Globemaster III, which replaced the C-5 Galaxy that phased out in 2011. Operations related to the aircraft maintenance include corrosion control, non-destructive inspection, minor painting, fuel cell maintenance, engine maintenance, avionics, repair, hydraulics, washing, and wheel and tire maintenance. Ground vehicle maintenance operations include fluid changes (e.g., oil, transmission, antifreeze); filter changes (fuel, oil, transmission, air); brake repair; lube, grease, and repair of axle and drive trains; body repair; welding; and minor painting and washing (Woods 2018). Access to the Base is through a controlled gate and has a perimeter fence (USACE 2020).

2.3. ENVIRONMENTAL SETTING

2.3.1. Geology

The bedrock beneath the Base is predominantly thinly bedded and fractured Martinsburg Shale, which is part of the Normanskill Formation, generally occurring at depths between 15 and 50 ft below ground surface (bgs) near the Base. Local bedrock structure is described as highly fractured and/or weathered in the upper 10 feet (ft) below the overburden/bedrock interface, with competency (lack of fracturing and weathering) increasing with depth. Most fractures and core breaks are parallel and subparallel to observed bedding surfaces (AFCEE 2002). The

unconsolidated deposits overlying the weathered rock zone are primarily dense, brown, and gray, well-graded glacial till consisting of sand, silty sand, pebble gravel, cobbles, and boulders, and are continuous across the Base (BB&E 2016).

The soil type primarily present at the Base is the Udorthents, smoothed, which consists of well to moderately well-drained level areas consisting of gravelly, sandy loam, with the original soil surface altered by filling, excavation, or grading activities. Stream channels and other features that create preferential subsurface flow pathways may be buried beneath the disturbed areas that were replaced by fill material (Wood 2020). The Base is located in the Hudson-Champlain Lowland of the Valley and Ridge Province. The property is relatively flat with significant downward slopes to the south and east. Surface elevations range from 440 to 450 ft above mean sea level throughout the majority of the Base to a low 340 ft along the eastern property line and 400 ft along the southern property line (BB&E 2016) (**Figure 2-1**).

2.3.2. Climate

Generally, the Base has a moderate climate with low humidity in the winter and relatively high humidity in the summer. The Base has an average daily high temperature above 84 degrees Fahrenheit (°F) in the hot season and average daily low temperature below 20°F in the cold season. January is the coldest with an average low temperature of 20°F and an average high temperature of 36°F. July is the hottest month with an average low temperature of 65°F and an average high temperature of 84°F. January is the driest month with an average of 1.7 inches of precipitation. September is the wettest with an average of 4.0 inches of precipitation. (Weather Spark 2024).

2.3.3. Surface Water

Surface water features at the installation are primarily limited to Murphy's Gulch, a tributary of the Hudson River, standing water in the wetland areas along the eastern portion of the Base, and the two wastewater lagoons (**Figure 2-2**). The wastewater lagoons receive and treat discharge from individual hangars and are subsequently discharged to the Town of New Windsor publicly owned treatment works. The Base is adjacent to a pond (i.e., the Recreation Pond), which is the Base's stormwater retention basin and receives stormwater flows from a significant majority of the Base. Stormwater is discharged to Silver Stream and Moodna Creek, which lie in the Hudson River drainage basin. Additional runoff flows eastward to wetlands in the vicinity of Murphy's Gulch. This includes runoff from the landfill and pesticide burial site areas. Approximately 2.8 acres of inland and non-tidal wetlands (specifically, marshy areas without open water) are located in the vicinity of Murphy's Gulch. No areas of the property are within the 100-year floodplain (AFCEE 2002).

2.3.4. Groundwater

The surficial aquifer at the Base consists of a very dense glacial till deposit over shale bedrock. The upper/weathered portion of the bedrock aquifer that lies beneath the Base is confined by the glacial till. The shale bedrock typically has very low permeability and yields low volumes of groundwater. The glacial till that overlies the shale bedrock is also known for its low permeability. These observations indicate that both the shallow and the bedrock aquifer may not

readily yield groundwater and no substantial groundwater resources are known to exist at the Base (USACE 2021). The NYSDEC database (https://dec.ny.gov/nature/waterbodies/groundwater/aquifers) of aquifers identifies all known Primary, Principal, and Sole-Source aquifers in New York State (NYSDEC 2024). Primary aquifers are identified as, "highly productive aquifers presently utilized as sources of water supply by major municipal water supply systems", Principal aquifers are, "aquifers known to be highly productive or whose geology suggests abundance potential water supply, but which are not intensively used as sources of water supply by major municipal systems at the present time", while Sole Source Aquifers are designated as the sole or main source of drinking water for a community by the USEPA under provisions of the Federal Safe Drinking Water Act. According the NYSDEC's database, the closest mapped subsurface aquifer is a Primary Aquifer which terminates approximately 2.3 miles to the east of the Base and is named the Ramapo River-Woodbury Creek Valley-Fill Aquifer System (and Adjacent Areas) in Eastern Orange County, New York (NYSDEC 2024).

Groundwater at the Base generally flows to the south-southeast. Depths to groundwater range between 15 and 40 ft bgs in upland areas of the Base, and between depths of approximately five to 10 ft bgs at the southerly Base boundary (Wood 2020).

2.3.5. Drinking Water Supply

There are no known drinking water supply wells at the Base. The City of Newburgh's historical source of drinking water was Lake Washington (1,500 ft southeast of the Base), which did receive surface water from the Base until 2016 when a diverter in Silver Stream began sending water southward to Moodna Creek. Due to impacts of PFAS to Lake Washington, the City of Newburgh switched to an alternative drinking water source in early May 2016 called Browns Pond and to New York City's Catskill Aqueduct in early June 2016. The NYSDEC also is funding all Catskill Aqueduct water payments to the State of New York (NYSDEC 2025). The Town of Newburgh provides water service to the Base and obtains drinking water from the Delaware Aqueduct and Chadwick Lake. The Town of Newburgh has transitioned to public water supply for many residents previously on private wells; however, there are several areas within the Town of Newburgh where residents still use private wells. As discussed in Section 1.4, on August 12, 2016, the NYSDEC determined that the Base is a source of PFAS to the watershed and the NYSDEC and the NYSDOH listed the Base area as a Class 2 State Superfund site, identifying the U.S. DoD as a potentially responsible party for the contamination detected in the area and in the public drinking water supply. In 2018, the NYSDEC constructed a granular activated carbon (GAC) treatment system at the City of Newburgh Lake Filtration Plant to remove PFAS from Lake Washington water, the City's primary water source (NYSDEC 2025).

The southern portion of the Base, including Recreation Pond and the wastewater lagoons are located within the Town of New Windsor. To address water quality issues in the area, the NYSDEC and NYSDOH designed, constructed, managed and monitored a temporary GAC treatment system for the Town of New Windsor's Kroll Public Water Supply Well that was shut down by the Town in February 2017 due to the presence of PFAS in the water supply; the Kroll Well temporary GAC treatment system was placed online in August 2019. The NYSDEC and NYSDOH also designed, constructed, managed, and monitored a temporary GAC treatment

system for the Town of New Windsor's Butterhill Public Water Supply Wellfield. The wellfield was shut down by the Town in May 2019 due to the presence of PFAS in the water supply; the temporary GAC treatment system was placed online in November 2019.

The NYSDEC and NYSDOH has taken action to address water quality issues in the Newburgh area. To date, the State has:

- Funded provision of bottled water, municipal water supply extension and connections for private residences in the Towns of Newburgh and New Windsor, with wells impacted by PFAS. Also funded and undertook the installation, maintenance, and monitoring of point of entry treatment systems in the Beaver Dam Lake area.
- Launched a fish sampling program to better understand the extent and impacts of contamination in the watershed.
- Launched an updated source water assessment planning process for the watershed.
- Conducted preliminary engineering studies of the stormwater flows from the identified source areas of the Base to provide data for the design of a treatment system for discharges coming from the Base.
- Designed, constructed, and operated a temporary pumping system to supply the City of Newburgh, and the Town of New Windsor, reliable potable water from Brown's Pond during the New York City's Catskill Aqueduct shutdowns (NYSDEC 2025).

The 2016 PA identified three USGS wells within a one-mile radius of the Base, located to the northwest, south, and south-southwest of the Base (BB&E, Inc. 2016). One public water system well was identified within a one-mile radius of the Base, located to the south-southwest of the property boundary. Five private wells were identified within a one-mile radius of the Base, located to the northwest, northeast, and south of the Base (three total downgradient). There are 13 domestic water supply wells within a one-mile radius of the Base as follows as presented in the 2016 PA:

- One- Newburgh County Club, <0.1 mile west-southwest, upgradient, unknown depth,
- One- Unknown Owner, 0.25 mile northwest, upgradient, 119 ft deep,
- One- Unknown Owner, <0.1 mile south-southeast, downgradient, 119 ft deep,
- Two- Jones Motor Company, 0.25 mile east-southeast, downgradient, unknown depth,
- Five- Mt. Airy Trailer Court, 0.25 mile south-southwest, upgradient, unknown, and
- Three- Newburgh City, 0.335 mile south-southwest, downgradient, unknown depth (BB&E, Inc. 2016).

From June 2016 to October 2023, the NYSDOH conducted an effort to comprehensively canvass and sample private water supplies in the vicinity of the Base. Areas were selected based on general proximity to the Base and known impacted water bodies. This canvassing effort covered an area of approximately 3,000 acres. Drinking water systems at a total of 303 individual locations were sampled for PFAS by the NYSDOH (NYDOH 2023). As a result, and where needed, the DEC, with supporting efforts from the NYSDOH provided municipal water supply hookups or point of entry treatment systems based on exceedances found during this sampling effort (NYSDOH 2023).

2.3.6. Ecological and Cultural Resources

The lands comprising the 105th Air Wing (AW) have terrestrial cover types that include developed/urban land, mixed hardwood forest, mowed turf, and field-delineated wetland areas. The 105 AW is located within the Hudson River Valley ecoregion, a subregion within the Northeastern Coastal Zone. Low elevations and the moderate climate of the Hudson Valley allow for a northward extension of the Appalachian oak-hickory forest ecological community consisting of black oak (*Quercus velutina*), white oak (*Quercus alba*), pignut hickory (*Carva labra*), mockernut hickory (*Carva tomentosa*), and shagbark hickory (*Carva ovata*) (USACE 2021). The existing 105 AW is broken into two habitat units.

Habitat Unit 1 comprises the majority of the project area, and consists of mowed and maintained grasslands with interspersed, unconnected depressions. The dominant vegetation present within this unit is typical of disturbed areas, including field thistle (*Cirsuim discolor*), giant goldenrod (*Solidago gigantea*), New England aster (*Symphyotrichum novae-angliae*), broadleaf cattail (*Typha latifolia*), and sumac (*Rhus spp.*). Given the history of disturbance, usable habitat for wildlife is minimal within this unit (USACE 2021).

Habitat Unit 2 is mixed hardwood forest consisting of a successional southern hardwood ecological community. It is located along the entire eastern perimeter, as well as a small portion of the northern edge, of the project area. Dominant vegetation within this unit includes American elm (*Ulmus americana*), American sycamore (*Platanus occidentalis*), blackhaw (*Viburnum prunifolium*), black walnut (*Juglans nigra*), common buckthorn (*Rhamnus cathartica*), multiflora rose (*Rosa multiflora*), northern spicebush (*Lindera benzoin*), poison ivy (*Toxicodendron radicans*), red maple (*Acer rubrum*), sensitive fern (*Onoclea sensibilis*), shagbark hickory (*Carya ovata*), silver maple (*Acer saccharinum*), Virginia creeper (*Parthenocissus quinquefolia*), and white ash (*Fraxinus americana*). This unit provides the best wildlife habitat of all Habitat Units as it is relatively intact and possesses mast-producing trees including black walnut, hickory (*Carya spp.*) and oak (*Quercus spp.*), and several drainage culverts and potential wetland areas which provide water for wildlife (USACE 2021)

Wildlife includes those animal species known, or suspected, to be present at 105 AW for at least part of their lives. The proximity of Orange Lake to the north, Lake Washington to the southeast, and Browns Pond to the south, as well as wetlands in the vicinity of the base, are an attractant to migratory birds and other wildlife at 105 AW. Stewart State Forest, other wooded areas, ponds, farm fields, and other undeveloped lands surrounding the airfield provide diverse habitats capable of supporting a varied wildlife fauna. The lists of birds known to occur in the area of the installation include:

- 23 species of waterfowl,
- 15 species of vultures, hawks, and falcons,
- Two species of land fowl,
- Five species of herons and egrets,
- Seven species of shorebirds and gulls,
- Two species of pigeons and doves,
- Nine species of perching birds,

- Two species of owls,
- One species of insect catchers,
- Two species of loons, and
- One species of pelicans (USACE 2021).

The flora and fauna survey was conducted on 22-23 September, 2020 for the presence of plant and animal species on the base. The survey included transect surveys within the installation and documentation of all wildlife and plant species observed, as well as any habitat that might support rare, threatened, and endangered species. No federally-listed species were observed during the survey. One state-listed species, the Norther harrier (*Circus hudsonius*) was observed. The list of all animal species observed during the survey include:

- 29 species of birds,
- Five species of mammals,
- One species of reptiles, and
- Two species of insects (USACE 2021).

According to the U. S. Fish and Wildlife Service, there are four threatened or endangered species in Orange County, New York, including: Indiana Bat (*Myotis sodalist*), Northern Long-eared Bat (*Myotis septentrionalis*), Bog Turtle (*Glyptemys muhlenbergii*), and Small Whorled Pogonia (*Isotria medeoloides*). The bald eagle (*Haliaeetus leucocephalus*) is a year-round inhabitant of the area; the bald eagle is classed as a protected species. It is worth noting that the Monarch Butterfly (*Danaus plexippus)* is listed as a candidate species for threatened status and may occur at this area (U.S. Fish and Wildlife Service 2024).

In 2007, the ANG conducted a Phase I archeological survey of the Base and identified one historic site, Belknap Farm Site. A Phase II archeological survey was completed on the Belknap Farm Site in 2007 in order to determine the eligibility of the site for the National Register of Historical Places (NRHP). Given the results of the Phase II survey, ANG determined that the Belknap Farm Site was eligible for the NRHP, and the New York State Historic Preservation Office (SHPO) concurred with that determination in 2008 (ANG 2019).

An architectural survey of the installation was conducted in 2007. No buildings or structures were identified as being eligible either individually or as a district for listing on the NRHP. The SHPO concurred with this determination in 2008 (ANG 2019).

The 105th AW installation has no known traditional resources; however, three federally recognized American Indian Tribes that are historically, culturally, and linguistically affiliated with the area have been identified. These American Indian Tribes include the Delaware Tribe of Indians, the Delaware Nation (Oklahoma), and the Stockbridge Munsee Community of Wisconsin (USACE 2021).

2.4. MIGRATION AND EXPOSURE PATHWAYS

Migration from a potential release of PFAS may occur through various media, such as:

- Air due to air particles deposited from incineration or burning,
- Surface soil due to product spills or surface application,
- Subsurface soil through infiltration or from subsurface release (e.g., discharge through leaking OWS or storm drains),
- Surface water from runoff or storm drain discharge, and
- Groundwater through migration through vadose zone or from surface water discharge.

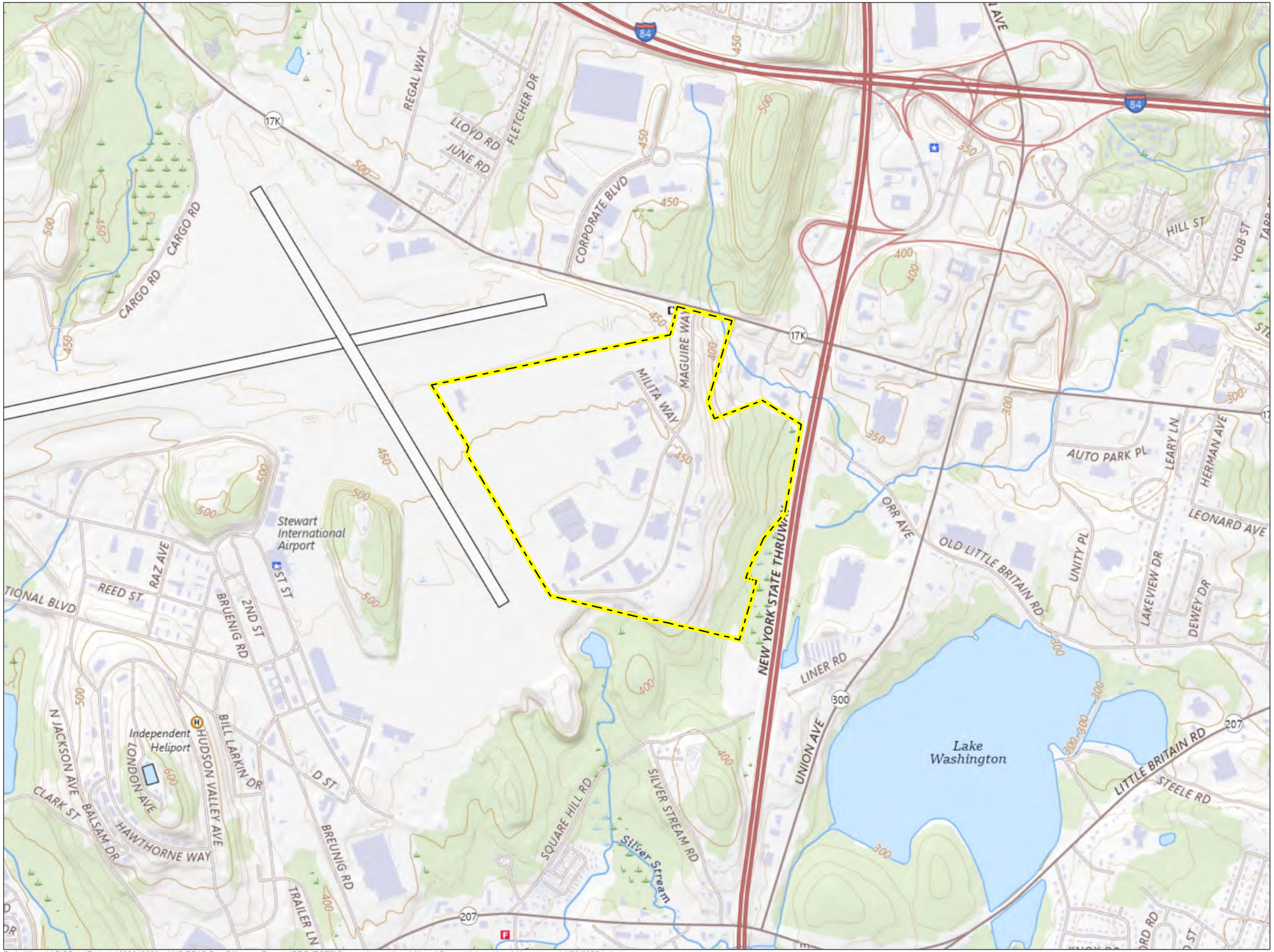
Migration and exposure pathways were determined for the Base and adjacent properties. If subsequent investigations confirm a release of material containing PFAS to surface water, additional downgradient sensitive receptors (i.e., up to a 15-mile radius) should be evaluated, in accordance with USEPA Guidance (USEPA 1991, 2005). Human receptors potentially exposed to surface and subsurface soil include Base personnel and workers, construction workers, residents, recreational users, and trespassers. PFAS exposure via surface water can occur through recreation, such as swimming and fish consumption, and through ingestion. PFAS exposure via groundwater can occur to residents through ingestion of groundwater from a private supply well. Exposure can also occur through food grown in PFAS-impacted soil and from the use of PFAS-impacted groundwater for irrigation. Another pathway is via air particles deposited from general air deposition, or other point sources such as from incineration or burning.

Ecological receptors may be exposed through soil, surface water (sediment), and groundwater (seepage to surface water) pathways. The identified receptor species, habitat (arboreal, aquatic, or terrestrial), and diet (i.e., role in the food chain) influence exposure and bioaccumulation factors (Grippo *et al.* 2021). A summary of the sensitive species at the Base is presented in **Section 2.3.6**.

Migration from a potential release of PFAS may occur through four pathways: soil, surface water, groundwater, or air deposition. As noted above, the soil type primarily present at the Base is the Udorthents, smoothed. These soils are well to moderately well-drained level areas consisting of gravelly, sandy loam, with the original soil surface altered by filling, excavation, or grading activities. Stream channels and other features that create preferential subsurface flow pathways may be buried beneath the disturbed areas that were replaced by fill material. Surface water features at the installation are primarily limited to Murphy's Gulch, a tributary of the Hudson River, standing water in the wetland areas along the eastern portion of the Base, and the two wastewater lagoons. The wastewater lagoons receive and treat discharge from individual hangars and are subsequently discharged to the Town of New Windsor publicly owned treatment works. The Base is adjacent to a pond (i.e., the Recreation Pond), which is the Base's stormwater retention basin and receives stormwater flows from a significant majority of the Base. Stormwater is discharged to Silver Stream and Moodna Creek, which lie in the Hudson River drainage basin. Additional runoff flows eastward to wetlands in the vicinity of Murphy's Gulch, downgradient of the installation. This includes runoff from IRP Sites 2 (DP002) and 3 (LF003). Approximately 2.8 acres of palustrine wetlands are located in the vicinity of Murphy's Gulch. Groundwater at the Base generally flows to the south-southeast and historically has been encountered in study area monitoring wells at depths ranging between 15 and 40 ft bgs in upland areas of the Base, and between depths of approximately five to 10 ft bgs at the southerly Base

boundary.

Human or ecological exposure may occur through each of the pathways to the potential receptors. Regarding human exposure to groundwater used as a source of drinking water, there are no known drinking water supply wells at the Base. The City of Newburgh's historical source of drinking water was Lake Washington (1,500 ft southeast of the Base), which did receive surface water from the Base until 2016 when a diverter in Silver Stream began sending water southward to Moodna Creek. The City of Newburgh switched to an alternative drinking water source in 2016. The Town of Newburgh provides water service to the Base and obtains drinking water from the Delaware Aqueduct and Chadwick Lake. One public water system well, located to the south-southwest of the property boundary and five private wells were identified within a one-mile radius of the Base (three total downgradient). The Town of Newburgh has transitioned to public water supply for many residents previously on private wells; however, there are several areas within the Town of Newburgh where residents still use private wells. From June 2016 to October 2023, the NYSDOH conducted an effort to comprehensively canvass and sample private water supplies in the vicinity of the Base. Areas were selected based on general proximity to the Base and known impacted water bodies. Drinking water systems at a total of 303 individual locations were sampled for PFAS by the NYSDOH. As a result, and where needed, the DEC, with supporting efforts from the NYSDOH, provided municipal water supply hookups or point of entry treatment systems based on exceedances found during this sampling effort (NYSDOH 2023).



Legend

Installation Boundary

Date Saved: 1/29/2025

Projection: NAD 1983 StatePlane New York East FIPS 3101 Feet

Scale: 1:14,400

0 600 1,200

US Feet

Data Sources: ESRI, USAF ANG, USGS

Stewart Air National Guard Base
Newburgh, Orange County, New York

Topographic Map

Figure 2-1

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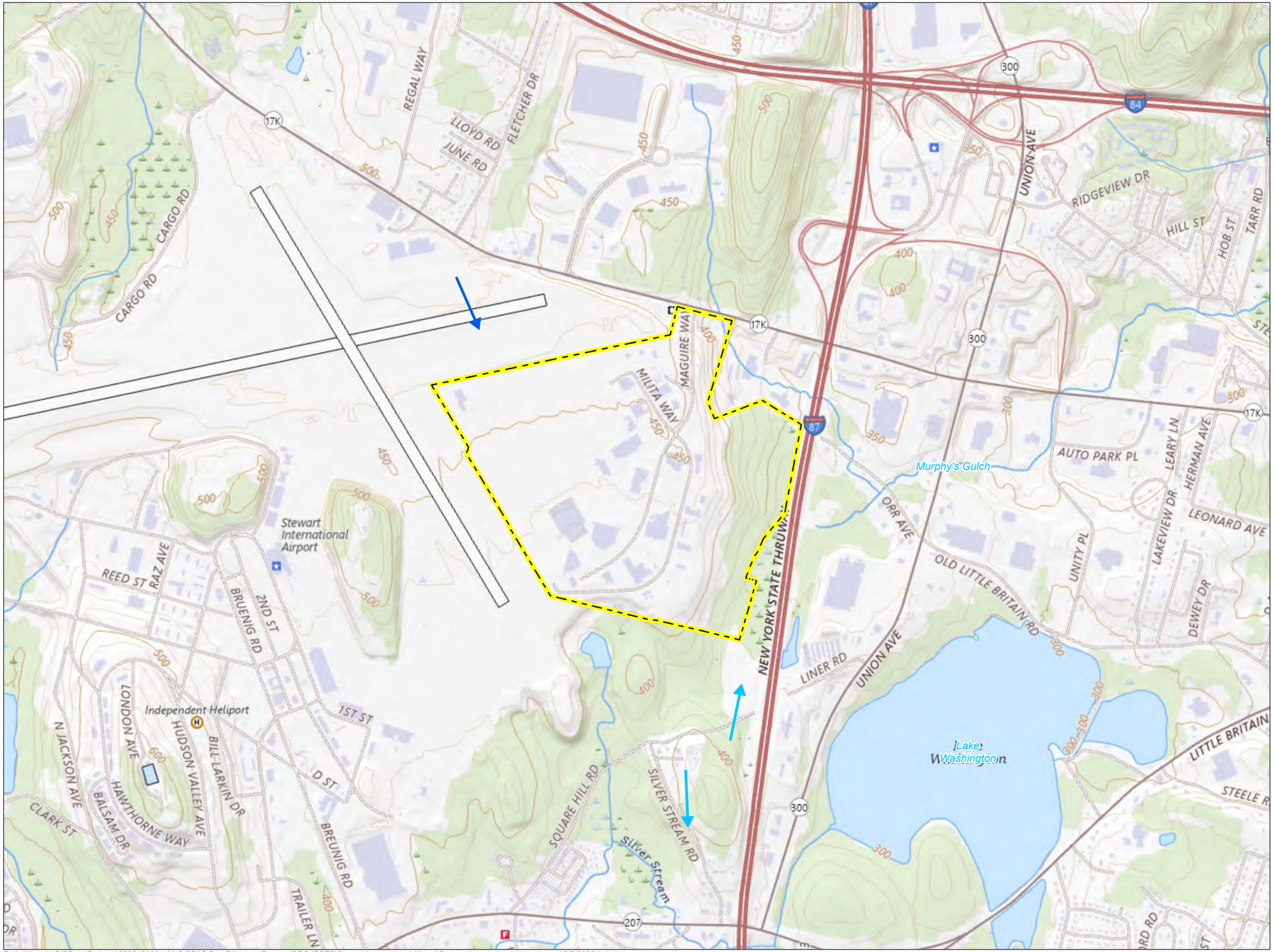

Legend

- Generalized Groundwater Flow Direction
- Generalized Surface Water Flow Direction
- Installation Boundary

Date Saved: 7/7/2025
Projection: NAD 1983 StatePlane New York East FIPS 3101 Feet
Scale: 1:14,400

0 600 1,200
US Feet

Data Sources: ESRI, USAF ANG, USGS

Stewart Air National Guard Base
Newburgh, Orange County, New York

Surface Water and Groundwater Features Map

Figure 2-2

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3. RESEARCH ACTIVITIES

3.1. RECORDS REVIEW

Both site-specific and general industry information sources were utilized during this research to determine the potential for PFAS-containing materials to have been present, used, or released at the Base. The AFCEC ANG AR for the Base includes 534 searchable documents. The records review for the Base focused on environmental compliance documents, water and wastewater system records, pesticide management plans, as-built drawings, base planning documents, and any other available documents regarding the potential use, storage, and/or disposal of products other than AFFF that potentially contain PFAS. Where data gaps were identified during the initial research for the Base, full metadata searches and full document searches for specific information were performed on the AFCEC ANG AR, and specific questions (with respect to supplemental PFAS) were asked during the interview or as follow up information requests. Numerous documents were obtained from information requests initiated with the Restoration Program Manager and Environmental Managers for the Base, along with those reviewed from the AFCEC ANG AR. The primary documents used during the records review are presented in **Table 3-1**. The AFFF PFAS SI investigated 13 AFFF areas present within the Base boundary plus three AFFF areas outside of the Base boundary (**Figure 1-2**). Four IRP Sites were found to be associated with potential sources of PFAS other than AFFF (including previously closed IRP sites) (**Figure 1-3**) within the Base boundary.

3.2. INTERVIEWS

Information from interviews has a degree of uncertainty due to the absence of contemporaneous documentation, the limited number of personnel with direct knowledge due to staffing changes, the time passed since PFAS was first used, and a reliance on personal recollection. Interviews were conducted with installation personnel familiar with the history and operations at the areas of interest. Interviewee contact information was provided by the ANG. In general, each interviewee was asked whether they were aware of any individual(s) that would have knowledge of processes or products used at the installation, with respect to PFAS, that should also be interviewed. If additional interviewees were identified, contact information was provided and subsequent interviews were attempted or completed. Due to the number of buildings at the Base, interviews were targeted at specific buildings based off the categories of potential buildings and shops outlined in **Table 1-1**. Two interviews with installation personnel familiar with the history and operations at the Base weas conducted; this included the Environmental Manager and former Base personnel. No additional interviewees were identified. **Appendix B** includes the personnel interviewed and a log from each interview.

3.3. EDR REPORT

The EDR report included a Well Report Map, an Area Corridor Report Key Map, and a Map Findings Summary for the Area Corridor Report Key Map. Sites shown on the Key Map are areas with an environmental concern that have been placed in federal, state, or local databases, but which were unable to be verified in their association with the potential to facilitate a release, discharge, or disposition point of supplemental sources of PFAS. The EDR report identified the

following:

- 32 PFAS sites as existing within a five-mile radius from the center point of the Base (from the following databases: state, federal, National Priority List, Toxics Release Inventory System, Toxic Substances Control Act, Resource Conservation and Recovery Act Manifest, Agency of Toxic Substances and Disease Registry, Water Quality Portal, National Pollutant Discharge Elimination System, Enforcement and Compliance History Online, Enforcement and Compliance History Online Fire Training, and Part 139 Airport),

- Two daycares as existing within a five-mile radius from the center point of the Base,

- 22 schools (including elementary, middle school, and high school) as existing within a five-mile radius from the center point of the Base,

- 248 wells (did not distinguish between monitoring, domestic, private, or public wells) as existing within a five-mile radius from the center point of the Base, and

- No Tribal Nations administered lands greater than or equal to 640 acres as existing at the Base (EDR does not identify Tribal Nations administered lands smaller than 640 acres). While the area could possibly contain culturally significant sites, information regarding the location and nature of archaeological resources and sites shall not be released to the public, in accordance with Title 43 sec. 7-18a, Section 9 of Archaeological Resources Protection Act, and Section 304 of the National Historic Preservation Act (USACE 2021).

Private and public wells are discussed in **Section 2.3.5.** Relevant excerpts from the EDR report are presented in **Appendix C**. Historical imagery of the Base is presented in **Appendix D**.

Table 3-1. Documents Reviewed

Air Force Administrative Record Document Number[1]	Document	Date	Relevance
445358	Final Long Term Monitoring Program Summary Report Site 2 – Pesticide Burial Pit Area. AMEC Earth & Environmental, Inc.	June 2006	Provided information on operational history of Site 2 for Landfill Checklist Form.
450994	Installation Restoration Program Management Action Plan 105th Airlift Group New York Air National Guard Stewart International Airport Newburgh, New York. Radian Corporation.	July 1994	Provided information on operational history of buildings and background information to the installation.
473136	Final Perfluorinated Compounds Preliminary Assessment Site Visit Report, New York Air National Guard Stewart Air National Guard Base Newburgh, New York. BB&E Consulting Engineers & Professionals (BB&E).	March 2016	Provided information on installation description, and on specific AFFF Buildings.
584628	Final Site Inspection Report Addendum FY 16 Phase I Regional Site Inspections Per- and Polyfluoroalkyl Substances 105th Airlift Wing New York Air National Guard Stewart Air National Guard Base Newburgh, NY. Wood Environmental and Infrastructure Solutions, Inc. (Wood)	March 2019	Provided information on previous PFAS investigations.
598617	Revised Final Report FY16 Phase I Regional Site Inspections Per- and Polyfluoroalkyl Substances, 105th Airlift Wing New York Air National Guard Stewart Air National Guard Base Newburgh, NY. Wood Environmental and Infrastructure Solutions, Inc. (Wood).	June 2018	Provided information on previous PFAS investigations.
602198	Final Expanded Site Inspection Report for Per- and Polyfluoroalkyl Substances 105th Airlift Wing New York Air National Guard Stewart Air National Guard Base Newburgh, NY. Wood.	September 2020	Provided information on previous PFAS investigations.
610379	Relative Risk Site Evaluation Stewart Air National Guard Base, New York. USACE.	December 2020	Provided information on ongoing PFAS investigations.
625062	Final 2022Annual Long Term Monitoring Report Site 3: Former Base Landfill. WSP USA Environment and Infrastructure, Inc.	March 2023	Provided information on operational history of Site 3 for Landfill Checklist Form.
625633	Draft Final Phase 1 Per- and Polyfluoroalkyl Substances (PFAS) Remedial Investigation Uniform Federal Policy – Quality Assurance Project Plan Stewart Air National Guard base NYSDEC Site No. 336089. New York State Department of Environmental Conservation (NYSDEC).	August 2022	Provided information on previous PFAS investigations.
625997	Technical Memorandum, Site Inspection Phase Closeout at Stewart Air National Guard Base, New York. National Guard Bureau (NGB).	May 2023	Provided information on previous PFAS investigations.

Air Force Administrative Record Document Number[1]	Document	Date	Relevance
Provided by Environmental Manager (EM)	Final Environmental Baseline Survey, 105th Airlift Wing New York (NY) Air National Guard, Stewart International Airport Newburgh, New York. Air Force Center for Environmental Excellence (AFCEE).	January 2002	Provided information on operational history at the installation, including specific buildings.
Provided by Base EM	Integrated Cultural Resources Management Plan (ICRMP) 105th Airlift Wing (105 AW), New York Air National Guard and U.S. Marine Aircraft Group 49, Detachment B. Air National Guard (ANG).	January 2019	Provided information on ecological and cultural resources at the installation.
Provided by Base EM	Integrated Pest Management Plan 105th Airlift Wing Stewart Air National Guard base Newburgh, New York. ANG.	June 2021	Provided information on pesticide use at the installation.
Provided by Base EM	Final Environmental Assessment New York Air National Guard 105th Airlift Wing Stewart International Airport Newburgh, New York. U.S. Army Corps of Engineers (USACE).	November 2021	Provided information on ecological and cultural resources at the installation.
Provided by Base EM	Final Spill Prevention, Control, and Countermeasure Plan Stewart Air National Guard Base. AECOM.	May 2023	Provided updated information on oil and water separators and spill procedures.

[1]The Air Force Administrative Record is found online at https://ar.cce.af.mil/

AFCEC = Air Force Center for Environmental Excellence
AFCEE = Air Force Center for Environmental Excellence
AFFF = Aqueous film-forming foam
ANG = Air National Guard
AW = Air Wing
BB&E = BB&E, Inc.
EM = Environmental Manager
IRP = Installation Restoration Program
ICRMP = Integrated Cultural Resource Management Plan
NGB = National Guard Bureau
NY = New York
NYSDEC = New York State Department of Environmental Conservation
PFAS = Per- and polyfluoroalkyl substances
USACE = U.S. Army Corps of Engineers
Wood = Wood Environmental and Infrastructure Solutions, Inc.

4. FINDINGS

The research evaluated 87 buildings/shops[1] that historically operated at the Base. The 87 buildings/shops identified were compiled in the Installation Summary Table (see **Appendix A**, **Table A.1**). The operational history of each of the 87 buildings/shops was identified as well as other key considerations shown in **Table A.1**, of those:

- 82 buildings/shops were determined to be decision categories A (no history or reasonable suspicion of PFAS use), B (possibly had material [other than AFFF] potentially containing PFAS and no documented release reported[2] [the term "no documented release reported" means no documentation is known to exist that supports the existence of a release or threat of release of material potentially containing PFAS]), or E (previously identified for further investigation due to AFFF release and no further investigation is recommended as part of this Non-AFFF Due Diligence effort),

- Zero buildings/shops were determined to be category C (spill[s] documented with material [other than AFFF] potentially containing PFAS less than the reportable quantity [<one pound in 24 hours[3,4]] and presumed to pose no potential risk to human health or the environment), and

- Five buildings/shops were identified as being associated with decision category D (documented or probable release, discharge, or disposition of material potentially containing PFAS other than AFFF and presumed to pose a potential risk to human health or the environment).

Sections 4.1–4.5 include buildings/shops identified as category D and the rationale for the decision. **Figure 4-1** provides an installation overview map of all buildings/shops (including building numbers of all currently in place or demolished buildings which require further investigation for supplemental sources of PFAS) identified in the research or the ANG provided building list, where available.

4.1. BUILDING 208 (VEHICLE MAINTENANCE SHOP/MOTOR POOL)

4.1.1. Description

Building 208 was constructed in 1990 as a vehicle maintenance shop and motor pool. Building 208 is still in service.

[1] The buildings/shops may include work or mishap areas such as aircraft aprons, flightlines, aircraft parking ramps, etc.
[2] Further investigation may be required if environmental sampling data suggests that an unreported release may have occurred.
[3] Considered Title 42, Section 9602, *Designation of additional hazardous substances and establishment of reportable released quantities; regulations* as a reasonable approach to assess the reportable quantity of potential PFAS containing material due to the lack CERCLA regulation (USEPA 2024).
[4] If available, use the mass (or weight by volume) of the product and the total PFAS concentration in the product to estimate the necessary volume of the product to achieve a one-pound release of PFAS (USEPA 2024).

4.1.2. Operational History

This building generates hazardous waste during maintenance operations and also included hazardous material storage of materials potentially containing PFAS (e.g., paints, sealants, fuel additives, thinner, and pesticides). Sites where pesticides/herbicides/insecticides were used in accordance with the Pesticide Management Plan (ANG 2021) are not considered to pose the potential for release of supplement sources of PFAS. Sites where pesticides/herbicides/insecticides were not used in accordance with the Pesticide Management Plan (e.g., pesticide storage, mixing, and/or disposal) may be recommended for further investigation for supplemental PFAS. Building 208 included one 100-gallon OWS to process floor drains and it also received floor wash-water. Building 208 also included one 500-gallon OWS for spills, which was located in the hazardous waste storage shed. Both OWSs discharged to the sanitary sewer (AFCEE 2002). The OWSs were in operation as of 2023 (ANG 2023). Effluent from these OWSs are conveyed (via the sanitary sewer) to the two wastewater lagoons (discussed in Section **2.3.3**), which receive and treat discharge from several buildings on-Base and subsequently discharge to the Town of New Windsor publicly owned treatment works (AFCEE 2002).

This building is associated with IRP site TU004, which is described as an area where two hydraulic lifts (one of which was leaking) were previously located in Building 208. One lift was reported to be leaking in 2005 but was repaired and put back in service. The second hydraulic lift was removed in 2010. There were no reports of leaks or signs of contamination identified during the removal of the second lift or the repair of the first. During the November 2013 site visit, a considerable volume (approximately 700 gallons) of hydraulic fluid/water mix were observed in the pit of the remaining lift, possibly as the result of a fire that occurred in the building in January 2011. No fire suppression system existed at Building 208 (BB&E 2016; Wood 2018). The oil/water fluid has since been removed from the lift pit and less than 15 gallons of hydraulic fluid was measured in the recovered material (AECOM 2015).

A PA/SI was conducted in 2014 at TU004. Volatile organic compounds and semi-volatile organic compounds were not detected at concentrations above screening levels in the soil samples or in groundwater collected, and the site was recommended for No Further Action. The NYSDEC approved closure of IRP Site TU004 in 2015 (Jacobs Engineering Group Inc. 2021).

4.1.3. Potential Release and Migration

Building 208 is documented as having stored and generated material potentially containing PFAS (e.g., paints, sealants, fuel additives, thinner, and pesticides). Two OWSs operated at this building and both processed materials which potentially contain PFAS. No confirmation sampling has been conducted to determine the integrity of the sanitary sewer, particularly at any outflow connection points from the two OWSs. In addition to this probable release point, while TU004 was investigated under the IRP, no PFAS analysis has been conducted at this location and there is a probable chance that PFAS migrated into the soil and groundwater at this location. Human and ecological receptors may be exposed to PFAS at Building 208 through soil, surface water (sediment), and groundwater pathways. Therefore, further investigation for supplemental sources of PFAS is warranted at Building 208.

4.2. BUILDING 209 (PAVEMENT AND GROUNDS FACILITY)

4.2.1. Description

Building 209 was constructed in 1990 as a Base Engineering Pavement and Grounds Facility. Building 209 is still in service.

4.2.2. Operational History

In addition to operating as a Pavement and Grounds Facility, this building operated as a Vehicle Operations Parking Shed. Hazardous material stored at Building 209 consisted of items with the potential to contain PFAS (e.g., motor oil and synthetic lube oil). No spills have been reported as occurring at this location (AFCEE 2002). Vehicle washing reportedly is conducted at this building (ANG 2024). The wash rack may have accumulated chemicals possibly containing PFAS (e.g., waxes, polishes, leaked engine oils, leaked hydraulic fluid, and/or leaked lubricants) (Gaines 2022). A 1,000-gallon OWS operated at Building 209 as of 2023, which contains and diverts wash effluent. It is unknown where this OWS discharged too, the lack of this information is a data gap.

4.2.3. Potential Release and Migration

Building 209 operated a wash rack, which possibly utilized or generated material with the potential to contain PFAS (e.g., waxes, polishes, leaked engine oils, leaked hydraulic fluid, and/or leaked lubricants). This wash rack serves as a likely release, discharge, and disposition point for PFAS because no known drainage systems exist to facilitate the collection or diversion of wash effluent, and there is a potential that wash effluent containing PFAS migrated into the soil and groundwater at this location. Human and ecological receptors may be exposed to PFAS at Building 209 through soil, surface water (sediment), and groundwater pathways. Therefore, further investigation for supplemental sources of PFAS is warranted at Building 209.

4.3. BUILDING 400 (AIRCRAFT ENGINE TEST STAND)

4.3.1. Description

Building 400 was constructed in an unknown year. It operated as an aircraft engine test stand and was used by both the U.S. Marine Corps and ANG, while it was owned and operated by the ANG. The test stand consisted of a concrete pad foundation with a jet engine testing structure. The concrete pad foundation is currently used to stage Aerospace Ground Equipment by the ANG while the jet engine testing structure was removed in 2013.

4.3.2. Operational History

Building 400 operated as an aircraft test stand as of 2002. No hazardous materials are documented as having been stored at this location (AFCEE 2002). Oil stains have been reported around the test stand, and oil poses the potential to contain PFAS (AFCEE 2002, Gaines 2022). It is unknown whether this location has been investigated previously, and it is unknown how much material may have been released at this location; the lack of this information is considered

to be a data gap.

4.3.3. Potential Release and Migration

Building 400 is documented as having oil staining, which indicates that an unspecified amount of material potentially containing PFAS (e.g., oil poses the potential to contain PFAS) may have been released at this location. No known cleanup response or PFAS analysis has been conducted or initiated at the test stand and there is a potential that PFAS migrated into the soil and groundwater at this location. Human and ecological receptors may be exposed to PFAS at Building 400 through soil, surface water (sediment), and groundwater pathways. Therefore, further investigation for supplemental sources of PFAS is warranted at Building 400.

4.4. BUILDING 403 (TECHNICAL LABORATORY)

4.4.1. Description

Building 403 was constructed in 1988 as a Technical Laboratory to conduct Liquid Fuels Analysis with petroleum, oil, and lubricants (POLs). Building 403 is currently still in service.

4.4.2. Operational History

Building 403 houses a fuels laboratory which is used to conduct Liquid Fuels Analysis with various POLs. The building consists of hazardous material storage with items potentially containing PFAS (e.g., water-indicator paste, sealants, and unspecified liquid) (AFCEE 2002). A number of tanks operated in this area, including two 10,000-gallon fuel product recovery underground storage tanks connected to two 30,000-gallon OWSs. Both OWSs (east and west of the building) process spills in the POL yard and discharge to Outfall 001. A fuel spill occurred at one of the product recovery tanks due to overfilling in 1993 or 1994. Contaminated soil was removed from the area and this tank was closed; fuel is not considered to pose the potential to contain PFAS (AFCEE 2002). Due to the historical building use as being associated with fuel laboratory operations, the OWSs at Building 403 may have processed waste oil, solvent degreasers, hydraulic fluids, lubricants, or other material associated with this building use which would pose the potential to contain PFAS, in addition to processing recovered fuel product which does not pose the potential to contain PFAS. The current status of both OWSs is unknown, and the lack of this information is considered to be a data gap. Effluent from these OWSs were conveyed (via Outfall 001) to the two wastewater lagoons (discussed in Section **2.3.3**), which receive and treat discharge from several buildings on-Base and subsequently discharge to the Town of New Windsor publicly owned treatment works (AFCEE 2002).

4.4.3. Potential Release and Migration

Building 403 is documented as having stored material potentially containing PFAS. Two OWSs operated at this building and processed any spills, yet the material possibly spilled is undocumented, and it may have processed material containing PFAS (e.g., waste oils, hydraulic fluid, sealants, water-indicator paste, other hazardous material with the potential to contain PFAS). No confirmation sampling has been conducted to determine the integrity of the sanitary sewer, particularly at any outflow connection points from the OWSs, and there is a potential that

PFAS migrated into the soil and groundwater at this location. Human and ecological receptors may be exposed to PFAS at Building 403 through soil, surface water (sediment), and groundwater pathways. Therefore, further investigation for supplemental sources of PFAS is warranted at Building 403.

4.5. FORMER PESTICIDE DISPOSAL SITE (IRP SITE 2 [DP002])

4.5.1. Description

The former pesticide disposal site, also known as IRP Site 2 (DP002), operated as a landfill during an unknown period of time in the late 1960s. The lack of information regarding the exact operational range of this building is considered to be a data gap. This location is currently a parking lot and grassy area adjacent to the east side of Building 214.

4.5.2. Operational History

The former pesticide disposal site is associated with IRP Site 2. It was used during the late 1960s for the unauthorized disposal of five and 55-gallon containers of pesticides and the disposal pit was approximately 20 ft by 53 ft by 12 ft deep. Around 2,000-gallons of pesticide/pesticide material in metal containers were disposed of into this pit in the late 1960s, which was then backfilled. Impacted soil was excavated from the pit in the late 1980s, and contaminated material was excavated from the pit and the site was returned to grade in 1988 (AFCEE 2002). Following this removal action and in 1989, additional surface soil and ground water sampling was conducted down gradient of Site 2, which indicated the continued presence of pesticides in surface soil and groundwater. An Interim Record of Decision was previously signed in March 2000, which recommended No Further Action but recommended two years of semiannual groundwater sampling at three monitoring wells for pesticides until 2003, with site closeout if monitoring results indicated stable contaminant levels, and included the same deed restrictions as the former Base landfill which prevents residential use of the area (AFCEE 2002). The report of the first year long-term monitoring results in 2001 indicated elevated concentrations of pesticides in the groundwater (AFCEE 2002).

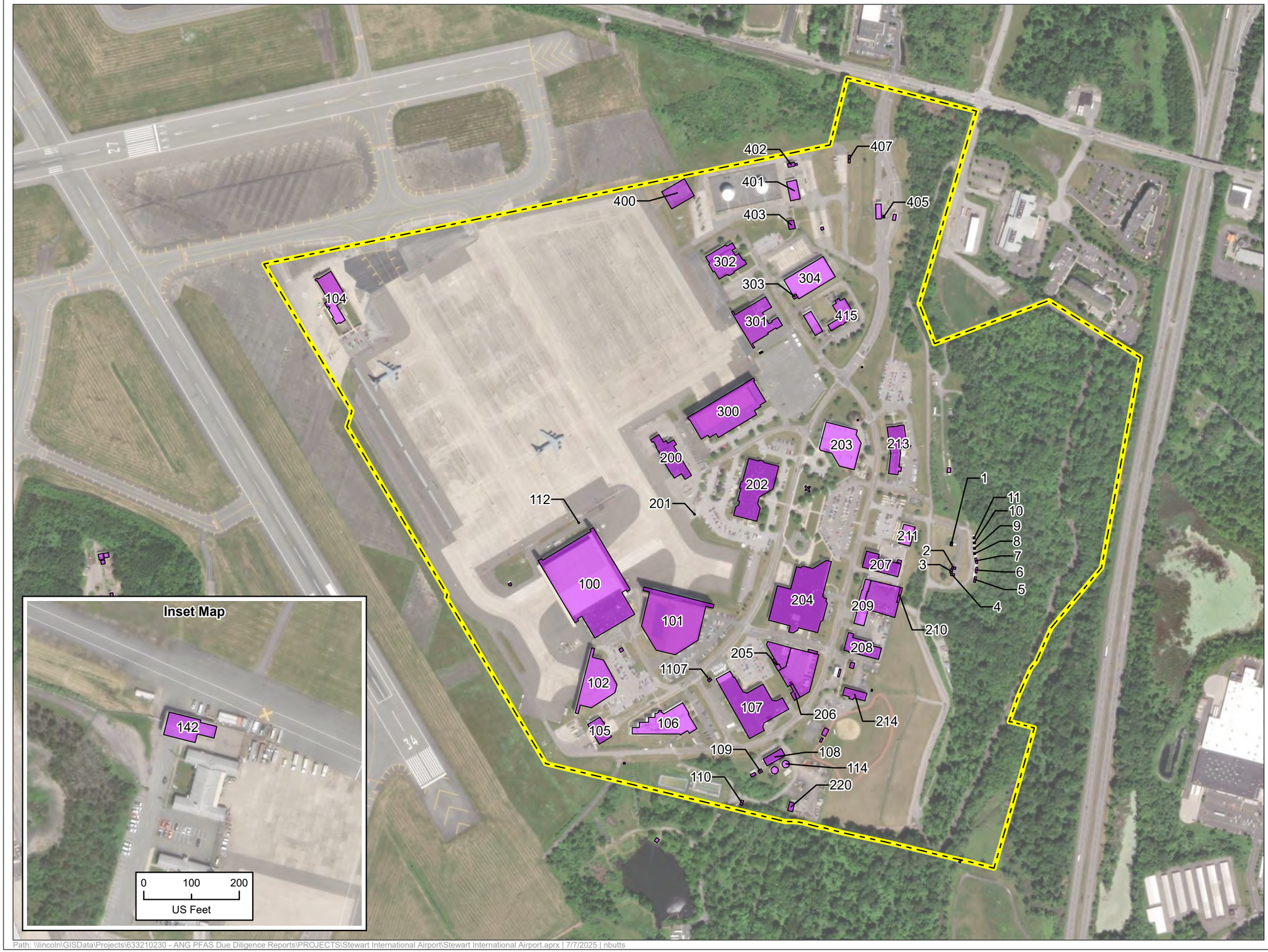
Due to the NYSDEC Ambient Water Quality Standard exceedances and observed variability in sample results at the monitoring wells over this monitoring period, the Long Term Monitoring Summary Report recommended an additional two years of semiannual monitoring, to provide better definition of the contaminant trend in groundwater at the site. This work included ground water sample collection at three wells from the following periods: June 2004, December 2004, June 2005, and November 2005 (AMEC Earth & Environmental, Inc., 2006). After additional monitoring, the site was closed in 2011 (ANG 2024). A landfill checklist form detailing the former pesticide disposal site is provided in **Appendix E**. The Base follows the 2021 Integrated Pest Management Plan which requires the Base stock, store, and dispense approved self-help pest control materials to residents and facility managers after establishing that these individuals are eligible to receive such materials. While the specific material disposed of at IRP Site 2 is unable to be verified, the current list of approved materials includes: nine types of insecticides, two types of herbicides, and five types of traps (ANG 2021).

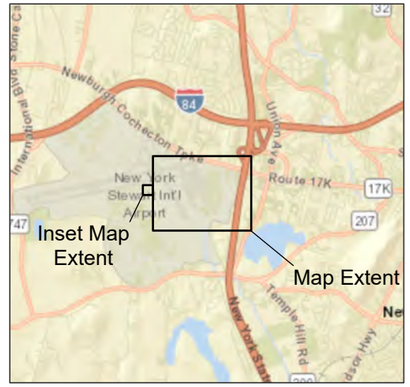
This area is also associated with IRP site SS005, where elevated concentrations of chlorinated

pesticides (i.e., 4,4'-DDD) have been detected in MW-1, approximately 200 ft from IRP Site 2. While groundwater tends to flow from the northwest to the southeast generally toward Recreation Pond and the former Base landfill, shallow groundwater does infiltrate the aged stormwater inverts in multiple locations throughout the Base (AECOM 2015; ANG 2021).

4.5.3. Potential Release and Migration

The former pesticide disposal site is documented as having served as a landfill and potentially received materials containing PFAS. Although this disposal site was investigated under IRP Site 2 and the nearby MW-1 was investigated under SS005, no PFAS analysis has been conducted at either location, and there is a probable chance that PFAS migrated into the soil and groundwater at this location. Human and ecological receptors may be exposed to PFAS at the former pesticide disposal site through soil, surface water (sediment), and groundwater pathways. Therefore, further investigation for supplemental sources of PFAS is warranted at the former pesticide disposal site (IRP Site 2).





Legend

- Building
- Installation Boundary

Date Saved: 7/7/2025
Projection: NAD 1983 StatePlane New York East FIPS 3101 Feet
Scale: 1:6,000

0 250 500
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Data Sources: ESRI, USAF ANG

Stewart Air National Guard Base
Newburgh, Orange County, New York

Installation Building Overview Map

Figure 4-1

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5. SUMMARY AND CONCLUSIONS

The research evaluated 87 buildings/shops[1] for use of products that may have contained PFAS and the likelihood of a potential release (including discharge or disposition locations). In summary, the research identified the following:

- 82 buildings/shops where no further PFAS investigation, study, or cleanup is warranted and categorized as follows:
  - — 38 with no history or reasonable suspicion of PFAS in products (i.e., category A)
  - — 25 that possibly had material (other than AFFF) potentially containing PFAS and no documented release reported[2] (the term "no documented release reported" means no documentation is known to exist that supports the existence of a release or threat of release of material potentially containing PFAS) (i.e., category B),
  - — Zero that had spill(s) documented with material (other than AFFF) potentially containing PFAS less than the reportable quantity (<one pound in 24 hours[3, 4]) and presumed to pose no potential risk to human health or the environment (i.e., category C).
  - — 19 previously identified for further investigation due to AFFF release and no further investigation is recommended as part of this Non-AFFF Due Diligence effort.
- Five buildings/shops where further investigation of PFAS is warranted (i.e., category D).

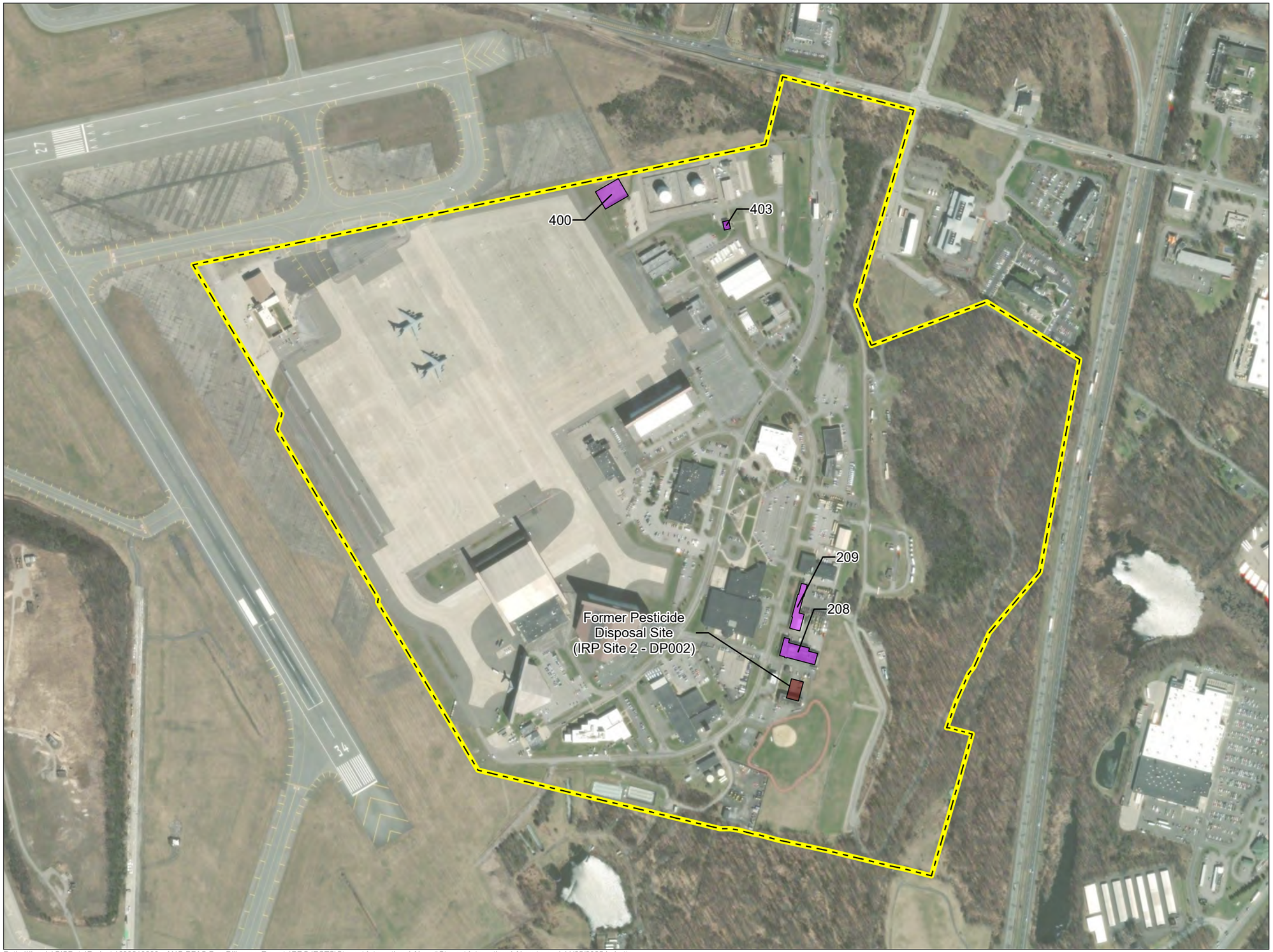
Buildings/shops identified as having a potential release of PFAS other than AFFF where further investigation is warranted (category D) are listed in **Table 5-1** and shown on **Figure 5-1**.

[1] The buildings/shops may include work or mishap areas such as aircraft aprons, flightlines, aircraft parking ramps, etc.
[2] Further investigation may be required if environmental sampling data suggests that an unreported release may have occurred.
[3] Considered Title 42, Section 9602, Designation of additional hazardous substances and establishment of reportable released quantities; regulations as a reasonable approach to assess the reportable quantity of potential PFAS containing material due to the lack CERCLA regulation (USEPA 2024).
[4] If available, use the mass (or weight by volume) of the product and the total PFAS concentration in the product to estimate the necessary volume of the product to achieve a one-pound release of PFAS (USEPA 2024).

Table 5-1. Summary of Buildings/Shops Identified for Further Investigation

Numerical Reference[2]	Building/Shop[1] Number	Historical Building/Shop[1] Use	Likely[4] Release, Discharge, or Disposition Point (Documented Release Volume)[3]	Associated IRP Site(s)
36	208	Vehicle Maintenance Shop/Motor Pool	Documented Hydraulic Fluid Release (700 gallons)	TU004
37	209	Base Engineering Pavement and Grounds Facility	Probable OWS Release (no release documented)	N/A
53	400	Aircraft Engine Test Stand	Documented Oil Release (no volume documented)	N/A
56	403	Technical Laboratory Liquid Fuels Analysis POL – Operations Buildings	Probable OWS Release (no release documented), Documented Hazardous Waste Release (no volume documented)	N/A
86	N/A	Former Pesticide Disposal Site (IRP Site 2 [DP002])	Documented Hazardous Waste Release (no volume documented)	IRP Site 2 (DP002), SS005

Notes:
1) The buildings/shops may include work or mishap areas such as aircraft aprons, flightlines, aircraft parking ramps, etc.
2) Numerical Reference refers to the first column of **Appendix A** which assigns a numerical qualifier to identify buildings/shops along with work or mishap areas such as aircraft aprons, flightlines, aircraft parking ramps, etc.
3) Further discussion regarding material types and volumes are presented in **Section 4. Findings**.
4) The term "likely" is defined as it relates to a "probable" or "documented" release. The term "probable" indicates supporting evidence exists to establish a presumption that a release of material with the potential to contain PFAS may have occurred; the term "documented" indicates that reported documentation exists which details that a release of material with the potential to contain PFAS has occurred.
IRP = Installation Restoration Program
N/A = Not applicable
OWS = Oil/water separator
POL = Petroleum, oil, lubricants



Legend

- Building
- Former Pesticide Disposal Site (IRP Site #2)
- Installation Boundary

Notes:
IRP = Installation Restoration Program

Date Saved: 11/25/2025
Projection: NAD 1983 StatePlane New York East FIPS 3101 Feet
Scale: 1:6,000

0 250 500
US Feet

Data Sources: ESRI, USAF ANG

Stewart Air National Guard Base
Newburgh, Orange County, New York

Summary of Buildings/Shops Identified for Further Investigation

Figure 5-1

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6. REFERENCES

———. 2015. Regional Compliance Restoration Program Preliminary Assessment/Site Inspection Stewart Air National Guard Base Newburgh, New York. July. [AR# 462912]

AECOM. 2023. Final Spill Prevention, Control, and Countermeasure Plan Stewart Air National Guard Base. May.

Aneptek Corporation (Aneptek). 1995a. Final Installation Restoration Program Remedial Investigation/Feasibility Study Work Plan Stewart Air National Guard Base Newburgh, New York. August. [AR# 29749]

———. 1995b. Final Installation Restoration Program Closure Site Investigation Work Plan Site 1, 105th Airlift Goup Stewart Air National Guard Base Newburgh, New York. September. [AR# 29750]

Air National Guard (ANG). 2019. Integrated Cultural Resources Management Plan (ICRMP) 105th Airlift Wing (105 AW), New York Air National Guard and U.S. Marine Aircraft Group 49, Detachment B. January.

———. 2021. Integrated Pest Management Plan 105th Airlift Wing Stewart Air National Guard Base Newburgh, New York. June.

———. 2024. ANG, Environmental Manager Michael Oettinger. Personnel Interview (conducted by EA Engineering, Science, and Technology, Inc., PBC). 8 March.

———. 2025. ANG, Mess Sargent Bob Browning. Personnel Interview (conducted by EA Engineering, Science, and Technology, Inc., PBC). 11 February.

Air Force Center for Environmental Excellence (AFCEE). 2002. Final Environmental Baseline Survey, 105th Airlift Wing New York Air National Guard, Stewart International Airport Newburgh, New York. January.

AMEC Earth & Environmental, Inc. 2006. Final Long Term Monitoring Program Summary Report Site 2 – Pesticide Burial Pit Area. June. [AR# 445358]

Office of the Assistant Secretary of Defense (ASD). 2021. *Phase I Impact Assessment (Final) PFBA, PFHxA, PFNA, PFDA, PFBS, and PFHxS, Chemical and Material Risk Management Program*. CUI Category TCSA, Distribution/Limited Distribution Control: FEDCON

———. 2025. *Investigating Per- and Polyfluoroalkyl Substances within the Department of Defense Cleanup Program*. January.

BB&E (BB&E, Inc.) 2016. Final Perfluorinated Compounds Preliminary Assessment Site Visit Report, New York Air National Guard Stewart Air National Guard Base Newburgh, New York. March. [AR#473136]

Department of Defense (DoD). 2018. Addressing Perfluorooctane Sulfonate (PFOS) and Perfluorooctanoic Acid (PFOA). May.

———. 2022. Addressing Per- and Polyfluoroalkyl Substances at Air National Guard Locations. 11 May.

———. 2023. *Report on Critical Per- and Polyfluoroalkyl Substance Uses.* August.

Dewapriya P., Chadwick L., Gorji S. G., Schulze B., Valsecchi S., Samanipour S., Thomas K. V., Kaserzon S. L. 2023. "Per- and polyfluoroalkyl substances (PFAS) in consumer products: Current knowledge and research gaps. (Including supplemental data)." Journal of Hazardous Materials Letters. Nov 2023.

Funderburg, AC. 2010. Teflon. *American Heritage: Invention and Technology*.

Gaines L.G.T. 2022. "Historical and current usage of per- and polyfluoroalkyl substances (PFAS): A Literature Review." *AM J Ind Med.* 2022;1-26. April.

Grippo, M.; Hayse, J.; Hlohowskyj, I.; Picel, K. 2021. Derivation of PFAS Ecological Screening Values, Environmental Science Division, Argonne National Laboratory. September.

Jacobs Engineering Group Inc. 2021. Final Community Involvement Plan New York Air National Guard 105th Airlift Wing, Stewart Air National Guard Base Newburgh, New York. April. [AR#608099]

Joint Ordnance Commanders Group. 2020. Emergency Planning and Community Right-to-Know Act Section 313 Toxic Chemical Release Reporting of Releases of Per- and Polyfluoroalkyl Substances from Military Munitions. November.

National Guard Bureau (NGB). 2023. Technical Memorandum, Site Inspection Phase Closeout at Stewart Air National Guard Base, New York. May. [AR#625997]

New York State Department of Environmental Conservation (NYSDEC). 2022. Draft Final Phase 1 Per- and Polyfluoroalkyl Substances (PFAS) Remedial Investigation Uniform Federal Policy – Quality Assurance Project Plan Stewart Air National Guard base NYSDEC Site No. 336089. August. [AR#625633]

———. 2024. *Aquifers in New York State*. https://dec.ny.gov/nature/waterbodies/groundwater/aquifers. 18 June.

———. 2025. Information for Communities Impacted by Per- and Polyfluoroalkyl Substances (PFAS) City of Newburgh, Town of Newburgh, and the Town of New Windsor https://dec.ny.gov/environmental-protection/site-cleanup/regional-remediation-project-information/region-3/newburgh. 28 January.

New York State Department of Health (NYSDOH). 2023. New Windsor Area Private Well Sampling Perfluorooctanesulfonic Acid (PFOS) and Perfluorooctanoic Acid (PFOA) Results Map. October.

Plunkett, R.J. 1986. The History of Polytetrafluoroethylene: Discovery and Development, in *High performance polymers: Their origin and development*. Springer, 261–266.

Radian Corporation. 1994. Installation Restoration Program Management Action Plan 105th Airlift Group New York Air National Guard Stewart International Airport Newburgh, New York. July. [AR#450994]

The Assistant Secretary of the Air Force for Energy, Installations, and Environment (SAF/IE). 2016. *Testing Drinking Water for Perfluorooctane Sulfonate (PFOS) and Perfluorooctanoic Acid (PFOA)*. 11 August.

U.S. Army Corps of Engineers (USACE). 2020. Relative Risk Site Evaluation Stewart Air National Guard Base, New York. December. [AR#610379]

———. 2021. Final Environmental Assessment New York Air National Guard 105th Airlift Wing Stewart International Airport Newburgh, New York. November.

———. 2023. *Performance Work Statement, Enterprise-Wide Due Diligence for Supplemental Polyfluoroalkyl Substances (PFAS) Sources from Non-Aqueous Film-Forming Foam (Non-AFFF) Sources at 141 ANG Installations and Geographically Separated Units. Final Document*. August.

U.S. Environmental Protection Agency (USEPA). 1991. *Guidance for Performing Preliminary Assessments Under CERCLA*. September.

———. 2005. *Federal Facilities Remedial Preliminary Assessment Summary Guide*. July.

———. 2024. *40 CFR Part 302 Designation of Perfluorooctanoic Acid (PFOA) and Perfluorooctanesulfonic Acid (PFOS) as CERCLA Hazardous Substances.* May.

U.S. Fish and Wildlife Service. 2024. *Information for Planning and Consulting*. https://ipac.ecosphere.fws.gov/location/GFU5IFYEJ5DQRFZVUA5IC3HEOM/resources. 8 March.

Weather Spark. 2024. Climate and Average Weather Year-Round at Stewart International Airport New York, United States. https://weatherspark.com/y/147174/Average-Weather-at-Stewart-International-Airport-New-York-United-States-Year-Round. 24 May.

WSP USA Environment and Infrastructure, Inc. 2023. Final 2022 Annual Long Term Monitoring Report Site 3: Former Base Landfill. March. [AR#625062]

Wood Environmental and Infrastructure Solutions, Inc. (Wood). 2018. Revised Final Report FY16 Phase I Regional Site Inspections Per- and Polyfluoroalkyl Substances, 105th

Airlift Wing New York Air National Guard Stewart Air National Guard Base Newburgh, NY. June. [AR#598617]

———. 2019. Final Site Inspection Report Addendum FY 16 Phase I Regional Site Inspections Per- and Polyfluoroalkyl Substances 105th Airlift Wing New York Air National Guard Stewart Air National Guard Base Newburgh, NY. March. [AR#584628]

———. 2020. Final Expanded Site Inspection Report for Per- and Polyfluoroalkyl Substances 105th Airlift Wing New York Air National Guard Stewart Air National Guard Base Newburgh, NY. September. [AR#602198]

Appendix A

Installation Research Summary Table

Table A. Installation Research Summary Table

Numerical Reference	Building/Shop[1] Number	Years Active	Historical Building Use	Likely Release, Discharge, or Disposition Point (Documented Release Volume)	Associated AFFF Area (#)	Associated IRP Site(s)	Decision Categories	Included in Due Diligence Research (Yes, No)	Recommended for Further Investigation (Yes, No)	Reference Document(s)/ Interview	Notes/Comments
1	1	4/4/2002- In Service	Storage Igloo	None	N/A	N/A	A	No	No	ANG Provided Building List	This building operated as a storage igloo. No materials potentially containing PFAS were identified in the documents reviewed. No historical spills or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.
2	2	4/4/2002 - In Service	Storage Igloo	None	N/A	N/A	A	No	No	ANG Provided Building List	This building operated as a storage igloo. No materials potentially containing PFAS were identified in the documents reviewed. No historical spills or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.
3	3	4/4/2002 - In Service	Storage Igloo	None	N/A	N/A	A	No	No	ANG Provided Building List	This building operated as a storage igloo. No materials potentially containing PFAS were identified in the documents reviewed. No historical spills or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.
4	4	4/4/2002 - In Service	Storage Igloo	None	N/A	N/A	A	No	No	ANG Provided Building List	This building operated as a storage igloo. No materials potentially containing PFAS were identified in the documents reviewed. No historical spills or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.
5	5	5/1/2013 - Unknown	Storage Igloo/Munitions Area	None	N/A	N/A	A	No	No	ANG Provided Building List	This building operated as a storage igloo and munitions area. No materials potentially containing PFAS were identified in the documents reviewed. No historical spills or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.
6	6	5/1/2013 - Unknown	Storage Igloo/Munitions Area	None	N/A	N/A	A	No	No	ANG Provided Building List	This building operated as a storage igloo and munitions area. No materials potentially containing PFAS were identified in the documents reviewed. No historical spills or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.
7	7	6/5/2013 - Unknown	Storage Igloo/Munitions Area	None	N/A	N/A	A	No	No	ANG Provided Building List	This building operated as a storage igloo and munitions area. No materials potentially containing PFAS were identified in the documents reviewed. No historical spills or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.
8	8	6/5/2013 - Unknown	Storage Igloo/Munitions Area	None	N/A	N/A	A	No	No	ANG Provided Building List	This building operated as a storage igloo and munitions area. No materials potentially containing PFAS were identified in the documents reviewed. No historical spills or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.
9	9	6/5/2013 - Unknown	Storage Igloo/Munitions Area	None	N/A	N/A	A	No	No	ANG Provided Building List	This building operated as a storage igloo and munitions area. No materials potentially containing PFAS were identified in the documents reviewed. No historical spills or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.
10	10	6/5/2013 - Unknown	Storage Igloo/Munitions Area	None	N/A	N/A	A	No	No	ANG Provided Building List	This building operated as a storage igloo and munitions area. No materials potentially containing PFAS were identified in the documents reviewed. No historical spills or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.
11	11	6/5/2013 - Unknown	Storage Igloo/Munitions Area	None	N/A	N/A	A	No	No	ANG Provided Building List	This building operated as a storage igloo and munitions area. No materials potentially containing PFAS were identified in the documents reviewed. No historical spills or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.
12	99	5/28/2015 - Unknown	Garbage Stand - Hangar 100	None	N/A	N/A	B	No	No	ANG Provided Building List	This building operated as a garbage stand hangar. This building generated unspecified hazardous waste with the potential to contain PFAS. No historical spills or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.
13	100	7/1/1988 - In Service	Weapon System Maintenance Management Facility/Maintenance Hangar	None	4, 12, 15	N/A	E	No	No	AFCEE 2002 Radian 1994 Wood 2018, 2020	Tanks: One 15,000-gallon #2 fuel oil UST, in use as of 1994 (Radian 1994). One AFFF AST installed in 1988 (unknown), one 4,600-gallon OWS for floor wash waters; also services Buildings 101 and 102; discharges to retention basins (AFCEE 2002). Hazardous material included: Safety Kleen solvent parts washer, sealants, lubricants, grease, paint, batteries, refrigerated sealant, hydraulic oil. (AFCEE 2002). Spills: Two reported spills: 35 gal of JP-4 in 1992, 525 gallons of AFFF foam in 1994 (AFCEE 2002). Small spills of oil and coolant noted in machine and welding shop. AFFF staining on grass outside mechanical room, along with stressed vegetation and staining on concrete and asphalt pavement on east and south sides of building (AFCEE 2002). Previously recommended to be included in AFFF SI for AFFF Areas 4, 12, 15. Sampled in 2020 ESI and PFAS was found to be above RSL (Wood 2018, 2020).

Table A. Installation Research Summary Table

Numerical Reference	Building/Shop[1] Number	Years Active	Historical Building Use	Likely Release, Discharge, or Disposition Point (Documented Release Volume)	Associated AFFF Area (#)	Associated IRP Site(s)	Decision Categories	Included in Due Diligence Research (Yes, No)	Recommended for Further Investigation (Yes, No)	Reference Document(s)/ Interview	Notes/Comments
14	101	7/1/1989 - In Service	Aircraft Corrosion Control Hangar	None	5, 12, 13, 15	N/A	E	No	No	AFCEE 2002 Wood 2018, 2020	Shops: Wash rack, hangars (x2), test stand (AFCEE 2002). Hazardous material included: soap, cleaning compound, spray release agent, potting compound, calibration fluid, aircraft sealants, batteries. (AFCEE 2002). Spills: Five reported spills: fuel and oil spilled in the vicinity of the wash rack over 12 years (unknown year/amount), 1992 approximately 900 gallons of AFFF foam, 1992 approximately 6 gallons of JP-4, 1993 approximately 3000-gallons of AFFF foam, 1993 approximately 8 gallons of JP-4 (AFCEE 2002). Tanks: 400-gallon JP-8 mobile bowser AST (AFCEE 2002). No expected PFAS Recommended to be included in AFFF SI for AFFF Areas 5, 12, 13, 15. Sampled in 2020 ESI and PFAS was found to be above RSLs (Wood 2018, 2020).
15	102	7/1/1990 - In Service	Fuel System Maintenance Dock/Fuel Cell Nose Dock	None	6, 13, 15	N/A	E	No	No	AFCEE 2002 Wood 2018, 2020	Hazardous material included cleaning compound, spray release agent, potting compound, calibration fluid, aircraft sealants, batteries, Safety Kleen solvent. Generated waste sealant. No reported spills (AFCEE 2002). Recommended to be included in AFFF SI for AFFF Areas 6, 13, 15. Sampled in 2020 ESI and PFAS was found to be above RSLs (Wood 2018, 2020).
16	104	2/2/2009-permenant	Fire Crash/Rescue Station Fire Station	None	1, 2, 15	N/A	E	No	No	Wood 2018, 2020	Recommended to be included in AFFF SI, included in AFF Areas 1, 2, and 15 (2016 AFFF PA). Sampled in 2020 ESI and PFAS was found to be above RSLs (Wood 2018, 2020).
17	105	2/8/1988 - In Service	Air Freight/Passenger Terminal	None	3, 15	N/A	E	No	No	AFCEE 2002 Wood 2018, 2020	Tanks: One 275-gallon diesel AST, in use as of 1994 (Radian 1994) and last inspected in 1991 (AFCEE 2002). Hazardous material included engine oil, caustic neutralizer, absorbent, wooden back boards, no reported spills (AFCEE 2002). Recommended to be included in AFFF SI (AFFF Area 3). Sampled in 2020 ESI and PFAS was found to be above RSLs (Wood 2018, 2020).
18	106	7/1/1992 - In Service	Security Police Operations Aerial Port	None	Outfall 003	N/A	E	No	No	AFCEE 2002 Radian 1994 Wood 2018, 2020	Tanks: One 1,000-gallon #2 fuel oil UST, in use as of 1994 (Radian 1994). Sampled in 2020 AFFF ESI under Outfall 003, and PFAS was found to be above RSLs (Wood 2018, 2020). Hazardous material included spray paints (EBS 2001).
19	107	7/1/1989 - In Service	Squadron Operations Composite Maintenance Facility	None	N/A	N/A	B	No	No	AFCEE 2002	This building operated as a squadron operations composite maintenance facility. The building included communications, navigation, electric, repair and reclamation, and survival equipment shops. The building included storage and generation of hazardous waste with the potential to contain PFAS (batteries, solvents, paints, cleaners, lubricants, sealants, adhesives, hydraulic fluid, oils). One 6,000-gal fuel oil UST and one solvent AST operated at the building; fuel oil does not pose the potential to contain PFAS. The floor drained to a 20-gallon OWS which discharged to the sanitary sewer. No releases associated with the OWS were identified and no issue with the integrity of the sanitary sewer has been reported. No historical spills or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.
20	107a	7/1/1989 - In Service	Base Hazardous Storage Hazard Store Base/Central Accumulation Point (Also known as Building 1107)	None	N/A	N/A	B	No	No	AFCEE 2002	This building operated as a hazardous materials storage which stored hazardous materials and waste with the potential to contain PFAS (pesticides, oils). No historical spills or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.
21	108	7/1/1988 - In Service	Water Fire Pumping Station	None	9	N/A	B	No	No	AFCEE 2002 Wood 2018, 2020	This building operated as a water fire pumping station. The building included one 2,000-gallon #2 fuel oil UST, in use as of 1994 (Radian 1994). Four 550-gallon diesel ASTs, all in use as of 1994 (Radian 1994). Discrepancy between number of ASTs/USTs listed in Radian 199 and AFCEE 2002. The 2002 EBS lists three 550-gal diesel ASTs, two 250,000-gallon water ASTs, and a 2,500-gallon #2 fuel oil UST; fuel oil does not pose the potential to contain PFAS. The floor drained to a 50-gallon OWS which discharged to the sanitary sewer. No releases associated with the OWS were identified and no issue with the integrity of the sanitary sewer has been reported. This building was included in the AFFF PA for AFFF Areas 9, 14, 15 (AFFF PA). However, AFFF Area 9 was recommended for NFA and not evaluated for AFFF contamination due to no known AFFF releases. No historical spills or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.
22	109	7/1/1988 - In Service	Electric Switching Station	None	N/A	N/A	A	No	No	AFCEE 2002	This building operated as an electric switching station. No materials potentially containing PFAS were identified in the documents reviewed. No historical spills or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.

Table A. Installation Research Summary Table

Numerical Reference	Building/Shop[1] Number	Years Active	Historical Building Use	Likely Release, Discharge, or Disposition Point (Documented Release Volume)	Associated AFFF Area (#)	Associated IRP Site(s)	Decision Categories	Included in Due Diligence Research (Yes, No)	Recommended for Further Investigation (Yes, No)	Reference Document(s)/ Interview	Notes/Comments
23	110	7/1/1988 - In Service	Water Pump Station	None	110	N/A	B	No	No	AFCEE 2002	This building operated as a water pump station. Due to the nature of this building, it may have processed materials with the potential to contain PFAS. No historical spills or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.
24	111	Unknown - Unknown	Unknown	None	N/A	N/A	B	No	No	Radian 1994	This building operated in an unknown capacity and therefore may have contained materials with the potential to contain PFAS. No historical spills or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.
25	112	7/1/1989 - Unknown	Access Control Facility	None	N/A	N/A	A	No	No	AFCEE 2002	This building operated as an access control facility. No materials potentially containing PFAS were identified in the documents reviewed. No historical spills or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.
26	114	Unknown-Unknown	Fire Water Tank	None	N/A	N/A	E	No	No	ANG Provided Building List	Currently suspected of AFFF release but not previously identified.
27	142	8/5/2021 - Unknown	Fire Crash/Rescue Station Alternate Facility/Auxiliary Fire Station	None	Building 142	N/A	E	No	No	AFCEE 2002 NGB 2023 NYSDEC 2022	A release of PFAS attributable to the ANG in environmental media above screening levels was confirmed in the Stewart International Airport PFAS Assessment conducted in 2016 and this building was recommended to move to the Remedial Investigation/Feasibility phase (NGB 2023)
28	200	7/1/1988 - In Service	Shop, Jet Engine Inspection And Maintenance Aerospace ground equipment (AGE)	None	10, 12, 15	N/A	E	No	No	AFCEE 2002 Wood 2018, 2020	Tanks: Seven USTs, one 6,000-gallon jet fuel UST, one 6,000-gallon diesel UST, one 6,000-gallon gasoline UST, four 10,000-gallon glycol USTs, all USTs in use as of 1994 (Radian 1994). 4000-gallon fuel oil UST, and one 2000-gallon OWS for floor wash waters; discharges to sanitary sewer system (AFCEE 2002). Hazardous material included cleaning compounds, antifreeze additive, primer, sealants, lubricant, varnish, adhesive, hydraulic fluid, solvent part washers - Safety Kleen, engine oil, aliphatic hydrocarbon grease. Generated used oil/fuel filters and used oil (AFCEE 2002). Spills: In 1995, 25 gallons of diesel spilled at equipment storage, contained and cleaned (AFCEE 2002). Leaky generators noted at USMCR AGE outside near drain on cracked pavement. Asphalt storage pad stained from equipment storage. Small spills noted from oil distribution from AGE (AFCEE 2002). Previously recommended to be included in AFFF SI for AFFF Areas 10, 12, 15. Sampled in 2020 ESI and PFAS was found to be above RSLs (Wood 2018, 2020).
29	201	7/1/1988 - Unknown	Access Control Facility	None	N/A	N/A	A	No	No	AFCEE 2002	This building operated as an access control facility. No materials potentially containing PFAS were identified in the documents reviewed. No historical spills or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.
30	202	7/1/1988 - In Service	Squadron Operations Comm	None	N/A	N/A	B	No	No	AFCEE 2002	This building operated as a squadron operations communication facility. This building included storage of hazardous materials and waste with the potential to contain PFAS (cleaners, lubricants, adhesives, sealant, oils). No historical spills or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.
31	203	7/1/1988 - In Service	Audiovisual Facility Comp Ops Training/Refuse And Garbage Building Garbage Stand, Group Headquarters Building	None	N/A	N/A	B	No	No	AFCEE 2002	This building operated as an audiovisual facility and headquarters building. It included a dental X-ray lab, medical lab, and X-ray lab; also known as Building 199 Refuse and Garbage Building. This building included generation of hazardous materials and waste with the potential to contain PFAS (photodevelopers and fixers). No historical spills or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.
32	204	7/1/1992 - In Service	Reserve Forces General Training Support Base Supply-ANG	None	N/A	N/A	B	No	No	AFCEE 2002	This building operated as a reserve forces general training support facility. The building included storage and generation of hazardous waste with the potential to contain PFAS (batteries, lubricants, sealants, adhesives, hydraulic fluid, oils). One 6,000-gal fuel oil UST and one solvent AST operated at the building; fuel oil does not pose the potential to contain PFAS. The floor drained to a 20-gallon OWS which discharged to the sanitary sewer. No releases associated with the OWS were identified and no issue with the integrity of the sanitary sewer has been reported.. No historical spills or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.
33	205	7/1/1992 - In Service	Warehouse Supply And Equipment/Base Hazardous Store	None	N/A	N/A	B	No	No	AFCEE 2002 Radian 1994	This building operated as a warehouse supply and equipment base facility and included aircraft and vehicle maintenance and repair. This building included storage of hazardous materials and waste with the potential to contain PFAS (batteries, hydraulic fluid, cleaners, lubricant adhesives, sealant, oils, paints). No historical spills or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.

Table A. Installation Research Summary Table

Numerical Reference	Building/Shop[1] Number	Years Active	Historical Building Use	Likely Release, Discharge, or Disposition Point (Documented Release Volume)	Associated AFFF Area (#)	Associated IRP Site(s)	Decision Categories	Included in Due Diligence Research (Yes, No)	Recommended for Further Investigation (Yes, No)	Reference Document(s)/ Interview	Notes/Comments
34	206	7/1/1988 - In Service	Base Hazardous Storage	None	N/A	N/A	B	No	No	AFCEE 2002	This building operated as base hazardous storage. This building included storage of hazardous materials and waste with the potential to contain PFAS (batteries, hydraulic fluid, cleaners, lubricants, adhesives, sealant, oils). No historical spills or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.
35	207	7/1/1988- In Service	Base Engineer Administration	None	N/A	N/A	B	No	No	AFCEE 2002 Radian 1994	This building operated as a base engineer administration building. This building included storage and generation of hazardous materials with the potential to contain PFAS (paint waste, thinners, adhesives, hydraulic fluid, lubricants, oils). One 1,000-gal fuel oil UST operated at this facility; fuel oil does not pose the potential to contain PFAS. No historical spills or releases at this building were identified in the documen reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.
36	208	7/1/1990 - In Service	Vehicle Maintenance Shop/Motor Pool	Documented Hydraulic Fluid Release (700 gallons)	N/A	TU004	D	Yes	Yes	AECOM 2015 AFCEE 2002 Radian 1994	Tanks: Three USTs, one 6,000-gallon gasoline UST, one 8,000-gallon diesel UST, one 2,000-gallon #2 fuel oil UST, all USTs in use as of 1994 (Radian 1994). One 500-gallon used oil AST installed in 2000, one 100-gallon OWS for floor wash waters; discharges to sanitary sewer; installed in 1989. One 500-gallon OWS for spills at hazardous waste storage shed; discharges to sanitary sewer system, (as of 2002, the OWS was last inspected in 2000) (AFCEE 2002). Hazardous material included cleaners, paints, sealants, fuel additives, thinner, oils, hydraulic fluid, lubricants, grease (AFCEE 2002). This building is associated with IRP site TU004. Two hydraulic lifts were previously located in Building 208. One lift was reported to be leaking in 2005 but was repaired and put back in service. The second hydraulic lift was removed in 2010. There were no reports of leaks or signs of contamination identified during the removal of the second lift or the repair of the first. During the November 2013 site visit, a considerable volume (approximately 700 gallons) of hydraulic fluid/water mix were observed in the pit of the remaining lift, possibly as the result of a fire that occurred in the building in January 2011. The oil/water fluid has since been removed from the lift pit and less than 15 gallons of hydraulic fluid was measured in the recovered material (AECOM 2015 - AECOM). Remediation is ongoing at this site. Documented release of PFAS containing materials or direct release mechanisms were identified within reviewed documents and subsequent interviews.
37	209	7/1/1990 - In Service	Base Engineering Pavement and Grounds Facility	Probable OWS Release (no release documented)	N/A	N/A	D	Yes	Yes	AFCEE 2002	Also operated as a Vehicle Operations Parking Shed. Hazardous material included motor oil, synthetic lube oil (AFCEE 2002). 1,000-gallon OWS, unknown discharge location. Documented release of PFAS containing materials or direct release mechanisms were identified within reviewed documents and subsequent interviews.
38	210	Unknown, between 2000 and 2010 - In Service	Base Supply And Equipment Shed	None	N/A	N/A	A	No	No	AFCEE 2002	This building operated as a base supply and equipment shed. No materials potentially containing PFAS were identified in the documents reviewed. No historical spills or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.
39	211	7/1/1993 - In Service	Telecommunications Facility Be Covered Store	None	N/A	N/A	B	No	No	AFCEE 2002	This building operated as a telecommunications facility. This building included storage of hazardous materials and waste with the potential t contain PFAS (oil lubricants, cleaners). No historical spills or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.
40	212	Unknown-Unknown	Base Supply And Equipment Shed/Storage Shed	None	N/A	N/A	A	No	No	ANG Provided Building List	This building operated as a base supply and equipment shed. No materials potentially containing PFAS were identified in the documents reviewed. No historical spills or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.
41	213	6/1/2001 - In Service	Reserve Forces Communications & Electronic Training Civil Engineering Training	None	N/A	N/A	A	No	No	AFCEE 2002	This building operated as a reserve forces communications and electronic training civil engineering training facility. One 1,000-gallon fuel AST operated at this building; fuel oil does not pose the potential to contain PFAS. No materials potentially containing PFAS were identifie in the documents reviewed. No historical spills or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.
42	214	6/1/2001 - In Service	Vehicle Maintenance Shop	None	N/A	N/A	B	No	No	AFCEE 2002	This building operated as vehicle maintenance shop. A 350-gallon OWS operated at this building and discharged to the sanitary sewer. No releases associated with the OWS were identified and no issue with the integrity of the sanitary sewer has been reported. No historical spills or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.
43	216	Unknown-Unknown	Pavilion	None	N/A	N/A	A	No	No	ANG Provided Building List	This building operated as a pavilion. No materials potentially containing PFAS were identified in the documents reviewed. No historical spi or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.

Table A. Installation Research Summary Table

Numerical Reference	Building/Shop[1] Number	Years Active	Historical Building Use	Likely Release, Discharge, or Disposition Point (Documented Release Volume)	Associated AFFF Area (#)	Associated IRP Site(s)	Decision Categories	Included in Due Diligence Research (Yes, No)	Recommended for Further Investigation (Yes, No)	Reference Document(s)/ Interview	Notes/Comments
44	218	Unknown-Unknown	Miscellaneous Outdoor Rec/Basketball Court	None	N/A	N/A	A	No	No	ANG Provided Building List	This building operated as an outdoor recreation center. No materials potentially containing PFAS were identified in the documents reviewed. No historical spills or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.
45	220	7/1/1995 - In Service	Base Engineer Storage Shed Base Engineering Storage Shed	None	N/A	N/A	A	No	No	AFCEE 2002	This building operated as a base engineer storage shed. No materials potentially containing PFAS were identified in the documents reviewed. No historical spills or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.
46	221	6/8/1988 - Unknown	Access Control Facility Traffic Check House	None	N/A	N/A	A	No	No	ANG Provided Building List	This building operated as an access control facility traffic check house. No materials potentially containing PFAS were identified in the documents reviewed. No historical spills or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.
47	300	7/1/1990 - In Service	Squadron Operations U.S. Marine Corps Reserve Hangar	Documented Hazardous Material Release (no volume documented)	7, 13, 15	N/A	E	No	No	AFCEE 2002 Radian 1994 Wood 2018, 2020	Aircraft/Vehicle maintenance and repair, fuel/oil storage, with unspecified hazardous materials (Radian 1994). Hazardous material included hydraulic bottles for testing quality, MEK, cleaner, paint, adhesive. Generated soldering waste, used solvents/sealants, used oil filters, used oil for recycling (AFCEE 2002). Spills: four gallons of #2 fuel oil spilled and the USMRC Hangar had many other unreported spills of oil, paint, and solvents. All spills were reportedly contained within the building AFCEE 2002. Tanks: One 8,000-gallon #2 fuel oil UST, in use as of 1994 (Radian 1994). One 500-gallon OWS for floor wash waters; discharges to sanitary sewer and to industrial waste system to one of two retention basins (AFCEE 2002). Building was included in AFFF SI for AFFF Areas 7, 13, 15. Sampled in 2020 ESI and PFAS was found to be above RSLs (Wood 2018, 2020).
48	301	7/1/1993 - In Service	Fuel System Maintenance Dock Fuel Systems Hangar (U.S. Marine Corps)	Documented Hazardous Material Release (no volume documented)	8, 12, 13, 15	N/A	E	No	No	AFCEE 2002 Radian 1994 Wood 2018, 2020	Aircraft/Vehicle maintenance and repair, hydraulics shop, fuel/oil storage, with unspecified hazardous materials (Radian 1994). Hazardous material included paint remover, corrosive glue, lubricants, enamel, primer, spray paint (inside paint booth), PD-680 (inside solvent cleaning room), antiseize, sealant, corrosion preventer, grease, adhesives. Generated liquid paint waste, used sealant, solid paint waste, lube oil (AFCEE 2002). Spills: 100 gallons of AFFF/water spilled in 1995, contained in downstream OWS. Spills observed at hydraulics shop (hydraulic spill in hydraulic testing room. Stains seen on concrete floor) AFCEE 2002. Tanks: One 4,000-gallon #2 fuel oil AST, in use as of 1994 (Radian 1994). One AFFF AST. Two 1000-gallon OWSs for floor wash waters; discharges to the sanitary sewer system and industrial waste system to one of two retention basins (AFCEE 2002). Building was included in AFFF SI for AFFF Areas 6, 13, 15. Sampled in 2020 ESI and PFAS was found to be above RSLs (Wood 2018, 2020).
49	302	7/1/1988 - In Service	Aircraft General Purpose Shop/ Intermediate Maintenance Activity (U.S. Marine Corps Reserve)	None	NA	N/A	B	No	No	Radian 1994 AFCEE 2002	This building operated as an aircraft general purpose and maintenance building and housed engine, tire, vehicle/aircraft maintenance, and NDI shops. The building included storage and generation of hazardous waste with the potential to contain PFAS (lubricants, sealants, adhesives, primer, oils). The floor drained to a 2,300-gallon OWS which discharged to the sanitary sewer. No releases associated with the OWS were identified and no issue with the integrity of the sanitary sewer has been reported.. No historical spills or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.
50	303	7/1/1990 - In Service	Base Engineer Storage Shed Base Engineering Store Shed	None	N/A	N/A	B	No	No	Radian 1994 AFCEE 2002	This building operated base engineering storage and included aircraft and vehicle maintenance and repair. This building included storage of hazardous materials and waste with the potential to contain PFAS (paint, cleaners, lubricants, adhesives, hydraulic fluid, oils, paints). No historical spills or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.
51	304	11/25/2020 - In Service	Warehouse Supply And Equipment	None	N/A	N/A	A	No	No	ANG Provided Building List	This building operated as a warehouse supply and equipment. No materials potentially containing PFAS were identified in the documents reviewed. No historical spills or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.
52	305	7/1/1993 - Unknown	Hazard Storage Base	None	N/A	N/A	B	No	No	AFCEE 2002	This building operated as base hazardous storage. This building included storage of unspecified hazardous materials and waste with the potential to contain PFAS. No historical spills or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.

Table A. Installation Research Summary Table

Numerical Reference	Building/Shop[1] Number	Years Active	Historical Building Use	Likely Release, Discharge, or Disposition Point (Documented Release Volume)	Associated AFFF Area (#)	Associated IRP Site(s)	Decision Categories	Included in Due Diligence Research (Yes, No)	Recommended for Further Investigation (Yes, No)	Reference Document(s)/ Interview	Notes/Comments
53	400	Unknown- - Unknown	Aircraft Engine Test Stand	Documented Oil Release (no volume documented)	N/A	N/A	D	Yes	Yes	AFCEE 2002	Two 1,050,000-gallon jet fuel ASTs, in use as of 1994 (Radian 1994). One 1000 gallon JP-8 AST (AFCEE 2002). Spills: oil staining observed at aircraft engine stand location (AFCEE 2002). Documented release of PFAS containing materials or direct release mechanisms were identified within reviewed documents and subsequent interviews.
54	401	7/1/1988 - In Service	Petroleum Operations Building Petroleum, oil, lubricant (POL) - Pump Stand	None	N/A	N/A	A	No	No	AFCEE 2002	This building operated as a POL pump stand. No materials potentially containing PFAS were identified in the documents reviewed. No historical spills or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.
55	402	7/1/1988 - In Service	Hydrant Fueling Building POL - Controls	None	N/A	N/A	B	No	No	AFCEE 2002	This building operated as a POL facility. This building included storage of hazardous materials with the potential to contain PFAS (petroleum, oils, and lubricants). One 200-gal diesel AST operated at this facility; diesel does not pose the potential to contain PFAS. No historical spills or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.
56	403	7/1/1988 - In Service	Technical Laboratory Liquid Fuels Analysis POL - Operations Buildings	Probable OWS Release (no release documented), Documented Hazardous Waste Release (no volume documented)	N/A	N/A	D	Yes	Yes	AFCEE 2002	Shops: fuels lab, Petroleum operations building, product recovery tank AFCEE 2002. Hazardous material included water indicating paste, "liquid" - unspecified, sealants (AFCEE 2002). Spills: one spill at product recovery tank (in 1993 or 1994) the product recovery tank overfilled and leaked; removed contaminated soil and closed the tank (AFCEE 2002). Tanks: three 600-gallon JP-8 ASTs, one 1500-gallon Oxygen AST, one 3000-gallon oxygen AST, two 6000-gallon JP-8 ASTs, one 11000-gallon nitrogen AST, one 4000-gallon JP8 UST, two 10000-gallon USTs for fuel product recovery (attached to OWSs), and two 30000-gallon OWSs (east and west) for spills at POL yard; both discharge to outfall 001 (AFCEE 2002). Documented release of PFAS containing materials or direct release mechanisms were identified within reviewed documents and subsequent interviews.
57	404	2/6/2008 - Unknown	Access Control Facility	None	N/A	N/A	A	No	No	ANG Provided Building List	This building operated as an access control facility. No materials potentially containing PFAS were identified in the documents reviewed. No historical spills or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.
58	405	7/1/1988 - In Service	Access Control Facility Guard Shack	None	N/A	N/A	A	No	No	AFCEE 2002	This building operated as an access control facility guard shack. No materials potentially containing PFAS were identified in the documents reviewed. No historical spills or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.
59	406	None - In Service	Access Control Facility	None	N/A	N/A	A	No	No	ANG Provided Building List	This building operated as an access control facility. No materials potentially containing PFAS were identified in the documents reviewed. No historical spills or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.
60	407	7/7/1988 - In Service	Special Fuel Facility POL Open Covered Storage	None	N/A	N/A	A	No	No	ANG Provided Building List	This building operated as a POL covered storage. No materials potentially containing PFAS were identified in the documents reviewed. No historical spills or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.
61	412	Unknown - Unknown	POL Receiving Shed/Base Supply And Equipment Shed	None	N/A	N/A	B	No	No	ANG Provided Building List	This building operated as a POL facility. This building included storage of hazardous materials with the potential to contain PFAS (petroleum, oils, and lubricants). No historical spills or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.
62	415	7/1/1998 - In Service	Flight Simulator Training	None	N/A	N/A	B	No	No	AFCEE 2002	This building operated as flight simulator training. This building included storage of hazardous materials with the potential to contain PFAS (paint, thinners, adhesives, hydraulic fluid, lubricants, grease). One 500-gal fuel oil AST operated at this facility; fuel oil does not pose the potential to contain PFAS. No historical spills or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.
63	420	Unknown - Unknown	Combat Arms Training Facility	None	N/A	N/A	A	No	No	ANG Provided Building List	This building operated as a combat arms training facility. No materials potentially containing PFAS were identified in the documents reviewed. No historical spills or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.
64	437	Unknown - Unknown	Monument/O-2 Plane	None	N/A	N/A	A	No	No	ANG Provided Building List	This building operated as a monument. No materials potentially containing PFAS were identified in the documents reviewed. No historical spills or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.

Table A. Installation Research Summary Table

Numerical Reference	Building/Shop[1] Number	Years Active	Historical Building Use	Likely Release, Discharge, or Disposition Point (Documented Release Volume)	Associated AFFF Area (#)	Associated IRP Site(s)	Decision Categories	Included in Due Diligence Research (Yes, No)	Recommended for Further Investigation (Yes, No)	Reference Document(s)/ Interview	Notes/Comments
65	500	Unknown - Unknown	ANG Apron	None	11	N/A	E	No	No	AFCEE 2002 Wood 2018, 2020	One 275-gallon diesel AST, in use as of 1994 (Radian 1994). Four 2,850-gallon OWSs for spills at aircraft parking apron; discharge to retention basins (The Recreation Pond or one of two retention basins (AFCEE 2002). Fire Chief Cinequemani noted that small JP-8 spills (less than 25 gallons) occur once per quarter on aprons. Spills contained on concrete with sorbent materials. In 2001 4 gallons of JP-8 fuel spilled at ANG ramp #4 by #4 engine on C-5 (AFCEE 2002). Area was included in AFFF SI for AFFF Area 11 (Wood 2018, 2020).
66	501	Unknown - Unknown	U.S. Marine Corps Reserve Apron	None	N/A	N/A	A	No	No	AFCEE 2002	This are operated as the U.S. Marine Corps Reserve Apron. No materials potentially containing PFAS were identified in the documents reviewed. Fire Chief Cinequemani noted that small JP-8 spills (less than 25 gallons) occur once per quarter on aprons. Spills contained on concrete with sorbent materials (AFCEE 2002). JP-8 does not pose the potential to contain PFAS. No historical spills or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.
67	505	5/28/2015 - Unknown	Storage Igloo 500	None	N/A	N/A	A	No	No	ANG Provided Building List	This building operated as a storage igloo. No materials potentially containing PFAS were identified in the documents reviewed. No historical spills or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.
68	521	2/21/2020 - Unknown	Control Tower	None	N/A	N/A	A	No	No	ANG Provided Building List	This building operated as a control tower. No materials potentially containing PFAS were identified in the documents reviewed. No historical spills or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.
69	1113	Unknown - Unknown	Base Fire Water Tank	None	N/A	N/A	A	No	No	ANG Provided Building List	This building operated as a Base fire water tank. No materials potentially containing PFAS were identified in the documents reviewed. No historical spills or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.
70	2203	Unknown - Unknown	Open Store	None	N/A	N/A	B	No	No	ANG Provided Building List	This building operated as an open storage facility. This building included storage of unspecified hazardous materials with the potential to contain PFAS. No historical spills or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.
71	2204	Unknown - Unknown	Open Store Base Supply	None	N/A	N/A	A	No	No	ANG Provided Building List	This building operated as a open supply storage. No materials potentially containing PFAS were identified in the documents reviewed. No historical spills or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.
72	2207	Unknown - Unknown	Civil Engineering Open Storage	None	N/A	N/A	A	No	No	ANG Provided Building List	This building operated as a Civil Engineering open storage. No materials potentially containing PFAS were identified in the documents reviewed. No historical spills or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.
73	4465	Unknown - Unknown	Loading Platform	None	N/A	N/A	A	No	No	ANG Provided Building List	This building operated as a loading platform. No materials potentially containing PFAS were identified in the documents reviewed. No historical spills or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.
74	5500	Unknown - Unknown	Refueler Truck Parking	None	N/A	N/A	A	No	No	AFCEE 2002	This building operated as a refueler truck parking. No materials potentially containing PFAS were identified in the documents reviewed. No historical spills or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.
75	6209	Unknown - Unknown	Gas Station Canopy	None	N/A	N/A	A	No	No	ANG Provided Building List	This area operated as a gas station canopy. No materials potentially containing PFAS were identified in the documents reviewed. No historical spills or releases at this area were identified in the documents reviewed. Interviews did not identify any further information on this area. Therefore, the area is justified for no further response action for PFAS.
76	7402	Unknown - Unknown	Fuel Storage	None	N/A	N/A	B	No	No	AFCEE 2002	This building operated as a fuel storage facility. This building included storage of unspecified hazardous materials with the potential to contain PFAS (waste fuel). Two 1,050,000-gal JP-8 fuel ASTs operated at this facility; JP-8 does not pose the potential to contain PFAS. No historical spills or releases at this building were identified in the documents reviewed. Interviews did not identify any further information on this building. Therefore, the building is justified for no further response action for PFAS.
77	NA	Unknown - Unknown	Wastewater Lagoon A	None	15	N/A	E	No	No	AFCEE 2002	Lined (with unknown material) and holds approximately 500,000-gallons (AFCEE 2002). Area was included in AFFF SI for AFFF Area 15 (Wood 2018, 2020).
78	NA	Unknown - Unknown	Wastewater Lagoon B	None	15	N/A	E	No	No	AFCEE 2002	Lined (with unknown material) and holds approximately 500,000-gallons (AFCEE 2002). Area was included in AFFF SI for AFFF Area 15 (Wood 2018, 2020).

Table A. Installation Research Summary Table

Numerical Reference	Building/Shop[1] Number	Years Active	Historical Building Use	Likely Release, Discharge, or Disposition Point (Documented Release Volume)	Associated AFFF Area (#)	Associated IRP Site(s)	Decision Categories	Included in Due Diligence Research (Yes, No)	Recommended for Further Investigation (Yes, No)	Reference Document(s)/ Interview	Notes/Comments
79	NA	Unknown - Unknown	Outfall 001	None	N/A	N/A	B	No	No	AFCEE 2002	Outfall 1 is behind Vehicle Maintenance and is not tested. (AFCEE 2002). Drainage basin 001 includes Buildings 401, 402, and 403 (PA 2016). Spills have been reported as well as the presence of an OWS at building 403 which may have caused contamination at the outfall. Outfalls were determined to not be direct release mechanisms for contamination and rather contamination sources will be investigated. Therefore, this area is justified for no further action for PFAS.
80	NA	Unknown - Unknown	Outfall 002	None	12	N/A	E	No	No	AFCEE 2002 Wood 2018, 2020	This outfall is tested for benzene, toluene, ethylbenzene, and xylenes (BTEX), oil, grease, detergent, pH, and effluent flow rate. Problems in this outfall include elevated pH levels and detections of oil and grease below NYSDEC guidance values (AFCEE 2002). Area 12 is outfall 002 which was included within the AFFF SI. Sampled in 2020 ESI and PFAS was found to be above RSLs (Wood 2018, 2020).
81	NA	Unknown - Unknown	Outfall 003	None	13	N/A	E	No	No	AFCEE 2002 Wood 2018, 2020	This outfall is tested for benzene, toluene, ethylbenzene, and xylenes (BTEX), oil, grease, detergent, pH, and effluent flow rate. Problems in this outfall include elevated pH levels and detections of oil and grease below NYSDEC guidance values (AFCEE 2002). Area 13 is outfall 003 which was included within the AFFF SI. Sampled in 2020 ESI and PFAS was found to be above RSLs (Wood 2018, 2020).
82	NA	Unknown - Unknown	Outfall 004	None	N/A	N/A	B	No	No	AFCEE 2002 BB&E 2016	Outfall 4 is tested for oil, grease, and detergent every 3 years according to the SPDES permit (AFCEE 2002). Drainage basin 004 includes Buildings 208 and 209 (PA 2016). Outfalls were determined to not be direct release mechanisms for contamination and rather contamination sources will be investigated. Therefore, this area is justified for no further action for PFAS.
83	NA	Unknown - Unknown	Outfall 005	None	N/A	N/A	B	No	No	AFCEE 2002 BB&E 2016	This outfall is tested for benzene, toluene, ethylbenzene, and xylenes (BTEX), oil, grease, detergent, pH, and effluent flow rate. Problems in this outfall include elevated pH levels and detections of oil and grease below NYSDEC guidance values (AFCEE 2002). No information regarding sampling at this specific outfall was able to be located. Drainage basin 005 includes Buildings 211 and 213. (PA 2016). Outfalls were determined to not be direct release mechanisms for contamination and rather contamination sources will be investigated. Therefore, thi area is justified for no further action for PFAS.
84	NA	Unknown - Unknown	Outfall 006	None	14	N/A	E	No	No	AFCEE 2002 Wood 2018, 2020	Area 14 is outfall 006 which was included within the AFFF SI. Sampled in 2020 ESI and PFAS was found to be above RSLs (Wood 2018, 2020).
85	NA	Unknown - Unknown	Former Base Landfill (IRP Site 3, formerly IRP Site 1)	Documented Hazardous Waste Release(no volume documented)	N/A	IRP Site 3 (LF003)	E	No	No	AFCEE 2002 Aneptek 1995b WSP 2023 ANG 2024	IRP Site 3 (LF003) (Formerly Site 1 [LF001]) operated between 1963 and 1970, materials disposed into the landfill include municipal domestic refuse from Base housing, and waste from food-dispensing and aircraft maintenance operations (Aneptek 1995b). Approximate volume of waste in landfill is 10,350 cubic yards, maximum depth is 22.5 ft (WSP 2023). Site 1 received aircraft maintenance wastes. construction and demolition debris, domestic refuse, food-related wastes (Radian 1994). Another former disposal site, the New Windsor Landfill, which reportedly encroached on Base property, is located approximately 500-1000 feet southeast of Site 3. This landfill reportedly received municipal wastes, paint sludge, and adhesive waste (Aneptek 1995b). Remedy was a NYSDEC-approved geomembrane cap and methane gas vents installed on landfill in the summer of 2000. Post- closure permit requires groundwater monitoring for 30 years. Pending deed restrictions to prevent future residential use. Currently being investigated by FUDS (as of 2002) and during post-closure period, groundwater, surface water, and leachate samples will be monitored in full compliance with the state requirements AFCEE 2002 In 2017, as part of the PFAS SI at the Base, groundwater sampling of select Site 3 monitoring wells to evaluate for the potential of PFAS at the Base boundary. Results of the initial investigation showed PFAS detections in exceedance at four monitoring wells (MW-07, -08, -09, and -10). Additional sampling was performed as part of the 2019 expanded SI, of the 13 wells samples, PFAS was detected in exceedance at seven wells (MW-06, -07, -08, -09, -11, -18, -19). IRP Site 3 is included in the ongoing AFFF focused PFAS RI (ANG 2024).
86	NA	Unknown - Unknown	Former Pesticide Disposal Site (IRP Site 2)	Documented Hazardous Waste Release(no volume documented)	N/A	IRP Site 2 (DP002), SS005	D	Yes	Yes	ANG 2024 AECOM 2015 Amec 2006 AFCEE 2002 Aneptek 1995a Aneptek 1995b	IRP Site 2 (DP002) is located southeast of the airport complex. Site 2 is a former trench, now filled in, which was used in the late 1960's as a pesticide disposal area. The pit, which was approximately 20 feet by 53 feet by 12 feet deep, was apparently used for the disposal of pesticide containers (Aneptek 1995a). Approximately 2,000-gallons of pesticide/herbicide material in metal containers in the late 1960's wer disposed of into this pit which was then backfilled (Aneptek 1995b). Contaminated material was excavated from the pit and the site was returned to grade in 1988 (AFCEE 2002). LTM occurred until site closure in 2011, with 4,4'-DDD and chlorinated pesticides being the primary contaminant (Amec 2006). IRP Site SS005: Elevated concentrations of chlorinated pesticides (i.e., 4,4'-DDD) have been detected in monitoring well MW-1. While groundwater tends to flow from the northwest to the southeast generally toward Recreation Pond and the former Base landfill, shallow groundwater infiltrates the aged stormwater inverts in multiple locations throughout the Base (AECOM 2015, ANG 2024) Documented release of PFAS containing materials or direct release mechanisms were identified within reviewed documents and subsequent interviews.

Table A. Installation Research Summary Table

Numerical Reference	Building/Shop[1] Number	Years Active	Historical Building Use	Likely Release, Discharge, or Disposition Point (Documented Release Volume)	Associated AFFF Area (#)	Associated IRP Site(s)	Decision Categories	Included in Due Diligence Research (Yes, No)	Recommended for Further Investigation (Yes, No)	Reference Document(s)/ Interview	Notes/Comments
87	NA	Unknown - Unknown	Former Nozzle Testing Area	None	16	N/A	E	No	No	Wood 2018, 2020	Area 16 is a former nozzle testing area which was included within the AFFF SI (Wood 2018, 2020). Fire equipment reportedly parked at the end of the concrete taxiway in this area and discharged to the grassed area to the northeast.

Buildings shaded grey had no history or reasonable suspicion of supplemental sources of PFAS; had potential PFAS-containing material and no release reported; or are included in previous AFFF investigation (Decision Categories A, B, and E).

Buildings shaded white had potential release of PFAS-containing material less the reportable quantity; had a spill but PFAS cannot be confirmed as part of the release; and/or had likely discharge where a potential release of PFAS occurred from other than AFFF (Decision Categories C and D).

Decision Categories are described as follows; A: Buildings/shops[1] with no history or reasonable suspicion of PFAS in products, B: Buildings/shops[1] which potentially had material (other than AFFF) potentially containing PFAS and no documented release reported[4] (the term "no release reported" means no documentation is known to exist that supports the existence of a release or threat of release of material potentially containing PFAS), C: Buildings/shops[1] which had spill(s) documented with material (other than AFFF) potentially containing PFAS less than the reportable quantity (<1 pound in 24 hours[2,3]) and presumed to pose no potential risk to human health and the environment, D: Buildings/shops[1] which had documented or probable release, discharge, or disposition of material potentially containing PFAS other than AFFF and presumed to pose a potential risk to human health or the environment, E: Buildings/shops[1] previously identified for further investigation due to AFFF release, previously evaluated and not recommended for further investigation due to AFFF release, or currently suspected of AFFF release but not previously identified.

[1] The Buildings/Shops may include work or mishap areas such as aircraft aprons, flightlines, aircraft parking ramps, etc.

[2] Considered Title 42, Section 9602, Designation of additional hazardous substances and establishment of reportable released quantities; regulations as a reasonable approach to assess the reportable quantity of potential PFAS containing material due to the lack CERCLA regulation (USEPA 2024).

[3] If available, use the mass (or weight by volume) of the product and the total PFAS concentration in the product to estimate the necessary volume of the product to achieve a one-pound release of PFAS (USEPA 2024).

[4] Further investigation may be required if environmental sampling data suggests that an unreported release may have occurred.

Acronyms:

AFCEE	Air Force Center for Environmental Excellence
AFFF	Aqueous Film-Forming Foam
AGE	Aerospace Ground Equipment
Aneptek	Aneptek Corporation
ANG	Air National Guard
AST	Aboveground Storage Tank
BB&E	BB&E, Inc.
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
EBS	Environmental Baseline Survey
ESI	Expanded Site Inspection
gal	Gallon(s)
IRP	Installation Restoration Program
LTM	Long Term Monitoring
N/A	Not Applicable
NDI	Non-destructive Inspection
NGB	National Guard Bureau
NYSDEC	New York State Department of Environmental Conservation
OWS	Oil/Water Separator
PA	Preliminary Assessment
PFAS	Per- and Polyfluorinated Substances
POL	Petroleum, Oil, and Lubricants
Radian	Radian Corporation
RSL	Regional Screening Levels
SI	Site Inspection
USEPA	U.S. Environmental Protection Agency
UST	Underground Storage Tank
Wood	Wood Environment and Infrastructure Solutions, Inc.
WSP	WSP USA Environment and Infrastructure, Inc.

Appendix B

Interview Questionnaires

QUESTIONNAIRE FOR POTENTIAL PFAS USE AND SOURCES OTHER THAN AFFF

Installation Name: Stewart ANGB
Current Title: Environmental Specialist

Date: 8 March 2024
Time: 9:00 AM CST

1. SITE SPECIFIC QUESTIONS (Blue font indicates interviewee responses)

1. What is/was your role at the installation and the number of years in that position?

   Response: The interviewee worked as the Environmental Specialist for two years at Stewart ANGB. The boundary for the installation that was provided by NGB was determined to be the correct installation boundary by the interviewee.

Use the Supplemental PFAS Source Matrix below to answer the questions pertaining to activities at locations/shops. Please reference the attached base map with building number or name.

2. Please indicate in column 2 if any of the locations/shops were located at the former installation. If yes, identify building number(s) in column 3.
   a. Is the building still present at the former installation?
   b. If it is still present, what is it used for currently?
   c. If demolished, what is currently present at the location of the former shop?
3. Please indicate in column 5 if any of the processes were performed at the location/shop?
4. Please indicate in column 7 if the PFAS containing product was potentially used.

   If yes to “Potentially Used?” what was the likely discharge or disposal of the material used in the process? Please enter response in column 8.
5. Provide the name and location point of the discharge or disposal point in column 9.

   If biosolids or sludge was taken off the installation, what was the end use (e.g. used as fertilizer, composting, ect.)?
6. Did any spills occur? Please enter response and location in column 10.
   d. Was the spill cleaned up (Y/N)?
   e. Where was the soil/material disposed of?
   f. Are you able to provide any records pertaining to the spill(s)?

2. APPLICATION OF ANG SUPPLEMENTAL PFAS SOURCE MATRIX (Blue Font Indicates Interviewee Responses)

1. Locations - Shops	2. Existed? Y/N	3. Building Number(s)/Name	4. Processes	5. Performed at shop? Y/N	6. Product Types	7. Potentially Used? Y/N	8. Disposition (e.g. landfill, surface water discharge, stormwater discharge, wastewater treatment plant, pit/pond, biosolids/sludge)	9. Name and/or location of discharge or disposal point	10. Spill Occurred? Y/N Where at building did spill occur?
Automotive/hobby	Y	208 (automotive), 214	- Descaling/Parts cleaning - Lubricating maintenance - Other applicable processes	Y - parts cleaning, lubricating	Defoamers; perfluoroalkyl; fluorochemicals	No Knowledge (NK)	OWS, industrial waste lagoons	NK	N
Motor Pool	Y	208 (Vehicle Maintenance/Motor Pool), 2204 (vehicle parking)	- Descaling/Parts cleaning - Lubricating maintenance - Oil Water Separator - Other applicable processes	Y – parts cleaning, lubricating	Defoamers; perfluoroalkyl; fluorochemicals	NK	NK	NK	Y - Miscellaneous oil spills from parked vehicles
Aircraft Maintenance Hangar (Vehicle Maintenance)	Y	100 (AFFF), 101 (AFFF), 102 (Dock, AFFF), 300 (USMCR Hangar, AFFF), 302 (Aircraft General Purpose, USMCR Shop); 200, 208, 301 (all AGE)	- Descaling/Parts cleaning - Lubricating maintenance	Y - parts cleaning, Lubrication	Defoamer; perfluoroalkyl; fluorochemicals	NK	OWS, lagoons	NK	Y - (AFFF fire suppression system discharged to lagoons), spills pushed to OWSs
Non-Destructive Inspection	Y	100, 200, 302	- Descaling/Parts cleaning - Lubricating maintenance	Y - X-Ray processing (100), others unknown	Defoamer; perfluoroalkyl; fluorochemicals	NK	NK	NK	NK
Corrosion Control	Y	100, 300	- Descaling/Parts cleaning - Applying repellents and surfactants	NK	Defoamers; fluorotelomer	NK	NK	NK	Y - Only minor maintenance spills
Body Shop	Y	208, possibly 214	- Descaling/Parts cleaning - Applying repellents and surfactants	NK	Defoamers; fluorotelomer	NK	NK	NK	NK
Paint stations/booths	Y	100 (still active), 101, 301	Applying repellents and surfactants	N	Defoamers; fluorotelomer	NK	Haz waste - disposed through DLA	NK	NK
Chrome plating	N	NK	Finishing, plating, and restoring metals	NK	Fumetrol/Mist Suppressant	NK	NK	NK	NK
Electroplating	N	NK	Finishing, plating, and restoring metals	NK	Fumetrol/Mist Suppressant	NK	NK	NK	NK
Metal plating and etching	N	NK	Finishing, plating, and restoring metals	NK	Fumetrol/Mist Suppressant	NK	NK	NK	NK
Housing/dormitory	Y	104 (fire station)	Cleaning carpet/floors	N	Defoamer	NK	NK	NK	NK
Mess hall	Y	302 (dining facility)	- Cleaning carpet/floors - Fire extinguishing	N	Defoamer Fluoroalkyl surfactant/ Fluorosurfactant	NK	NK	NK	NK
Buildings	N	NK	Cleaning carpet/floors	NK	Defoamer	NK	NK	NK	NK
Carwash	Y	Aircraft wash rack runoff area (near Building 101 – historical only), 209 (carwash)	Washing/finishing	NK	Defoamer; water repellents	NK	OWS, sanitary sewer	NK	NK
Laundry/ housing laundry/ dormitory laundry	Y	104 (fire house)	Washing/finishing	NK	Defoamer; water repellents	NK	NK	NK	NK
Parachute/survival equipment	Y	107	Washing/finishing	Unknown	Defoamer; water repellents	NK	NK	NK	NK
Housing/buildings	Just Hangars	NK	Fire extinguishing (*fire suppression systems* [supplemental PFAS])	NK	Fluoroalkyl surfactant/ Fluorosurfactant	NK	(e.g. wastewater pump station)	NK	NK

1. Locations - Shops	2. Existed? Y/N	3. Building Number(s)/Name	4. Processes	5. Performed at shop? Y/N	6. Product Types	7. Potentially Used? Y/N	8. Disposition (e.g. landfill, surface water discharge, stormwater discharge, wastewater treatment plant, pit/pond, biosolids/sludge)	9. Name and/or location of discharge or disposal point	10. Spill Occurred? Y/N Where at building did spill occur?
Fuel bulk terminal	Y	POL Shop (near 401), Island between 208 and 214), Island near 200	Fire extinguishing (*fire suppression systems* [supplemental PFAS])	NK	Fluoroalkyl surfactant/ Fluorosurfactant	NK	NK	NK	Y - Miscellaneous minor spills of fuel only
Fuel dispensing	Y	200, between 208 and 214	Fire extinguishing (*fire suppression systems* [supplemental PFAS])	NK	Fluoroalkyl surfactant/ Fluorosurfactant	NK	NK	NK	Y – Miscellaneous minor spills of fuel only
Wastewater Treatment Plant	N	No sanitary sewage treatment.	Collecting and Treating sewage	NK	Defoamer; PFAS containing waste	NK	Disposed to Windsor Treatment Plant, Filtration plant on commercial airport, do have temporary mobile emptying of waste lagoons (set up along between lagoons and boundary); historical discharges from Lagoon (Note: Wastewater Lagoons A and B are both part of Potential Release Location 15 Retention Basin and have both been sampled for PFAS and groundwater and surface water had reportable exceedances of PFAS during 2018 Site Investigation (AR#598617).	NK	NK
Biosolids/Sludge	Y	Just bottom of lagoons (Note: Wastewater Lagoons A and B are both part of Potential Release Location 15 Retention Basin and have both been sampled for PFAS and groundwater and surface water had reportable exceedances of PFAS during 2018 Site Investigation (AR#598617).	Removal of organic matter from sewage	NK	PFAS containing waste	NK	NK	NK	NK
Various shops (Life support Shops, Mess Hall, etc.)	Y	107 (Maintenance Facility, parachute and survival gear), 204 (Support Base Supply)	Various processes (packaging, use of building and household products, renovating – removing carpet)	NK	Various packaging and coatings; removed carpet	NK	NK	NK	NK
Entomology shop	N	NK	Storing, mixing, and applying Pesticides /Herbicides	NK	PFAS polymers, and fluorotelomers	NK	No mixing or storing of pesticides	NK	NK
Golf Course Maintenance shop	N	NK	Storing, mixing, and applying Pesticides/Herbicides	NK	PFAS polymers, and fluorotelomers	NK	(e.g. applied as intended use and include location) NK	NK	NK
Grounds Maintenance shop	N	Contracted Out	Storing, mixing, and applying Pesticides/Herbicides	NK	PFAS polymers, and fluorotelomers	NK	(e.g. applied as intended use such as defogging and include location) NK	NK	NK

3. FOLLOW-UP QUESTIONS (Blue font indicates interviewee responses)

7. Were/are there other processes or product types containing PFAS that were utilized at the locations/shops at the installation other than what is listed in the above matrix? If yes, please describe those processes and products as well as disposal.

   Response: No.

8. Any other studies, records, or documents that you can provide that will be helpful regarding PFAS use at the installation? If yes, please send through DoD Safe.

   Response: PFAS RI.

9. Were garbage stands (Buildings 99, 199) used for waste storage or disposal?

   Response: No knowledge.

10. Have there been overflows or discharges from Lagoons A and B?

    Response: Probably, historical documentation. Area is contaminated, unknown specifics.

11. Does the New Windsor Landfill encroach on base property?

    Response: Landfill was located in southwest corner.

12. Do you have any information on spills (Oil) from engine stands located at Building 400 (Unknown Usage)?

    Response: West of large oil tank. No knowledge of spills.

13. Do you recall any dump sites besides the former landfill (IRP Site 1) or the pesticide disposal site (IRP Site 2)?

    Response: No.

14. Do you have any updated information on the aircraft wash rack runoff area (From Building 101)?

    Response: No.

QUESTIONNAIRE FOR POTENTIAL PFAS USE AND SOURCES OTHER THAN AFFF

Installation Name: Stewart ANGB
Current Title: Former Airman Stationed at Stewart ANGB

Date: 11 February 2025
Time: 2:00 PM CST

1. SITE SPECIFIC QUESTIONS (Blue font indicates interviewee responses)

1. What is/was your role at the installation and the number of years in that position?

   Response: Previously, EA interviewed the Environmental Specialist for two years at Stewart ANGB. The boundary for the installation that was provided by NGB was determined to be the correct installation boundary.

   The interviewee was stationed at Stewart ANGB from 1965 to 1966 and was discharged 10-16-66 at Airmen First Class rank. Spent close to a year at the Base, lived in the barracks and worked in the mess hall. Served as a mess Sargent and cook.

   The interviewee noted that old remains of Stewart AFB, decrepit and unrepaired but still standing buildings, are present on-Base. Also noted that these likely had not been removed due to asbestos.

   Observed several incidents:
   1. Witnessed a helicopter crash with helicopter on fire on the runway (between 1965 and 1966), went over there on foot, saw the helicopter in flames and the fire crew using water and chemicals to extinguish, large amounts of water and chemicals were used and the smell was pervasive. The atmosphere around helicopter was strong smelling. Residue remained for an extended period of time. Area was blocked off for days. It was a smaller helicopter, and crews responded within minutes.
   2. Observed on several occasions, training exercises that mimicked plane and helicopter crashes, chemicals and foam were used. Usually this occurred during spring and summer.
   3. Also observed a large air show with heavy air traffic and large number of spectators. Was in 1966, unsure specific dates though.

Use the Supplemental PFAS Source Matrix below to answer the questions pertaining to activities at locations/shops. Please reference the attached base map with building number or name.

2. Please indicate in column 2 if any of the locations/shops were located at the former installation. If yes, identify building number(s) in column 3.
   a. Is the building still present at the former installation?
   b. If it is still present, what is it used for currently?
   c. If demolished, what is currently present at the location of the former shop?
3. Please indicate in column 5 if any of the processes were performed at the location/shop?
4. Please indicate in column 7 if the PFAS containing product was potentially used.

   If yes to “Potentially Used?” what was the likely discharge or disposal of the material used in the process? Please enter response in column 8.
5. Provide the name and location point of the discharge or disposal point in column 9.

   If biosolids or sludge was taken off the installation, what was the end use (e.g. used as fertilizer, composting, ect.)?
6. Did any spills occur? Please enter response and location in column 10.

d. Was the spill cleaned up (Y/N)?

e. Where was the soil/material disposed of?

f. Are you able to provide any records pertaining to the spill(s)?

2. APPLICATION OF ANG SUPPLEMENTAL PFAS SOURCE MATRIX (Blue Font Indicates Interviewee Responses)

1. Locations - Shops	2. Existed? Y/N	3. Building Number(s)/Name	4. Processes	5. Performed at shop? Y/N	6. Product Types	7. Potentially Used? Y/N	8. Disposition (e.g. landfill, surface water discharge, stormwater discharge, wastewater treatment plant, pit/pond, biosolids/sludge)	9. Name and/or location of discharge or disposal point	10. Spill Occurred? Y/N Where at building did spill occur?
Automotive/hobby	N	None	- Descaling/Parts cleaning - Lubricating maintenance - Other applicable processes	NK	Defoamers; perfluoroalkyl; fluorochemicals	No Knowledge (NK)	NK	NK	NK
Motor Pool	Y	Yes, were there. Unknown specifics.	- Descaling/Parts cleaning - Lubricating maintenance - Oil Water Separator - Other applicable processes	NK	Defoamers; perfluoroalkyl; fluorochemicals	NK	NK	NK	NK
Aircraft Maintenance Hangar (Vehicle Maintenance)	Y	Buildings were here, repair, maintenance occurred. Unknown specifics.	- Descaling/Parts cleaning - Lubricating maintenance	NK	Defoamer; perfluoroalkyl; fluorochemicals	NK	NK	NK	NK
NK Non-Destructive Inspection	NK	NK	- Descaling/Parts cleaning - Lubricating maintenance	NK	Defoamer; perfluoroalkyl; fluorochemicals	NK	NK	NK	NK
Corrosion Control	NK	NK	- Descaling/Parts cleaning - Applying repellents and surfactants	NK	Defoamers; fluorotelomer	NK	NK	NK	NK
Body Shop	NK	NK	- Descaling/Parts cleaning - Applying repellents and surfactants	NK	Defoamers; fluorotelomer	NK	NK	NK	NK
Paint stations/booths	NK	NK	Applying repellents and surfactants	NK	Defoamers; fluorotelomer	NK	NK	NK	NK
Chrome plating	NK	NK	Finishing, plating, and restoring metals	NK	Fumetrol/Mist Suppressant	NK	NK	NK	NK
Electroplating	NK	NK	Finishing, plating, and restoring metals	NK	Fumetrol/Mist Suppressant	NK	NK	NK	NK
Metal plating and etching	NK	NK	Finishing, plating, and restoring metals	NK	Fumetrol/Mist Suppressant	NK	NK	NK	NK
Housing/dormitory	Y	Located on a hill above the BX, still standing there. Hard floors, taken care of once every several weeks or once a month, local air force personnel.	Cleaning carpet/floors	NK	Defoamer	NK	NK	NK	NK

1. Locations - Shops	2. Existed? Y/N	3. Building Number(s)/Name	4. Processes	5. Performed at shop? Y/N	6. Product Types	7. Potentially Used? Y/N	8. Disposition (e.g. landfill, surface water discharge, stormwater discharge, wastewater treatment plant, pit/pond, biosolids/sludge)	9. Name and/or location of discharge or disposal point	10. Spill Occurred? Y/N Where at building did spill occur?
Mess hall	Y	Hard, in house, by mess staff, had a mob and a broom, periodic more extensive cleanings. No chemicals used, used detergents. No spills or releases from this practice.	- Cleaning carpet/floors - Fire extinguishing	NK	Defoamer Fluoroalkyl surfactant/ Fluorosurfactant	NK	NK	NK	NK
Buildings	NK	Maybe the theatre	Cleaning carpet/floors	NK	Defoamer	NK	NK	NK	NK
Carwash	NK	No	Washing/finishing	NK	Defoamer; water repellents	NK	NK	NK	NK
Laundry/ housing laundry/ dormitory laundry	Y	In the barracks, had a private tailor that brought uniforms to. Didn't do it ourselves.	Washing/finishing	NK	Defoamer; water repellents	NK	NK	NK	NK
Parachute/survival equipment	NK	NK	Washing/finishing	NK	Defoamer; water repellents	NK	NK	NK	NK
Housing/buildings	Y	Barracks, NK	Fire extinguishing (*fire suppression systems* [supplemental PFAS])	NK	Fluoroalkyl surfactant/ Fluorosurfactant	NK	NK	NK	NK
Fuel bulk terminal	Y	Fueling area, availability for air force personnel to fill up cars and trucks, mostly for air force official motor vehicles.	Fire extinguishing (*fire suppression systems* [supplemental PFAS])	NK	Fluoroalkyl surfactant/ Fluorosurfactant	NK	NK	NK	NK
Fuel dispensing	Y	Fueling area, availability for air force personnel to fill up cars and trucks, mostly for air force official motor vehicles.	Fire extinguishing (*fire suppression systems* [supplemental PFAS])	NK	Fluoroalkyl surfactant/ Fluorosurfactant	NK	NK	NK	NK
Wastewater Treatment Plant	N	On the outskirts of the Base were reservoirs.	Collecting and Treating sewage	NK	Defoamer; PFAS containing waste	NK	NK	NK	NK
Biosolids/Sludge	NK	NK	Removal of organic matter from sewage	NK	PFAS containing waste	NK	NK	NK	NK
Various shops (Life support Shops, Mess Hall, etc.)	NK	NK	Various processes (packaging, use of building and household products, renovating – removing carpet)	NK	Various packaging and coatings; removed carpet	NK	NK	NK	NK
Entomology shop	NK	NK	Storing, mixing, and applying Pesticides /Herbicides	NK	PFAS polymers, and fluorotelomers	NK	NK	NK	NK
Golf Course Maintenance shop	NK	NK	Storing, mixing, and applying Pesticides/Herbicides	NK	PFAS polymers, and fluorotelomers	NK	(e.g. applied as intended use and include location) NK	NK	NK
Grounds Maintenance shop	NK	NK	Storing, mixing, and applying Pesticides/Herbicides	NK	PFAS polymers, and fluorotelomers	NK	(e.g. applied as intended use such as defogging and include location) NK	NK	NK

3. FOLLOW-UP QUESTIONS (Blue font indicates interviewee responses)

7. Were/are there other processes or product types containing PFAS that were utilized at the locations/shops at the installation other than what is listed in the above matrix? If yes, please describe those processes and products as well as disposal.

   Response: No.

8. Any other individuals worth interviewing, with regarding PFAS use at the installation?

   Response: No.

9. Any landfills present on-Base?

   Response: No knowledge.

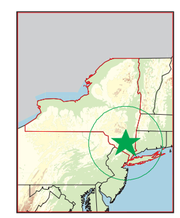
Appendix C

Environmental Database Report

EDR DataMap®
Well Search

Stewart

- Listed Water Wells
- Study Boundary
- Roads
- Major Roads
- Waterways
- Railroads
- Contour Lines
- Fault Lines
- Water
- Superfund Sites
- 100-Yr Flood Zones
- Wetlands



Newburgh, NY

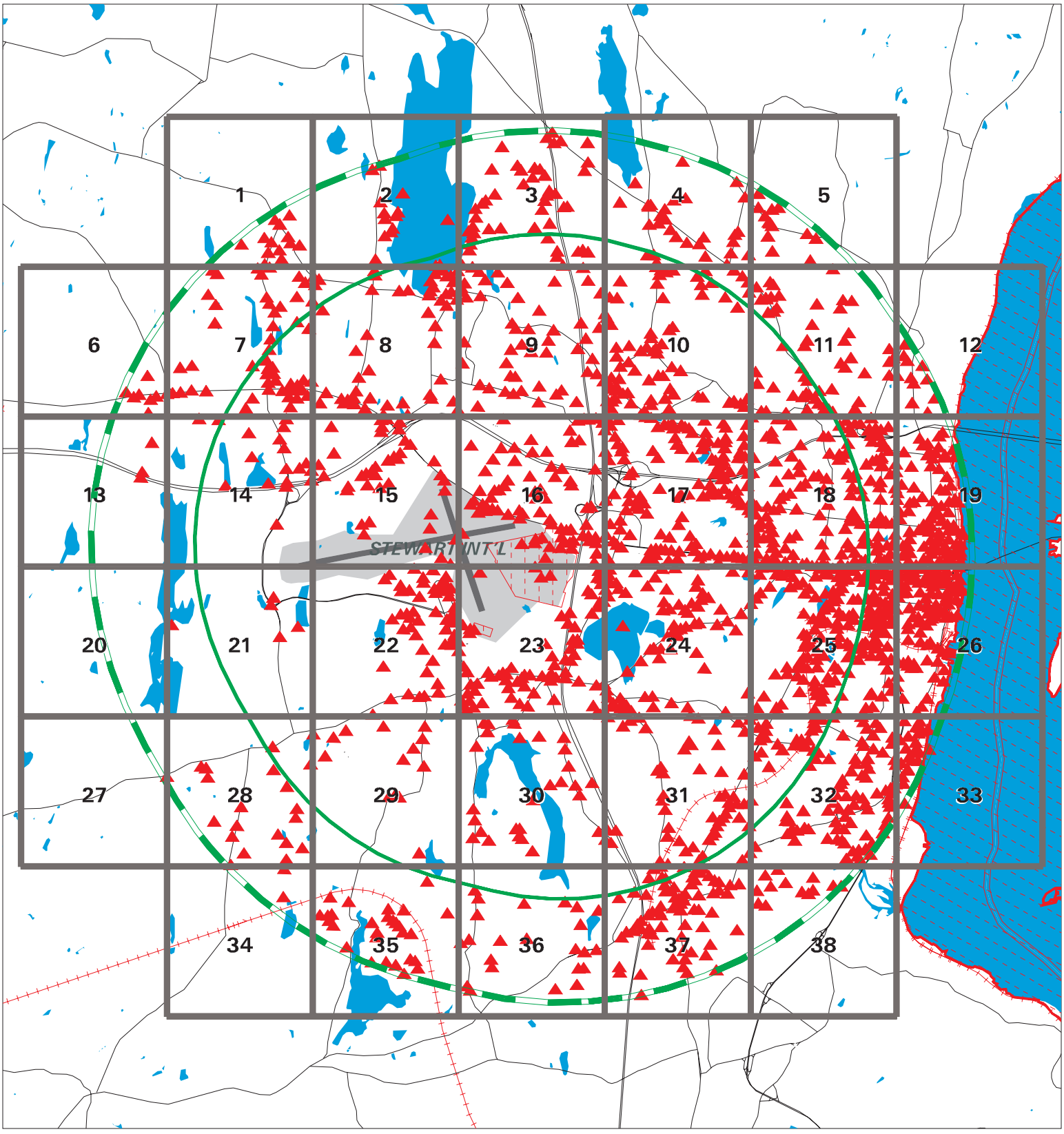
0 1/2 1

Scale in Miles

EDR® Environmental Data Resources Inc

7604851.1w - 25 Mar 24

Key Map - 7604851.1s



Sites
Target Property
Search Buffer
Focus Map - No Sites
Focus Map - Sites
National Priority List Sites
Dept. Defense Sites
Indian Reservations BIA

0 1 2 Miles

SITE NAME: Stewart	CLIENT: EA Engineering Science & Tech.
ADDRESS: Stewart	CONTACT: Eric Johnson
CITY/STATE: Newburgh NY	INQUIRY #: 7604851.1s
ZIP: 12550	DATE: 03/25/24 4:33 PM

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Lists of Federal NPL (Superfund) sites								
NPL	1.000		0	0	0	1	NR	1
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
Lists of Federal Delisted NPL sites								
Delisted NPL	1.000		0	0	0	1	NR	1
Lists of Federal sites subject to CERCLA removals and CERCLA orders								
FEDERAL FACILITY	1.000		0	0	0	0	NR	0
SEMS	1.000	4	0	0	0	4	NR	8
Lists of Federal CERCLA sites with NFRAP								
SEMS-ARCHIVE	1.000	5	0	1	0	3	NR	9
Lists of Federal RCRA facilities undergoing Corrective Action								
CORRACTS	1.000	1	0	0	1	0	NR	2
Lists of Federal RCRA TSD facilities								
RCRA-TSDF	1.000		0	0	0	0	NR	0
Lists of Federal RCRA generators								
RCRA-LQG	1.000	13	0	2	1	5	NR	21
RCRA-SQG	1.000	31	0	1	4	8	NR	44
RCRA-VSQG	1.000	43	3	4	4	2	NR	56
Federal institutional controls / engineering controls registries								
LUCIS	1.000		0	0	0	0	NR	0
US ENG CONTROLS	1.000		0	0	0	2	NR	2
US INST CONTROLS	1.000		0	0	0	2	NR	2
Federal ERNS list								
ERNS	1.000	28	0	3	5	34	NR	70
Lists of state- and tribal hazardous waste facilities								
NY SHWS	1.000	13	1	1	0	2	NR	17
OH DERR	1.000		0	1	0	0	NR	1
Lists of state and tribal landfills and solid waste disposal facilities								
NY SWF/LF	1.000	19	2	2	2	4	NR	29
Lists of state and tribal leaking storage tanks								
INDIAN LUST	1.000		0	0	0	0	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
NY LTANKS	1.000	228	16	19	51	59	NR	373
NY HIST LTANKS	1.000		0	0	0	0	NR	0
Lists of state and tribal registered storage tanks								
FEMA UST	1.000		0	0	0	0	NR	0
NY UST	1.000	165	14	18	47	38	NR	282
NY CBS UST	1.000	2	0	0	0	1	NR	3
NY MOSF UST	1.000	1	0	0	0	5	NR	6
NY CBS	1.000	21	0	0	3	11	NR	35
NY MOSF	1.000	2	0	0	0	8	NR	10
NY AST	1.000	127	8	9	27	29	NR	200
NY CBS AST	1.000	12	0	0	3	9	NR	24
NY MOSF AST	1.000	1	0	0	0	7	NR	8
INDIAN UST	1.000		0	0	0	0	NR	0
NY TANKS	1.000	9	0	0	0	2	NR	11
State and tribal institutional control / engineering control registries								
NY RES DECL	1.000		0	0	0	0	NR	0
NY ENG CONTROLS	1.000	5	0	1	0	3	NR	9
NY INST CONTROL	1.000	5	0	1	0	2	NR	8
Lists of state and tribal voluntary cleanup sites								
NY VCP	1.000	4	0	0	0	0	NR	4
INDIAN VCP	1.000		0	0	0	0	NR	0
Lists of state and tribal brownfield sites								
NY BROWNFIELDS	1.000	3	0	0	1	2	NR	6
NY ERP	1.000	2	0	1	1	2	NR	6
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	1.000		0	0	1	3	NR	4
Local Lists of Landfill / Solid Waste Disposal Sites								
NY SWRCY	1.000	6	1	0	0	0	NR	7
NY SWTIRE	1.000		0	0	0	0	NR	0
INDIAN ODI	1.000		0	0	0	0	NR	0
DEBRIS REGION 9	1.000		0	0	0	0	NR	0
ODI	1.000		0	0	0	0	NR	0
IHS OPEN DUMPS	1.000		0	0	0	0	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	1.000		0	0	0	0	NR	0
NY DEL SHWS	1.000		0	0	0	1	NR	1
US CDL	1.000		0	0	0	0	NR	0
Local Lists of Registered Storage Tanks								
NY HIST UST	1.000		0	0	0	0	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
NY HIST AST	1.000		0	0	0	0	NR	0
Local Land Records								
NY LIENS	1.000	4	1	0	1	1	NR	7
LIENS 2	1.000		0	0	0	0	NR	0
Records of Emergency Release Reports								
HMIRS	1.000	216	1	58	0	0	NR	275
NY Spills	1.000	1148	83	107	257	416	NR	2011
NY Hist Spills	1.000		0	0	0	0	NR	0
NY SPILLS 90	1.000	1	0	1	1	1	NR	4
NY SPILLS 80	1.000	3	0	0	0	1	NR	4
Other Ascertainable Records								
RCRA NonGen / NLR	1.000	130	12	14	24	35	NR	215
FUDS	1.000	2	0	0	1	2	NR	5
DOD	1.000	2	0	0	0	0	NR	2
SCRD DRYCLEANERS	1.000		0	0	0	0	NR	0
US FIN ASSUR	1.000		0	0	0	0	NR	0
EPA WATCH LIST	1.000		0	0	0	0	NR	0
2020 COR ACTION	1.000		0	0	0	0	NR	0
TSCA	1.000		0	0	0	0	NR	0
TRIS	1.000	2	0	0	0	4	NR	6
SSTS	1.000	1	0	0	0	0	NR	1
ROD	1.000		0	0	0	2	NR	2
RMP	1.000	2	0	0	0	0	NR	2
RAATS	1.000	1	0	0	0	0	NR	1
PRP	1.000	7	0	0	0	4	NR	11
PADS	1.000		0	0	0	0	NR	0
ICIS	1.000	36	4	4	6	19	NR	69
FTTS	1.000	21	1	3	6	5	NR	36
MLTS	1.000		0	0	0	0	NR	0
COAL ASH DOE	1.000		0	0	0	0	NR	0
COAL ASH EPA	1.000		0	0	0	0	NR	0
PCB TRANSFORMER	1.000		0	0	0	0	NR	0
RADINFO	1.000		0	0	0	0	NR	0
HIST FTTS	1.000	21	1	3	6	5	NR	36
DOT OPS	1.000		0	0	0	1	NR	1
CONSENT	1.000		0	0	0	1	NR	1
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	1.000		0	0	0	0	NR	0
LEAD SMELTERS	1.000		0	0	0	1	NR	1
US AIRS	1.000	32	6	4	1	13	NR	56
US MINES	1.000	1	0	0	0	0	NR	1
ABANDONED MINES	1.000		0	0	0	0	NR	0
MINES MRDS	1.000		0	0	0	2	NR	2
FINDS	1.000	507	40	44	86	143	NR	820
DOCKET HWC	1.000		0	0	0	0	NR	0
UXO	1.000		0	0	0	0	NR	0
ECHO	1.000	299	21	26	46	69	NR	461

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
FUELS PROGRAM	1.000		0	0	0	14	NR	14
PFAS NPL	1.000		0	0	0	1	NR	1
PFAS FEDERAL SITES	1.000	1	0	0	0	0	NR	1
PFAS TSCA	1.000		0	0	0	0	NR	0
PFAS TRIS	1.000		0	0	0	0	NR	0
PFAS RCRA MANIFEST	1.000		0	0	0	0	NR	0
PFAS ATSDR	1.000		0	0	0	0	NR	0
PFAS WQP	1.000		0	0	0	0	NR	0
PFAS NPDES	1.000		0	0	0	0	NR	0
PFAS ECHO	1.000	17	0	0	0	9	NR	26
PFAS ECHO FIRE TRAINING	1.000		0	0	0	0	NR	0
PFAS PART 139 AIRPORT	1.000	1	0	0	0	0	NR	1
AQUEOUS FOAM NRC	1.000		0	0	0	0	NR	0
BIOSOLIDS	1.000	1	0	0	0	1	NR	2
NY PFAS	1.000	3	0	0	0	0	NR	3
NY AIRS	1.000	22	0	1	0	13	NR	36
NY COAL ASH	1.000		0	0	0	0	NR	0
NY DRYCLEANERS	1.000	6	2	1	1	1	NR	11
NY E DESIGNATION	1.000		0	0	0	0	NR	0
NY Financial Assurance	1.000	2	0	0	0	1	NR	3
NY HSWDS	1.000	3	0	0	0	3	NR	6
NY LEAD	1.000		0	0	0	0	NR	0
NY MANIFEST	1.000	171	11	13	22	36	NR	253
NY SPDES	1.000	168	7	14	30	47	NR	266
CT NPDES	1.000		0	0	1	0	NR	1
WI MANIFEST	1.000		0	0	1	0	NR	1
MI MANIFEST	1.000	1	0	0	0	0	NR	1
CT MANIFEST	1.000	1	0	0	0	4	NR	5
MN MANIFEST	1.000	2	0	0	0	0	NR	2
RI MANIFEST	1.000	2	0	1	0	1	NR	4
WV NPDES	1.000	2	0	0	0	0	NR	2
PA MANIFEST	1.000	16	0	1	2	3	NR	22
NJ MANIFEST	1.000	22	1	1	2	6	NR	32
NY VAPOR REOPENED	1.000		0	0	0	1	NR	1
NY UIC	1.000		0	0	0	0	NR	0
NY COOLING TOWERS	1.000	13	0	0	1	6	NR	20
NY NYC OER	1.000		0	0	0	0	NR	0
NY MGP	1.000	1	0	0	0	0	NR	1
NY NYC LAND USE	1.000		0	0	0	0	NR	0
NY ILI	1.000	9	0	0	0	2	NR	11
UST FINDER	1.000	130	13	15	37	24	NR	219
UST FINDER RELEASE	1.000	69	9	3	20	8	NR	109

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP	1.000		0	0	0	1	NR	1
EDR Hist Auto	1.000	85	5	11	27	15	NR	143
EDR Hist Cleaner	1.000	17	1	4	9	8	NR	39

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

NY RGA HWS	1.000	3	0	1	0	2	NR	6

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
NY RGA LF	1.000	14	2	1	1	5	NR	23
- Totals --		3968	266	395	740	1187	0	6556

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

Appendix D

Historical Photographic Records

Legend

Building

Installation Boundary

Date Saved: 7/7/2025

Projection: NAD 1983 StatePlane New York East FIPS 3101 Feet

Scale: 1:6,000

0 250 500

US Feet

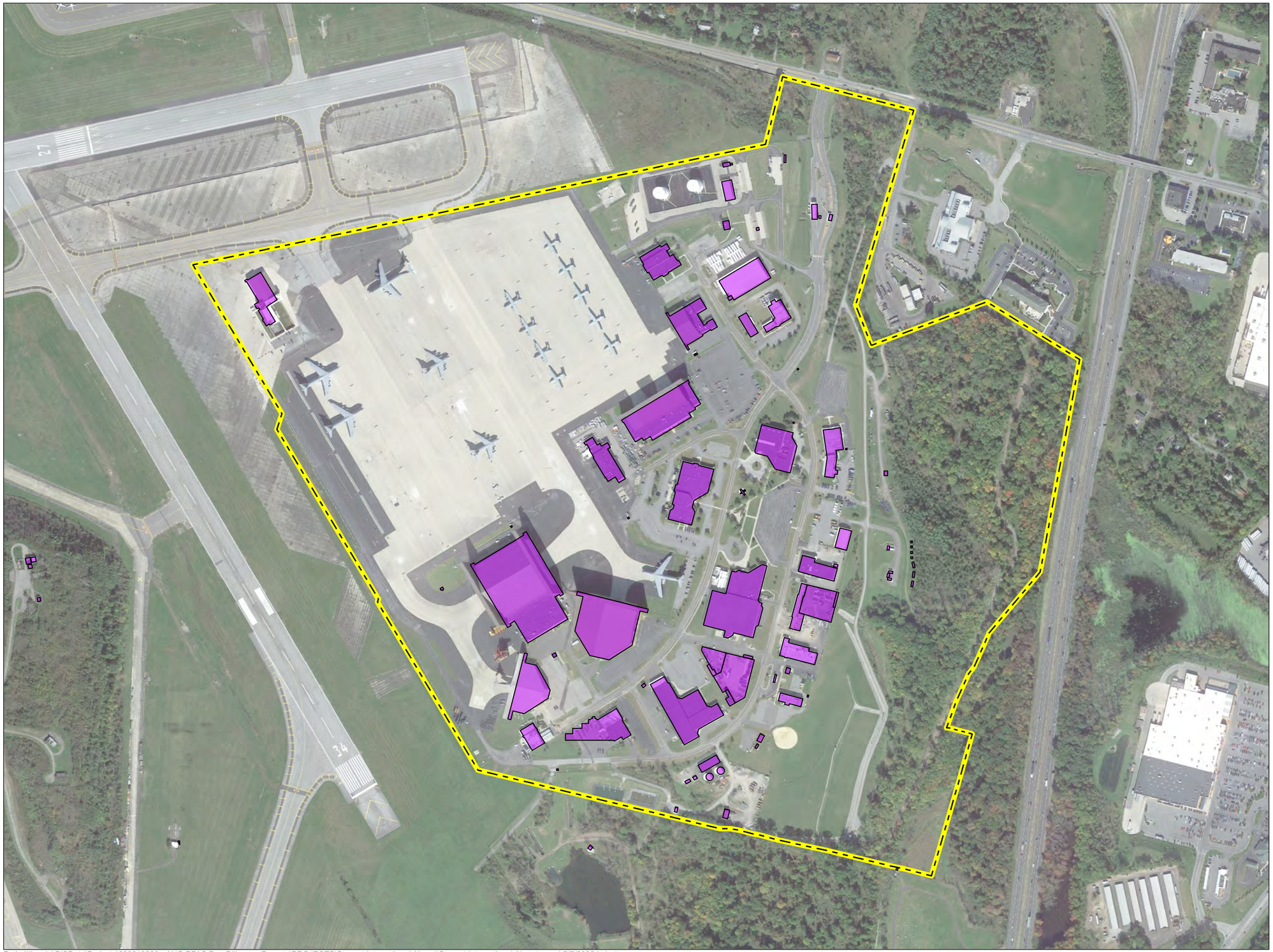
Data Sources: ESRI, USAF ANG, Google Earth 1994

Stewart International Airport
Newburgh, Orange County, New York

Historical Installation Map (1994)

Figure D-1

Path: \\lincoln\GISData\Projects\633210230 - ANG PFAS Due Diligence Reports\PROJECTS\Stewart International Airport\Stewart International Airport.aprx | 7/7/2025 | nbutts



Legend

- Building
- Installation Boundary

Date Saved: 7/7/2025
Projection: NAD 1983 StatePlane New York East FIPS 3101 Feet
Scale: 1:6,000

0 250 500
US Feet

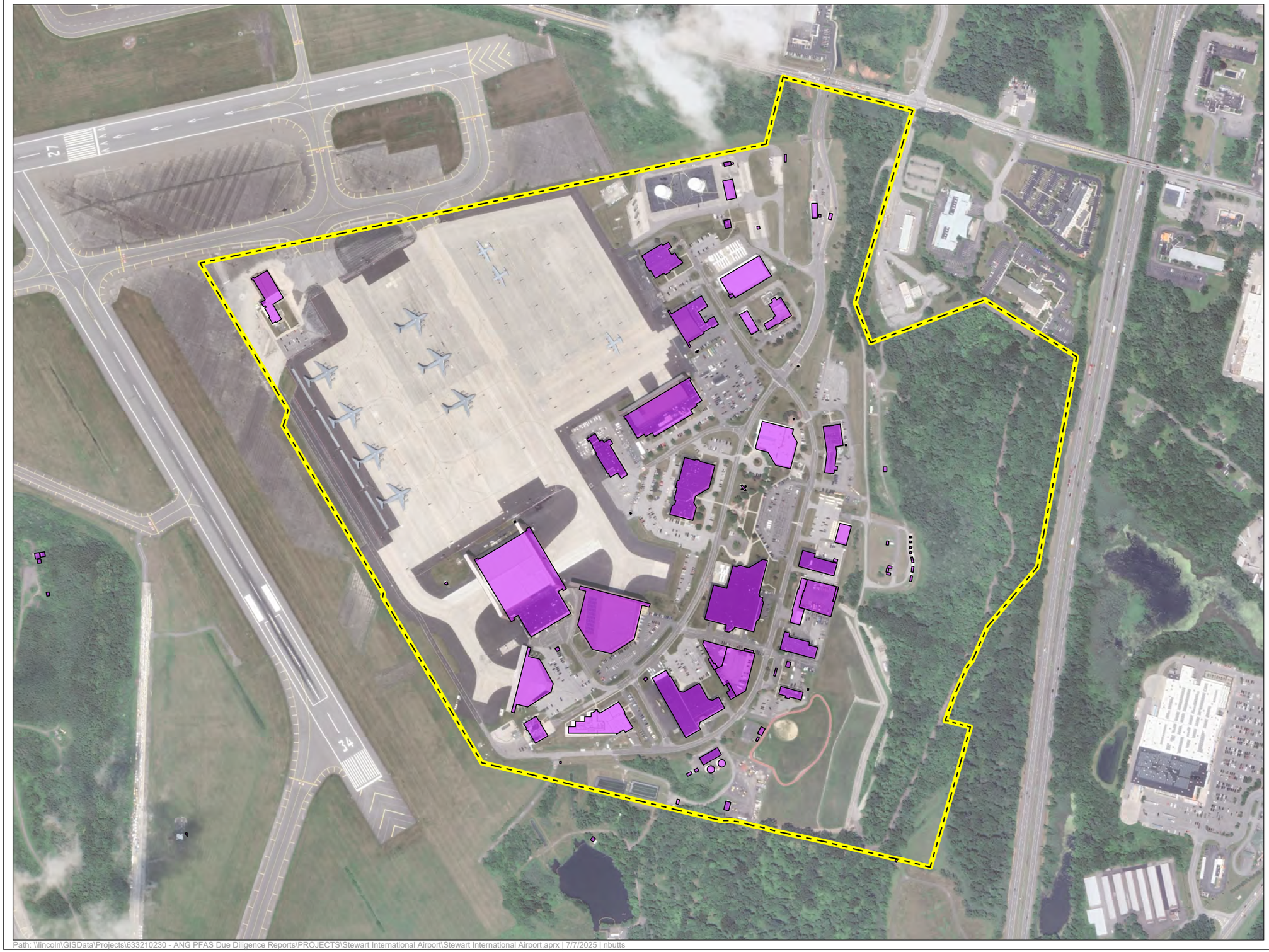
Data Sources: ESRI, USAF ANG, Google Earth 2011

Stewart International Airport
Newburgh, Orange County, New York

Historical Installation Map (2011)

Figure D-2

Path: \\lincoln\GISData\Projects\633210230 - ANG PFAS Due Diligence Reports\PROJECTS\Stewart International Airport\Stewart International Airport.aprx | 7/7/2025 | nbutts



Legend

- Building
- Installation Boundary

Date Saved: 7/7/2025
Projection: NAD 1983 StatePlane New York East FIPS 3101 Feet
Scale: 1:6,000

0 250 500
US Feet

Data Sources: ESRI, USAF ANG, Google Earth 2021

Stewart International Airport
Newburgh, Orange County, New York

Historical Installation Map (2021)

Figure D-3

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Appendix E

Landfill Checklist Form

Supplemental Sources of PFAS Potential Landfill – Due Diligence Checklist

Landfill Name:	*Address or on-base location:*
Pesticide Burial Pit Area (IRP Site 2 [DP002])	Southeast portion of the airport complex

The inquiry should include an evaluation of all available waste disposal records and operational history for any onsite landfill that describes the nature, location, and date of the placement in any on-site landfill or dump site. Conduct an evaluation of records for all wastes potentially dumped or buried on the site. Identify the approximate location on site maps.

1. General Site Information

Latitude:	Longitude:	Approximate Area of Site:	Status of Site:
41°29'54.55"N	74° 4'56.02"W	0.1 Acres 4000 Square Ft	☐Active ☒ Not Specified ☐Inactive/Closed: Closure Date: _____

Site Description:

The abandoned pesticide disposal site is located approximately 100 feet west of the landfill. It was used during the late 1960s to dispose of 5- and 55-gallon containers of pesticides and was approximately 20 feet wide, 53 feet long, and 12 feet deep. Investigations between 1984 and 1986 identified the disposal area as an area of concern. Contaminated material was excavated from the pit and the site was returned to grade in 1988. Following this removal action and in 1989, additional surface soil and ground water sampling was conducted down gradient of IRP Site 2 (DP002), which indicated the continued presence of pesticides in surface soil (DDE, DDD, and DDT) and ground water (DDT and derivatives). An Interim Record of Decision was previously signed for IRP Site 2 in 2000 which recommended two years of semiannual ground water sampling, with site closeout if monitoring results indicated stable contaminant levels. Deed restrictions for the former base landfill (IRP Site 3 [LF003]) cap prevent residential use of the area due to its location near IRP Site 3 (formerly known as IRP Site 1). The Record of Decision recommended No Further Action with continued groundwater monitoring for chlorinated pesticides over a 2-year period until 2003 (AFCEE 2002). The report of the first year long-term monitoring results by ANEPTEL in 2001 indicated elevated concentrations of the pesticides 4,4'-DDD, 4,4'-DDT, and 4,4'-DDE in the groundwater (AFCEE 2002). After additional monitoring, IRP Site 2 was closed out in 2011 (ANG 2024).

3. Site Evaluator Information

Name of Evaluator:	Organization:	Date Prepared:
Andrew Harms	EA Engineering, Science, and Technology, Inc. PBC	19 March 2024

5. Operational History

Provide Site Closure Information:

The Record of Decision was signed in March 2000 and recommended No Further Action with continued groundwater monitoring for chlorinated pesticides over a 2-year period until 2003 (AFCEE 2002). Due to the New York State Department of Environmental Conservation Ambient Water Quality Standard exceedances and observed variability in sample results at MW-01 over this monitoring period, the Long Term Monitoring Summary Report recommended an additional two years of semiannual monitoring (i.e., the Scope of Work of this Delivery Order), to provide better definition of the contaminant trend in ground water at the site. This work included ground water sample collection at MW-01, MW-16, and MW-17 from the following periods: June 2004, December 2004, June 2005, and November 2005 (AMEC Earth & Environmental, Inc., 2006). After additional monitoring, IRP Site 2 was closed out in 2011.

Describe Current Land-Use:

Parking lot and grassy area adjacent to the east side of Building 214.

Site History

Supplemental Sources of PFAS Potential Landfill – Due Diligence Checklist

Landfill Name:	*Address or on-base location:*
Pesticide Burial Pit Area (IRP Site 2 [DP002])	Southeast portion of the airport complex

☐ Landfill is/was permitted — Details: Unauthorized disposal
☒ Landfill is an existing IRP Site — Name: IRP Site
☐ Solid Waste Management Unit (SWMU) — Name: _____

Groundwater Monitoring

☒ Historic groundwater monitoring
☐ Active groundwater monitoring
☐ Groundwater has been sampled for PFAS
  ☐ Sampling Results Detected PFAS
☒ Active Monitoring Wells On Site – No. of Wells: 4
Describe monitoring program:

LTM – 2 Years of semiannual ground water sampling, with site closeout if monitoring results indicated stable contaminant levels. Initiated in 2000 and extended to completion in 2011 due to exceedances.

List active well IDs:

MW-01, MW-16, and MW-17. An unnamed well was installed in 2006 but was never sampled (AMEC Earth & Environmental, Inc., 2006). The three wells MW-01, MW-16, and MW-17 were removed in 2011, and the current status of the fourth well installed in 2006 is unknown and considered to be a data gap.

Surface Water Monitoring

☐ Historic surface water monitoring
☐ Active surface water monitoring
☐ Stormwater Management Controls in place
Describe stormwater management controls:

N/A

☐ Surface Water has been Sampled for PFAS
  ☐ Sampling Results Detected PFAS
Describe Monitoring Program:

N/A

6. Landfill Characteristics

Landfill Type

☐ Municipal Solid Waste
☐ Industrial Waste
- Construction and Demolition (C&D)
- Non-Hazardous Industrial Waste

☒ Hazardous Waste

Landfill Lining

☐ Landfill is Lined
  ☐ Clay/single Composite Lined
  ☐ Double Composite Lined
  ☐ Other: Describe _____
☒ Landfill is Unlined

Leachate Management System

☐ Leachate Management System in Place
☐ On-site Leachate Storage Pond/Tank
☐ Leachate Recirculated Through Landfill
☐ Off-site Leachate Treatment (WWTP)
☐ Leachate system has permit status on E-Dash
Describe Permit Status in PA report

N/A

☐ Leachate been sampled for PFAS
☐ Sampling Results Detected PFAS
Detail sampling results in PA report

N/A

Wastewater Treatment Bio-Solids

☐ Industrial Wastewater Treatment Plant Sludge
  ☐ Within landfill
  ☐ Land application on top of cap
☐ Municipal Sanitary Wastewater Treatment Plant sludge (Bio-solids)
  ☐ Within landfill
  ☐ Land application on top of cap

Landfill Design

☐ Surface Impoundment or Trench Landfill
☐ Area Landfill
☐ Ramp Landfill
☒ Dump Site, Waste Pile, Junk Pile, Scrap Metal Pile, etc.
☐ Landfill is capped

7. Waste Characteristics Information

Supplemental Sources of PFAS Potential Landfill – Due Diligence Checklist

Landfill Name:	*Address or on-base location:*
Pesticide Burial Pit Area (IRP Site 2 [DP002])	Southeast portion of the airport complex

Physical State of Waste Deposited:

☐ Solid ☐ Liquid
☐ Sludge ☐ Gas
☒ Other: ____dichlorodiphenyltrichloroethane_____

AFFF Wastes

☐ Liquid
- AFFF product and/or liquid concentrates/solutions
- Liquid from system inspections/ maintenance
- IDW, rinsate, residual treatment system liquid

☐ Soil/Sediment
- soil/sediment from excavated construction sites
- IDW
- Remedial Action derived waste

☐ Other Solids
- Personal Protective Equipment (PPE)
- Sampling equipment
- Construction debris

☐ Spent treatment media and filters (spent carbon, resin, etc.)
☐ Other (list): _____

Operational and Industrial Sources

☐ Chromium Plating Wastes
☐ Coating materials, corrosion prevention
☐ Resins, molds, and plastics
☐ Laboratory/Hospital Waste
☐ Non-Hazardous Industrial Waste
☐ Laundry / water proofing waste
☒ Pesticides and Herbicides
☐ Machine Shop Waste ☐ Industrial surfactants
☐ Metals ☐ Solvents
☐ Organics ☐ Inorganics
☐ Paints/Pigments ☐ Acids/Bases
☐ Explosives ☐ Oily Waste
☐ Other (list): _____

Waste Generated:

☐ On Site
☐ Off Site
☒ On Site and Off Site

Municipal Solid Waste

☐ Textiles
☐ Paper, cardboards, and packaging
☐ Polishes and waxes
☐ Non-stick cookware
☐ Cleaning agents and fabric softeners
☒ Pesticides and herbicides
☐ Hydraulic fluids
☐ Paints, varnishes, dyes, and inks
☐ Adhesives
☐ Medical products
☐ Personal care products
☐ Building debris
☐ Resins, molds, and plastics
☐ Other (list): _____

Wastewater Bio-Solids

☐ Bio-solids or Sludge
☐ Water Treatment Residuals
☐ Other (list): _____

Construction and Demolition (C&D)

☐ Metals ☐ Oily Waste
☐ Paints ☐ Vinyl siding
☐ Sealants, caulks, adhesives ☐ Drywall
☐ Fiberglass insulation ☐ Carpet
☐ Roofing shingles / materials ☐ Furniture, Fabrics
☐ Other (list): _____