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FINAL RESOURCE CONSERVATION AND RECOVERY ACT PARTIAL CLOSURE REPORT
FOR RUNWAYS AREA AND AIRFIELD PARKING APRON AREA WITH TRANSMITTAL
LETTER NAS BRUNSWICK ME
8/24/2010
NAS BRUNSWICK

**ENVIRONMENTAL DEPARTMENT
NAVAL AIR STATION
437 HUEY DRIVE
BRUNSWICK, ME 04011**

August 24, 2010

Mr. Edward Vigneault
Maine Department of Environmental Protection
Division of Oil and Hazardous Waste Facilities Registration
17 State House Station
Augusta, ME 04333-0017

Subj: Final RCRA Partial Closure Report for Runways Area and Airfield Parking Apron Area

Dear Mr. Vigneault:

A copy of the Final RCRA Partial Closure Report for Runways Area and Airfield Parking Apron Area at Naval Air Station Brunswick is provided as Enclosure (1).

If you have any questions, please contact Mr. Mike Fagan at 921-1717 or via e-mail at michael.fagan1@navy.mil.

Sincerely,


FOR LISA M. JOY
Environmental Director

Enclosure: (1) Final RCRA Partial Closure Report for Runways Area and Airfield Parking Apron Area

Copy to:
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RCRA PARTIAL CLOSURE REPORT
for
RUNWAYS AREA AND AIRFIELD PARKING APRON AREA
NAVAL AIR STATION BRUNSWICK, MAINE
USEPA IDENTIFICATION NUMBER ME8170022018
AUGUST 2010

1. INTRODUCTION

The purpose of this report is to present the findings and conclusions of the investigation conducted to determine if the Maine Department of Environmental Protection (MEDEP) RCRA or hazardous waste closure requirements have been completed for the Runways Area and Airfield Apron Area at Naval Air Station Brunswick (NAS Brunswick).

2. PROPERTY DESCRIPTION

This section provides a description of the Runways Area and Airfield Parking Apron Area of NAS Brunswick. The runways and taxiways are part of the NAS Brunswick airfield that supported anti-submarine surveillance and warfare missions, originally by the Neptune P2 aircraft, and later by the Orion P3 aircraft. All airfield operations at NAS Brunswick ceased in January 2010. The airfield is currently closed to all air traffic. (Note: These areas are part of the Airport Public Benefit Conveyance Parcel 1 [Airport PBC 1].)

Runways Area

From the northwest corner of the NAS Brunswick base boundary, the Runways Area extends southward approximately 2.3 miles through the mid-portion of the base (Figure 1). The approximately 620-acre parcel is bordered to the north by the base boundary and Route 24; to the east by the parking apron area and an industrial area of the base, as well as a less developed and wooded area of the base; to the south by the NAS Brunswick Golf Course; and to the west by a wooded area where airfield support buildings, including the new Air Traffic Control Tower (Building 231), are located (Figures 2 and 3).

The Runways Area consists of the two parallel Runways 1L/19R and 1R/19L, the associated taxiways, Taxiway G Wash Rack and the associated oil/water separator (OWS), the former Ready Storage Area (for Class 1 explosives), the runway lighting system, and grass-covered area, which are described later in this section.

The Runways Area includes the following buildings or facilities (also indicated in Figures 2 and 3), which have been addressed under separate RCRA partial closure reports:

- Building 49, Runway Lighting Substation (also known as Regulator Substation Building) (Tetra Tech, June 2010)
- Building 115, Arresting Gear (removed in 2009) (Tetra Tech, January 2010)
- Building 229, Ground Control Approach (GCA) Turntable. (The turntable was removed in 2009; only its generator was in place at the time of closure.) (Tetra Tech, May 2010)
- Building 602, Glide Slope Antenna (Tetra Tech, May 2010)
- Building 603, Localizer Antenna Shelter (Tetra Tech, May 2010)

This RCRA closure investigation excludes the two Installation Restoration Program (IRP) site areas that are located within the Runways Area. The sites, listed below, were the subject of investigations and remedial actions conducted under the IRP and require no further action:

- Site 5 - Orion Street Asbestos Disposal Site; Record of Decision (ROD), 1993
- Site 14 - Old Dump #3; Consensus Statement with EPA, 2001

In addition, this RCRA closure investigation excludes the portion of the abandoned Casco Bay-to-Brunswick Naval Air Station Pipeline (Casco Bay Pipeline) crossing the southeast corner of the Runways Area. Available information regarding this inactive aviation-fuel pipeline is presented for informational purposes only. The pipeline has been addressed under a separate program.

Runways, Taxiways, and Grass-Covered Areas

Runways 1L/19R and 1R/19L and Taxiways A through G were constructed in 1951. The two parallel inboard and outboard runways are situated approximately north-south and are asphalt-paved. They each measure approximately 8,000-feet long, 200-feet wide, and 1.5-feet thick. Taxiway A is a 75-foot-wide concrete taxiway that runs parallel to and east of the 1R/19L runway. Taxiways B through I are perpendicular to the runways and Taxiway A. According to NAS Brunswick records, the runways and taxiways were upgraded in 2001.

According to NAS Brunswick personnel, aircraft were fueled by fuel-tanker trucks dispatched from the Old Navy Fuel Farm (ONFF) and later from the Jet Fuel Storage Installation (JFSI) that was constructed in the early 1990s. No documentation of underground fuel lines or fuel tanks within the Runways Area has been discovered; however, historical drawings indicate that in the 1940s underground pipelines conveyed aviation gasoline to fuel-loading pits in the apron near Hangars 1, 2 and 3, as discussed in Section 3.

A large portion of the Runways Area is preserved as open space, acting as a protective buffer for flight activities. This includes a runway object-free area parallel to the runways and runway protection zones located at either end of the runways. The majority of the airfield operations area is enclosed by perimeter security fencing. Mere Brook flows underneath the runways, entering from the west side, near Taxiway D, and continuing to the southeast, appearing again on the east side of Orion Street in the weapons compound near the southern gate (Dyer's Gate). The runway and taxiway area features a storm drainage system that directs runoff to the stormwater outfalls via an underground piping system. Photographs of the Runways Area are provided in the attachment.

Taxiway G Wash Rack and Associated OWS

The Taxiway G Wash Rack, constructed in 2000, is located on Taxiway G, east of Taxiway A and west of the Airfield Parking Apron Area. This area was used for aircraft washing during the summer months and for aircraft de-icing during the winter months. In the summer months, salt water was washed from aircraft using fresh water sprayed from a high-pressure supply system located in the in-ground rinse rack. The aircraft wash water was collected by a perimeter drain and routed to the adjacent in-ground, 12,000-gallon, steel-tank OWS and then discharged to the storm drainage system. The storm drainage system discharges to the storm water system impoundment/retention ponds located south of Building 201, outside the Runways Area to the east. During winter de-icing operations, deicing trucks located at Building 86 were used in this wash rack to spray a propylene glycol de-icing material on the aircraft. The spent propylene glycol was collected via the perimeter drain and pumped by a lift station to a holding tank located adjacent to Building 251, east of Building 86, for off-site disposal. A valve pit located at the wash rack controls the flow of fluids to the storm drainage system or the Building 251 holding tank. Photographs of the Taxiway G Wash Rack and adjacent OWS areas are provided in the attachment.

Former Ready Storage Area

According to NAS Brunswick Environmental personnel, an area in the southeast section of the Runways Area was used as a Ready Storage Area for Class 1 explosives. These items were stored in a series of seven former secure-storage lockers (the lockers have been removed as part of the Weapons Department decommissioning), along a road currently identified as "Abandoned Road" on the 2006 NAS Brunswick base map. According to NAS Brunswick personnel, the items

stored at the former Ready Storage Area consisted of signal flares and similar pyrotechnics. Photographs of the former Ready Storage Area are provided in the attachment.

Airfield Parking Apron Area

The Airfield Parking Apron Area is located in the central portion of NAS Brunswick, immediately east of the Runways Area (Figure 1). The approximately 65-acre parcel is bordered to the north by Buildings 45, 200, and 292; to the east by Orion Street and Building 86, Hangar 4/Building 250, and Hangar 5; and to the south and west by Building 153 (south) and the Runways Area (south and west), as indicated in Figures 2 and 3. The Airfield Parking Apron consists of a large concrete area in proximity to Hangars 4 and 5 (and former Hangar 1) that provided parking space, tie-down points, service points, and line maintenance areas for aircraft.

The apron area is made up of approximately 1.5-foot-thick, reinforced-concrete slabs, with sealant between the concrete joints, and aircraft tie-down hooks. According to NAS Brunswick records, the Airfield Parking Apron was upgraded in 2001.

The Airfield Parking Apron Area includes the following existing buildings or facilities (also indicated in Figures 2 and 3), which have been addressed under separate RCRA partial closure reports:

- Building 434, VP-92 Hangar 6 West Line Shack (Tetra Tech, July 2010)
- Building 553, Airfield Support Building (Tetra Tech, May 2010)

The Airfield Parking Apron Area also includes the former Hangar 1 Aircraft Maintenance Hangar, which was located in the northeastern portion of the area. Hangar 1 was closed under a separate RCRA certification prior to demolition in 2008 (Acadia, 2007).

As discussed above, Navy personnel reported that aircraft were fueled by fuel-tanker trucks loaded at the ONFF and later at the JFSI. However, as discussed below historical drawings indicate an underground fuel supply system served a portion of the area in the 1940s.

Photographs of the Airfield Parking Apron Area are provided in the attachment.

3. PROPERTY HISTORY AND RECORDS RESEARCH

The Tetra Tech NUS, Inc. (Tetra Tech) project team interviewed NAS Brunswick Environmental Department personnel and performed records research at both NAS Brunswick and the MEDEP office in Augusta, Maine to collect available information concerning the Runways Area and the Airfield Parking Apron Area, including past use and operations at these areas.

Runways Area

The following paragraphs present a brief history of the Runways Area and a summary of available information pertinent to the RCRA partial closure investigation based on the records research. The records research findings are presented regarding Runways Area hazardous waste generation, electrical transformers, aboveground storage tanks (ASTs), underground storage tanks (USTs), OWSs, fuel pipelines, spills, and groundwater.

Runways Area History

The airfield at NAS Brunswick was originally constructed and commissioned in 1943, initially serving as a training area for British Royal Navy Fleet Air Arm pilots. The first U.S. squadron to arrive at NAS Brunswick was a lighter-than-air (airship) scouting squadron. During World War II (WWII), NAS Brunswick was used to carry out anti-submarine warfare missions.

After the war ended, the air station was deactivated in October 1946 and the land reverted to caretaker status, with land and buildings leased jointly to the University of Maine and Bowdoin College. When the station's facilities were no longer required, the leases were terminated and in 1949, operations at NAS Brunswick were taken over by the Brunswick Flying Service.

In March 1951, NAS Brunswick was recommissioned and the original runways and taxiways were replaced with dual 8,000-foot runways and taxiways. New facilities, including a control tower, were constructed to replace or supplement the temporary WWII structures.

According to NAS Brunswick Environmental Department personnel, the Runways Area has been used as the runway and taxiway system since its construction in 1951. Prior to 1951, the area was used for runways and taxiways, however, in a different configuration. There is no record of hazardous waste generation at the Runways Area.

Runways Area Historical Records Review

Records reviewed include: historical aerial photographs; the NAS Brunswick Other Environmental Liabilities (OEL) Database; area-specific reports; facility plans and drawings; and hazardous waste records. Aerial photographs dated 1958, 1978, 1981, 1984, 1989, 1993 and 1997 (all produced by James W. Sewall Company) were reviewed along with Public Works Department (PWD) site base maps dated 1946, 1952, 1956, 1957, 1962, 1975, 1983, 1989, 2004, and 2006, to provide historical information.

Beginning with the 1946 base map, the following features or buildings are present in the locations described below:

- In the Runways Area – former north-south Runway 3/21, former east-west Runway 9/27, and former northwest-southeast Runway 16/34;
- North of the current runway system - Former Building 40 (Lighter than Air [LTA] Office), an LTA mooring circle, and Building 46 (Direction Finder);
- Within the footprint of the current runway and taxiway system - Former Building 56 (High Explosive Magazine), Former Building 72 (Ready Magazine), Former Building 98 (Transformer Vault), Former Building 99 (Heavy Equipment Repair), a storage shed, Gurnet Road, Ordnance Road No. 2, Dump Area No. 3 (IRP Site 14), a wooded area, a cleared approach area, and the base boundary;
- West of the current runways - Former Buildings 58 through 61 (High Explosive Magazines);
- On Ordnance Road No.1, to the southeast of the current runway and taxiway system – Former Buildings 53 and 54 (Small Arms Magazines) and Former Building 55 (Pyrotechnic Magazine).

In the 1952 base map, the following are observed:

- Former Runway 9/27 and newly constructed Runway 1R/19L are shown with associated taxiways, with Runway 1L/19R shown as under construction;
- Runways 3/21 and 16/34 have been abandoned and removed for the construction of the new runways.

From the 1958 aerial photographs and on, the following are observed:

- Runway 9/27 (now abandoned), Runway 1R/19, and Runway 1L/19R are shown in their current configuration with the associated taxiways;
- Former Building 228 and Building 229 (GCA hardstands) are shown between the 1L/19R and 1R/19L runways;
- Former Buildings 58 through 61 (High Explosive Magazines) are shown to the west of the current runways;

- Former Buildings 53 and 54 (Small Arms Magazines) and Former Building 54 (Pyrotechnic Magazine) are shown on Ordnance Road No. 1, and Former Buildings 58 and 61 (High Explosive Magazines) are still present to the west;
- Dump Road is shown on the east side of the parcel, and appears to be part of the current Orion Street;
- Also in the 1958 aerial photographs, some discolored areas (indicating possible aircraft exhaust staining) are visible along the taxiways.

In the 1978 aerial photographs:

- Runway 9/27 is marked as abandoned, with "X"s painted on the runway surface;
- The only buildings visible within the parcel are Former Building 228 and Building 229.

In the 1983 base map:

- The taxiways are labeled as the current Taxiways A through I;

After the 1983 base map, no other significant changes were observed in the Runways Area.

Runways Area Hazardous Waste

According to NAS Brunswick personnel hazardous waste was not generated by the flight operations that occurred within the Runways Area. There are no records of hazardous waste generation in this area. Aircraft maintenance activities that generated hazardous waste occurred at either the maintenance hangars or Building 250, Aircraft Intermediate Maintenance Division (AIMD), or within the Parking Apron Area.

Runways Area Storage Tanks, Transformers, OWSs, Fuel Pipeline, and Spills

With the exception of those associated with buildings being closed under separate RCRA certifications, no ASTs, USTs, or polychlorinated biphenyl (PCB)-containing transformers are present in the Runways Area, according to NAS Brunswick records (PWD, 2010 and Environmental Department, 2009). PCB-containing transformers may have been located at former Building 98, a transformer vault demolished prior to 1953. However, the former Building 98 location was reworked during the current runway system construction and is now covered by the runway.

According to NAS Brunswick records, only one OWS, associated with the wash rack facility, is located in the Runways Area. The operation of this OWS is described in Section 2. According to NAS Brunswick records this unit was included in the OWS maintenance program, which included annual cleaning. Cleaning consisted of removal of accumulated petroleum products and excessive sludge, and proper disposal of all collected petroleum contaminated water, petroleum products and sludge.

As mentioned previously an approximately 400-foot segment of the abandoned Casco Bay Pipeline aviation-fuel pipeline crosses the southeast corner of the Runways Area. The pipeline is excluded from this RCRA closure investigation since it was previously closed under a separate action. Available information regarding the pipeline is presented here for informational purposes. This pipeline system consists of two separate pipes that were used to transfer jet propulsion fuel (primarily JP-5) from the Defense Fuel Support Point (DFSP)-Casco Bay facility in Harpswell to the ONFF during the period from about 1952 until 1991. The pipeline consists of two separate carbon-steel pipes with welded joints and set approximately 3-feet apart. The pipes are covered in an exterior tar coating impregnated with asbestos. In 1991 the pipeline was taken out of service, drained, cleaned and pressurized with nitrogen until 1995 when the ONFF was dismantled (GZA, 1997).

A review of the MEDEP spill database and the NAS Brunswick spill logbook identified the following reported spills within the Runways Area.

Documented Spills – Runways Area

Location	Date	Material	Quantity (gallons)	MEDEP Notified	Notes
Runway/Taxiway	2/24/1993	sulfuric acid	< 1	yes	Cleaned up by NAS Brunswick, NFA
South Runway	4/17/1996	antifreeze	unknown	yes	
Building 229 GCA Turntable	4/21/2005	diesel	25	yes	AST pump malfunctioned; soil was removed.

Source: MEDEP Spills Database
NAS Brunswick Environmental Spills Logbook

AST aboveground storage tank

JP Jet Propellant (Jet Fuel)

NFA No further action

According to NAS Brunswick personnel some staining visible at ends of runways and taxiways was associated with engine exhaust (blowback) from high-power engine run up that was conducted to test engines. It was not a practice to release aircraft fuel on the ramps, runways, or taxiways to test release valves or for any other purpose. According to NAS Brunswick personnel, prior to the late 1980s, small jars (de minimis quantities) of aviation fuel would be retained by flight engineers (for testing, if necessary after the flight) and poured out on the ramp after the flights returned. Post-1980s, the fuel samples were containerized.

Runways Area Groundwater

Information available for known groundwater contamination areas at NAS Brunswick was reviewed to determine if groundwater underlying the Runways Area could potentially be impacted by another (off-parcel) source area. With the exception of the sites listed in Section 2 that are being or have been addressed separately, no groundwater investigations have been conducted to specifically address known or suspected contaminant releases from within the Runways Area. However, environmental investigations have been conducted to address sites located beyond the boundaries of the Runways Area, and as a part of these investigations, four groundwater monitoring wells have been installed along or just inside the southeastern boundary of the Runways Area. The monitoring wells are identified as GW-02-307, GW-02-308, MW-101, and NASB-BG-MW-42. These wells have been installed and/or sampled as part of several environmental investigations known as: Site 2 - Orion Street Landfill South; Sites 1 and 3; and the Background Study. The locations of these monitoring wells and of the environmental investigation areas are indicated on Figures 2 and 3. These wells and associated groundwater sampling results are discussed below.

Monitoring wells GW-02-307 and GW-02-308 were installed and sampled as part of the Site Investigation conducted by Tetra Tech in 2008 at Site 2, the Orion Street Landfill South, located outside the boundaries of the Runways Area (Figures 2 and 3). The objectives of the investigation were to address the elevated levels of several compounds that were reported periodically in leachate and/or groundwater (metals in site leachate seeps and volatile organic compounds [VOCs] in groundwater) and to delineate the boundaries of the landfill. The locations for GW-02-307 and GW-02-308 were selected based on existing leachate-seep sample locations. Both monitoring wells have 10-foot screens in the upper sand/transition unit: the GW-02-307 well screen is 5.7 to 15.7 feet below ground surface (bgs); the GW-02-308 well screen is 4.3 to 14.3 feet bgs. Groundwater samples were submitted for analysis of VOCs, pesticides, PCBs, and metals. No compounds were detected in exceedance of the Maine Maximum Exposure Guidelines (MEGs) for Drinking Water (MEDEP, 2008).

A third monitoring well, MW-101, is located just inside the southeastern boundary of the Runways Area. This overburden well was installed in 1984 upgradient of the Sites 1 and 3 as a background

well for the NAS Brunswick 1990 remedial investigation (RI). Samples were collected from MW-101 during three sampling rounds conducted in 1988 and 1989; sampling analytes included inorganics, VOCs, semi-volatile organic compounds (SVOCs), and pesticides/PCBs. MW-101 groundwater sampling results were used to calculate background levels for the RI; sampling results did not indicate groundwater contamination at this location (E.C. Jordan, 1990).

A fourth monitoring well, NASB-BG-MW-42, just inside the southeastern boundary of the Runways Area south of Dyer's Gate, was sampled by Tetra Tech in April 2010 as part of the Background Study. The monitoring well has a 10-foot screen with a total well depth of 42.49 feet bgs. Groundwater samples were submitted for filtered and unfiltered metals analysis. No compounds were detected at levels exceeding the Maine MEGs.

In addition, groundwater sampling results for a non-potable water supply well located near the NAS Brunswick south gate (Dyer's Gate) provides groundwater quality information for the southeast Runways Area. This well, known as DGPW (Dyer's Gate Public Well), is located immediately outside the Runways Area boundary, just southeast of the southern end of the runways and taxiway (Figures 2 and 3). Due to the proximity of the well to the Runways Area, it may be influenced by groundwater underlying the parcel. The Navy has tested this well for volatile organic compounds (VOCs), PCBs, pesticides, and total and dissolved metals. All results were below State of Maine residential drinking water criteria (ATSDR, 2005). In addition, Tetra Tech sampled the Dyer's Gate well, DGPW, in 2006 and 2007 for analysis of VOCs, pesticides, PCBs, and metals. The concentrations of detected VOCs and metals compounds were all below State residential drinking water criteria.

Airfield Parking Apron Area

The following paragraphs present a brief history of the Airfield Parking Apron Area and a summary of available information pertinent to the RCRA partial closure investigation based on the records research. The records research findings are presented regarding Airfield Parking Apron Area hazardous waste generation, electrical transformers, ASTs, USTs, OWSs, fuel pipelines, spills, and groundwater.

Airfield Parking Apron Area History

According to NAS Brunswick Environmental Department personnel, the Airfield Parking Apron Area (the parking apron) was used to park, fuel, and rinse aircraft, and to conduct light maintenance on the aircraft. Prior to 1951, the area was used for runways and taxiways.

Records indicate that a small quantity of hazardous waste was generated at the Airfield Parking Apron Area on an annual basis as discussed later in this section. Major maintenance activities and associated generation and storage of hazardous waste occurred at either the maintenance hangars or Building 250.

Airfield Parking Apron Area Historical Records Review

Records reviewed include: historical aerial photographs; the NAS Brunswick OEL Database; area-specific reports; facility plans and drawings; and hazardous waste records. Aerial photographs dated 1958, 1978, 1981, 1984, 1989, 1993 and 1997 (all produced by James W. Sewall Company) were reviewed along with PWD site base maps dated 1946, 1952, 1956, 1957, 1962, 1975, 1983, 1989, 2004, and 2006, to provide historical information.

In the 1943 base map, only former Hangar 1 is identified in the Airfield Parking Apron Area.

An engineering drawing dated August 1945 (revision date) shows a gasoline-loading system served the former Hangar 1 area and the former Hangar 2 and Hangar 3 areas as well. The system consisted of two, parallel, 4-inch pipelines, reducing to 3-inch diameter, that conveyed 91-octane gasoline and 100-octane gasoline from the ONFF along the north side of former Avenue A

(now known as Seahawk Avenue) and the west side of former First Street (now known as Orion Street) to former Hangar 1 and to two in-ground fuel-loading pits located north and south of the hangar (PWD, 1943). It is assumed that the fuel-loading pits were used to fill the fuel tanker trucks that fueled aircraft on the parking apron. A second engineering drawing, dated 1992, prepared for a Hangar 1 rehabilitation project shows two abandoned fuel lines along Orion Street (NAVFAC, 1992). No further information regarding the gasoline loading system was found. The date of decommissioning of the system is unknown; decommissioning may have occurred in the mid-1960s when the P2 Neptune aircraft, which used aviation gasoline, was replaced by the P3 Orion aircraft, which uses jet fuel. No documentation regarding historical releases associated with the system's operation have been found.

Beginning with the 1946 base map, the following features are present:

- In the Airfield Parking Apron Area (as in the Runways Area, described above) – former north-south Runway 3/21, former east-west Runway 9/27, and former northwest-southeast Runway 16/34;

In the 1952 base map, the following are observed:

- Former Runway 9/27 and newly constructed Runway 1R/19L are shown with associated taxiways (as in the Runways Area, described above);
- Runways 3/21 and 16/34 have been abandoned and removed for the construction of the new runways (as in the Runways Area, above).

From the 1958 photographs and on, the following are observed:

- Runway 9/27 (now abandoned), Runway 1R/19, and Runway 1L/19R are shown in their current configuration with the associated taxiways (as in the Runways Area, above).
- A darkened area (indicating possible aircraft engine exhaust staining) is visible along the Airfield Parking Apron Area, along with parked aircraft;
- Hangar 4/Building 250 is present to the east of the parcel.

Beginning with the 1984 aerial photographs, Hangar 5 is present to the east of the parcel. After the 1984 photograph, no other significant changes were observed in the Airfield Parking Apron Area; it was noted that no visible staining was present in the 1989 aerial photographs.

Airfield Parking Apron Area Hazardous Waste

According to NAS Brunswick Environmental Department personnel, aircraft maintenance practices performed on the Parking Apron Area consisted of flushing the aircraft engine gas pathways with a detergent solution to remove carbon deposits to maintain engine performance. The engine wash operation would be performed at almost any aircraft parking spot on the apron, and reportedly generated between 10 and 20 gallons of wash water. Other sources have reported that this maintenance practice for the P3 Orion T56 engine produces cadmium-contaminated wash water due to leaching from the nickel-cadmium coating on the engine compressor blades. In 1997 the NAS Brunswick began the use of catch carts to contain the wash water; however prior to that time the wash water was allowed to drain to the tarmac.

The Environmental Department reports that collected wash water was transported to Building 45 to be disposed of as hazardous waste with RCRA code D006 (waste exceeds maximum concentration of cadmium for toxicity characteristic). Available results for engine wash water samples analyzed for toxicity characteristic leaching procedure (TCLP), provided in the table below, show that the cadmium TCLP limit is exceeded in one of the two samples.

Engine Wash Water Samples TCLP Analysis Results (mg/L)

Metal	TCLP Limit	6/26/2002	3/9/2007
arsenic	5.0	<0.2	<0.2
barium	100	0.14	0.25
cadmium	1.0	1.9	0.51
chromium	5.0	<0.05	<0.05
lead	5.0	<0.05	0.1
mercury	0.2	<0.05	<0.05
selenium	1.0	<0.25	<0.25
silver	5.0	<0.05	<0.05

Notes:

Bold font: exceeds TCLP limit

Source: NAS Brunswick Environmental Department

mg/L milligram per liter

< less than

Provided in the table below are historical total quantities of engine wash water collected annually by NAS Brunswick from 1997 through 2009 (based on NAS Brunswick hazardous waste shipment records). The majority of the NAS Brunswick wash water would have been generated at the Airfield Parking Apron Area; the remainder would have been collected from engine washing conducted at the current Hangar 6 apron area.

NAS Brunswick Engine Wash Water Quantities Collected 1997 through 2009

Year	Estimated Volume (gallons)
1997	1220
1998	1310
1999	970
2000	740
2001	530
2002	560
2003	600
2004	330
2005	390
2006	240
2007	70
2008	60
2009	20

Source: NAS Brunswick Environmental Department

As discussed above, prior to 1997 engine wash water was discharged to the tarmac, resulting in the material being discharged through the airfield stormwater sewer system. Most of the Parking Apron Area drains to the stormwater sewer system that discharges to the impoundment/retention pond storm water system located to the east near Building 201. The southern apron area drains to a separate storm water sewer system that discharges to a small retention pond, located at the south end of the airfield, and discharges to Mere Brook. With the exception of the OWSs associated with the Taxiway G Wash Rack, there are no OWSs located in the storm water sewer system that drains the Parking Apron Area.

It is highly unlikely that any waste residue from wash water discharged to the tarmac during the 1962 to 1997 timeframe remains. This material would have been carried by precipitation runoff to the stormwater sewer systems and discharged to the receiving water bodies, which are located outside the Airfield Parking Apron Area.

Information regarding cadmium levels in the impoundment/retention pond storm water system near Building 201 is presented here. This system receives over 80 percent of the stormwater discharge from the industrial portion of NAS Brunswick including the airfield (EIS, 2010). Picnic

Pond was dammed around 1954 when the storm drain system on the Base was separated from the sanitary sewer system. The storm water system consists of a series of detention/retention ponds known as Pond A (upper impoundment), Pond B (lower impoundment), Pond C, (area north of the abandoned fuel pipeline and north of the Night-flight outfall) and Picnic Pond. The dikes and dams creating the ponds in this drainage area were built in the mid-1990s to retain stormwater and minimize impacts from large rain events in downstream areas; to treat stormwater for solids and other aviation-related contaminants; and to contain spills.

A 2002 hydrologic study concluded that the Picnic Pond storm water treatment pond is capturing contamination within its sediments and providing particulate removal as designed. Also, the study concluded that while metals concentrations in the sediments are above ecological threshold values, these metals are tightly bound to sediments and are unavailable to aquatic life (Woodard & Curran, 2002).

Airfield Parking Apron Area Storage Tanks, Transformers, OWSs, Fuel Pipeline, and Spills

With the exception of those associated with buildings being closed under separate RCRA certifications, no ASTs, USTs, or PCB-containing transformers are present in the Airfield Parking Apron Area, according to NAS Brunswick records (PWD, 2010; Environmental Department, 2009).

Two in-ground, 315-gallon, concrete OWSs were located on the northeast and southeast corners of Hangar 1. Interior trench drains within Hangar 1 flowed to two OWSs connected to the sanitary sewer. According to NAS Brunswick, the OWS were routinely cleaned and pumped out until Hangar 1 was demolished in 2007. According to Hangar 1 demolition plans, the two OWSs were abandoned in place; the OWS was filled with sand and the pipelines filled with cement. Other NAS Brunswick records indicate the units were taken out of service on March 16, 2007.

A review of the MEDEP spill database and the NAS Brunswick spill logbook identified the following reported spills within the Airfield Parking Apron Area.

Documented Spills - Airfield Parking Apron Area

Location	Date	Material	Quantity (gallons)	MEDEP Notified	Notes
Tarmac	4/25/1995	AFFF	110	yes	Cockpit fire; spill was diluted by 3,000 gallon water
Hangar 1 (Former)	7/24/1995	JP-5	30	yes	storm drain affected - outfall boomed and padded
Apron Spot 34	10/16/1997	sewage	10	unknown	Spill (from C-130) contained and cleaned up
Apron Spot 33	12/4/1997	JP-8	200	unknown	Logbook states: "see file"; no further information
Apron Spot 39	5/4/1999	JP-8	300+	yes	Line on fuel truck ruptured; apron area cleaned up and outfalls boomed and oil skimmed; MEDEP onsite
Apron Spot 5	4/5/2002	JP-8	5	unknown	Spilled on Spot 5 in front of former Hangar 1
Apron Spot 50	1/28/2005	unknown	15	unknown	No drains impacted - spill cleaned up

Source: MEDEP Spills Database
 NAS Brunswick Environmental Spills Logbook
 JP Jet Propellant (Jet Fuel)

According to NAS Brunswick personnel dark stains visible on aerial photographs, primarily in the parking spots on aprons/ramps, are associated with de minimis quantities of drips from engines, landing gear, and hydraulic systems and engine exhaust during startup. This staining was not usually cleaned up and was contained by the concrete, and worn away by weathering. Also, some staining on the apron south of Hangar 5 was associated with engine exhaust (blowback) from high power engine run up that was conducted to test engines.

Airfield Parking Apron Area Groundwater

No groundwater investigations have been conducted in the vicinity of the Airfield Parking Apron Area; therefore, groundwater characterization information for the parcel is not available.

4. SITE VISIT AND INVESTIGATION

A site visit was conducted by Mr. James Forrelli, P.E. and Mr. Brandon Smith, P.E. of Tetra Tech on April 28, 2010. An additional site visit was conducted by Mr. James Forrelli, P.E., Ms. Jane Connet, and Mr. Steven Giannino, P.E. on May 12, 2010. The purpose of the visits was to verify information gathered during the records search and to collect additional information as necessary to prepare this closure report. Tetra Tech personnel were accompanied by Mr. D. Bruce Smith, the NAS Brunswick Hazardous Waste Manager.

Runways Area

The Runways Area was visually inspected for signs of hazardous waste generation or storage activity. Site visit observations, recorded on the attached Building Inspection Form ⁽¹⁾, are summarized below:

- At the time of the inspection, the runways and taxiways within the Runways Area were closed and in good condition.
- At the Ready Storage Area, no secure-storage buildings were present; only concrete pads where the buildings were previously situated were present on the north and south of the Abandoned Road. (The secure-storage lockers were previously removed as part of the Weapons Department decommissioning.)
- No evidence of current or past hazardous waste generation was observed.
- No evidence of hazardous waste residues was observed.
- Some discolored areas (probably resulting from engine exhaust gases during start up or in some cases *de minimis* drips from aircraft engines, landing gear, and hydraulic systems) were observed along taxiways. No structural modifications, which could conceal signs of a past release, were observed.
- No hazardous waste storage areas or hazardous waste accumulation areas were observed.

The areas of known groundwater contamination at NAS Brunswick were reviewed with respect to the location of the Runways Area. Based on this review, as well as the review of available information on historical activities that occurred at the parcel, there is no evidence to suggest that groundwater underlying the Runways Area has been adversely impacted by a release from within the parcel, and no adverse impact to the off-site groundwater (non-potable water) well at Dyers Gate has been reported.

Based on the records research findings and site visit observations, it was determined that neither further inspection nor sampling of the Runways Area is required to complete the MEDEP hazardous waste closure requirements.

Airfield Parking Apron Area

The Airfield Parking Apron Area was visually inspected for signs of hazardous waste generation or storage activity. Site visit observations, recorded on the attached Building Inspection Form ⁽¹⁾, are summarized below:

- At the time of the inspection, the Airfield Parking Apron Area was closed and in good condition.
- No evidence of current or past hazardous waste generation was observed.

- No evidence of hazardous waste residues was observed.
- Some discolored areas at aircraft parking spots (probably resulting from engine exhaust gases during start up and/or *de minimis* drips from aircraft engines, landing gear, and hydraulic systems) were observed. No structural modifications, which could conceal signs of a past release, were observed.
- No hazardous waste storage areas or hazardous waste accumulation areas were observed.

The areas of known groundwater contamination at NAS Brunswick were reviewed with respect to the location of the Airfield Parking Apron Area. Based on this review, as well as the review of available information on historical activities that occurred at the parcel, there is no evidence to suggest that groundwater underlying the Airfield Parking Apron Area has been adversely impacted by a release, either from within the parcel or from another (off-parcel) source area.

Based on the records research findings and site visit observations, it was determined that neither further inspection nor sampling of the Airfield Parking Apron Area is required to complete the MEDEP hazardous waste closure requirements.

5. HAZARDOUS WASTE GENERATION AND STORAGE

Based on the records research, site visit observations, and NAS Brunswick Environmental Department personnel interviews, with the exception of universal waste, no hazardous waste generation, hazardous waste accumulation, or hazardous waste storage was conducted at the Runways Area.

Hazardous waste generated in Airfield Parking Apron Area by the washing of aircraft engines from as early as the mid-1960s through 2009. The waste contained cadmium levels exceeding the maximum for the RCRA toxicity characteristic. From 1997 through 2009 this material was contained, collected and properly disposed of off-site as a RCRA hazardous waste. From the mid-1960s to 1997, the engine wash water was discharged to the tarmac. It is unlikely that any waste residue from engine wash water currently remains on the tarmac, as the material would have been flushed by precipitation to the storm water sewer system and discharged primarily to the Picnic Pond storm water system and to a lesser extent, to the Mere Brook stormwater system. The Picnic Pond storm water system detention/retention ponds were designed to treat stormwater for solids and other aviation-related contaminants. A study of the system concluded that the ponds were effective in capturing and retaining metals, including cadmium, contamination from the stormwater runoff originating from industrial portion of NAS Brunswick, which includes the Parking Apron Area.

6. OTHER ENVIRONMENTAL CONSIDERATIONS

No USTs or ASTs were observed at the Runways Area or the Airfield Parking Apron Area, with the exception of those associated with buildings being closed under separate RCRA certifications.

7. LIMITATIONS

This investigation of the hazardous waste closure requirements applies to the Runways Area and the Airfield Parking Apron Area (as shown on Figures 2 and 3) only.

Located within the Runways Area and the Airfield Parking Apron Area are the following buildings or facilities for which separate investigations and associated RCRA Partial Closure Reports have been completed:

- Building 49, Regulator Lighting Substation (Tetra Tech, June 2010)
- Building 115, Arresting Gear (Tetra Tech, January 2010)
- Building 229, GCA Turntable (Tetra Tech, May 2010)

- Building 434, VP-92 Hangar 6 West Line Shack (Tetra Tech, July 2010)
- Building 553, Airfield Support Building (Tetra Tech, May 2010)
- Building 602, Glide Slope Antenna (Tetra Tech, May 2010)
- Building 603, Localizer Antenna Shelter (Tetra Tech, May 2010)

These investigations concluded that the hazardous waste closures of these buildings or facilities were completed in accordance with MEDEP regulations.

The former Hangar 1 Aircraft Maintenance Hangar was located in the northeastern portion of the Airfield Parking Apron Area and was also closed under a separate RCRA certification prior to its demolition in 2008 (Acadia, 2007).

The following Installation Restoration Program (IRP) sites are located within the Runways Area and were closed under the Comprehensive Environmental Response and Compensation Liability Act (CERCLA). They require no further action and are not part of the RCRA certification process:

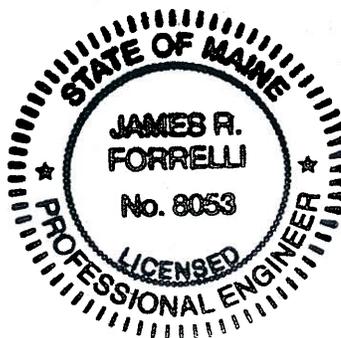
- Site 5, Orion Street Asbestos Disposal Site; Record of Decision (ROD) - 1993
- Site 14, Old Dump #3; Consensus Statement with EPA - 2001

In addition, the abandoned aviation-fuel pipeline crossing the southeast corner of the Runways Area was addressed under a separate action and therefore, was not investigated under this RCRA Partial Closure Report.

8. CERTIFICATION

Based on the findings of this investigation of the Runways Area and the Airfield Parking Apron Area, NAS Brunswick, there have been no activities resulting in the generation, accumulation, or storage of hazardous waste at the Runways Area. Historical operations did result in the generation of hazardous waste within the Airfield Parking Apron Area. Based on the findings of the investigation as reported in this Partial Closure report, the hazardous waste closure of the Runways Area and the Airfield Parking Apron Area was completed in accordance with the provisions of MEDEP Regulations Chapter 851, Standards for Generators of Hazardous Waste, Section 11.

James R. Forrelli
 James Forrelli, P.E.
 Senior Project Engineer
 Tetra Tech NUS, Inc.



⁽¹⁾ The Building Inspection Form provides preliminary information collected during the building inspection, including information from visual observations, Navy personnel interviews, and from documents reviewed during file reviews. It does not reflect any additional information provided at a later date that further clarifies or corrects preliminary information collected during the building inspection and file reviews.

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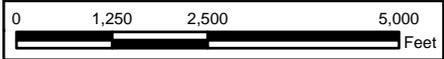
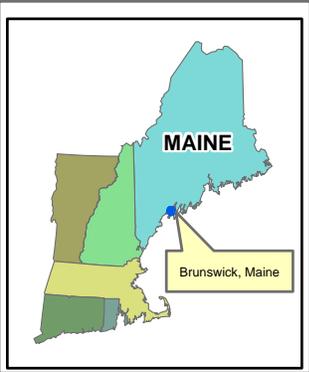
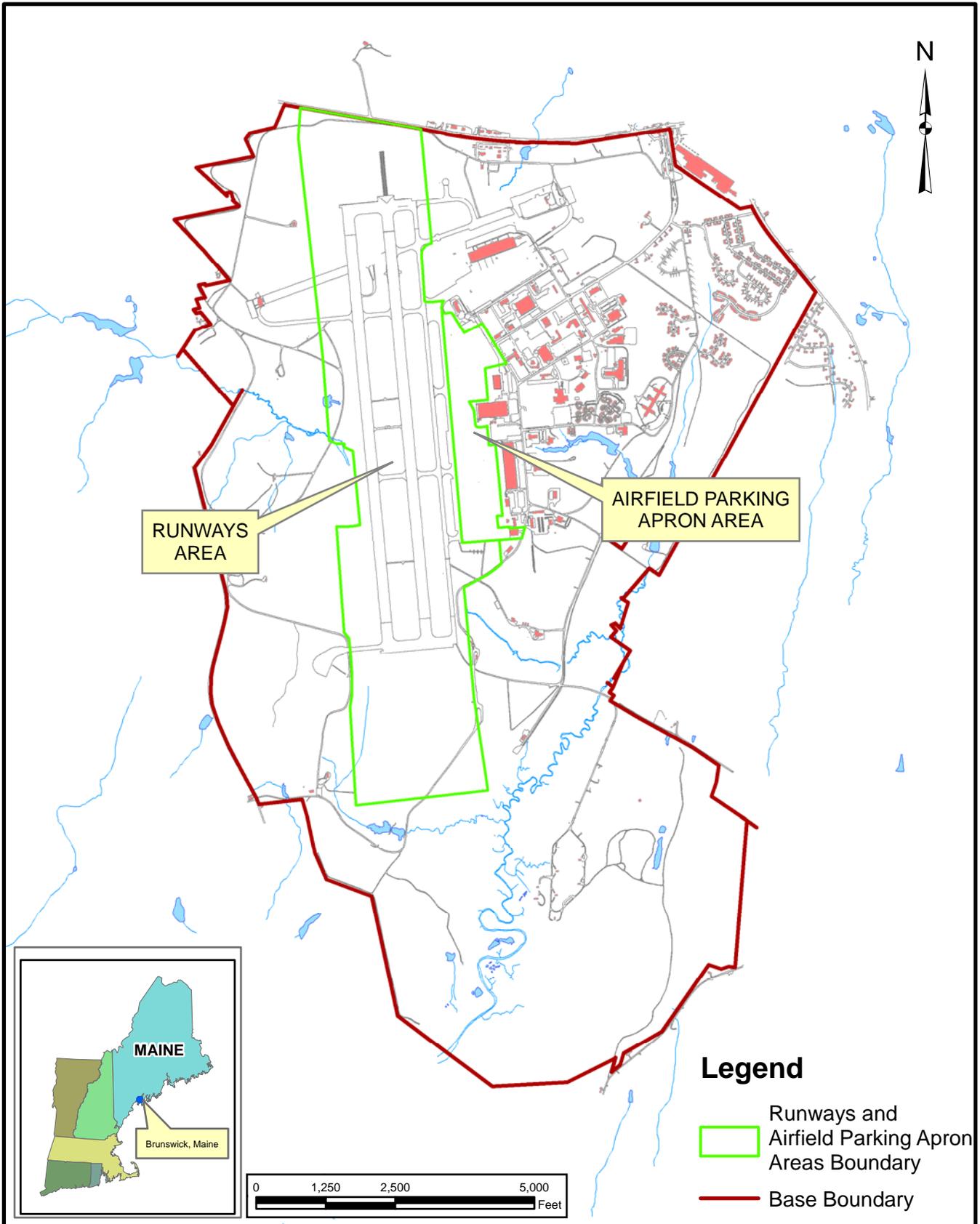
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Legend

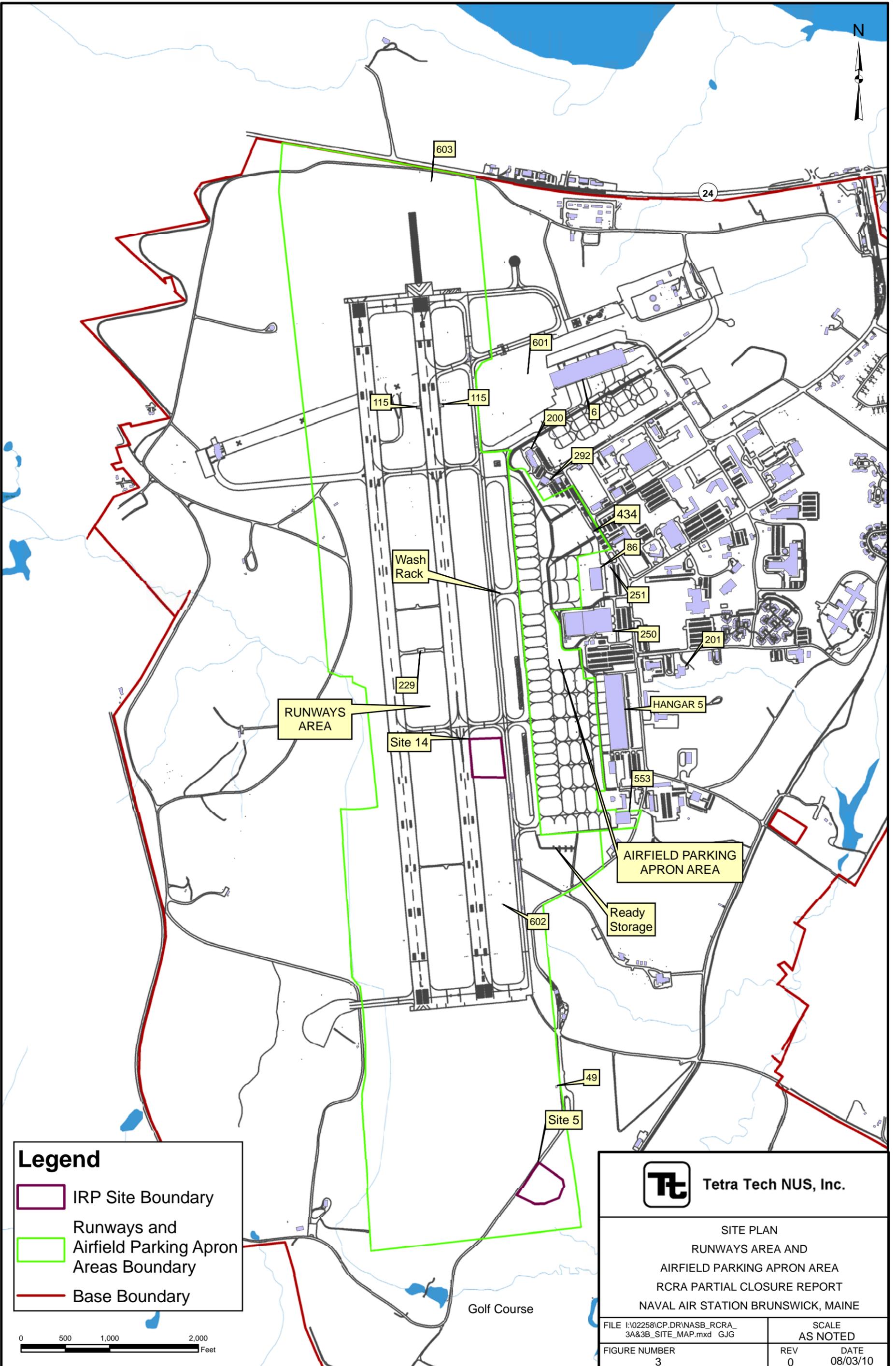
- Runways and Airfield Parking Apron Areas Boundary
- Base Boundary

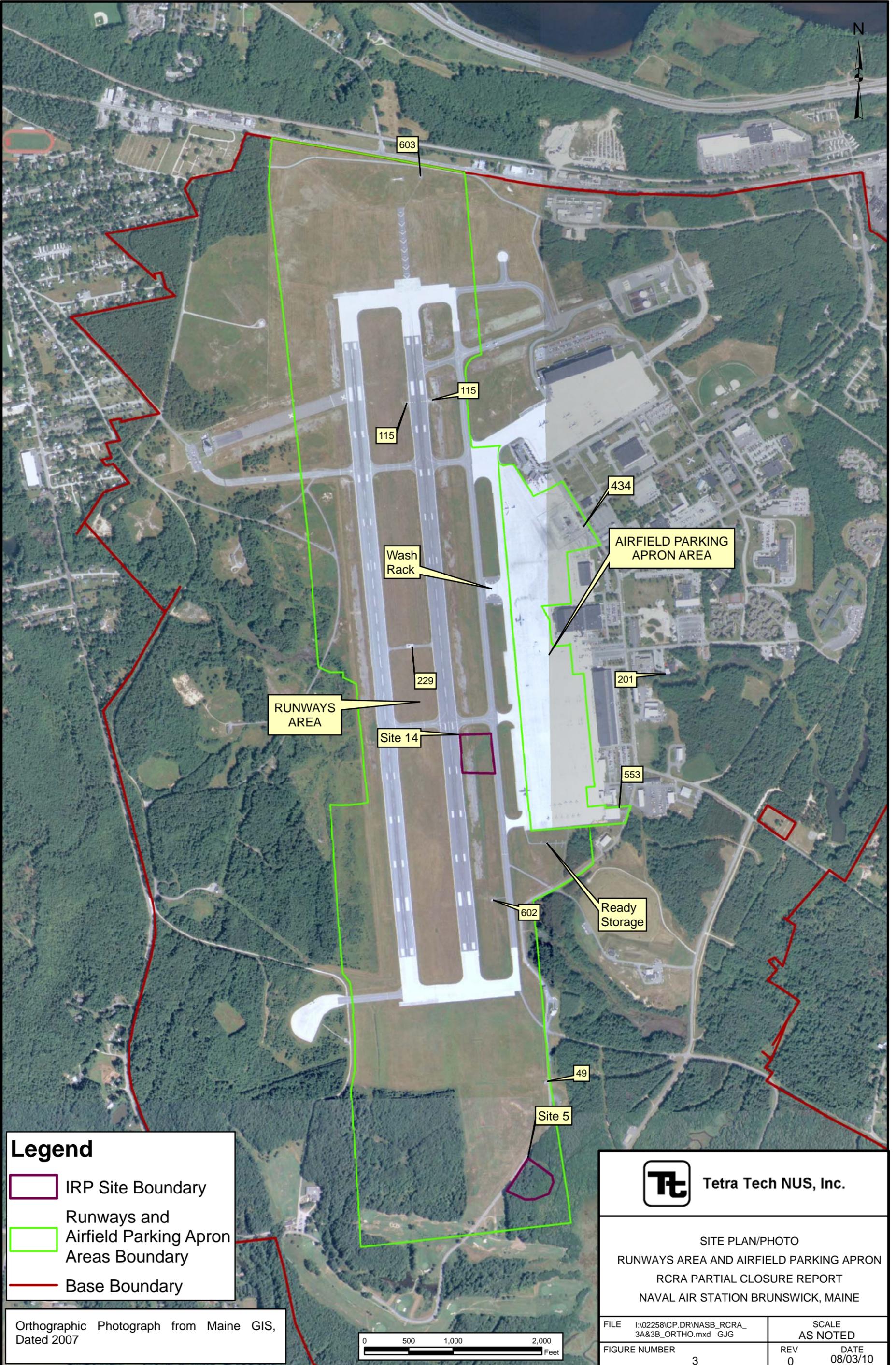


Tetra Tech NUS, Inc.

SITE LOCATION MAP
 RUNWAYS AREA AND AIRFIELD PARKING APRON AREA
 RCRA PARTIAL CLOSURE REPORT
 NAVAL AIR STATION BRUNSWICK, MAINE

SCALE AS NOTED	
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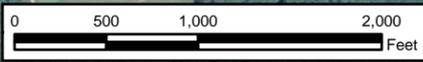




Legend

- IRP Site Boundary
- Runways and Airfield Parking Areas Boundary
- Base Boundary

Orthographic Photograph from Maine GIS, Dated 2007



 Tetra Tech NUS, Inc.	
SITE PLAN/PHOTO RUNWAYS AREA AND AIRFIELD PARKING APRON RCRA PARTIAL CLOSURE REPORT NAVAL AIR STATION BRUNSWICK, MAINE	
FILE I:\02258\CP_DR\NASB_RCRA_3A&3B_ORTHO.mxd GJG	SCALE AS NOTED
FIGURE NUMBER 3	REV 0
	DATE 08/03/10

RUNWAYS AREA

**BUILDING INSPECTION FORM
RCRA PARTIAL CLOSURE PROGRAM
NAS BRUNSWICK
BRUNSWICK, MAINE
CTO WE22**

Inspection Date: 4/28/2010

Personnel: James Forrelli, P.E. / Brandon Smith, P.E.

Weather: Overcast 40s

GENERAL BUILDING INFORMATION / USES

Building Name: Runways Area Parcel (Land Area 3A)
Function: Runways Area Parcel
Size: 696 AC
Year of Construction: NA

The Land Area 3A Parcel (Runways Area Parcel) is located in the central portion of NAS Brunswick. The approximate 696-acre parcel is bordered to the north by the base boundary and Route 24; to the east by the apron area and industrial area; to the south by the Brunswick Golf Course; and to the west by a wooded area with former munitions bunkers and airfield support buildings.

Land Area 3A contains the Runways 1L/19R and 1R/19L, taxiways, Taxiway G Wash Rack and associated oil/water separator (OWS), ready storage for Class 1 explosives, runway lighting system, and grass covered area.

Runways 1L/19R and 1R/19L and Taxiways A through G were constructed in 1951 when NAS Brunswick was recommissioned as a Naval Air Station. The runways consist of two asphalt paved 8,000-foot long and 200-foot wide and 1.5-foot thick, parallel inboard and outboard runways situated roughly north-south. Taxiway A is a 75-foot wide concrete taxiway that runs parallel to the east of the 1R/19L runway. Taxiways B through G are perpendicular to the runways and taxiway A. According to NAS Brunswick records, the runways, taxiways, and aircraft parking apron were upgraded in 2001.

The runways and taxiways were used to support anti-submarine surveillance and warfare originally by the Neptune P2 aircraft, and later the Orion P3 aircraft. According to NAS Brunswick personnel, aircraft were fueled by fuel trucks from the Old Navy Fuel Farm (ONFF) and then the New Fuel Farm. No fuel lines or fuel tanks are present on the airfield or aprons.

A large portion of the Land Area 3A is preserved as open space, which acted as a protective buffer for flight activities. This area includes portions of the clear zones and accident potential zones located at either end of the runways. The majority of the airfield operations area is enclosed by perimeter fencing. All airfield operations ceased in January 2010 with the departure of the last tenant squadron, VP-26, to NAS Jacksonville and the runways are currently closed to all air traffic.

A wash rack used for de-icing operations during the winter and aircraft washing during the summer is located on Taxiway G, east of Taxiway A and west of the aircraft apron area. The wash rack was constructed in 2000. The wash rack consists of an in-ground system with a grated opening that delivers ethylene glycol for de-icing operations and rinse water for washing of salt from aircraft. The water/ethylene glycol is collected in a perimeter drain which is collected in the 12,000 gallon, steel tank OWS and is discharged to the storm drain system. The storm drain system discharged to the impoundment ponds south of Building 201, outside the Land Area 3A parcel to the east.

According to NAS Brunswick Environmental personnel, the area of Land Area 3A south of Land Area 3B was used as ready storage for Class 1 explosives in a series of bunkers along road currently identified as Abandoned Road on NAS Brunswick base maps. No bunkers were present during the Tetra Tech inspection, with only concrete pads on the north and south of the Abandoned Road. According to NAS Brunswick personnel, the area was used to storage signal flares and similar pyrotechnics.

BUILDING INSPECTION / CONDITION

No record of hazardous waste stored at Land Area 3A.

At the time of the inspection, the Land Area 3A parcel runways and taxiways were closed and in good condition.

No evidence of current or past hazardous waste generation activities was observed.

No evidence of hazardous waste residues was observed.

Some petroleum staining from aircraft was observed. No structural modifications, which could conceal signs of a past release, were observed.

No hazardous waste storage areas or hazardous waste accumulation areas were observed.

RUNWAYS AREA

HAZARDOUS WASTE STORED / GENERATED

No hazardous waste was stored or generated at Land Area 3A, according to NASB personnel.

POTENTIAL PCB-CONTAINING TRANSFORMERS

The NASB transformer database listed no transformers associated with Land Area 3A, with the exception of those buildings being closed under separate RCRA Certification.

APPLICABLE REPORTS / DOCUMENTS

Available historical plans and aerial photos were reviewed for past property uses:

Beginning with the 1946 base map, Runway 3/21, Runway 9/27, and Runway 16/34 are present in Land Area 3A. Building 56 (High Explosive Magazine, Building 72 (Ready Magazine), Building 98 (Transformer Vault), Building 99 (Heavy Equipment Repair), a storage shed, Gurnet Road, Ordnance Road No.2, Dump Area No.3 (IRP Site 14), wooded area, cleared approach area, and the base boundary are all shown within the footprint of the current runway and taxiways system. Buildings 58 through 61 (High Explosive Magazines) are shown to the west of the current runways. Building 53 and 54 (Small Arms Magazines) and Building 54 (Pyrotechnic Magazine) are shown on Ordnance Road No. 1 to the southeast of the current runway and taxiway system.

In the 1952 base map, Runway 9/27 and newly constructed Runway 1R/19L are shown with associated taxiways, with Runway 1L/19R shown as under design. Runways 3/21 and 16/34 have been abandoned and removed for the construction of the new runways.

From 1958 on, Runway 9/27, Runway 1R/19, and Runway 1L/19R are shown in their current configuration with the associated taxiways. In 1958, Buildings 228 and 229 (GCA hardstands) are shown between the 1L/19R and 1R/19L runways. Buildings 58 through 61 (High Explosive Magazines) are shown to the west of the current runways. Building 53 and 54 (Small Arms Magazines) and Building 54 (Pyrotechnic Magazine) are shown on Ordnance Road No. 1 and Building 58 and 61 (High Explosive Magazines) are still present to the west. Dump Road is shown on the east side of the parcel and appears to be part of the current Orion Street. Some petroleum staining is visible along the taxiways in the 1958 aerial photographs.

In 1978, Runway 9/27 is marked as abandoned with "X"s painted on the runway surface. The only buildings visible within the parcel are Buildings 228 and 229. In 1983, the taxiways are labeled as the current Taxiways A through G. No other significant changes were observed after the 1983 base map in the Land Area 3A parcel.

According to NAS Brunswick records, no above-ground storage tanks (ASTs), underground storage tanks (USTs), or PCB-containing transformers, with the exception of those buildings being closed under separate RCRA certification, are present in the Land Area 3A parcel

HAZARDOUS WASTE STORAGE RECORDS

No hazardous waste was historically stored in Land Area 3A, according to NAS Brunswick Hazardous Waste Manager, D. Bruce Smith.

MISCELLANEOUS NOTES

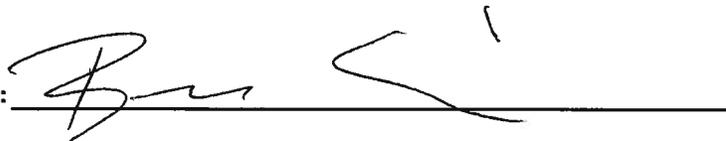
Tetra Tech personnel were accompanied on the inspection by D. Bruce Smith.

The parcel contains the following buildings that have been closed under RCRA under separate certifications (Tetra Tech, 2010):

Building 49, Regulator Substation, Building 115, Arresting Gear, Building 229, GCA Turntable, Building 601, ASOS Antenna, Building 602, Glide Slope Antenna, and Building 603, Localizer Antenna Shelter

(SEE ATTACHED PHOTOGRAPHS)

INSPECTOR SIGNATURE: _____



Brandon Smith, P.E.

PHOTOGRAPHS



No. 1 Runways Area – NAS Brunswick 2004
Historical (2004) aerial photograph of runways area from northwest (Note: Photograph date is prior to Hangar 1 and 3 demolition and Hangar 6 construction.)



No. 2 Runways Area – NAS Brunswick June 23, 2010
North central runways area opposite former air control tower with former helipad in foreground

PHOTOGRAPHS



No. 3 Runways Area – NAS Brunswick
Central runways area from northeast

June 23, 2010



No. 4 Runways Area – NAS Brunswick
Taxiway G wash rack – airfield parking apron area, Hangar 4 (left) and Hangar 5 (center) in background

April 28, 2010



No. 5 Runways Area – NAS Brunswick April 28, 2010
Oil/water separator at Taxiway G wash rack



No. 6 Runways Area – NAS Brunswick April 28, 2010
One of the secure-storage buildings locations at the former ready storage area – airfield parking apron area and Hangar 5 in background

AIRFIELD PARKING APRON AREA

**BUILDING INSPECTION FORM
RCRA PARTIAL CLOSURE PROGRAM
NAS BRUNSWICK
BRUNSWICK, MAINE
CTO WE22**

Inspection Date: 4/28/2010

Personnel: James Forrelli, P.E. / Brandon Smith, P.E.

Weather: Overcast 40s

GENERAL BUILDING INFORMATION / USES

Building Name: Airfield Parking Apron Area (Land Area 3B)
Function: Airfield Apron Area Parcel
Size: 65 AC
Year of Construction: NA

The Land Area 3B Parcel (Airfield Apron Area Parcel) is located in the central portion of NAS Brunswick. The approximate 65-acre parcel is bordered to the north by the Buildings 45, 200, and the NAS Brunswick Fire Department area; to the east and south by Land Area 3A; and to the west the industrial area and Hangars 4 and 5 and Buildings 86 and 250.

The former Hangar 1 Aircraft Maintenance Hangar was located in the northeastern portion of Land Area 3B and was closed under a separate RCRA certification prior to demolition in 2008.

Land Area 3B contains the aircraft parking apron. The aircraft apron area consists of approximately 1.5-foot thick concrete slabs with sealant between the concrete joints and aircraft tie-down hooks. No buildings are present in Land Area 3B. According to NAS Brunswick records, the aircraft parking apron was upgraded in 2001.

BUILDING INSPECTION / CONDITION

No record of hazardous waste stored at Land Area 3B.

At the time of the inspection, the Land Area 3B parcel aircraft apron was closed and in good condition. No evidence of current or past hazardous waste generation activities was observed. No evidence of hazardous waste residues was observed.

Some petroleum staining from parked aircraft was observed. No structural modifications, which could conceal signs of a past release, were observed.

No hazardous waste storage areas or hazardous waste accumulation areas were observed.

HAZARDOUS WASTE STORED / GENERATED

No hazardous waste was stored or generated at Land Area 3B, according to NASB personnel.

POTENTIAL PCB-CONTAINING TRANSFORMERS

The NASB transformer database listed no transformers associated with Land Area 3B.

AIRFIELD PARKING APRON AREA

APPLICABLE REPORTS / DOCUMENTS

Available historical plans and aerial photos were reviewed for past property uses:

In the 1943 base map, only Hangar 1 is identified in the Land Area 3B parcel. Beginning with the 1946 base map, Runway 3/21, Runway 9/27, and Runway 16/34 are present in Land Area 3A and 3B.

In the 1952 base map, Runway 9/27 and newly constructed Runway 1R/19L are shown with associated taxiways, with Runway 1L/19R shown as under design in Land Area 3A. Runways 3/21 and 16/34 have been abandoned and removed for the construction of the new runways.

From 1958 on, Runway 9/27, Runway 1R/19, and Runway 1L/19R are shown in their current configuration with the associated taxiways. Petroleum staining is visible along the aircraft apron area along with parked aircraft in the 1958 aerial photographs. Hangar 4/Building 250 is present to the east of the parcel.

Beginning with the 1984 aerial photographs, Hangar 5 is present to the east of the parcel. In the 1989 aerial photographs, no visible petroleum staining is present. No other significant changes were observed after the 1984 aerial photographs in the Land Area 3B parcel.

According to NAS Brunswick records, no above-ground storage tanks (ASTs) or underground storage tanks (USTs) are present in the Land Area 3B parcel

A review of the MEDEP spill database and the NAS Brunswick Spill log identified the following reported spills within the Land Area 3B parcel.

Location of Spill	Date	Material	Quantity	DEP Notified	Notes
Hangar 1	7/24/1995	JP-5	30	Yes	Spill occurred in Hangar 1 flight line - storm drain affected - outfall boomed and padded
Apron Spot 5	4/5/2002	JP-8	5	Unknown	Spilled on spot 5 in front of Hangar 1
Apron Spot 33	12/4/1997	JP-8	200	Unknown	Logbook stated "see file"; No further information.
Apron Spot 34	10/16/1997	Sewerage	10	Unknown	Spill contained and cleaned up from C-130.
Apron Spot 39	5/4/1999	JP-8	300+	Yes	Line on fuel truck ruptured - outfalls boomed Clean Harbors cleanup; MEDEP onsite
Apron Spot 50	1/28/2005	unknown	15	Unknown	No drains impacted-spill cleaned up

HAZARDOUS WASTE STORAGE RECORDS

No hazardous waste was historically stored in Land Area 3A, according to NAS Brunswick Hazardous Waste Manager, D. Bruce Smith.

MISCELLANEOUS NOTES

Tetra Tech personnel were accompanied on the inspection by D. Bruce Smith.

The parcel contains the following buildings that have been closed under RCRA under separate certifications (Tetra Tech, 2010):

Building 49, Regulator Substation, Building 115, Arresting Gear, Building 229, GCA Turntable, Building 601, ASOS Antenna, Building 602, Glide Slope Antenna, and Building 603, Localizer Antenna Shelter

(SEE ATTACHED PHOTOGRAPHS)

INSPECTOR SIGNATURE: _____



Brandon Smith, P.E.

PHOTOGRAPHS



No. 1 Airfield Parking Apron Area – NAS Brunswick June 23, 2010
Parking Apron Area from north – in background Hangar 4 (left) and runways area



No. 2 Airfield Parking Apron Area – NAS Brunswick June 23, 2010
Parking Apron Area from north – in background Building 86 (left), Building 250/Hangar 4 (center) and runways area (right)

PHOTOGRAPHS



No. 3 Airfield Parking Apron Area – NAS Brunswick April 28, 2010
Central section of Aircraft Parking Apron Area – in background Hangar 4 (left) and Hangar 5 (center)