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NAS BRUNSWICK  
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FINAL RESOURCE CONSERVATION AND RECOVERY ACT PARTIAL CLOSURE REPORT  
FOR WEST BASE AREA LAND AREA 15A WITH TRANSMITTAL LETTER NAS BRUNSWICK  
ME  
2/11/2011  
NAS BRUNSWICK

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

February 11, 2011

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 West Base Area (Land Area 15A)

Dear Mr. Vigneault:

A copy of the Final RCRA Partial Closure Report for West Base Area (Land Area 15A) 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](mailto:michael.fagan1@navy.mil).

Sincerely,

  
*For* LISA M. JOY  
Environmental Director

Enclosure: (1) Final RCRA Partial Closure Report for West Base Area (Land Area 15A)

Copy to:  
NAVFAC Mid-Atlantic (B. Abraham)  
NAS Brunswick (M. Fagan/D. Smith)  
EPA Region I (M. Daly)  
MRRA (V. Boundy)  
Curtis Memorial Library (L. Oliver)  
Lepage Environmental (C. Lepage)  
BRAC PMO NE (P. Burgio)

**RCRA PARTIAL CLOSURE REPORT**  
**for**  
**WEST BASE AREA**  
**NAVAL AIR STATION BRUNSWICK, MAINE**  
**USEPA IDENTIFICATION NUMBER ME8170022018**  
**FEBRUARY 2011**

## 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 West Base Area at Naval Air Station Brunswick (NAS Brunswick).

## 2. PROPERTY DESCRIPTION

The West Base Area is located in the west-central area of NAS Brunswick, bordering the western boundary of the base (Figure 1). As shown in Figure 2, the approximately 399-acre West Base Area is bordered as follows:

- to the north, by the RCRA Partial Closure "Former Residential Area" and by Federal Aviation Administration (FAA) Federal Transfer property, Building 231 (Air Traffic Control Tower);
- to the east, by the Runways Area;
- to the southeast, by the Red Label Area and the Runways Area;
- to the south, by the Golf Course Area and by the NAS Brunswick perimeter security fence and Town of Brunswick residential areas, beyond;
- to the west, by the NAS Brunswick perimeter security fence and by Town of Brunswick residential areas, beyond.

A significant portion of the West Base Area is undeveloped and is comprised of forested and wetland areas. Several surface water bodies are located within the area, including Mere Brook and tributaries to Mere Brook, as discussed below. Perimeter Road, a two-lane, asphalt-paved roadway, runs approximately north-south through the western portion of the area and is connected to several roadway improvements running approximately east-west.

Topography of the West Base Area is varied, with an elevation high of approximately 125 feet mean sea level (feet msl) near the south-central portion of the area, immediately south of the Quarry MMRP site and New Gurnet Road, and an elevation low of approximately 40 feet msl along the Mere Brook valley, in the northern portion of the West Base Area. From the crest of the ridge near the south-central portion of the area, approximately 125 feet msl in elevation, the land surface generally slopes downward to the north and northeast, and toward the southeast.

The following surface water features are located in the West Base Area:

- the main branch of Mere Brook, one of the main water features on NAS Brunswick, which originates off base to the west, entering the NAS Brunswick on the northwest side of the West Base Area and flows in a generally southeastern direction in its natural streambed for approximately 0.62 mile (1 km) before it is routed southeastward, underneath the Runways Area via an artificial conduit (Navy, 2006);
- Several unnamed tributaries to Mere Brook, which flow approximately south to north;
- Two unnamed streams and a pond in the extreme southwest corner and southeast corner of the West Base Area.

As indicated in Figures 2 and 3, three areas physically located within the West Base Area have

been transferred from the Department of the Navy to other Federal agencies, and are therefore excluded from this RCRA partial closure investigation, as follows:

- Buildings 517 (Receiver Building) and 518 (Generator Building) parcel (approximately 11.25 acres), located south of Old Gurnet Road in the northern portion of the West Base Area, which was transferred to the United States Coast Guard (USCG) in 2010;
- Building 227 (Generator Building) and Building 280 (VHF/UHF Transmitter Building) parcel (3.01 acres), located in the north-central portion of the West Base Area, which was transferred to the Federal Aviation Administration (FAA) in 2010;
- Building 646 (Radar Air Traffic Control Facility [RATCF] Antenna Building) parcel (0.92 acre), located in the central portion of the West Base Area, which was also transferred to the FAA.

In addition, three buildings located within the West Base Area are addressed under separate RCRA Partial Closure reports and are therefore excluded from this RCRA closure investigation:

- Building 230 (Old TACAN Transmitter Building) (Tetra Tech, January 2011a);
- Building 63 (West Bunker) (Tetra Tech, January 2011b); and
- Building 64 (West Bunker) (Tetra Tech, January 2011c).

This RCRA closure investigation also excludes two sites that are physically located within the West Base Area but were investigated under another program, the Installation Restoration Program (IRP). These sites, listed below and indicated in Figures 2 and 3, were also the subject of IRP remedial actions and require no further action (Navy, 2006):

- Site 16 - Swampy Road Debris Site; Consensus Statement with EPA for No Further Action (NFA), 2001; and
- Site 18 - West Runway Study Area; Consensus Statement with EPA for NFA, 2001.

In addition, the West Base Area encompasses two Military Munitions Response Program (MMRP) sites being investigated separately, and therefore excluded from this RCRA partial closure:

- Former Munitions Bunker West Area, located in the east-central portion of the West Base Area; and
- Quarry Site, located in the west-central portion of the West Base Area.

Photographs of the West Base Area are provided in the attachment to this report.

### **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 West Base Area, including past use and operations.

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 1953, 1958, 1978, 1981, 1984, 1989, 1993 and 1997 (Sewall, 1953, 1958, 1978, 1981, 1984, 1989, 1993 and 1997) were reviewed. Public Works Department (PWD) site base maps dated 1943, 1946, 1952, 1956, 1957, 1975, 1989, and 2006 (PWD, 1943, 1946, 1952, 1956, 1957, 1975, 1989, and 2006) and site building lists for 1950, 1965, 1976, 2003, and 2008 (Navy, 1950; PWD, 1965, 1976, 2003, and 2008a) were also reviewed.

According to NAS Brunswick Environmental Department personnel, the West Base Area was used for air wing support services, but was not used for industrial purposes. Air wing support services included munitions storage, radar installations, communication installations, storage facilities, married enlisted men's housing, and administrative office buildings.

Observations based upon the historical records review are summarized below:

- The 1946 map is the earliest to include the West Base Area of the air station. It shows the following buildings/features within the West Base Area: (1) Two structures identified as abandoned houses are present: Building 137, located in the southeast portion of the area, within the "Clear Zone" of the 1943 runway configuration, and Building 138, located immediately west of former Building 62. None of these structures are on the 1950 building list, and Building 137 is believed to have been demolished prior to 1950. Building 138 is also present on a 1958 aerial of the air station, but is not present in later aerials. (2) A Department of Public Works Storehouse (former Building 108) and a gate and gatehouse are located in the northwest portion of the West Base Area. These structures were not noted on the 1950 building list and do not appear on the 1956 map or later maps of the area. (3) Munitions bunkers are shown in the north-central portion of the West Base Area. Magazine Buildings 65 through 67 were used to store fuse and detonators and are noted on the 1950 building list. They appear in the 1958 aerial photograph of the area, but do not appear on later maps, aerials, or building lists.
- The 1957 map shows: (1) Former Building 232 (Emergency Generator Building) and associated antenna (four towers) are present immediately west of former Building 61 and north of Mere Brook. Former Building 232 is on the 1976 building list, however the building and the associated antenna are not present in the 1978 aerial photograph of the area. (2) Former Buildings 300 (Administration – Married Enlisted Men's Quarters [MEMQ]), 300A (Administration, Garage for Quarters 300), and 301 (Administration – MEMQ) are present at the southern end of the West Base Area boundary. The 1958 aerial photographs do not cover this area of the base, and only the 1978 map shows the presence of these buildings, believed to have been demolished prior to 1978. (3) Former Building 302 (Administration – Fleet Reserve Clubhouse Parcel) is present in the southwest corner of the West Base Area. This building was not on the 1965 or 1976 building lists, but was observed in the 1981 aerial photograph of the air station. Former Building 302 was not observed in later aerials, maps, or building lists.
- In the 1958 aerial photographs, several unidentified, unknown structures are shown, one of which is located southwest of the intersection of Perimeter and Ordnance Roads, in the northwest corner of the area. This structure was not observed in later aerials. Numerous structures believed to be various pieces of equipment are observed immediately north of Building 63. This equipment does not appear to be containers or tanks, and is not observed in later aerials of the area.
- On the 1978 map of the air station, Former Building 304 (believed to have been a gate house) is present in the southwest corner of the West Base Area, at Dyer's Corner. This building was observed in the 1978 aerial photograph, but was not observed on later aerials nor was it on later maps or building lists. The building identification number "304" appears to have been reused, since the 2008 building list notes Building 304 to be the Winch House – North Array (constructed in 1960).
- The 1978 aerial photographs are the first to show Antenna Site 1 (Antenna FLPA 8) (Figure 2). This antenna was located west of the Red Label Area.
- The 1993 aerial photographs are the first to show Antenna Site 6 (Spira cone type antenna) (Figure 2). This antenna was located northwest of Antenna Site 5, and southwest of Building 227.

- The 1981 aerial photographs are the first to show Antenna Site 7 (Antenna HTOA 9) (Figure 2). This antenna was located south of the intersection of Perimeter and Ordnance Roads, in the northwest corner of the West Base Area.

The West Base Area includes three areas and part of a fourth area that were designated as seasonal, archery hunting areas for base personnel (from September 6<sup>th</sup> through December 13<sup>th</sup>) (PWD, 2008c). Hunting Area 1 is located in the southern portion of the area, west and south of Antenna Site 1 and the Red Label Area; Hunting Area 3 straddles the West Base Area and Runways Area boundary at the southern end of these areas; and Hunting Areas 9 and 10 are located in the northern half of the West Base Area, west of the Former Munitions Bunker West area.

The majority of the West Base Area is located within Area B-7 of the Community Environmental Response Facilitation Act (CERFA) Report. Area B-7 is classified as a Category 3 CERFA property, an area of potential release and/or disposal. This is defined as a real property on which there is potential for hazardous substances and/or petroleum products or their derivatives to have been released or disposed, and some level of further assessment or evaluation is required (Tetra Tech, 2006). This classification results from the munitions storage magazines, closed IRP Site 18, historical use of aboveground storage tanks (ASTs), historical removals of transformers containing polychlorinated biphenyls (PCBs), potential lead-based paint issues associated with antennas, possible munitions explosives constituents (MEC) disposal activity in the quarry, and former use for munitions-related training. These concerns relate to areas or sites excluded from the West Base Area RCRA closure; these areas/sites have been transferred to other federal agencies or addressed by other programs. No commercial or industrial activities or releases were identified for Area B-7 in the CERFA report.

The southernmost portion of the West Base Area (south of the Red Label and Antenna Site 1 areas) is located within Area A-4 of the CERFA Report. Area A-4 is classified as a Category 1 CERFA property, an area of no known release or disposal. This is defined as a real property on which no hazardous substances and no petroleum products or their derivatives are known to have been released or disposed (Tetra Tech, 2006). Designated Area A-4 (Golf Course and Undeveloped Area) was a recreational area in the 1950's, and has had no evident non-recreational use or development since the government acquired the property. No commercial or industrial activities or releases were identified for Area A-4 in the CERFA report.

A 1987 U.S. Environmental Protection Agency (EPA) study of select, historical aerial photographs, dated 1940 to 1980, focused on four known or suspected historical release areas at NAS Brunswick (U.S. EPA, 1987). One study area (Area B) is located west of the Runway Area and south of the Former Residential Area, consisting of the northern portion of the West Base Area and overlapping a limited portion of the Runway Area. A review of the study provides the following information:

- September 28, 1940 aerial photograph - NAS Brunswick is not constructed and the overall area appears to consist of land primarily used for agricultural purposes. No potential release features (tanks, drums, standing liquids/ground stains, stressed vegetation) are noted for the West Base Area;
- April 18, 1959 aerial photograph - NAS Brunswick has been constructed. No potential release features (tanks, drums, standing liquids/ground stains, and stressed vegetation) are noted for the West Base Area. A feature labeled "lagoon" is noted within a wetland area, west of the former residential Building 138; this feature is actually the existing small pond located immediately south of Mere Brook, through which a tributary to the brook flows (Figure 3);
- For the remaining aerial photographs, dated August 29, 1965, August 28, 1966, May 13,

1972, August 15, 1978, and September 9, 1980, no potential release features (tanks, drums, standing liquids/ground stains, and stressed vegetation) are noted for the West Base Area.

An archaeological survey, performed as part of the Comprehensive Archaeological Identification Survey at Naval Air Station, Brunswick, Maine, located a historic site within the West Base Area, south of the intersection of Perimeter Road and Old Gurnet Road. The historic site was described as an unidentified cellar hole (Navy, 2010; SEARCH, 2010).

In October 2010, the Navy removed antennas and associated electrical equipment from seven sites located in the West Base Area, as listed in the table below:

Site	Description	Location
1	FLPA 8, 90-foot aluminum with lights	south of New Gurnet Road
2	HTOA 7, 90-foot aluminum with lights	northeast of Perimeter Road and Perimeter Road Cut-Off
3	Small conical monopole	north of Perimeter Road Cut-Off
4	Large conical monopole	west of Perimeter Road Cut-Off
5	FLPA 10, 90-foot aluminum with lights	east of Perimeter Road
6	Spira cone type antenna	east of Perimeter Road
7	HTOA 9, 90-foot aluminum with lights	southwest of Perimeter Road and Old Gurnet Road intersection

The antenna removal activities consisted of the following:

- removing all above-grade cables and conduits to a depth of 12 inches below grade;
- removing all antenna anchors to a depth of 12 inches below grade;
- leaving all concrete anchors and antenna bases in place;
- leaving all sub-grade electrical conduits and cables in place;
- removing all fencing and associated posts; and
- leaving all underground cable signs in place (PWD, 2010).

According to NAS Brunswick Environmental personnel, the antenna demolition debris was disposed of as scrap metal and construction debris.

No oil/water separators (OWS), ASTs, or underground storage tanks (USTs) are associated with the West Base Area, according to NAS Brunswick records (PWD, 2008b; Environmental Department, 2009).

The West Base Area is not served by the base-wide sanitary sewer system and no individual septic systems are located there (Navy, 2006).

A review of the MEDEP spills database and the NAS Brunswick spill logbook identified no reported spills within the West Base Area (MEDEP, 2010; Environmental Department, 1999, 2005).

According to the Draft Final Remedial Investigation Report for NAS Brunswick, the northern and southeastern portions of the West Base Area are located within the Mere Brook drainage basin and the southwestern portion is located within the Middle Bay Cove drainage basin (E.C. Jordan, 1990). Surface water runoff and groundwater flow within the northern and southeastern portions of the area are generally to the south and southeast, along and toward the Mere Brook, while in the southwestern portion of the area, groundwater flow and surface water runoff are to the south and southwest. Based upon interpreted regional groundwater flow patterns, a groundwater divide likely exists in this area, approximately bisecting the area in a southeast-northwest orientation (E.C. Jordan, 1990).

From the Background Study for NAS Brunswick, surface water and sediment data are available for eight sample locations from Mere Brook within the West Base Area, as shown in Figure 3 and summarized below. Two sampling events were conducted in fall 2009 and spring 2010 (Tetra Tech, 2011d). No soil or groundwater samples were collected within the West Base Area as part of this soil background study.

Location	Sample ID	Notes
Western limit of Mere Brook within the northwest portion of the West Base Area; hydraulically upgradient of the Former Munitions Bunker West area and the Runways Area	BG-SW-09 through BG-SW-16	surface water samples within Mere Brook
	BG-SD-09 through BG-SD-16	sediment samples within Mere Brook

During both the fall and spring surface water/sediment monitoring events in Mere Brook, neither total nor dissolved metals (for surface water), nor polycyclic aromatic hydrocarbon (PAH) concentrations indicate a release from within the West Base Area.

Additional analytical data is available from an ongoing screening investigation of Areas of Potential Interest (AOPI) that included the West Fire Training (WFT) Area 1, located within the southeast corner of the Former Munitions Bunker West MMRP Site (Figure 3). Although the MMRP Site itself is excluded from this RCRA Partial Closure investigation, the soil and groundwater data resulting from the AOPI investigation conducted within a portion of that site is summarized here, to provide additional information for evaluating a portion of the West Base Area.

As part of the AOPI investigation, five surficial soil samples and five subsurface soil samples (including two duplicate samples) were collected from five boring locations in October 2010 (a revision from the field work described in the Work Plan for the AOPI Screening Investigation) (Tetra Tech, 2010). These soil sample locations are shown on Figure 3 and are summarized below.

Location	Sample ID <sup>(1)</sup>	Notes
Located in the northern half of the West Fire Training (WFT) Area 1, approximately 400 feet west of the westernmost runway	FTA-SS-SS01 through FTA-SS-SS05	surficial soil collected in borings at the approximate location of the former concrete pad area, near the western runway, in southeast corner of Former Munitions Bunker West

The soil samples were analyzed for volatile organic compounds (VOCs), volatile petroleum hydrocarbons (VPH), extractable petroleum hydrocarbons (EPH), and semi-volatile organic compounds (SVOCs). For those compounds detected, none exceeded the Maine Remedial Action Guidelines (RAGs).

Also as part of the AOPI investigation, a temporary groundwater monitoring well, FTA-MW08, was installed just east of the West Base Area in the Runways Area, immediately south of the Munitions Bunker West (Figure 3). This location is likely downgradient of a portion of the easternmost West Base Area. Groundwater at this location was encountered at grade. The groundwater sample collected from FTA-MW08 was analyzed for metals, VPH, EPH, VOCs, and SVOCs. Several metals were detected, however, none of the detected concentrations exceeded the most stringent Maine Maximum Exposure Guidelines (MEGs).

Based on information from the background study and from the AOPI investigation at the WFT Area 1, the West Base Area does not appear to have been impacted by any historic disposal activities at NAS Brunswick.

#### **4. SITE VISIT AND INVESTIGATION**

Site visits were conducted by Mr. James Forrelli, P.E., of Tetra Tech on October 14, 2010, and by Mr. Brian Geringer, Mr. Brandon Smith, P.E., and Mr. James Forrelli, P.E., of Tetra Tech on November 3, 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.

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

- At the time of the inspection, there was no active use of the West Base Area.
- There are no existing improvements/development in the West Base Area (no observed development since the government transferred Buildings 227, 280, and 646 and land to the FAA, and Buildings 517 and 518 and land to the USCG).
- Seven former antenna sites were inspected during the November 2011 visit, with no remnant paint chips observed.
- No evidence of current or past hazardous waste generation was observed.
- No evidence of hazardous waste residues was observed.
- No signs of a past release (staining, unusual odors, etc.) were observed.
- No hazardous waste storage areas or hazardous waste accumulation areas were observed.
- One historical cellar foundation in the northwest portion of the area was observed. Discarded household items were observed in and around the cellar hole. These items were observed scattered along the ground surface, including corroded metal pots and pans, corroded metal cans, old glass bottles and jars, and broken porcelain items. A barrel labeled "trash" was observed nearby.
- A suspected former fire training area located in the southeastern portion of the Former Munitions Bunker West area, the West Fire Training (WFT) Area 1, was inspected and several soil boring locations were observed.

The nature and frequency of discarded household items appears to be an insignificant remnant of the former historic residential use of the area, before it was acquired by the federal government to establish NAS Brunswick.

In the Mere Brook portion of the West Base Area (northern portion), surface water runoff from precipitation appears to flow from the north and west across the area to the east, to and along Mere Brook.

Surface water, sediment, and groundwater sample results from other investigations within and adjacent to the West Base Area indicate that past activities have not significantly affected these media.

Based on the records research findings and site visit observations, it was determined that neither further inspection nor sampling at the West Base 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, no hazardous waste generation, hazardous waste accumulation, or hazardous waste storage was conducted at the West Base Area.

**6. OTHER ENVIRONMENTAL CONSIDERATIONS**

No oil/water separators, ASTs, or USTs have been utilized at the West Base Area, according to NAS Brunswick records, and none were observed during the site visit.

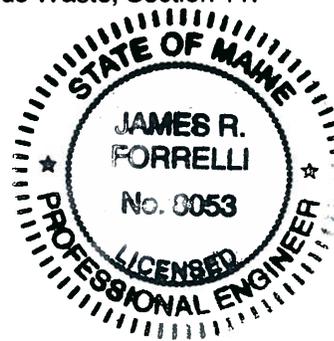
**7. LIMITATIONS**

This investigation of the hazardous waste closure requirements applies to the West Base Area (as shown on Figure 2) only, with exclusion as noted in Section 2.

**8. CERTIFICATION**

Based on the findings of this investigation, there have been no activities resulting in the generation, accumulation, or storage of hazardous waste at the West Base Area. Based on the findings of the investigation as reported in this Partial Closure report, the hazardous waste closure of the West Base 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.



<sup>(1)</sup> 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.

**REFERENCES**

ABB Environmental Services, Inc. (ABB), 1995. ABB Environmental Services, Inc. Site Inspection Report West Runway Study Area, Brunswick Naval Air Station, Brunswick, Maine. Portland, Maine, January.

DTM (Distribution Transformer Manufacturers), 2006. "Distribution Transformer Manufacturers and Available Polychlorinated Biphenyl Information". Elizabethton Electric System, Updated January.

EC Jordan, 1990. Draft Final Remedial Investigation Report, Naval Air Station, Brunswick, Maine. August.

Environmental Department, 1999. Environmental Incident Log - Book No. 1, July 1988-November 1999, Environmental Department, NAS Brunswick, Maine.

Environmental Department, 2005. Environmental Incident Log - Book No. 2, December 1999-July 2005, Environmental Department, NAS Brunswick, Maine.

Environmental Department, 2009. Master/Historical Aboveground and Underground Storage Tank Inventory. NAS Brunswick, Maine. February.

Environmental Department, 2010. Hazardous Waste Database, Naval Air Station Brunswick  
Environmental Department, Brunswick, Maine.

MEDEP, 2010. MEDEP Spills Database. Maine Department of Environmental Protection,  
Augusta, Maine.

Navy 1950. "Available for Lease, U.S. Naval Air Station, Brunswick, Maine." Headquarters, First  
Naval District, Boston, Massachusetts, May 24.

Navy (Department of the Navy, Base Realignment and Closure Program Management Office),  
2006. "Final (Revision 2) Environmental Condition of Property Report for the Naval Air Station,  
Brunswick, Maine," NAS Brunswick, Maine. May 30.

Navy (Naval Facilities Engineering Command), 2010. "Executive Summary, Modification 01,  
Comprehensive Archeological Identification Survey at NAS Brunswick, Brunswick, Maine". June  
30.

PWD (Public Works Department), 1943. "US Naval Air Station, Brunswick, Maine, Building Site  
Plan Showing Locations of Underground Water Distribution Lines and Hydrants," NAS Brunswick,  
Maine. September 4.

PWD, 1946. "Map of US Naval Air Station, Brunswick, Maine, Showing conditions on June 30,  
1946," NAS Brunswick, Maine. June 30.

PWD, 1952. "Map of US Naval Air Station, Brunswick, Maine, Showing conditions on June 30,  
1952," NAS Brunswick, Maine. June 30.

PWD, 1956. General Station Map, Enclosure 2. , NAS Brunswick, Maine.

PWD, 1957. "Map of US Naval Air Station, NAS Brunswick, Maine.

PWD, 1965. "Index of Structures, Department of the Navy Bureau of Yards & Docks  
Department" US Naval Air Station Brunswick, Maine. Updated May 13.

PWD, 1975. "General Development, Existing and Planned, Operations Area," US Naval Air  
Station, Brunswick, Maine, NAS Brunswick, Maine. Updated December 2.

PWD, 1976. "Index of Structures, Naval Facilities Engineering Command, Northeast Division  
Drawing No. 747 256" Naval Air Station Brunswick, Maine. Updated September 21.

PWD, 1989. "Existing Conditions Map. Public Works Department Drawing No. 2157" NAS  
Brunswick, Maine. Revised April 2.

PWD, 2003. "NAS Brunswick, Facility List," US Naval Air Station, Brunswick, Maine, NAS  
Brunswick, Maine. March 9.

PWD, 2006. Brunswick Naval Air Station, NAS Brunswick, Maine.

PWD, 2008a. "Draft NAS Brunswick, Facility List," US Naval Air Station, Brunswick, Maine, NAS  
Brunswick, Maine. March.

PWD, 2008b. Revised Oil/Water Separator List, Table J-C4(a). NAS Brunswick, Maine. January  
1.

PWD, 2008c. "NAS Brunswick Archery Hunting Areas," US Naval Air Station, Brunswick, Maine,

NAS Brunswick, Maine. March. 2008.

PWD, 2009. Master Transformer Database. NAS Brunswick, Maine. June 24.

PWD, 2010. Provide Antenna Removal Services Specification. NAS Brunswick, Maine.

SEARCH (Southeastern Archaeological Research, Inc.), 2010. Executive Summary, Modification 01, Comprehensive Archaeological Identification Survey at Nas Brunswick, Brunswick, Maine. June 30.

Sewall (James W. Sewall Company), 1953. NAS Brunswick Aerial Photographs. James W. Sewall Company, Old Town, ME. June 29.

Sewall, 1958. NAS Brunswick Aerial Photographs. James W. Sewall Company, Old Town, ME. October 9.

Sewall, 1978. NAS Brunswick Aerial Photographs. James W. Sewall Company, Old Town, ME. November 22.

Sewall, 1981. NAS Brunswick Aerial Photographs. James W. Sewall Company, Old Town, ME. October 17.

Sewall, 1984. NAS Brunswick Aerial Photographs. James W. Sewall Company, Old Town, ME. April 23.

Sewall, 1989. NAS Brunswick Aerial Photographs. James W. Sewall Company, Old Town, ME. April 2.

Sewall, 1993. NAS Brunswick Aerial Photographs. James W. Sewall Company, Old Town, ME. November 8.

Sewall, 1997. NAS Brunswick Aerial Photographs. James W. Sewall Company, Old Town, ME. May 27.

Tetra Tech (Tetra Tech NUS, Inc.), 2006. Draft Community Environmental Response Facilitation Act (CERFA) Identification of Uncontaminated Property at the Naval Air Station Brunswick, Maine. Tetra Tech NUS, Inc., King of Prussia, Pennsylvania. May.

Tetra Tech (Tetra Tech NUS, Inc.), 2009. Sampling and Analysis Plan (Field Sampling Plan and Quality Assurance Project Plan), Background Study, Naval Air Station Brunswick, Maine. Prepared for Naval Facilities Engineering Command, Mid-Atlantic Division. July.

Tetra Tech, 2010. Work Plan, Areas of Potential Interest Screening Investigations - Mercury Disposal Area, West Fire Training Area, Helipad Area and Former Buildings 7 and 10, Naval Air Station, Brunswick, Maine. September 16.

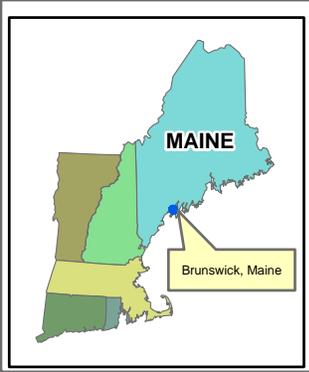
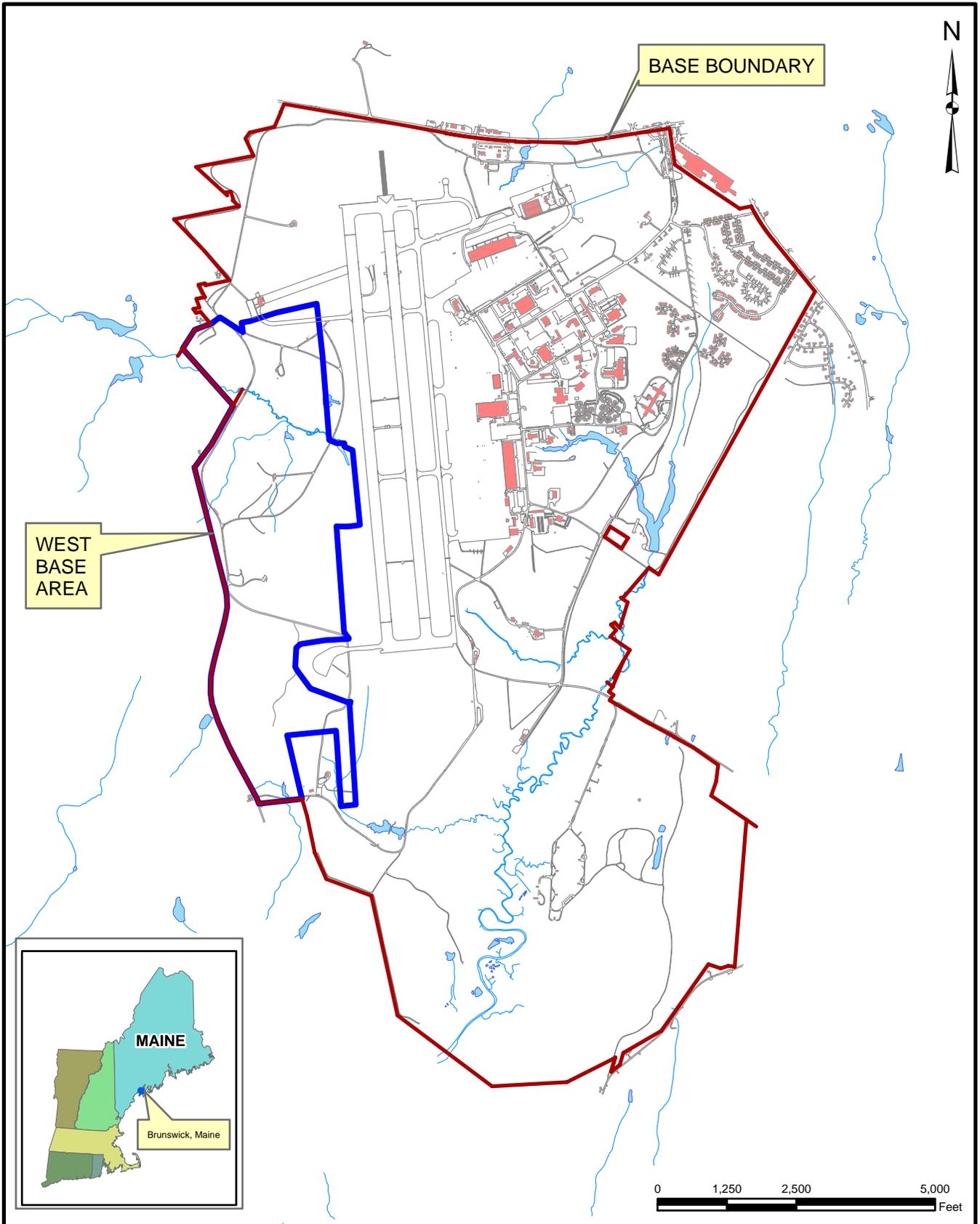
Tetra Tech, 2011a. Final RCRA Partial Closure Report for Building 230 – Old TACAN Transmitter Building, Naval Air Station Brunswick, Maine. Tetra Tech NUS, Inc, King of Prussia, Pennsylvania. January.

Tetra Tech, 2011b. Final RCRA Partial Closure Report for Building 63 – West Bunker, Naval Air Station Brunswick, Maine. Tetra Tech NUS, Inc, King of Prussia, Pennsylvania. January.

Tetra Tech, 2011c. Final RCRA Partial Closure Report for Building 64 – West Bunker, Naval Air Station Brunswick, Maine. Tetra Tech NUS, Inc, King of Prussia, Pennsylvania. January.

Tetra Tech, 2011d. Background Study for Naval Air Station Brunswick, Naval Air Station Brunswick, Brunswick, Maine. Prepared for Naval Facilities Engineering Command, Mid-Atlantic. January.

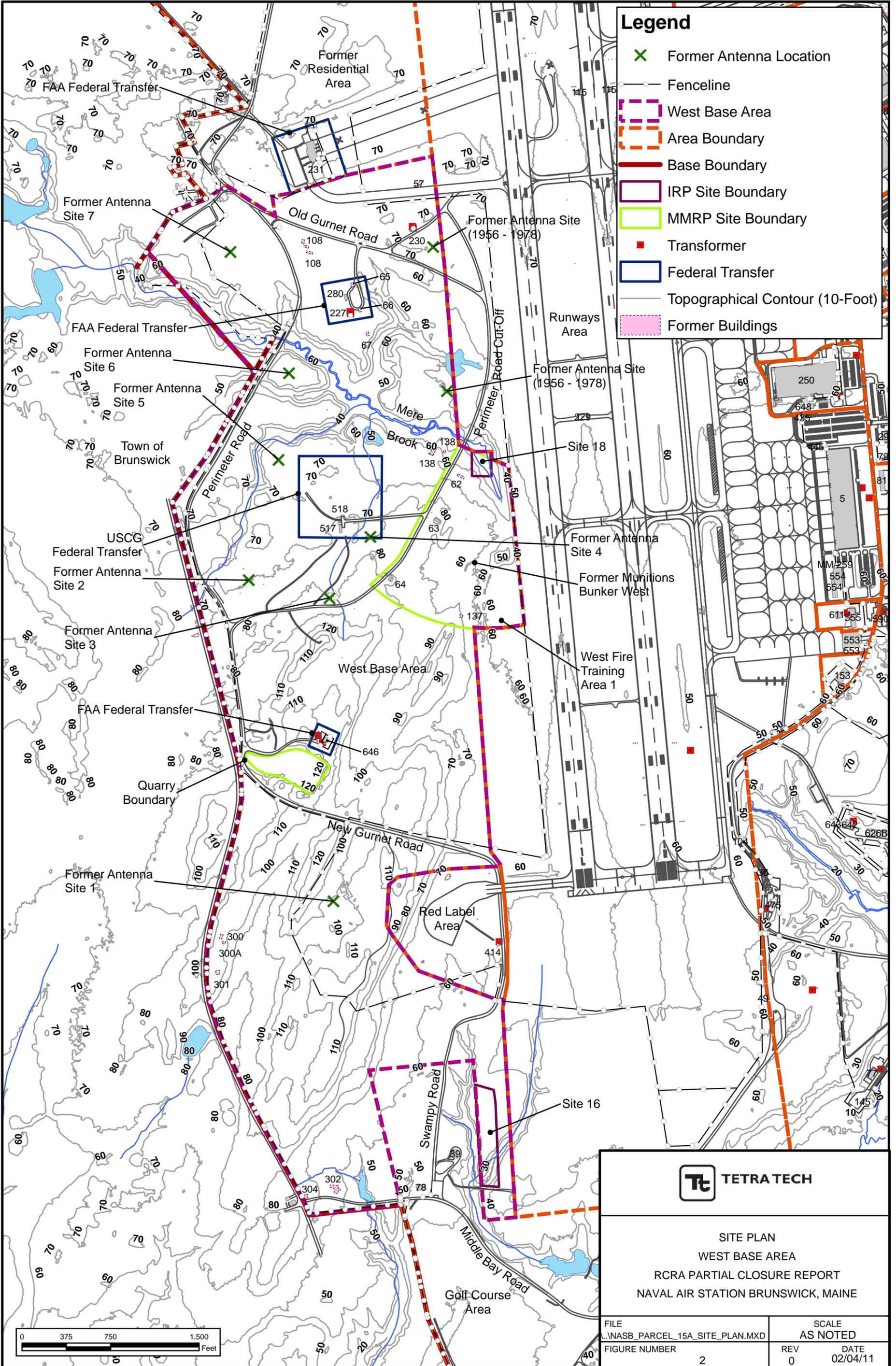
U.S. EPA (Environmental Protection Agency), 1987. Volume 1 and 2, Site Analysis Brunswick Naval Air Station, Brunswick, Maine. April.



Tetra Tech NUS, Inc.

SITE LOCATION MAP  
 WEST BASE AREA  
 RCRA PARTIAL CLOSURE REPORT  
 NAVAL AIR STATION BRUNSWICK, MAINE

SCALE AS NOTED	
FILE A:\ASB_PARCEL_15A_LOCUS.MXD	
REV 0	DATE 01/28/11
FIGURE NUMBER 1	



**Legend**

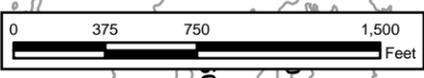
- ✕ Former Antenna Location
- Fenceline
- West Base Area
- Area Boundary
- Base Boundary
- IRP Site Boundary
- MMRP Site Boundary
- Transformer
- Federal Transfer
- Topographical Contour (10-Foot)
- Former Buildings

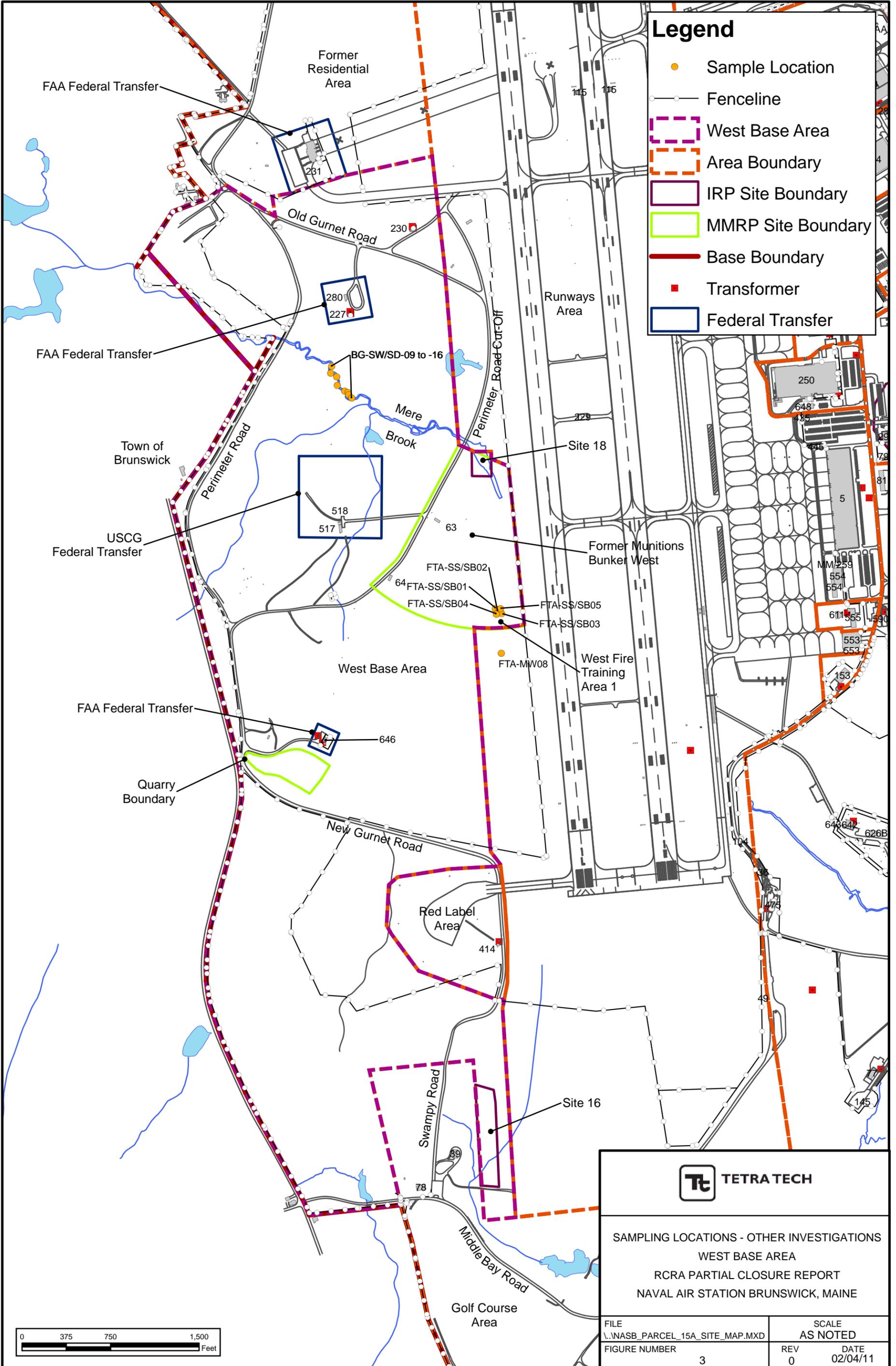


**TETRA TECH**

SITE PLAN  
 WEST BASE AREA  
 RCRA PARTIAL CLOSURE REPORT  
 NAVAL AIR STATION BRUNSWICK, MAINE

FILE ...NASB_PARCEL_15A_SITE_PLAN.MXD	SCALE AS NOTED
FIGURE NUMBER 2	REV 0
	DATE 02/04/11





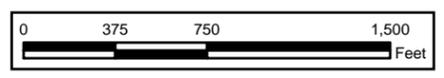
### Legend

- Sample Location
- Fenceline
- West Base Area
- Area Boundary
- IRP Site Boundary
- MMRP Site Boundary
- Base Boundary
- Transformer
- Federal Transfer



SAMPLING LOCATIONS - OTHER INVESTIGATIONS  
 WEST BASE AREA  
 RCRA PARTIAL CLOSURE REPORT  
 NAVAL AIR STATION BRUNSWICK, MAINE

FILE	I:\NASB_PARCEL_15A_SITE_MAP.MXD		SCALE	AS NOTED
FIGURE NUMBER	3	REV	0	DATE
				02/04/11



## West Base Area

**HWSA INSPECTION REPORT  
HAZARDOUS WASTE STORAGE AREAS CLOSURE  
NAS BRUNSWICK  
BRUNSWICK, MAINE  
CTO WE22**

**Inspection Date: 11/3/10**

**Personnel: Brian Geringer / James Forrelli, P.E. / Brandon Smith, P.E./ D. B. Smith (Navy)**

**Weather: Partly Cloudy**

### **GENERAL BUILDING INFORMATION / USES**

Building Name: West Base Area

Function: Former Antenna and Munitions Sites, and Forested Open Space

Size: or 399.3 acres (does not include federal-to-federal property transfer areas)

Year of Construction: NA

The West Base Area is located in the west-central section of NAS Brunswick and is bounded to the north by the Former Residential Area; to the east by the Runways Area; to the south by the Golf Course Area; and to the west by the Base boundary fence line and beyond, by a residential area in the Town of Brunswick. Perimeter Road passes through the West Base Area, from north to south.

The West Base Area is forested open space with some historic non-industrial/commercial development; and includes Federal-to-Federal property transfer areas including Buildings 227 & 280, Buildings 517 & 518, and Building 646 areas.

Two Installation Restoration Program sites are located in the West Base Area, Sites 18 (West Runway Study Area); and 16 (Swampy Road Debris Site). Two MMRP study areas are located in the West Base Area, the Former Munitions Bunker West, and the Quarry.

One AOPI site (West Fire Training Area 1) is located in the southeast corner of the Former Munitions Bunker West.

### **HWSA INSPECTION / CONDITION**

At the time of inspection, the West Base Area was vacant and the grounds appeared to be in reasonably good condition. One historic cellar (late 19<sup>th</sup>-early 20<sup>th</sup> century) with household waste (artifacts) and some metal debris were observed in the woods, south of the Former Residential Area.

Seven former antenna sites observed, with no paint chips observed on ground, and with the antennas removed from their base, or cut to approximately 18-inches above grade. No evidence of current or other past hazardous waste disposal, or hazardous waste generation was observed. No evidence of hazardous waste residues was observed. No signs of a past release (staining, unusual odors, etc.) were observed. No hazardous waste storage areas were evident.

### **POTENTIAL PCB-CONTAINING TRANSFORMERS**

No transformer that could be a potential source of polychlorinated biphenyls (PCBs) contamination in the event of a leak was observed.

### **APPLICABLE REPORTS / DOCUMENTS**

Available historical aerial photos and base maps were reviewed for past uses:

1943 map – None, area of map does not include the West Base Area.

1946 map – Buildings 62 & 63 (High Explosives Mags.), 64 (Incendiary Mag.), 65 – 67 (Fuse & Detonator Mags.), 108 (Storehouse-PW plus 2-out bldgs.), and 137 & 138 (Abandoned bldgs.).

1950 building list – Bldgs. 62 thru 67 (Magazines); and 108, 137 & 138 not listed (NL).

**APPLICABLE REPORTS / DOCUMENTS, cont'd**

1952 map – Same as 1946 map.  
1953 aerial – Photo clarity limits review.  
1956 map – Bldgs. 62 thru 64 (Magazines), 226 (Comm. Transmitter), 227 (Generator Bldg.), 230 (TACAN Trans. Bldg.), T-212 (ADF Homer), 300 (MEMQ), 300A (Garage), 301 (MEMQ), and 302 (Fleet Reserve Clubhouse).  
1957 map – Buildings 63, 64, 226 & 227, 230 & 246, 300 & 300A, 301, and 302.  
1958 aerial – Buildings 62 thru 67, 108 w/2-out bldgs., 226 & 227, 230 & 246, 232, 280, 302, and 517 & 518.  
1965 building list – Buildings 62 thru 64 (Magazines), 65 thru 67 (NL), 108 (NL), 226 (Electronic Storage), 227 (Gen. Bldg.), 230 (TACAN Trans. Bldg.), 232 (E. Gen. Bldg.), 246 (TACAN Antenna Tower), 280 (Trans. Bldg.), 300 (NL), 300A (NL), 301 (NL), 302 (NL), 517 (Receiver Bldg.), 518 (Gen. Bldg.), and T-212 (Storage of Refueling Contractor).  
1975 map – None, West Base Area not present on map.  
1976 building list – Same as 1965 building list.  
1978 map – Bldgs. 63 & 64, 226 & 227, 230 & 246, 280, 300, 300A, 301, 304, 517 & 518 (plus antennas 519 – 522).  
1978 aerial – Bldg. 62 pad; and Bldgs. 63 & 64, 226 & 227, 230 & 246, 280, 517 & 518, and 646.  
1979 map – None, West Base Area not present on map.  
1981 aerial – Bldg. 62 pad; and Bldgs. 63 & 64, 227, 230, 280, 302, 517 & 518, and 646.  
1983 map – Same as 1979 map.  
1984 aerial – Bldg. 62 pad; and Bldgs. 63 & 64, 227, 230, 280, 517 & 518, and 646.  
1989 map – Bldgs. 63 & 64, 226 & 227, 280 (mislabeled as 289), 517 & 518, and 646.  
1989 aerial – Same as 1984 aerial.  
1993 aerial – Bldgs. 63 & 64, 227, 230, 280, 517 & 518, and 646.  
1997 aerial – Same as 1993 aerial.  
2003 building list – Bldgs. 63 & 64 (Storage Facilities), 227 (Gen. Bldg.), 230 (Old TACAN Trans. Bldg.), 280 (Trans. Bldg. UHF/VHF), 517 (Receiver Bldg.), 518 (Gen. Bldg.), and 646 (RATCH Antenna Bldg.).  
2006 map – 63, 64, 227, 230, 280, 517, 518, and 646.  
2008 building list – Same as 2003 building list.  
Current Google aerial – Current site configuration.

According to NASB records, no above ground storage tanks (ASTs), underground storage tanks (USTs), or oil-water separators (OWS) were registered to the West Base Area.

**HAZARDOUS WASTE STORAGE RECORDS**

No hazardous waste was historically stored at the Former Residential Area according to NAS Brunswick Hazardous Waste Manager, D. Bruce Smith.

**MISCELLANEOUS NOTES**

The Tetra Tech personnel were accompanied on the inspection by D. Bruce Smith Hazardous Waste Manager.

INSPECTOR SIGNATURE:  \_\_\_\_\_

**PHOTOGRAPHS**



No. 1 West Base Area, NAS Brunswick October 14, 2010  
Antenna Site 3 (prior to antenna removal) from southwest



No. 1 West Base Area, NAS Brunswick October 14, 2010  
Antenna Site 6 (prior to antenna removal) from west



No. 3 West Base Area, NAS Brunswick November 3, 2010  
Antenna Site 1 (after antenna removal) from west



No. 4 West Base Area, NAS Brunswick November 3, 2010  
Antenna Site 6 (after antenna removal) from west



No. 5 West Base Area, NAS Brunswick November 3, 2010  
Antenna Site 7 (after antenna removal) from east



No. 6 West Base Area, NAS Brunswick November 3, 2010  
Possible historic site cellar hole, located south of Perimeter Road and Old Gurnet Road intersection