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NAS BRUNSWICK  
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FINAL RESOURCE CONSERVATION AND RECOVERY ACT PARTIAL CLOSURE REPORT  
FOR FORMER QUARTERS C AREA LAND PARCEL WITH TRANSMITTAL LETTER NAS  
BRUNSWICK ME  
12/21/2010  
NAS BRUNSWICK

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

December 21, 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

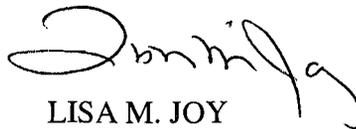
Subj: Final RCRA Partial Closure Report for Former Quarters C Area Land Parcel

Dear Mr. Vigneault:

A copy of the Final RCRA Partial Closure Report for Former Quarters C Area Land Parcel 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,



LISA M. JOY  
Environmental Director

Enclosure: (1) Final RCRA Partial Closure Report for Former Quarters C Area Land Parcel

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  
**FORMER QUARTERS C AREA**  
**NAVAL AIR STATION BRUNSWICK, MAINE**  
**USEPA IDENTIFICATION NUMBER ME8170022018**  
**DECEMBER 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 Former Quarters C Area at Naval Air Station Brunswick (NAS Brunswick).

## **2. PROPERTY DESCRIPTION**

The Former Quarters C Area is located in the northeastern portion of NAS Brunswick, bordering the northern boundary of the base (Figure 1). The approximately 37.3-acre parcel is bordered to the north by Route 24 (Bath Road) and Town of Brunswick land beyond, to the east by the Building 37 parcel and the Private Housing Area; to the south by the Old Navy Fuel Farm (ONFF) Area and Fitch Avenue; and to the west by the Sea Bee Compound and the New Fuel Farm Areas. Installation Restoration Program (IRP) Site 7, the Old Acid/Caustic Pit, is located in the southern portion of the Former Quarters C Area (Figure 2).

A small clearing is present where the former base housing (Quarters C, thought to be a single-family house) was located, in the northern portion of the Former Quarters C Area; the remainder of the parcel is primarily tree-covered. Perimeter Road, a two-lane, asphalt-paved roadway, runs approximately east-west through the northern portion of the area. A district regulator station, installed and operated by Maine Natural Gas (MNG) of Brunswick, Maine, is located approximately adjacent to the former Quarters C building (see Figure 2). There are no other structures or improvements present within the area.

The topography of the Former Quarters C Area is generally flat, ranging in elevation from approximately 65 feet above mean sea level (msl) to 80 feet msl. In general, the land surface across the Former Quarters C Area slopes to the northwest toward Route 24, and in the southern part of the land area the land slopes slightly to the southeast. A minor drainage ditch is located to the east of the former Quarters C building, and a slight topographic high exists just northeast of the ONFF. A small, unnamed stream flows southwest-northeast across the center of the Former Quarters C Area to the NAS Brunswick front gate area where it turns north flowing under Route 24 toward the Androscoggin River.

This RCRA closure investigation excludes the Site 7 site area, which was the subject of investigations and remedial actions conducted under the IRP; a Record of Decision (ROD), for the site was signed in 2002 (Tetra Tech, 2010). Information regarding Site 7 is provided in this RCRA Closure report for information purposes.

Photographs of the Former Quarters C 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 Former Quarters C Area, including past use and operations at that location.

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. Additional aerial photographs for the parcel dated 1940, 1959, 1965, 1966, 1972, 1978, and 1980 were also reviewed (USEPA, 1987). Public Works Department (PWD) site base maps dated 1943, 1946, 1952, 1956, 1957, 1975, 1978, 1979, 1989, and 2006 (PWD, 1943, 1946, 1952, 1956, 1975, 1978, 1979, 1989, and 2006) and site building lists for 1950, 1965, 1976, 2003, and 2008 (PWD, 1950, 1965, 1976, 2003, and 2008) were also reviewed.

Observations based upon the historical records review are summarized below.

- The former residential “Quarters C” area was located at the northern edge of the parcel and is shown on historical site documents as early as the 1943 map. In the 1946 map, it appears that access to Quarters C was obtained from Route 24.
- According to the 1946 NAS historical map, the area just north of IRP Site 7 was a cleared approach area and an overrun area (1957) for the runway to the west, until approximately 1975, when the easternmost portion of the runway is shown as closed (now the Jet Fuel Storage Installation), located directly to the west.
- IRP Site 7 (Old Acid/Caustic Pit), located in the southern portion of the area (Figures 2 and 3), was reportedly an unlined pit used for liquid waste disposal from 1952 to 1969 (E.C. Jordan 1990). The precise location of the IRP Site 7 pit does not appear to have been documented, but the location was estimated based on site investigation activities. Extensive debris was identified on the aerial photograph dated 1965 (see attachment). Wastes reportedly included transformer oil, battery acid, caustics, solvents, and other miscellaneous liquids.
- Based on aerial photograph interpretation, the IRP Site 7 area also appeared to be used as an equipment lay-down area during the 1952 to 1969 timeframe (E.C. Jordan, 1990).
- Perimeter Road was constructed sometime between 1953 and 1956.
- A possible vehicle and equipment storage area and possible drum disposal area were identified in the approximate area of IRP Site 7 in 1959. A cleared area is visible to the east of the Quarters C building in the 1959 aerial photograph. Two areas of mounded earth are also identified just north of Site 7, adjacent to the southeastern most corner of the cleared area for the runway.
- In aerial photographs from 1965, significant debris is noted in the approximate area of IRP Site 7.
- Between 1953 and 1978, most of the Former Quarters C Area is cleared or open field.
- According to site information, Quarters C burned down sometime between 1972 and 1978. This structure is not included on any of the historical site building lists.
- Between 1978 through the present, the parcel is predominantly a wooded area.
- According to site area information and interviews with representatives of MNG, the natural gas district regulator station was likely constructed sometime between April and December of 2001 (Maine GIS, 2001).

The Site 7 2002 ROD indicated that surface soil and groundwater do not pose unacceptable risk to human health or the environment under current site uses (undeveloped/undisturbed). The remedy selected consisted of institutional controls (ICs) with groundwater monitoring. Semi-annual post-ROD long-term groundwater monitoring has been conducted at since April 2005, and exceedances of the maximum contaminant levels (MCL) for cadmium have consistently been detected at three monitoring wells located southwest of the approximate area of the Former Acid/Caustic Pit.

A supplemental site investigation conducted at Site 7 in 2008 and 2009 to: (1) determine the source of elevated metals concentrations in groundwater; (2) collect additional soil samples for polychlorinated biphenyl (PCB), pesticide, polynuclear aromatic hydrocarbon (PAH), and Target

Analyte List (TAL) metals analyses to better characterize the site; and (3) determine whether site conditions have changed significantly from the conditions in 2002 when the ROD was signed.

According to the Third Five-Year Review Report published in September 2010, no deficiencies were identified during review of the Site 7 remedy, and no issues related to current site operations, conditions, or activities prevent the remedy from being protective. In addition, additional evaluation of the leaching potential of cadmium in soil to groundwater, and an additional sentinel well(s) may be needed to evaluate off-site migration of groundwater with cadmium concentrations greater than the MCL/Maine Maximum Exposure Guidelines (MEG).

Under the Community Environmental Response Facilitation Act (CERFA) process, the Navy identified uncontaminated property at NAS Brunswick in accordance with CERCLA. The northern portion of the Former Quarters C Area (designated in the CERFA process as Area A-1) was identified as an area with the potential for classification as CERFA uncontaminated property. The CERFA Identification of Uncontaminated Property report stated that hazardous substances and petroleum products have never been used or stored in Area A-1.

The remaining portion of the Former Quarters C Area is designated as Area B-1 (Fuel Farm) and is classified as a Category 3 CERFA property, due to its proximity to IRP Sites and the potential for undocumented releases from historical operations. No commercial or industrial activities or releases were identified in the CERFA report for the Former Quarters C Area (Tetra Tech, 2006).

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

The Former Quarters C Area is not served by the base-wide sanitary sewer system and there are no individual septic systems located on the parcel (Navy, 2006).

The NAS Brunswick Transformer Database lists no electrical transformers for the Former Quarters C Area (PWD, 2009).

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

According to the Draft Final Remedial Investigation Report for NAS Brunswick, the northern portion of the parcel is located within the Lower Androscoggin River Basin and the southern portion is located within the Mere Brook drainage basin (E.C. Jordan, 1990). Surface water runoff and groundwater flow within the northern portion of the parcel is generally to the north and northwest, toward the Androscoggin River, while in the southern portion of the parcel, groundwater and surface water runoff is to the south. Based upon interpreted regional groundwater flow patterns, a groundwater divide likely exists in this area, approximately bisecting the parcel in an east-west orientation (E.C. Jordan, 1990).

According to a 2009 investigation, in IRP Site 7 wells, depths to groundwater across the site ranged from approximately 3 to 11.5 feet below ground surface (bgs), and groundwater is interpreted to flow to the southeast in the vicinity of IRP Site 7 (Tetra Tech, 2010). Investigations and remedial actions conducted at IRP Site 7 defined no specific source of the elevated concentrations of cadmium in groundwater, although soil was removed in an attempt to decrease the potential source of contamination to groundwater. Groundwater samples collected as part of the ongoing Long Term Monitoring Program (LTMP) at IRP Site 7 indicate both cadmium and manganese concentrations exceed current drinking water criteria (Tetra Tech, 2010). Several monitoring wells have been installed in the IRP Site 7 area and are included in the LTMP.

Information concerning groundwater to the west of the Former Quarters C Area, in the vicinity of the ONFF, is available in a groundwater monitoring report, prepared by Ecor Solutions, Inc. (ESI).

The ONFF, located southwest and hydraulically cross-gradient from the Former Quarters C area, was decommissioned in 1993 and remediated in 2000. Groundwater samples are collected from a network of wells to monitor dissolved-phase hydrocarbon migration in groundwater. The April and October 2008 monitoring results indicate that groundwater is encountered at about 3 to 7 feet bgs and flows from the ONFF to the southeast, across Fitch Avenue, possibly impacting a small portion of the southern corner of the Former Quarters C Area (ESI, 2009). In 2008, diesel-range organics (DRO) were detected at concentrations below applicable criteria, in a groundwater sample collected from a possible upgradient well (MW-NASB-51) (ESI, 2009).

Site 8 is a closed site, located to the west and northwest of the Former Quarters C Area. It was a former disposal site for construction and demolition debris, from 1964 to 1974. Additionally, solvents including trichloroethylene (TCE), methyl ethyl ketone (MEK), and toluene were reportedly disposed at Site 8. Remediation of the site included the removal of all construction debris and contaminated soils. In the Navy's Final (Revision 2) Environmental Condition of Property Report (ECPR), dated May 30, 2006, localized groundwater flow at Site 8 was radial, flowing to the surrounding surface water bodies, including the Androscoggin River, located north of Site 8 (Navy, 2006). Regional groundwater flow from the Site 8 area is to the north/northwest. Based on information from the ECPR, it is unlikely that groundwater underlying the Former Quarters C area is impacted by the historic disposal activities at Site 8.

#### 4. SITE VISIT AND INVESTIGATION

A site visit was conducted by Mr. Brian Geringer, Ms. Mindi Messmer, and Mr. James Forrelli, P.E., of Tetra Tech on November 2, 2010. The purpose of this visit 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 Former Quarters C 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 Former Quarters C Area.
- There are no existing improvements on the Former Quarters C Area (no observed development since the government acquired the property), with the exception of the MNG natural gas district regulator station, located adjacent to Route 24 and adjacent to the former Quarters C building.
- Most of the parcel was wooded, with a small cleared area located in the former Quarters C Building area and the IRP Site 7 area.
- 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.
- The remnants of the foundation of the former Quarters C building were identified in the northern section of the parcel.
- Some miscellaneous debris was identified in the area west of the former Quarters C building area.
- A small stream flowing to the northeast, was south of Perimeter Road north of IRP Site 7.
- An unmarked groundwater monitoring well was observed south of the former Quarters C building area, across Perimeter Road.
- Several monitoring wells were identified in the vicinity of IRP Site 7, located in the southern area of the parcel (see Figure 3).
- A pole-mounted transformer was identified adjacent to the northeast side of the MNG district regulator station (see Figure 3).

Surface water runoff from precipitation appears to flow from the south to the north/northwest across the parcel, in the direction of Route 24.

Due to the age of the former Quarters C building, PCB-containing transformers may have been in service there at any time in the past. As of July 1, 1979, the United States Environmental Protection Agency (EPA) prohibited all manufacturing of new PCB electrical equipment (transformers and capacitors). Therefore, soil sampling was conducted to evaluate the possibility of a historical release from a former pole-mounted transformer. On December 2, 2010, two soil samples were collected from boring SB-1, located east of the pole-mounted transformer (Figure 3). A hand-auger was used to collect samples from 0- to 6-inches and from 6- to 24-inches below ground surface (bgs).

The soil samples were submitted to Tetra Tech's subcontracted laboratory, Katahdin Analytical Services of Scarborough, Maine, for polychlorinated biphenyl (PCB) analysis. The analytical results underwent limited data validation, including blank contamination evaluation and completeness evaluation. As presented in Table 1, PCBs were not detected in the soil samples. Table 1 lists the MEDEP action limit for PCB spills (1 mg/kg). The results were also compared to the EPA Regional Screening Levels (RSLs) for Residential Soil, for informational purposes (USEPA, 2010).

Based on the records research findings and site visit observations, the historical use of the area has been residential in the north, and largely undeveloped in the central portion of the Former Quarters C Area. Historical use in the southern portion of the area, at IRP Site 7, reportedly included liquid waste disposal from 1952 to 1969 (E.C. Jordan, 1990). Wastes reportedly included transformer oil, battery acid, caustics, solvents, and other miscellaneous liquids, impacting soil and groundwater in that area. The NAS Brunswick IRP monitors groundwater at this area as part of the Site 7 remedy.

There is no evidence or record of commercial or industrial activity on the Former Quarters C Area, with the exception of the waste disposal activities that occurred at Site 7, the Old Acid/Caustic Pit. The Site 7 ROD stipulated on-going land use controls and groundwater monitoring that are conducted by the IRP. Therefore, it was determined that neither further inspection nor sampling of the Former Quarters C Area is required to complete the MEDEP hazardous waste closure requirements.

The areas of known groundwater contamination at NAS Brunswick were reviewed with respect to the location of the Former Quarters C Area. Based on this review, as well as the review of available information on historical activities that occurred at the parcel, it is unlikely that groundwater underlying the Former Quarters C Area has been adversely impacted by a release from the nearest (off-parcel) source areas. However, as stated above in Section 3, groundwater within Former Quarter C Area has been previously impacted at IRP Site 7. If any additional remedial action is needed in the future to address groundwater contamination at Site 7, it would be addressed under the IRP. There is no evidence to suggest that there has been other release from within the Former Quarter C Area that has adversely impacted groundwater underlying the area.

## **5. HAZARDOUS WASTE GENERATION AND STORAGE**

Based on the records research, site visit observations, NAS Brunswick Environmental Department personnel interviews, and sampling results, no hazardous waste generation, hazardous waste accumulation, or hazardous waste storage was conducted at the Former Quarters C Area.

## 6. OTHER ENVIRONMENTAL CONSIDERATIONS

No ASTs, USTs, or OWS have been utilized at the Former Quarters C Area, according to NAS Brunswick records.

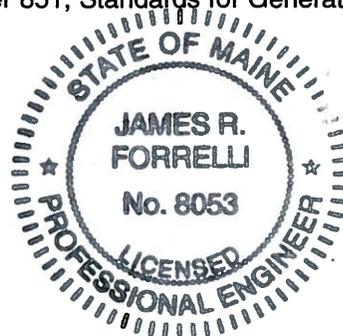
## 7. LIMITATIONS

This investigation of the hazardous waste closure requirements applies to the Former Quarters C Area (as shown on Figure 2) only.

## 8. CERTIFICATION

Based on the findings of this investigation discussed in Sections 3 and 4, there have been no activities resulting in the generation, accumulation, or storage of hazardous waste at the Former Quarters C Area with the exception of historical waste disposal activities that occurred at Site 7, the Old Acid/Caustic Pit, now under investigation by the IRP. Therefore, with the exception of residual soil and groundwater contamination associated with Site 7 as summarized in this Partial Closure report, the hazardous waste closure of the Former Quarters C Area was completed in accordance with the provisions of MEDEP Regulations Chapter 851, Standards for Generators of Hazardous Waste, Section 11.

  
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

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

E.C. Jordan, 1991. Draft Final Supplemental RI Report, Naval Air Station, Brunswick, Maine. August.

Environmental Department, 2005. Spill Record Logbook (19 June 1991 - 21 April 2005). NAS Brunswick, Maine.

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

ESI, 2009. Final Groundwater Monitoring Report, April 2008 and October 2008 Sampling Events, Old Navy Fuel Farm, Naval Air Station Brunswick, Maine. September.

Maine Geographical Information System (Maine GIS), 2001. April.

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

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.

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, 1978. "Repair Storage Magazines, Area Location & Index of Drawings, Drawing No. 2030672" US Naval Air Station, Brunswick, Maine, NAS Brunswick, Maine. Updated August 22.

PWD, 1979. "Department of the Navy Bureau of Yards & Docks, Naval Air Station, Brunswick, Maine, Existing Conditions Map, Operations Area, Y&D Dwg. No. 925130" US Naval Air Station, Brunswick, Maine, NAS Brunswick, Maine. Updated June 12.

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

Sewall (James W. Sewall Company), 1940. NAS Brunswick Aerial Photographs. James W. Sewall Company, Old Town, ME. September 28.

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, 1959. 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, 2010. Third Five-Year Review Report for Naval Air Station Brunswick, Brunswick, Maine. Submitted to Naval Facilities Engineering Command Mid-Atlantic, Norfolk, Virginia. March.

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

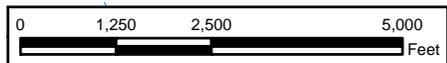
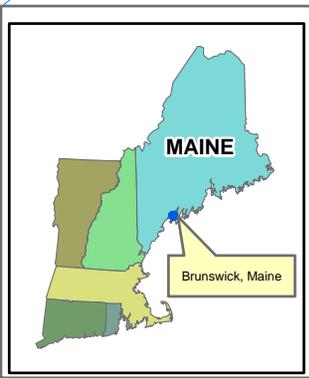
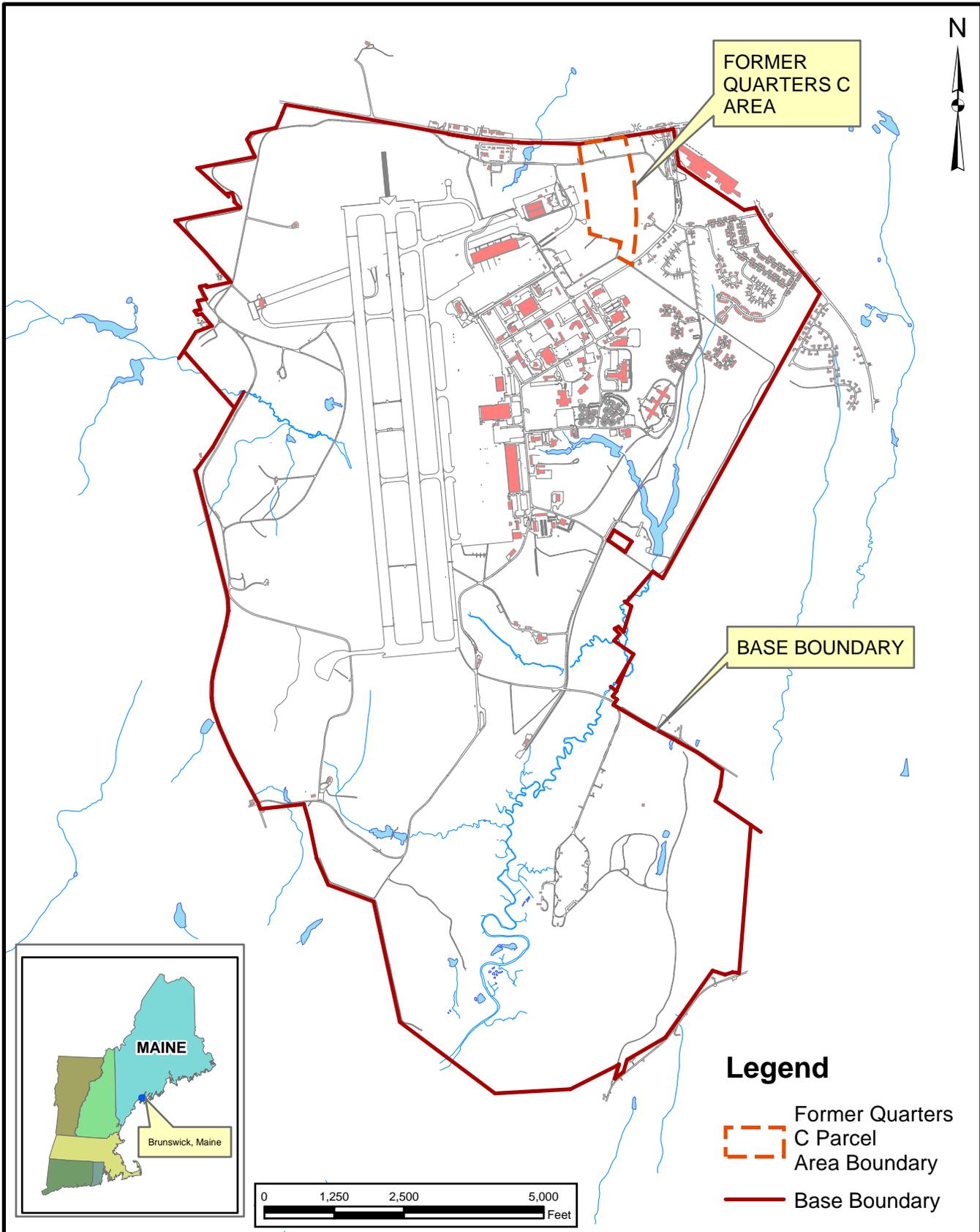
U.S. Environmental Protection Agency (EPA), 2010. Regional Screening Levels (RSL) for Chemical Contaminants at Superfund Sites. <http://www.epa.gov/region9/superfund/prg/>. May.

**TABLE 1**  
**SOIL SAMPLE PCB RESULTS – POLE-MOUNTED TRANSFORMER**  
**RCRA PARTIAL CLOSURE REPORT**  
**FORMER QUARTERS C AREA**  
**NAVAL AIR STATION BRUNSWICK, MAINE**

SAMPLE ID <sup>(1)</sup>	EPA RSLs <sup>(2)</sup> (µg/kg)	LA6-SB01-0006	LA6-SB01-0624
LOCATION		northeast side of pole	northeast side of pole
MATRIX		soil	soil
DEPTH		0-6 inches bgs	6-24 inches bgs
SAMPLE DATE		12/2/10	12/2/10
PCB (µg/kg)			
Aroclor-1016	3,900	10 U	10 U
Aroclor-1221	140	10 U	10 U
Aroclor-1232	140	12 U	12 U
Aroclor-1242	220	10 U	10 U
Aroclor-1248	220	10 U	10 U
Aroclor-1254	220	10 U	10 U
Aroclor-1260	220	10 U	10 U
Total PCBs <sup>(3)</sup>	1,000 <sup>(3)</sup>	12 U	12 U

## Notes:

- (1) Sample prefix "NASB" is not shown  
(2) EPA Regional Screening Levels [RSLs] for residential soil provided for informational purposes  
(3) MEDEP action limit for PCB spill (1 milligram per kilogram)  
bgs below ground surface  
µg/kg micrograms per kilogram  
U not detected (with associated detection limit)  
J approximate concentration due to results of data validation  
UJ not detected (with associated approximate detection limit)  
PCB polychlorinated biphenyl



### Legend

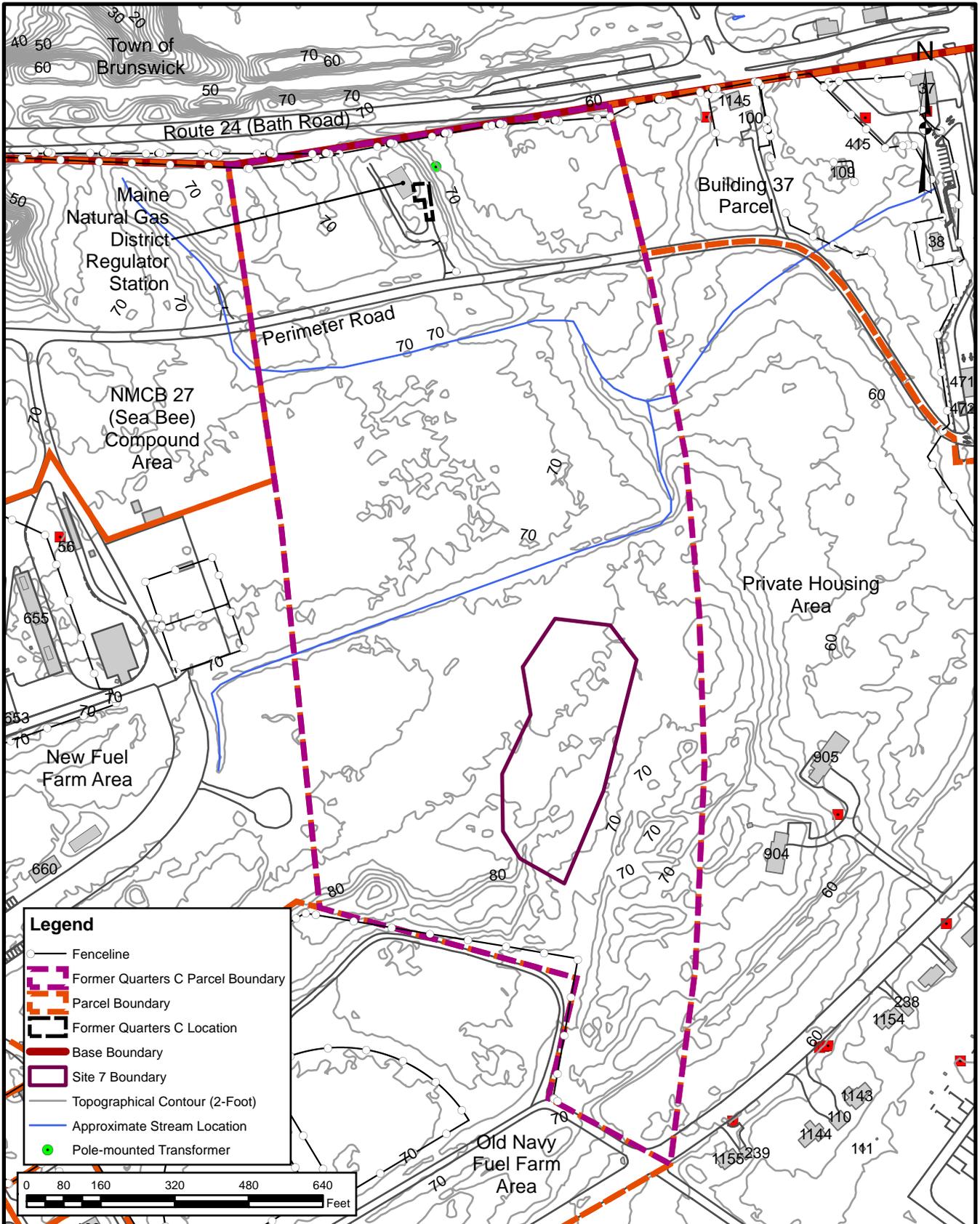
- Former Quarters C Parcel Area Boundary
- Base Boundary



Tetra Tech NUS, Inc.

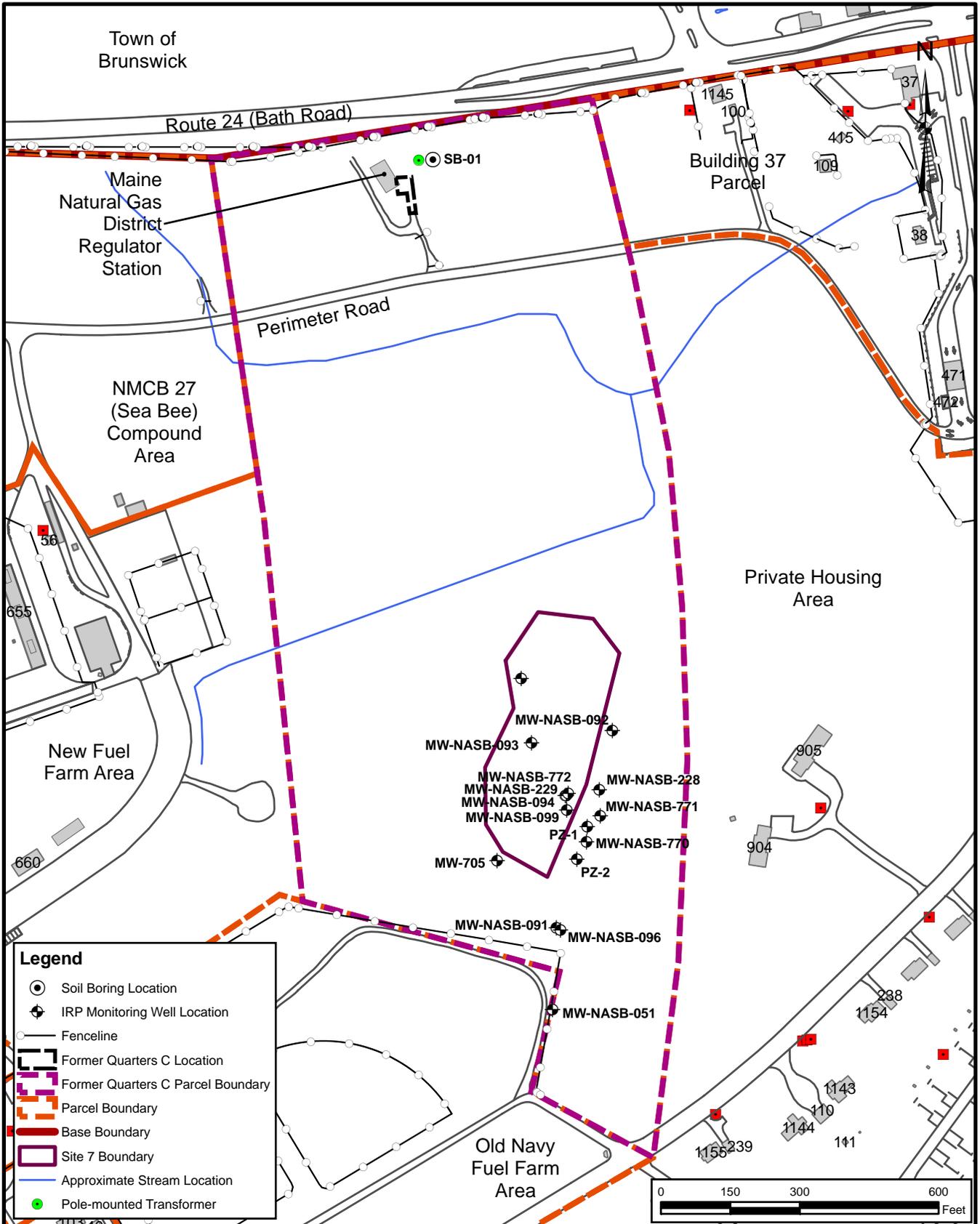
SITE LOCATION MAP  
 FORMER QUARTERS C AREA  
 RCRA PARTIAL CLOSURE REPORT  
 NAVAL AIR STATION BRUNSWICK, MAINE

SCALE AS NOTED	
FILE I:\NASB_PARCEL_6_LOCUS.MXD	
REV 0	DATE 12/20/10
FIGURE NUMBER 1	



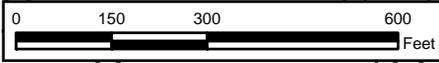
**SITE PLAN**  
**FORMER QUARTERS C AREA**  
**RCRA PARTIAL CLOSURE REPORT**  
**NAVAL AIR STATION BRUNSWICK, MAINE**

SCALE AS NOTED	
FILE L:\NASB_PARCEL_6_SITE_PLAN.MXD	
REV 0	DATE 12/17/10
FIGURE NUMBER 2	



**Legend**

- Soil Boring Location
- ⊕ IRP Monitoring Well Location
- Fenceline
- ▭ Former Quarters C Location
- ▭ Former Quarters C Parcel Boundary
- ▭ Parcel Boundary
- ▭ Base Boundary
- ▭ Site 7 Boundary
- Approximate Stream Location
- Pole-mounted Transformer



**SAMPLE LOCATIONS**  
**FORMER QUARTERS C AREA**  
**RCRA PARTIAL CLOSURE REPORT**  
**NAVAL AIR STATION BRUNSWICK, MAINE**

SCALE AS NOTED	
FILE I:\NASB_PARCEL_6_SITE_MAP.MXD	
REV 0	DATE 12/20/10
FIGURE NUMBER 3	

# **BUILDING Former Quarters C Land Area**

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

**Inspection Date:** 11/2/10

**Personnel:** Brian Geringer / James Forrelli, P.E. / Mindi Messmer

**Weather:** Partly Cloudy, 70s

## **GENERAL BUILDING INFORMATION / USES**

Building Name: Former Quarters C Parcel

Function: Forested Open Space, Site 7 (Old Acid/Caustic Pit), CMP Natural Gas Pumping Station

Size: 16 acres

Year of Construction: NA

Tenant List:

Former Quarters C is located in the northern corner of the air station, immediately south of Route 24 (Bath Road); east of the Sea Bee Compound and the New Fuel Farm Land Areas; and west of the Housing and Front Gate and Navy Land/Private Housing Parcels. The Former Quarters C land area is located north of the Old Navy Fuel Farm Land Area and Fitch Avenue. Perimeter Road passes through the parcel, from east to west, to the eastern side of the Sea Bee Compound Land Area parcel. Site 7, the Old Acid/Caustic Pit, an IR site, is located in the southern portion of the land area.

The Former Quarters C land area is predominantly forested open space and has not been an active area of the air station. A base residential housing area (Quarters C) was located in the northern portion of the land area from approximately 1943 to sometime before 1983 when it was destroyed by fire.

According to the 1946 NAS historical map the area just north of Site 7 was a cleared approach area and an overrun area (1957) for the runway to the west until approximately 1975 when the easternmost portion of the runway is shown as closed (now the Jet Fuel Storage Installation) located directly to the west.

The former acid caustic pit at Site 7 was reportedly used for liquid waste disposal from 1952 to 1969 (E.C. Jordan 1990). Wastes reportedly included transformer oil, battery acid, caustics, solvents, and other miscellaneous liquids. Based on aerial photograph interpretation, the area also appeared to be used as an equipment lay-down area during the 1952 to 1969 time frame (E.C. Jordan 1990).

## **HWSA INSPECTION / CONDITION**

At the time of inspection, the foundation of Former Quarters C visible in the northern portion of the land area. Currently a Maine Natural Gas (MNG) operates a natural gas pumping station is located approximately adjacent to the former Quarters C building. The remaining portions of the land area are predominantly forested. The Site 7 area is predominantly open grass area with many groundwater monitoring wells 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.

## **BUILDING Former Quarters C Land Area**

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

One pole-mounted transformer was identified adjacent to the Former Quarters C 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:

1940 aerial – area of Former Quarters C and area along Route 24 appears to be cleared. Resolution of photograph not high enough to identify buildings. A cleared area extends north/south through the central portion of the land area extending from the southern edge to approximately the middle of the land area.

1943 map –Former Quarters C is shown on this map though not to scale.

1946 map – Former Quarters C is shown within a fenced area with access from Route 24 on the northern edge of the land area. A cleared approach area is located south of the Former Quarters C building to the east of the east-west oriented runway. The southern portion of the land area is shown as wooded with a dashed line indicating a possible roadway extending northeast from the eastern side of the Old Navy Fuel Farm (ONFF) to the approximate Site 7 (Old Acid/Caustic Pit) area. A railroad track is shown in the extreme southern portion of the land area near Fitch Avenue.

1950 building list – No buildings listed.

1952 map – Same as 1946 map.

1953 aerial –Most of the northern approximate 2/3 of the land area appears to be cleared. Objects visible in the approximate area of Site 7 along with the access road extending northeast from the eastern edge of the ONFF.

1956 map – Same as 1946 map except cleared approach area not indicated and area south (approximate Site 7 area) appears vacant. Perimeter Road, an east-west roadway, is shown in the northern portion of the land area.

1957 map – Same as 1956 map except Quarters C Building is not shown. A possible access road is shown extending from the extreme southwest corner of the parcel extending to the northeast to the approximate area of Site 7 (Old Acid/Caustic Pit).

1958 aerial –Same as 1953 aerial except access road was moved to the southeastern edge of the ONFF connecting with an access road that traces east- west south of the ONFF. Quarters C Building is possibly visible in the northern part of the land area. Perimeter Road visible.

1959 aerial- Quarters C Building is visible along with potential ground disturbance in IRP Site 7.

1965 aerial- Quarters C Building visible along with two smaller rectangular shaped objects to the southeast of the building. Extensive material visible in the IRP Site 7 area.

1965 building list – Same as 1950 building list.

1966 aerial- Quarters C visible. Possible debris in IRP Site 7 Area.

1966 building list – Same as 1950 building list.

1972 aerial – Quarters C visible. IRP Site 7 area appears relatively undisturbed.

1975 map –Same as 1957 map except runway area to the west is indicated as closed.

1976 building list – Same as 1950 building list.

1978 aerial- Quarters C building no longer visible but a rectangular shape observable likely to be foundation of former building.

1978 map – Same as 1975 map except no access road is shown in the southern portion.

1978 aerial – Same as 1958 aerial except possible structures in Site 7 area and Quarters C building no longer visible and most of the parcel is wooded except in the area of Former Quarters C and Site 7.

Possible piles of dirt visible in the northern portion of the approximate Site 7 area.

1979 map – Same as 1975 map.

# BUILDING Former Quarters C Land Area

## APPLICABLE REPORTS / DOCUMENTS(Cont)

1980 aerial –same as 1978 aerial.

1981 aerial – Same as 1978 aerial.

1984 aerial – Same as 1978 aerial.

1989 map – Same as 1975 map.

1993 aerial – Same as 1978 aerial except Site 7 and former Quarters C cleared areas are less extensive.

A portion of the Former Quarters C foundation is possibly visible.

1997 aerial – Same as 1984 aerial.

2003 building list – Same as 1950 building list.

2006 map – Same as 1978 map.

2008 building list – Same as 1950 building list.

Current Google aerial – Current site configuration except MNG natural gas pumping station is visible adjacent to Former Quarters C building.

According to NASB records, no above ground storage tanks (ASTs), underground storage tanks (USTs), or oil-water separators (OWS) were registered to the Former Quarters C parcel.

## HAZARDOUS WASTE STORAGE RECORDS

No hazardous waste was historically stored at the Former Quarters C Parcel 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. 4                      Former Quarters C Area, NAS Brunswick                      November 2, 2010  
Former Quarters C building area from perimeter Road; MNG district regulator station in background



No. 1                      Former Quarters C Area, NAS Brunswick                      November 2, 2010  
MNG district regulator station located north of Perimeter Road; possible former Quarter C concrete structure remnant in foreground and pole-mounted transformer in background



No. 6                      Former Quarters C Area, NAS Brunswick                      November 2, 2010  
Metal debris at location west of former Quarters C building area



No. 2                      Former Quarters C Area, NAS Brunswick                      November 2, 2010  
Tree-covered area south Perimeter Road and north of unnamed stream



No. 5 Former Quarters C Area, NAS Brunswick  
IRP Site 7 (Old Acid/Caustic Pit) area from south

November 2, 2010