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NAS BRUNSWICK
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FINAL RESOURCE CONSERVATION AND RECOVERY ACT PARTIAL CLOSURE REPORT
FOR BUILDING 295 WITH TRANSMITTAL LETTER NAS BRUNSWICK ME
4/16/2010
NAS BRUNSWICK

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

April 16, 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 Building 295

Dear Mr. Vigneault:

A copy of the Final RCRA Partial Closure Report for Building 295 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,



LISA M. JOY
Environmental Director

Enclosure: (1) Final RCRA Partial Closure Report for Building 295

Copy to:
NAVFAC Mid-Atlantic (B. Abraham)
NAS Brunswick (M. Fagan/D. Smith)
EPA Region I (M. Daly)
MRRA (V. Boundy)
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RCRA PARTIAL CLOSURE REPORT
for
BUILDING 295 - WATER RESERVOIR PUMP HOUSE PARCEL
NAVAL AIR STATION BRUNSWICK, MAINE
USEPA IDENTIFICATION NUMBER ME8170022018
APRIL 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 Building 295 parcel at Naval Air Station Brunswick (NAS Brunswick).

2. PROPERTY DESCRIPTION

The Building 295 parcel is located in the central portion of NAS Brunswick (see Figure 1). The approximately 0.7-acre parcel (see Figure 2) is bordered to the west by Pelican Street and to the south by Burbank Avenue. The parcel contains Building 295 (the Water Reservoir Pump House building), the associated earthen-covered water storage tank and the surrounding grass-covered areas. Photographs taken during the site visit are provided in an attachment.

Building 295, constructed in 1957, consists of an approximately 3,600 square-foot one-story concrete and block building on a slab foundation seated on top of an earthen-covered water tank. The building was used as a reservoir pump house for the hangar fire suppression system for its entire history. Building 295 contains two rooms, the first contains pumps for the transfer of water from the reservoir tank and the second contains a series of pumps for the fire suppression delivery system for the hangars.

Building 295 features an electric heating system.

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 Building 295, including past use and operations at that location.

According to NAS Brunswick Environmental Department personnel, since its construction in 1957, the sole use of Building 295 has been as a pump house. There is no record of hazardous waste operations at Building 295.

Records reviewed include: historical aerial photographs; the NAS Brunswick Other Environmental Liabilities (OEL) Database; area-specific reports; facility plans and drawings; and hazardous operation records. Aerial photographs dated 1958, 1978, 1981, 1984, 1989, and 1993 (all produced by James W. Sewall) were reviewed along with Public Works Department site base maps dated 1943, 1946, 1952, 1956, 1983, 1989, and 2006 to provide historical information.

Building 295 is shown at this location on aerial photographs starting in 1958. NAS Brunswick maps dated 1943, 1946, 1952, and 1956 document the presence of no buildings at the parcel. Building 17 and Building 19, both barracks, were present to the north and west of the parcel, respectively. In 1956, the Navy Exchange Filling Station (T-220) is present to the south of the Building 295 parcel. Beginning with the 1958 aerial photos, Building 295 is present in its current location along with the NEX gas station (Building 538) to the south of the parcel. Building 19 to the west was demolished prior to the 1978 aerial photo, and Building 17 was demolished prior to

the 1981 aerial photo, with the Navy Exchange (Building 11) constructed to the west of the parcel. From 1983 on, no additional changes to the area were noted.

The NASB Removed Transformer Database lists one non-polychlorinated-biphenyl (PCB)-containing, pad-mounted, electrical transformer for Building 295. Information provided in the database for the transformer is listed below. The serial number for the RTE-manufactured unit indicates that it was manufactured after 1979 and therefore is unlikely to contain PCBs. As of July 1, 1979, the United States Environmental Protection Agency (EPA) prohibited all manufacturing of new PCB electrical equipment (transformers and capacitors). However, due to the age of the building, it is possible that PCB-containing transformers were in service at the Building 295 transformer pad at some time in the past.

Transformer	Manufacturer	Serial No.	Manufacture Date	Notes
500-kVa non-PCB-containing, pad-mounted	RTE ⁽¹⁾	RTE 866011664 ⁽²⁾	1986	adjacent to Building 538 pad-mounted transformer

⁽¹⁾ Rural Transformer & Electric (RTE), now owned by Cooper Power Systems

⁽²⁾ The first two digits of the serial numbers denote the year of manufacture (EES, 1998)

According to NAS Brunswick records, four 275-gallon single-wall steel (SWS) aboveground storage tanks (ASTs) (A295.0 through A295.3) containing diesel for the generators are present and active at Building 295 (installation dates unknown). Additionally, a 25-gallon SWS, AST (A295.4) containing diesel for the backup generator is present and active (installation date unknown). Other information relating to these tanks was not found.

Information concerning groundwater underlying the Building 295 parcel was not available. The Building 295 parcel is located adjacent to and cross-gradient from the NEX Service Station petroleum, oil, and lubricant (POL) site. The Navy Exchange Service Station had underground storage tanks and associated piping that leaked gasoline into the surrounding soil and groundwater. Active remediation has consisted of air sparging soil vapor extraction, and a chemical oxidation event. Most recently, a bioremediation program attempted to treat the dissolved and sorbed phases of petroleum contamination in the subsurface near Building 27 using enhanced biological activity (microbes) (EA, 2004). The fuel USTs were removed in September 2009 and additional contaminated soil removal occurred in December 2009. (Acadia, 2009)

4. SITE VISIT AND INVESTIGATION

A Building 295 site visit was conducted on January 22, 2010 by Tetra Tech personnel Mr. Brandon Smith, P.E. and Mr. James Forrelli, P.E. The purpose of the visit was to verify information gathered during the records search and to collect additional information as necessary to prepare this RCRA Partial Closure Report. Tetra Tech personnel were accompanied by Mr. D. Bruce Smith, the NAS Brunswick Hazardous Waste Manager. Building 295 and the associated parcel of land were 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 inspection, Building 295 was occupied and in good condition. Pumps, generators, and associated maintenance equipment were present.
- No evidence of current or past hazardous waste generation activities was observed.
- No evidence of hazardous waste residues was observed.
- No signs of a past release (staining, unusual odors, stressed vegetation, etc.) nor structural modifications that could conceal signs of a past release were observed.
- No hazardous waste storage or accumulation areas were observed.

- One pad-mounted transformer location was observed on the south side of the building, adjacent to the Building 538 pad-mounted transformer. No evidence of a past leak from these transformers was observed.

Because Building 295 was constructed prior to 1979, the transformer pad, located south of the building, could potentially be an area of PCB soil contamination, if there had been an historical transformer leak. On February 23, 2010, Tetra Tech collected surface soil samples from four locations surrounding the transformer pad using a hand auger. Four samples were collected from 0 to 6 inches below ground surface (bgs) [NASB-B295-SB01-0006 through NASB-B295-SB04-0006], three samples were collected from 6 to 12 inches bgs (NASB-B295-SB01-0612 through NASB-B295-SB03-0612) and one sample was collected from 6 to 24 inches bgs (NASB-B295-SB04-0624). Sample locations are presented on Figure 3.

All soil samples were submitted for PCB analysis by Tetra Tech's subcontracted analytical laboratory (Analytics Environmental Laboratory, Portsmouth, New Hampshire). Sample analytical data underwent limited data validation, consisting of field duplicate evaluation, blank contamination evaluation, and completeness evaluation. As presented in the attached Table 1, PCBs were not detected in any of the soil samples collected at Building 295. (The EPA Regional Screening Levels [RSLs] for Residential Soil are included in Table 1 for informational purposes [EPA, 2009].) All concentrations are below the MEDEP RCRA standard for total PCBs in soil of 1 part per million (ppm).

Based on the available information regarding historical activities at the Building 295 parcel, there is no evidence that groundwater underlying the parcel has been adversely impacted by a release from within the parcel. However, groundwater at the Building 295 parcel may have been previously impacted by dissolved-phase hydrocarbon migration from the off-parcel, cross-gradient NEX gas station source area.

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 activity or hazardous waste accumulation or storage activity was conducted at the Building 295 parcel.

6. OTHER ENVIRONMENTAL CONSIDERATIONS

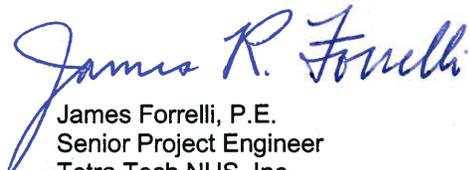
The only USTs or ASTs known to be associated with the Building 295 parcel are discussed in Sections 3 and 4. No other tanks were observed in the immediate vicinity of Building 295. The facility space is heated by an electric heating system.

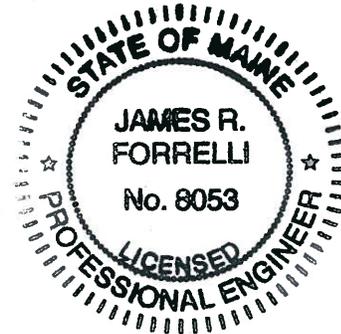
7. LIMITATIONS

This investigation of the hazardous waste closure requirement applies to the Building 295 parcel (as shown on Figure 2) only.

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 Building 295 parcel, NAS Brunswick, Maine. Therefore, the hazardous waste closure of the Building 295 parcel 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.



⁽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.

REFERENCES

Acadia Environmental Technology, 2009. UST Closure Assessment. October 12, 2009.

BNAS Reuse Master Plan Property Condition Assessment. Mid-Coast Regional Redevelopment Authority, Brunswick, ME. 2006.

EA Engineering, Science, and Technology, Inc, 2004. Corrective Action Plan. Navy Exchange Service Station, Naval Air Station, Brunswick, ME. Final. March 2004.

ECC, 2008. Site Management Plan, A Road Map for Environmental Cleanup, Naval Air Station Brunswick, Brunswick, ME. December 2008.

EES (Elizabethton Electric System), 1998. QuickSheet Data Table, PCB Information. Prepared by Elizabethton Electric System, June 1998. (<http://www.eesonline.org/programs/pcbdata.html>).

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

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

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

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

NAS Brunswick Environmental Department. Master/Historical Underground Storage Tank Inventory. NAS Brunswick, Maine. February 5, 1996.

NAS Brunswick Environmental Department. NASB Removed Transformer Database.

Naval Air Station (NAS) Brunswick, 2008. Naval Air Station Brunswick Instruction 5090.1C From: Commanding Officer, Subj: Restriction on Soil Excavation, Groundwater Use, and Remedial Component Disturbance. March 5, 2008.

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, 1943.

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

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

Public Works Department, 1956. General Station Map, Enclosure 2. , NAS Brunswick, Maine. 1956.

Public Works Department , 1983. "Existing Conditions Map. Public Works Department Drawing No. 2157" NAS Brunswick, Maine. May 5, 1983.

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

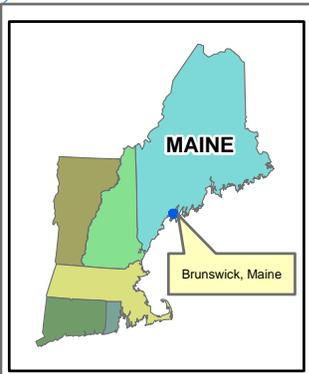
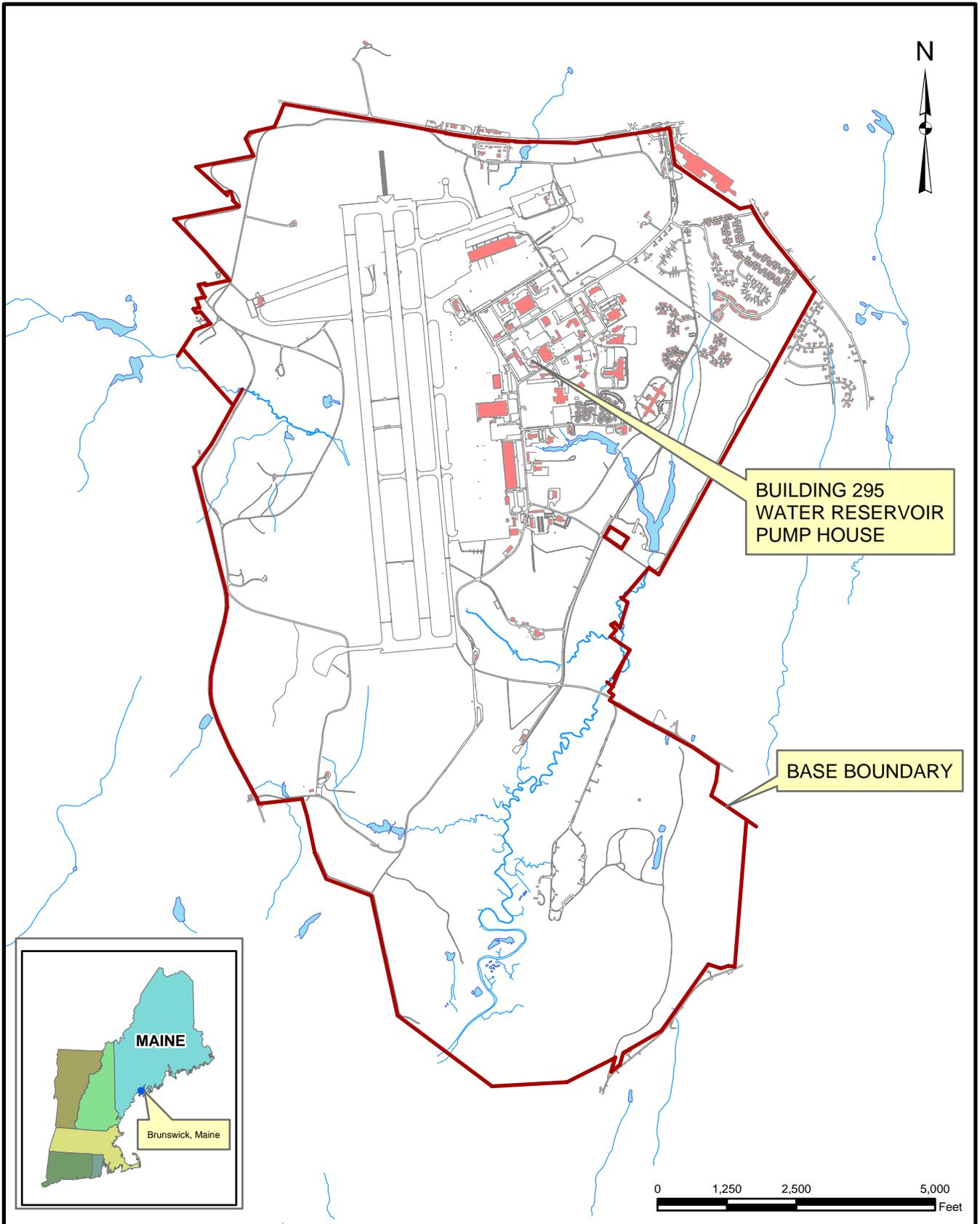
Public Works Department, 2006. Brunswick Naval Air Station, NAS Brunswick, Maine. 2006.

**TABLE 1
SOIL SAMPLE PCB RESULTS
RCRA PARTIAL CLOSURE REPORT
BUILDING 295 – WATER RESERVOIR PUMP HOUSE
NAVAL AIR STATION BRUNSWICK, MAINE**

SAMPLE ID	EPA RSLs ⁽¹⁾ (ug/kg)	NASB-B295- SB01-0006	NASB-B295- SB01-0612	NASB-B295- SB02-0006	NASB-B295- SB02-0612	NASB-B295- SB03-0006	NASB-B295- SB03-0612	NASB-B295- SB04-0006	NASB-B295- SB04-0624 ⁽³⁾
LOCATION		transformer pad							
MATRIX		soil							
DEPTH		0-6 inch bgs	6-12 inch bgs	0-6 inch bgs	6-12 inch bgs	0-6 inch bgs	6-12 inch bgs	0-6 inch bgs	6-24 inch bgs
SAMPLE DATE		02/23/10	02/23/10	02/23/10	02/23/10	02/23/10	02/23/10	02/23/10	02/23/10
PCB (µg/kg)									
Aroclor-1016	3,900	18 U	18 U	20 U	18 U				
Aroclor-1221	140	18 U	18 U	20 U	18 U				
Aroclor-1232	140	18 U	18 U	20 U	18 U				
Aroclor-1242	220	18 U	18 U	20 U	18 U				
Aroclor-1248	220	18 U	18 U	20 U	18 U				
Aroclor-1254	220	18 U	18 U	20 U	18 U				
Aroclor-1260	220	18 U	18 U	20 U	18 U				
Total PCB ⁽²⁾	1,000	18 U	18 U	20 U	18 U				

Notes:

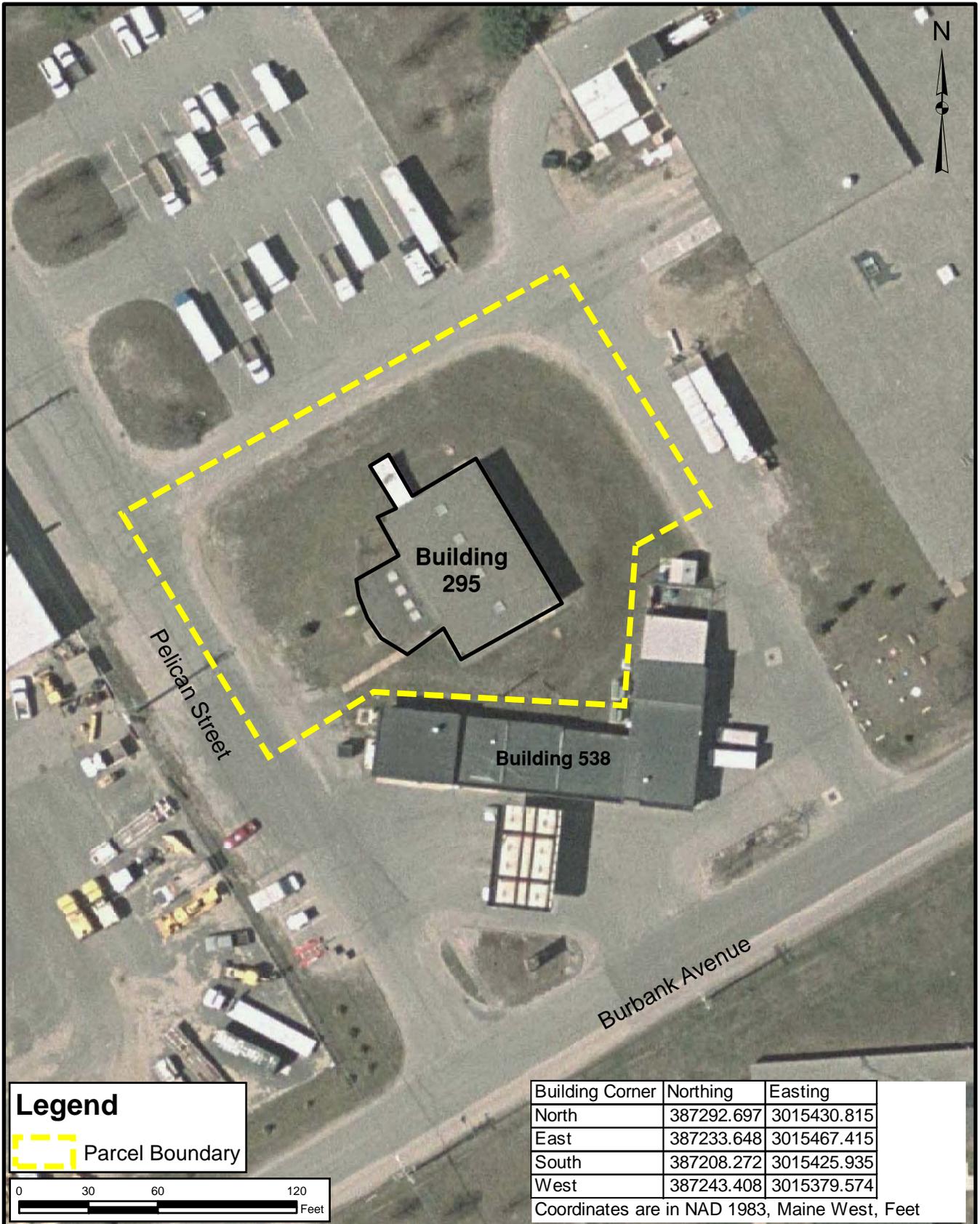
- (1) EPA Regional Screening Levels [RSLs] for residential soil provided for informational purposes
(2) MEDEP action limit for PCB spill (1 mg/kg).
(3) Sample located between Buildings 295 and 538 transformer pads.
bgs below ground surface
µg/kg micrograms per kilogram
U not detected (with associated detection limit)
PCB polychlorinated biphenyl



Tetra Tech NUS, Inc.

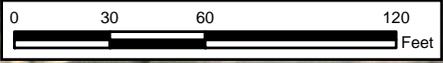
SITE LOCATION MAP
 BUILDING 295 - WATER RESERVOIR PUMP HOUSE
 RCRA PARTIAL CLOSURE REPORT
 NAVAL AIR STATION BRUNSWICK, MAINE

SCALE AS NOTED	
FILE I:_NASB_BLDG_295_LOCUS.MXD	
REV 0	DATE 04/13/10
FIGURE NUMBER 1	



Legend

 Parcel Boundary



Building Corner	Northing	Easting
North	387292.697	3015430.815
East	387233.648	3015467.415
South	387208.272	3015425.935
West	387243.408	3015379.574

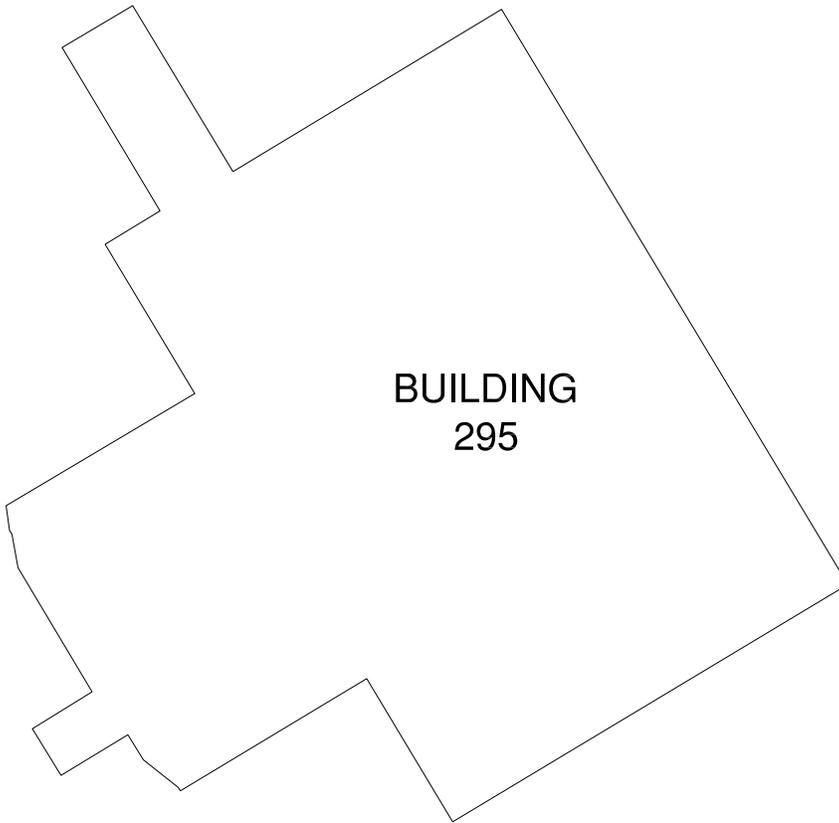
Coordinates are in NAD 1983, Maine West, Feet



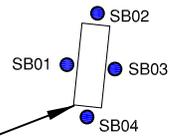
Tetra Tech NUS, Inc.

SITE PLAN
BUILDING 295 - WATER RESERVOIR PUMP HOUSE
RCRA PARTIAL CLOSURE REPORT
NAVAL AIR STATION BRUNSWICK, MAINE

SCALE AS NOTED	
FILE \\.\BLDG_295_ORTHO.MXD	
REV 0	DATE 04/13/10
FIGURE NUMBER FIGURE NO. 2	



BUILDING
295



TRANSFORMER
PAD

LEGEND

SB01 ● SHALLOW SOIL SAMPLE LOCATION

GRAPHIC SCALE



TETRA TECH NUS, INC.

FLOOR PLAN
BUILDING 295 - WATER RESERVOIR PUMP HOUSE
RCRA PARTIAL CLOSURE REPORT
NAVAL AIR STATION BRUNSWICK, MAINE

SCALE
AS NOTED

FILE
\\.\NASB_BLDG_295_FP.DWG.DWG

REV DATE
0 04/13/10

FIGURE NUMBER
3

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

Inspection Date: 1/22/2010
Personnel: Brandon Smith, P.E. / James Forrelli, P.E.
Weather: Clear, 20s

GENERAL BUILDING INFORMATION / USES

Building Name: Water Reservoir Pump House
 Function: Pumphouse for fire suppression system in hangars
 Size: 3,600 SF approximate
 Year of Construction: 1957

Building 295 is located northeast of the intersection of Burbank Avenue and Pelican Street at NAS Brunswick. It was constructed in 1957 and served as a reservoir pumphouse and fire suppression pumphouse for the hangars for its entire history. Building 295 consists of an approximately 3,600 square-foot, one story building on a slab foundation seated on top of an earthen-covered water tank.

Building 295 was used as pumphouse for fire suppression. Building 295 contains two rooms, the first contains pumps for the transfer of water from the reservoir tank and the second contains a series of pumps for the fire suppression delivery system for the hangars.

Building 295 is heated via electric heat.

BUILDING INSPECTION / CONDITION

No record of hazardous waste stored at Building 295.
 The building was occupied at the time of the site visit and appeared in good condition. Pumps, generators, and associated maintenance equipment were present.
 No potential evidence of current or past hazardous waste generation activities was observed.
 No evidence of hazardous waste residues was observed.
 No signs of a past release (staining, unusual odors, stressed vegetation, etc.) were observed. No modifications to the structure, which may 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 record of hazardous waste stored or generated at Building 295, according to NASB personnel.

POTENTIAL PCB-CONTAINING TRANSFORMERS

The NASB transformer database lists the following transformer associated with Building 295:
 500 KVA Pad-Mounted - RTE Serial No. 866011664 - Non-PCB containing (Mineral Oil)

Due to the age of the building, soil sampling around the pad is recommended in order to confirm that the soil is free of PCBs from potential former transformers.

APPLICABLE REPORTS / DOCUMENTS

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

- 1943 plan - No buildings present. Building 17 (Barracks) present to the north and Building 19 (Barracks) to the west.
- 1946 plan - Same as 1943.
- 1952 plan - Same as 1946.
- 1956 plan - Same as 1952, to south T-220 (Navy Exchange Filling Station) is present.
- 1958 aerial - Building 295 and water tank present with Building 538 (NEX gas station) to the south, Building 17 to the north and Building 19 to the west.
- 1978 aerial - Same as 1958 aerial; Building 19 to the west has been demolished.
- 1981 aerial - Same as 1978 aerial; Building 17 demolished and Building 11 (NEX) constructed to the east.
- 1983 plan - Building 295 not shown. Buildings 225/252 present to the west and Building 11 (NEX) to east.
- 1984 aerial - Same as 1981 aerial.
- 1989 plan - same as 1983 plan
- 1989 aerial - same as 1984 aerial.
- 1993 aerial - same as 1989 aerial.
- 2006 plan - Building 295 shown in current location with Building 538 to the south.

According to NASB records, no USTs were present at Building 295

According to NASB records, the following ASTs are present at Building 295:

- A295.0, a 275 gallon SWS tank containing diesel for the generators (unknown installation date)
- A295.1, a 275 gallon SWS tank containing diesel for the generators (unknown installation date)
- A295.2, a 275 gallon SWS tank containing diesel for the generators (unknown installation date)
- A295.3, a 275 gallon SWS tank containing diesel for the generators (unknown installation date)
- A295.4, a 25 gallon SWS tank containing diesel for the generators (unknown installation date)

HAZARDOUS WASTE STORAGE RECORDS

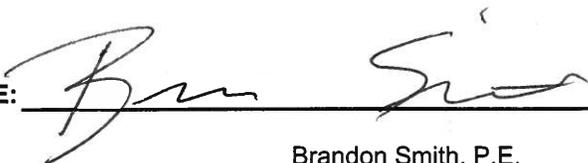
No hazardous waste was historically stored at Building 295, according to NAS Brunswick Hazardous Waste Manager, D. Bruce Smith.

MISCELLANEOUS NOTES

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

(SEE ATTACHED BUILDING FLOOR PLAN AND PHOTOGRAPHS)

INSPECTOR SIGNATURE:



Brandon Smith, P.E.

PHOTOGRAPHS



No. 1 Building 295 – NAS Brunswick
Building 295 – Southwest elevation

April 15, 2010



No. 2 Building 295 – NAS Brunswick
Building 295 – fire suppression pumping room interior

January 22, 2010

PHOTOGRAPHS



No. 3 Building 295 – NAS Brunswick
Building 295 – Building 295 pump room interior

January 22, 2010



No. 4 Building 295 – NAS Brunswick
Building 295 – Building 295 pad-mounted transformer (left) adjacent to Building 538 transformer (right)

January 22, 2010