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FINAL RESOURCE CONSERVATION AND RECOVERY ACT PARTIAL CLOSURE REPORT
FOR BUILDING 592 WITH TRANSMITTAL LETTER NAS BRUNSWICK ME
1/26/2011
NAS BRUNSWICK

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

January 26, 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 Building 592

Dear Mr. Vigneault:

A copy of the Final RCRA Partial Closure Report for Building 592 at Naval Air Station Brunswick is provided as Enclosure (1).

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

Sincerely,



For LISA M. JOY
Environmental Director

Enclosure: (1) Final RCRA Partial Closure Report for Building 592

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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Lepage Environmental (C. Lepage)
BRAC PMO NE (P. Burgio)

**RCRA PARTIAL CLOSURE REPORT
for
BUILDING 592 – VETERINARY CLINIC PARCEL
NAVAL AIR STATION BRUNSWICK, MAINE
USEPA IDENTIFICATION NUMBER ME8170022018
JANUARY 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 Building 592 parcel at Naval Air Station Brunswick (NAS Brunswick).

2. PROPERTY DESCRIPTION

The Building 592 parcel is located in the eastern-central portion of NAS Brunswick, directly to the west of the former Commander Patrol and Reconnaissance Wing Five (CPRW-5) compound (Figure 1). The approximately 0.4-acre parcel is bordered by the following roads and parcels: to the north and west, by the Building 24 (Personnel Support Detachment [PSD]) parcel and Burbank Avenue further north; to the east by Pegasus Street and the Building 43 (Telephone Exchange) parcel and further east by the Building 87 (Anti-Submarine Warfare Operations Center [ASWOC]) parcel; to the south and southwest by the Building 26 (Child Care Clinic) and Building 21 (Child Care Center) parcels (Figure 2). In addition to Building 592, this parcel includes associated paved parking and grass-covered areas, and Structure MMM (Storage Shed).

Building 592 was constructed in 1950 and consists of a 1,621-square-foot, single-story structure on a concrete slab foundation. The building is constructed with transite shingles. Building 592 has a natural-gas heating system. Photographs of the building are provided as an attachment to this report.

Structure MMM is located at the northern side of Building 592 and is used as a storage shed and for lawnmowers and various landscaping tools and equipment. The shed is constructed of wood with an asphalt roof and measures 5 feet by 10 feet by 9 feet high.

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 Building 592 parcel, 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 (U.S. EPA, 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, 1957, 1975, 1978, 1979, 1989, and 2006a) and site building lists for 1950, 1965, 1976, 2003, 2006 and 2008 (PWD, 1950, 1965, 1976, 2003, 2006b and 2008a) were also reviewed.

The 1966 buildings index is the first available building list to include Building 592, and indicates it to be a former Air Force building (AF-15) used for storage. The 1976 building index identifies Building 592 as the "Telephone Exchange Building". The next available building index is dated 2003 and indicates that Building 592 is the "Vet Clinic" and is a 1,621-square-foot structure

constructed in 1950. This construction date is consistent with historical aerial photographs and site plans. The following summarizes other historical observations relating to the Building 592 parcel and proximal areas:

- The 1940 aerial photograph shows the Building 592 parcel area is vacant and wooded.
- The historical site plan dated 1943 shows a wooded area at the location of the Building 592 parcel.
- Beginning with the 1946 aerial photograph, a complex of buildings surrounded by fencing and identified as "Air Force Operations", occupied the area of the Building 592 parcel, as well as the adjacent Building 43 and Building 87 parcels to the east. (As of 1950, these buildings included Building 592). Based on available information, this former United States Air Force (USAF) facility was an Aircraft Control and Warning Radar facility and was in operation until the mid-1960s, when it was transferred to the Navy. Prior to this transfer, Building 592 was operated by the USAF as a communications control building.
- According to historical NAS Brunswick building lists and NAS Brunswick Environmental Department personnel, from its transfer to the Navy in the 1960s until approximately the early 1990s, Building 592 was a telephone exchange office.
- According to an undated floor plan, and based on review of historical aerial photographs and plans, sometime between 1968 and 1976, an addition was constructed on the west side of Building 592, increasing the building size by approximately one-third. This addition included office spaces to the north, and two rooms that included a testing and repair shop (more recently the veterinary services room) and a battery room (current furnace room). According to the floor plan, the existing northern portion of the building housed office space, storage, restrooms, and a switchboard room. The existing southeastern portion of the building was a large room labeled "Switch Gear Room" and included a battery rack and rectifier.
- In the early 1990s, Building 592 was converted from the Telephone Exchange Building to a veterinary clinic. According to historical building indexes, a new Telephone Exchange Building, Building 43, and Building 87 (ASWOC), were built in 1988, and it is likely that the conversion of Building 592 to a veterinary clinic occurred in approximately this time frame.
- According to historical site plans and/or NAS Brunswick Environmental Department personnel, an oil-burning furnace and indoor fuel oil AST were removed in 2003, and the heating system was converted to natural gas (NAVFAC, 2003).
- The 2003 site plan also indicates that the interior of the veterinary clinic consisted of a laboratory, furnace room, procedure room, waiting room, exam rooms, restrooms, and office space (NAVFAC, 2003). According to NAS Brunswick Environmental Department personnel, procedures conducted in Building 592 consisted of autopsies and other medical procedures on animals.

According to NAS Brunswick Environmental Department personnel, hazardous waste generation at Building 592 was episodic in nature, with no operations producing hazardous waste on a regular basis. The source of most hazardous waste generated by activities at Building 592 was used and empty aerosol paints cans and formaldehyde. NAS Brunswick has a program in place that tracks hazardous waste to ensure proper handling and disposal. Generally, small quantities (less than 50 gallons total) of wastes such as paint waste, used and empty aerosol cans, formaldehyde, and fluorescent lamps were generated during the 2003 through 2009 time period. Table 1 provides a list of hazardous wastes, associated RCRA waste codes, and quantities of waste for Building 592, during the period from 2003 through 2009, as obtained from the Hazardous Waste Database (Environmental Department, 2010). Prior to 2003, the database did not segregate hazardous waste generated by activities at Building 592 from other medical waste generated on the base. It is likely that activities at Building 592 prior to 2003 generated similar types and quantities of waste, when operated as a veterinary clinic, as discussed above.

Little information is available regarding hazardous substance use and disposal practices that may have been conducted at the parcel when it was a former USAF facility. Due to the uncertainties regarding USAF hazardous substance use and disposal practices, the Navy is conducting a groundwater sampling investigation at the former radar station area to determine if there is evidence of a historical release of solvents in this area. The potential for groundwater contamination at the Building 592 parcel will be addressed under this investigation.

According to MEDEP and NAS Brunswick spill records, no spills were reported in the vicinity of the Building 592 parcel (Environmental Department, 1988; Environmental Department 1999; and MEDEP, 2010).

The NAS Brunswick Removed Transformer Database lists no electrical transformers for Building 592 (PWD, 2010). However, since buildings have been present on the parcel since at least 1950, it is possible that a previous PCB-containing transformer may have been present at the Building 592 parcel, although there is no record of PCB-containing transformers for this building. A site area plan dated 1968 indicates that a new transformer was to be installed on the Building 592 parcel, on the eastern side of Building 592, along Pegasus Street (PWD, 1968). The transformer is visible on historical aerial photographs taken at approximately that time. Inspection of historical aerial photographs and a historical site plan dated 1985 (NAVFAC, 1985) suggests the transformer was likely removed in the mid-1980s, during construction associated with the demolition of some of the old USAF buildings on the Building 87 parcel, and the construction of Building 87. During that time, modifications were made to Pegasus Street, which likely disturbed the ground where the transformer was located. Therefore, it is highly unlikely that any potential residue associated with the previous transformer at this location would remain, and soil sampling in the area of the former transformer is considered unnecessary.

The NAS Brunswick Aboveground Storage Tank (AST) and Underground Storage Tank (UST) inventory records for Building 592 indicate that no USTs have been associated with Building 592. Three ASTs are listed in the database for Building 592 as follows:

ID	Capacity	Material Stored	Manufacturer	Year Installed/Removed
A592.0	330 gallons	No. 1 fuel oil	Highland	1996/1998
A592.1	330 gallons	No. 1 fuel oil	Highland	1996/1998
A592.2	330 gallons	No. 1 fuel oil	Highland	1998/2003

No oil-water separators (OWS) have been associated with Building 592 (Navy, 2006).

No septic systems were identified within this parcel, which has historically been (and is currently being) served by the base-wide sanitary sewer system (Navy, 2006).

In the Navy's Final (Revision 2) Environmental Condition of Property Report (ECPR), dated May 30, 2006, asbestos-containing material (ACM) was suspected in the transite siding, vinyl floor tile, mastic, and joint compound of Building 592. As discussed in Section 4, the possible presence of ACM was also noted.

No groundwater investigations have been conducted in the vicinity of the Building 592 parcel; therefore, groundwater characterization information for the parcel is not available. Information on known NAS Brunswick groundwater contamination areas was reviewed to determine if groundwater underlying the Building 592 parcel could potentially be impacted by another (off-parcel) source area. The only identified groundwater contamination that could potentially impact the parcel is the dissolved-phase hydrocarbon plume associated with the Old Navy Fuel Farm (ONFF). The ONFF was decommissioned in 1993 and remediated in 2000. Based on results from the ONFF groundwater monitoring program, the leading edge of this plume is located approximately 900 feet north of Building 592, and the groundwater flow direction from the ONFF is to the southeast (ESI, 2009). Based on the location of the plume with respect to the Building

592 parcel, it is very unlikely that groundwater underlying the parcel would be impacted by the ONFF hydrocarbon plume. In addition, as stated above, due to the uncertainties regarding USAF hazardous substance use and disposal practices, the Navy is conducting a groundwater sampling investigation at the former radar station area to determine if there is evidence of a historical release of solvents in this area. The potential for groundwater contamination at the Building 592 parcel will be addressed under this investigation.

Little information is available regarding hazardous substance use and disposal practices that may have been conducted at the western portion of the parcel when it was part of a former USAF facility. While there is no information that would suggest a release occurred, solvents were typically used for cleaning radar antennas and electrical equipment at these former radar facilities, such as the former USAF radar domes (former Buildings 598 and 599). Due to the uncertainties regarding USAF hazardous substance use and disposal practices, the Navy is conducting a groundwater sampling investigation at the former radar station area to determine if there is evidence of a historical release of solvents in this area. The potential for groundwater contamination at the Building 592 parcel will be addressed under this investigation.

4. SITE VISIT AND INVESTIGATION

A site visit was conducted for Building 592 on September 30, 2010 by Mr. Brandon Smith, P.E., and Ms. Mindi Messmer, of Tetra Tech. The purpose of the 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 building was visually inspected for signs of hazardous waste generation or storage. Site visit observations, recorded on the attached Building Inspection Form ⁽¹⁾, are summarized below:

- At the time of inspection, Building 592 was unoccupied and in good condition.
- No evidence of current or past hazardous waste generation activities was observed.
- No signs of a past release (unusual odors, stressed vegetation, etc.) were observed.
- Red staining was observed on the floor of the furnace room.
- No modifications to the structure, which may conceal signs of a past release, were observed.
- No peeling or flaking paint was observed on the exterior or interior of the building.
- Possible asbestos-containing floor tile was observed in the furnace room, in the transite siding, in mastic, and possibly in roofing material at Building 592.
- Structure MMM (Storage Shed), a wooden structure with asphalt shingles, was observed on the north side of Building 592. According to NAS Brunswick Environmental Department personnel, the interior was used to store various landscaping equipment, including lawn mowers.
- Two metal access plates were identified on the northeast and the southeast sides of the building, along Pegasus Street, which enabled access to underground telephone or electrical cables.
- The interior of Building 592 included a laboratory, exam rooms, restrooms, office space, and a furnace room in the southwest corner.
- A macerator pump, through which the laboratory sink discharged, was observed on the floor adjacent to the sink; the macerator pump grinds waste down to small particle size prior to discharging to the sanitary sewer system.
- According to NAS Brunswick Environmental Department personnel, cleaning solutions and laboratory solutions were stored in a cabinet and small refrigerator in the laboratory.
- A bench was observed in the laboratory, which was used to conduct laboratory testing, according to NAS Brunswick Environmental Department personnel.

According to NAS Brunswick Environmental Department personnel, the macerator pump has been temporarily removed and cleaned; the pump will be retained for future use.

Based on the site visit observations and records research findings, environmental samples were collected at Building 592 to investigate the potential presence of hazardous waste residue potentially associated with the furnace room and the laboratory. The investigation sample results are discussed below.

Residue Investigation

On October 20, 2010, five wipe samples (plus one duplicate) were collected from areas including floors and walls in the laboratory and furnace room in Building 592, and from the bench and cabinet in the laboratory, as shown on Figure 3. As presented in Table 2, wipe samples were submitted for either RCRA metals or semivolatile organics (SVOCs) analysis by Tetra Tech's subcontracted analytical laboratory, Analytics Environmental Laboratory (Analytics). The resulting analytical data underwent limited data validation consisting of field duplicate evaluation, blank contamination evaluation, and completeness evaluation.

Wipe sample results for the Building 592 investigation are presented in Table 2. For lead, analytical results were compared to the following MEDEP criteria for lead-contaminated settled dust, applicable for RCRA closures:

- Floors: 40 micrograms per square foot ($\mu\text{g}/\text{ft}^2$)
- Walls and other flat surfaces up to a height of 8 feet: 250 $\mu\text{g}/\text{ft}^2$
- Surfaces above 8 feet: visibly clean (dust-free)

There are no Maine criteria for the other seven RCRA metals or for the SVOCs. For informational purposes, wipe sample results for six of the other seven metals were compared to World Trade Center (WTC) Settled Dust Screening Values (there are no WTC screening values for selenium) (WTC, 2003). The data validation findings indicate that bis(2-ethylhexyl)phthalate was detected in the laboratory blanks. Data qualifications were taken on some of the data for SVOCs and metals (arsenic, mercury, barium, and lead), based upon data validation results.

As shown in Table 2, in the former furnace room, lead exceeded the applicable MEDEP criteria in the wall sample and in the floor-wipe sample and duplicate. All levels of other detected metals were below the screening values. Based on the analytical results, cleaning of Building 592 was required to remove lead-contaminated residue from the furnace room exceeding the associated MEDEP criterion for dust on floors and walls (discussed in Section 6).

5. HAZARDOUS WASTE GENERATION AND STORAGE

Based on the records research and NAS Brunswick Environmental Department personnel interviews, former operations at Building 592 generated small quantities of various wastes on an episodic basis; these wastes were handled and disposed of under the NAS Brunswick hazardous waste department, as discussed in Section 3.

Based on site visit observations and sampling results, hazardous waste residue was generated at Building 592 in the form of lead-contaminated settled dust in the furnace room. The areas impacted by lead-dust were also addressed by the closure actions described in Section 6.0.

In addition, it's likely that during the use of a portion of the Building 592 parcel as a USAF radar facility in the 1950s, spent chlorinated solvent waste was generated as part of the maintenance of radar antennas and electrical equipment. There is no information available concerning the quantities of hazardous waste that may have been generated or the waste storage and disposal practices during the timeframe of the radar facility operation, and there is no information that would suggest a release of hazardous waste has occurred at the parcel.

6. CLOSURE ACTIONS

Based on analytical results discussed in Section 4, closure actions were required at Building 592 to satisfy the MEDEP hazardous waste closure requirements. Closure actions were conducted at Building 592 on January 11, 2011, as discussed below.

Tetra Tech's cleaning subcontractor (TK&K Services [TK&K]) performed floor- and wall-cleaning activities at Building 592, based on lead criteria exceedances in wipe samples, as discussed in Section 4. On January 11, 2011, cleaning activities were conducted in the former furnace room. The floors were manually swept and then vacuumed with a high-efficiency particulate air (HEPA) vacuum. After sweeping and vacuuming, floors and walls were sprayed with a 2-percent, lead-specific detergent solution, scrubbed, and pressure-washed, using a 5,000-pounds-per-square-inch (psi) steam cleaner. All cleaning wastewater was containerized using a wet-vacuum, placed in a 55-gallon drum, and transferred to the NAS Brunswick hazardous waste department for disposal. Upon completion, the Tetra Tech field representative performed a visual inspection of the cleaned areas.

Post-cleaning, confirmatory floor- and wall-wipe samples were collected from each of the cleaned rooms on January 11, 2011 (Figure 4). Samples were submitted to Katahdin Analytical Services of Scarborough, Maine (Katahdin) for lead analysis. The resulting analytical data underwent limited data validation consisting of blank contamination evaluation and completeness evaluation. The January 11, 2011 wipe sample results are included in Table 3.

The lead level ($49 \mu\text{g}/\text{ft}^2$) in the post-cleaning confirmatory wipe sample collected from the furnace room floor just slightly exceeded the associated MEDEP floor criterion of $40 \mu\text{g}/\text{ft}^2$. Lead levels were below the MEDEP criterion for walls in each of the post-cleaning wall-wipe samples, as shown in Table 3. Additional closure action is not warranted at Building 592, since the level of lead in the floor-wipe sample collected after cleaning of the furnace room was only slightly above the MEDEP criterion, and the lead levels in the post-cleaning wall-wipe samples were very low, near the detection limit, when detected.

7. OTHER ENVIRONMENTAL CONSIDERATIONS

Any ASTs and electrical transformers known to be associated with the Building 592 parcel are discussed in Section 3. No additional electrical transformers or tanks are known of and none were observed in the immediate vicinity of Building 592 or elsewhere on the parcel. No oil/water separators are known to be associated with the Building 592 parcel.

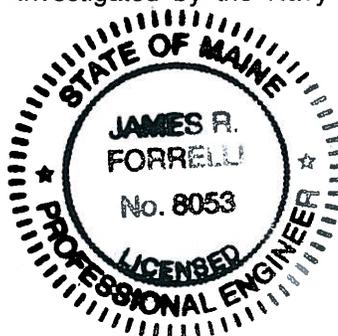
8. LIMITATIONS

This investigation of the hazardous waste closure requirement applies to the Building 592 parcel (as shown on Figure 2) only.

9. CERTIFICATION

Based on the findings of the investigation as presented in this Partial Closure Report, historical operations resulted in the generation of hazardous waste residue in the form of lead-contaminated settled dust in the furnace room at Building 592, NAS Brunswick, Maine. In addition, hazardous waste may have been generated between the 1950s and 1990s, when the parcel was occupied by a former USAF radar station. In accordance with the provisions of MEDEP Regulations Chapter 851, Standards for Generators of Hazardous Waste, Section 11, the hazardous waste closure of the Building 592 parcel was completed, with the exception of possible residual groundwater contamination that may be present as a result of a potential historical release associated with the former USAF radar station. Potential groundwater contamination at the former radar station area will be investigated by the Navy in a future groundwater investigation.

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



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

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TABLE 1
BUILDING 592 HAZARDOUS WASTE QUANTITIES - 2003 THROUGH 2009⁽¹⁾
RCRA PARTIAL CLOSURE REPORT
BUILDING 592 – VETERINARY CLINIC
NAVAL AIR STATION BRUNSWICK, MAINE

Description	RCRA Waste Code	Quantity
aerosol cans (used and empty)	G09, G11	2 pounds
asbestos, roofing tiles	G21	2,000 pounds
asbestos, unspecified	G19	702 pounds
formaldehyde	G09, G11	31 pounds
lamps, fluorescent	U01	3.44 pounds
MRE heaters	G11	10.62 pounds
paint	G11	240.2 pounds
paint, chips	G02	22 pounds
paint, latex	G11	29 pounds
soap	G11	7.65 pounds

(1) Quantity reported for years 2003 through 2009.

**TABLE 2
PRE-CLEANING WIPE SAMPLE RESULTS
RCRA PARTIAL CLOSURE REPORT
BUILDING 592 – VETERINARY CLINIC
NAVAL AIR STATION BRUNSWICK, MAINE**

SAMPLE ID ⁽¹⁾	WTC	MEDEP floor	MEDEP wall	B592-WP01	B592-WP01 (Duplicate)	B592-WP02	B592-WP03	B592-WP04	B592-WP05
LOCATION				Building 592 furnace room southeast floor	Building 592 furnace room southeast floor	Building 592 furnace room wall	Building 592 laboratory floor	Building 592 laboratory cabinet interior	Building 592 laboratory bench
MATRIX				wipe	wipe	wipe	wipe	wipe	wipe
SAMPLE DATE				10/20/10	10/20/10	10/20/10	10/20/10	10/20/10	10/20/10
METALS (µg/ft ²)									
arsenic	36	--	--	11	19	1.3 J	NA	NA	NA
barium	10000	--	--	170 J	300 J	38 J	NA	NA	NA
cadmium	140	--	--	22	43	2 J	NA	NA	NA
chromium	440	--	--	110	130	12 J	NA	NA	NA
lead	NA	40	250	4100 J	7300 J	1100 J	NA	NA	NA
mercury	15	--	--	0.19 J	0.37 J	0.074 J	NA	NA	NA
selenium	--	--	--	4.3 J	5 J	6.5 U	NA	NA	NA
silver	730	--	--	0.46 J	0.74 J	3.7 U	NA	NA	NA
SEMIVOLATILES (µg/ft ²)									
benzaldehyde	--	--	--	NA	NA	NA	9.3 U	38	9.3 U
bis(2-ethylhexyl)phthalate	--	--	--	NA	NA	NA	22000	150 U	160 U
butyl benzyl phthalate	--	--	--	NA	NA	NA	92	9.3 U	9.3 U
di-n-butyl phthalate	--	--	--	NA	NA	NA	600	26	9.3 J
other SVOCs	--	--	--	NA	NA	NA	ND	ND	ND

Notes:

(1) Sample prefix "NASB" is not shown.

Wipe sample surface area: 10 cm by 10 cm

WTC Source: Table A-3 Settled Dust Screening Values and Supporting Toxicity Criteria from World Trade Center Indoor Environment Assessment: Selecting Contaminants of Potential Concern and Setting Health-Based Benchmarks, May 2003

Shading indicates criteria exceeded

µg/ft² micrograms per square foot

J estimated result or estimated detection limit (UJ)

U not detected (with associated detection limit)

-- no criteria available

NA not analyzed

ND not detected

Shading indicates criteria exceeded.

**TABLE 3
POST-CLEANING WIPE SAMPLE RESULTS
RCRA PARTIAL CLOSURE REPORT
BUILDING 592 – VETERINARY CLINIC
NAVAL AIR STATION BRUNSWICK, MAINE**

SAMPLE ID ⁽¹⁾	WTC	MEDEP floor	MEDEP wall	B592-WP06	B592-WP07	B592-WP08	B592-WP09	B592-WP10
LOCATION				Building 592 furnace room floor	Building 592 furnace room east wall	Building 592 furnace room south wall	Building 592 furnace room west wall	Building 592 furnace room north wall
MATRIX				wipe	wipe	wipe	wipe	wipe
SAMPLE DATE				01/11/11	01/11/11	01/11/11	01/11/11	01/11/11
METALS (µg/ft ²)								
lead	NA	40	250	49	3.72U	3.25J	1.11J	1.02J

Notes:

(1) Sample prefix "NASB" is not shown.

Wipe sample surface area: 10 cm by 10 cm

WTC Source: Table A-3 Settled Dust Screening Values and Supporting Toxicity Criteria from World Trade Center Indoor Environment Assessment: Selecting Contaminants of Potential Concern and Setting Health-Based Benchmarks, May 2003

Shading indicates criteria exceeded

µg/ft² micrograms per square foot

J estimated result

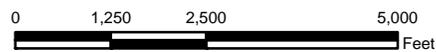
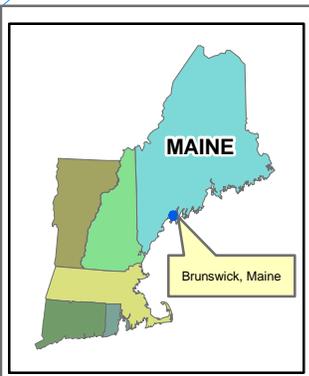
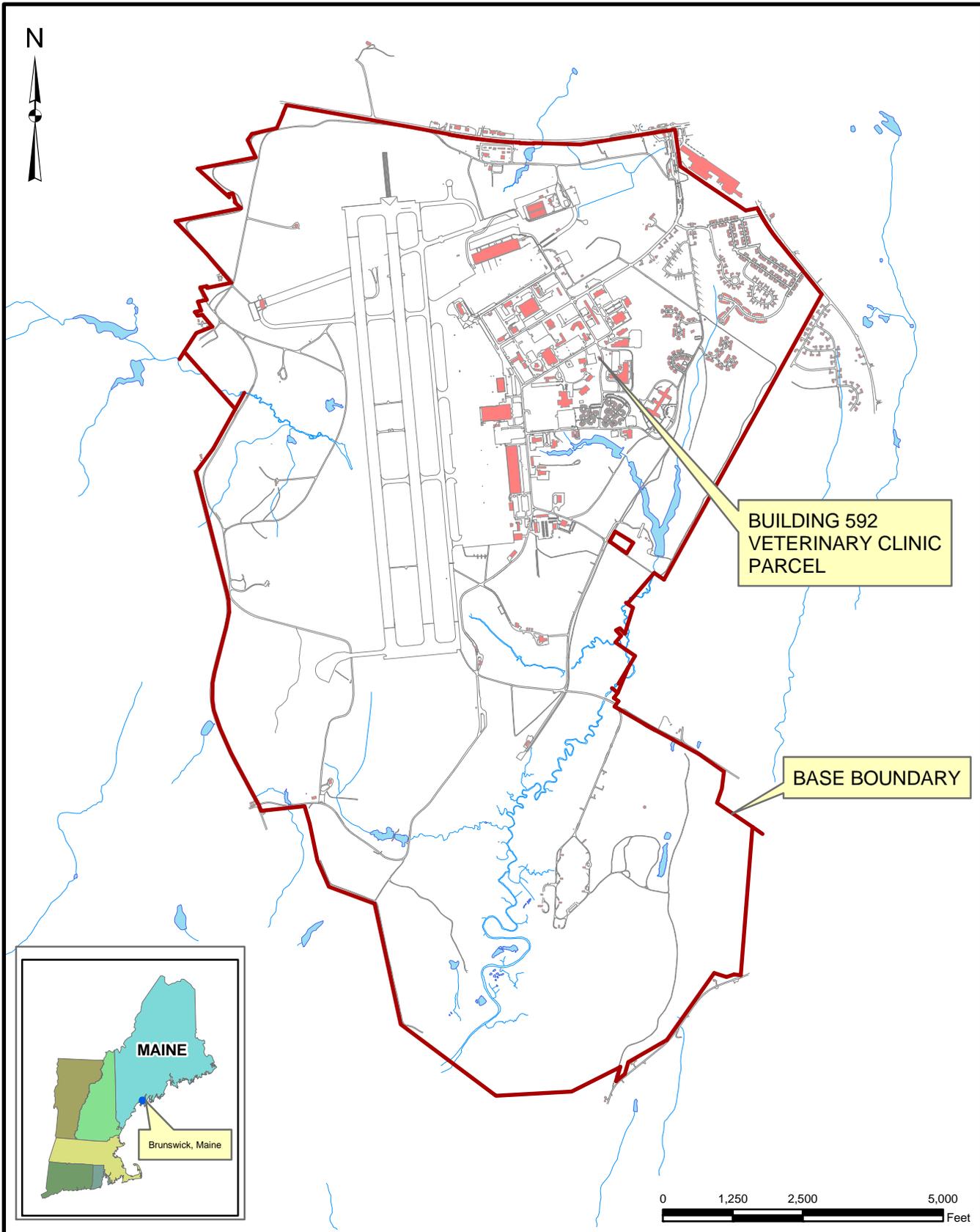
U not detected (with associated detection limit)

-- no criteria available

NA not analyzed

ND not detected

Shading indicates criteria exceeded

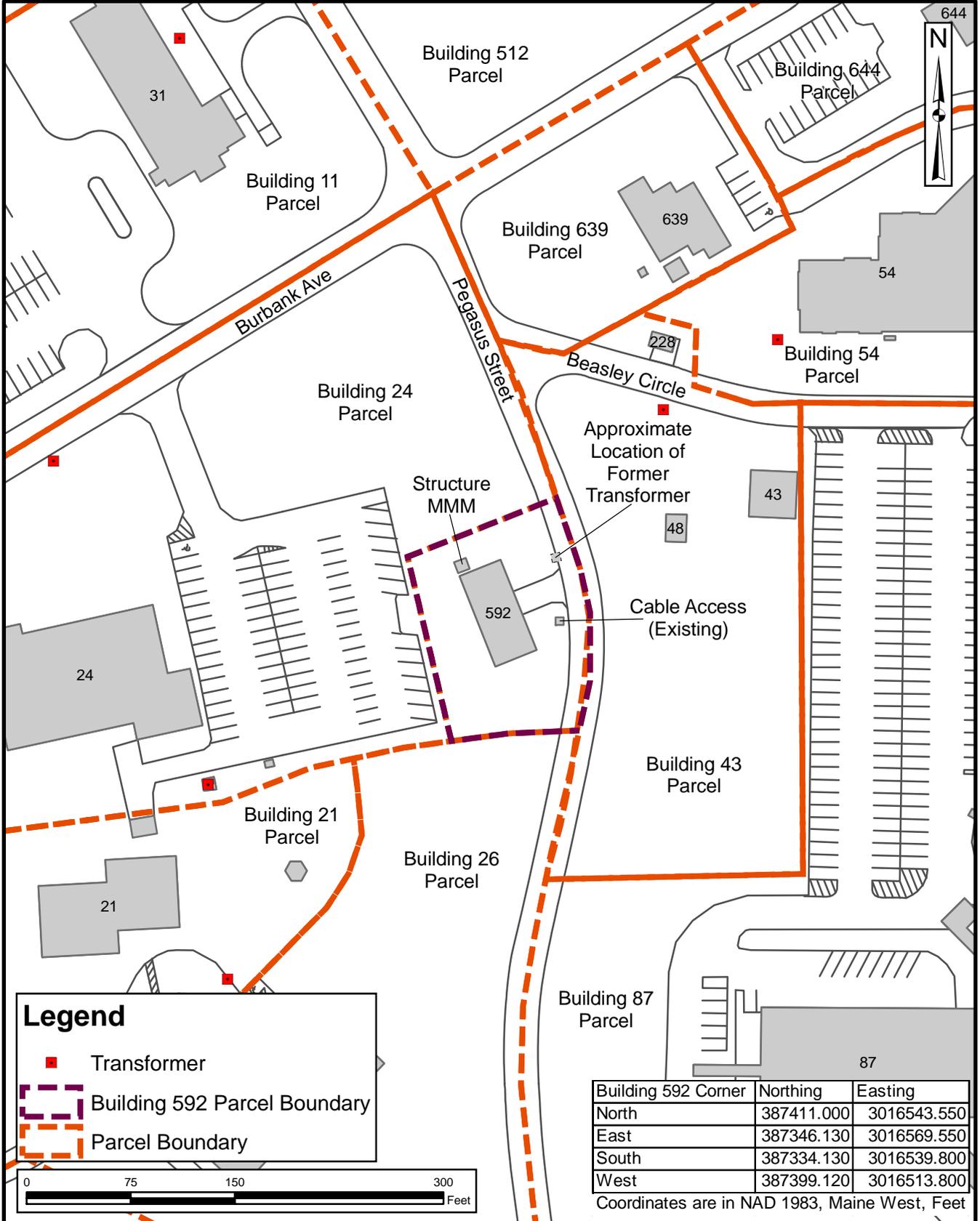


Tetra Tech NUS, Inc.

SITE LOCATION MAP
 BUILDING 592 - VETERINARY CLINIC PARCEL
 RCRA PARTIAL CLOSURE REPORT
 NAVAL AIR STATION BRUNSWICK, MAINE

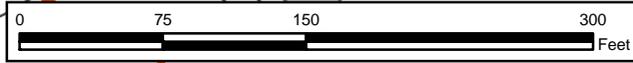
SCALE AS NOTED	
FILE I:\NASE_BLDG_592_LOCUS.MXD	
REV 0	DATE 01/21/11
FIGURE NUMBER 1	

I:\02258\CP.DR\NASB_BLDG_592_SITE_MAP.MXD DWM\NEC 01/21/11



Legend

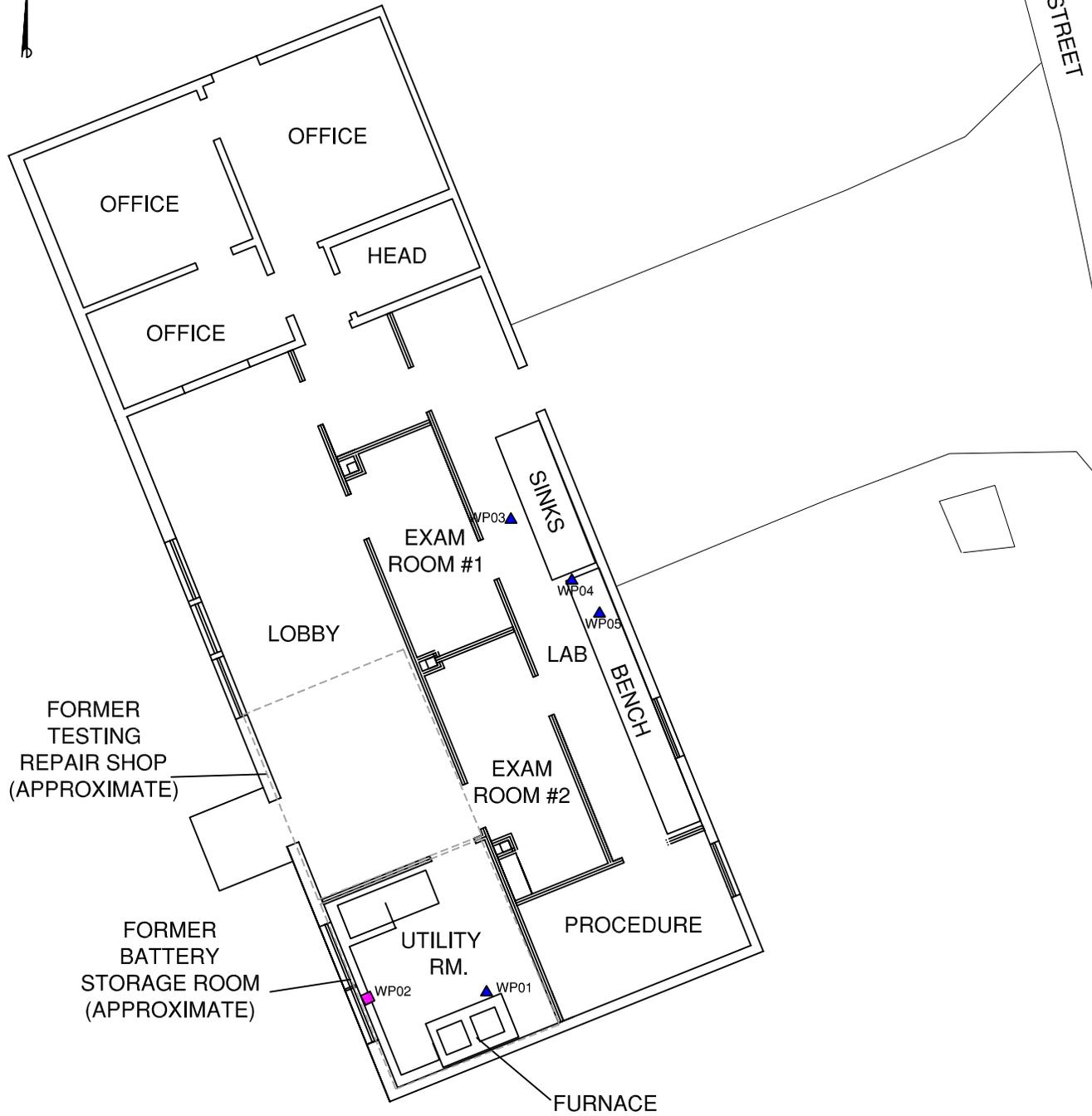
- Transformer
- - - Building 592 Parcel Boundary
- - - Parcel Boundary



Building 592 Corner	Northing	Easting
North	387411.000	3016543.550
East	387346.130	3016569.550
South	387334.130	3016539.800
West	387399.120	3016513.800

Coordinates are in NAD 1983, Maine West, Feet

 Tetra Tech NUS, Inc.	SITE LOCATION MAP BUILDING 592 - VETERINARY CLINIC PARCEL RCRA PARTIAL CLOSURE REPORT NAVAL AIR STATION BRUNSWICK, MAINE	<small>SCALE AS NOTED</small> <small>FILE</small> <small>VCP.DR\NASB_BLDG_592_SITE_MAP.MXD</small>
		<small>REV</small> <small>DATE</small> 0 01/21/11
		<small>FIGURE NUMBER</small> FIGURE NO. 2



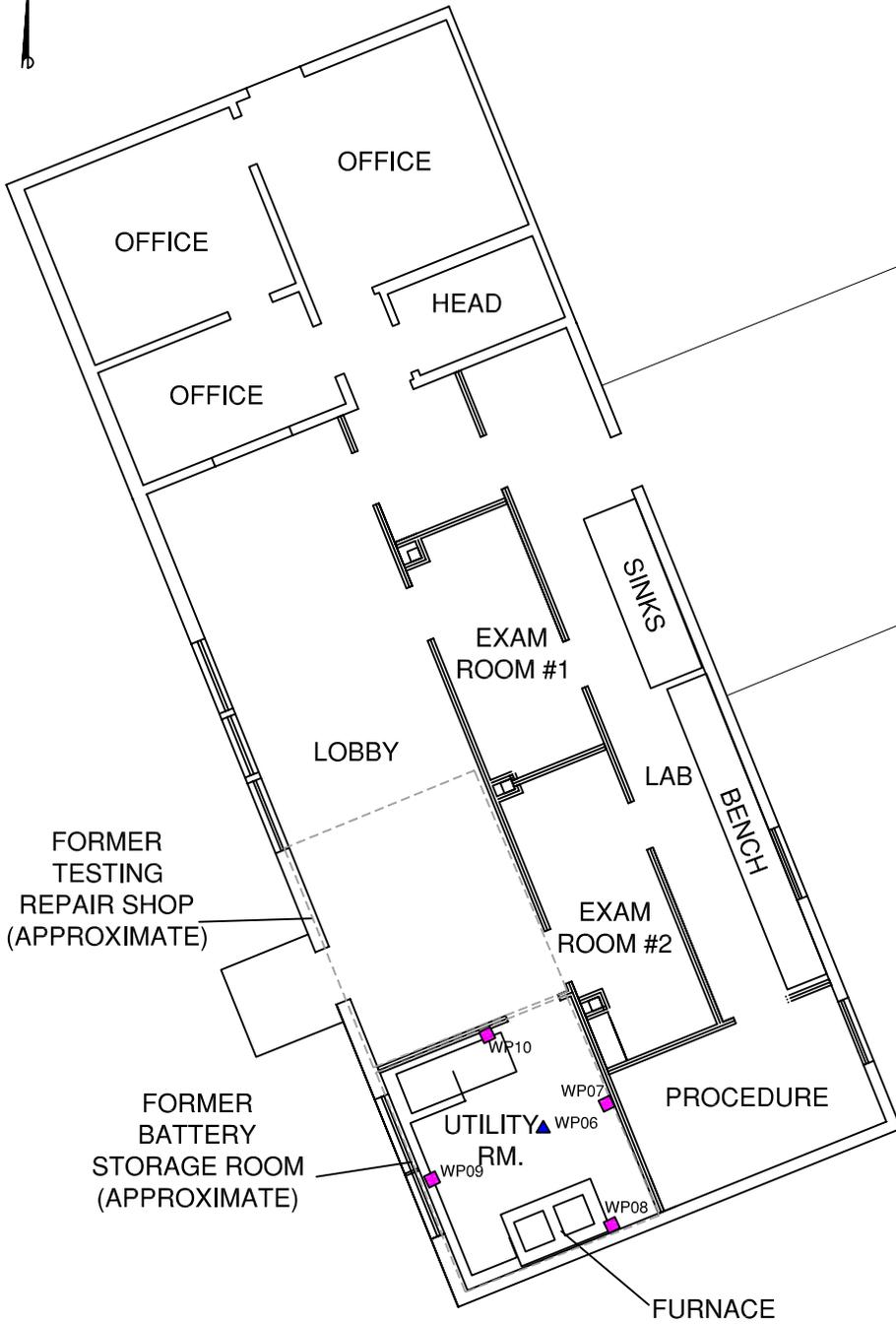
LEGEND

- WP01 ▲ FLOOR WIPE SAMPLE LOCATION
- WP02 ◻ WALL WIPE SAMPLE LOCATION



PRE-CLEANING SAMPLE LOCATIONS
BUILDING 592 - VETERINARY CLINIC PARCELRCRA
PARTIAL CLOSURE REPORT
NAVAL AIR STATION BRUNSWICK, MAINE

SCALE AS NOTED	
FILE \\.\NASB_BLDG_592_PRE.DWG	
REV 0	DATE 01/21/11
FIGURE NUMBER 3	



LEGEND

- WP01 ▲ FLOOR WIPE SAMPLE LOCATION
- WP02 ◆ WALL WIPE SAMPLE LOCATION



POST-CLEANING SAMPLE LOCATIONS
BUILDING 592 - VETERINARY CLINIC PARCELRCRA
PARTIAL CLOSURE REPORT
NAVAL AIR STATION BRUNSWICK, MAINE

SCALE AS NOTED	
FILE \\NASB_BLDG_592_POST.DWG	
REV 0	DATE 01/21/11
FIGURE NUMBER 3	

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

Inspection Date: 9/30/10

Personnel: Brandon Smith, P.E. / Mindi Messmer

Weather: Clear, 60's

GENERAL BUILDING INFORMATION / USES

Building Name: Building 592 –Veterinary Clinic Building
Function: Veterinary Clinic
Size: 1,651 SF
Year of Construction: 1950

The Building 592 parcel is located in the eastern-central portion of NAS Brunswick, directly to the west of the former Commander Patrol and Reconnaissance Wing Five (CPRW-5) compound (Figure 1). The parcel is bordered by the following roads and parcels: to the north and west, by the Building 24 (Personnel Support Detachment [PSD]) parcel and Burbank Avenue further north; to the east by Pegasus Street and the Building 43 (Telephone Exchange) parcel and further east by the Building 87 (Anti-Submarine Warfare Operations Center [ASWOC]) parcel; to the south and southwest by Building 26 (Child Care Clinic) and Building 21 (Child Care Center) parcel (Figure 2). In addition to Building 592, this parcel includes associated paved parking and grass-covered areas, and Structure MMM (Storage Shed).

Building 592 was constructed in 1950 and consists of a 1,621-square-foot, single-story structure on a concrete slab foundation. The building is constructed with transite shingles. Building 592 has a natural gas heating system. Building 592 is connected to the base-wide sanitary sewer system (Navv. 2006).

HWSA INSPECTION / CONDITION

- At the time of inspection, Building 592 was unoccupied and in good condition.
- No evidence of current or past hazardous waste generation activities was observed.
- No signs of a past release (unusual odors, stressed vegetation, etc.) were observed.
- Red staining was observed on the floor of the furnace room.
- No modifications to the structure, which may conceal signs of a past release, were observed.
- No peeling or flaking paint was observed on the exterior or interior of the building.
- Possible asbestos containing floor tile was observed in the furnace room, the transite siding, mastic and possible roofing material of Building 592.
- Building MMM (Storage Shed), a wooden structure with asphalt shingles, was observed on the north side of Building 592. According to NAS Brunswick Environmental Department personnel, the interior was used to store various landscaping equipment including lawn mowers.
- Two metal access plates were identified on the northeast and the southeast sides of the building, along Pegasus Street, which enabled access to underground telephone or electrical cables.
- The interior of Building 592 included a laboratory, exam rooms, restrooms, office space, and a furnace room in the southwest corner.
- A separator was observed beneath the laboratory sink which separated solids from the sink drain.
- According to NAS Brunswick Environmental Department personnel, cleaning solutions and laboratory solutions were stored in a cabinet and small refrigerator in the laboratory.
- A bench was observed in the laboratory which was used to conduct laboratory testing according to NAS Brunswick Environmental Department personnel.

POTENTIAL PCB-CONTAINING TRANSFORMERS

The NAS Brunswick Removed Transformer Database lists no electrical transformers for Building 592 (PWD, 2010). A site area plan dated 1968 (PWD, 1968) indicates that a new transformer was to be installed on the Building 592 parcel on the eastern side of Building 592 along Pegasus Street. The transformer is visible on historical aerial photographs taken at approximately that time. Inspection of historical aerial photographs and a historical site plan dated 1985 (NAVFAC, 1985) suggest the transformer was likely removed in the mid-1980s during construction associated with the demolition of some of the old air force buildings on the Building 87 parcel and the construction of Building 87.

BUILDING 592

APPLICABLE REPORTS / DOCUMENTS

Available historical aerial photos were reviewed for past uses:

- The 1940 aerial photograph shows the Building 592 area is vacant and wooded.
- The historical site plan dated 1943 shows a wooded area at the location of the Building 592 parcel.
- Beginning with the 1946 aerial photograph, a complex of buildings surrounded by fencing and identified as "Air Force Operations" occupied the area of the Building 592 parcel and the adjacent Building 43 and Building 87 parcels to the east. Based on available information, this former United States Air Force (USAF) facility was an Aircraft Control and Warning Radar Facility and was in operation until the mid-1960s, when the facility was transferred to the Navy. Prior to the transfer to the Navy Building 592 was operated as a communications control building.
- According to historical NAS Brunswick building lists and NAS Brunswick Environmental Department personnel, from construction in 1950 until approximately the early 1990s Building 592 was the telephone exchange office.
- The 1966 buildings index is the first available building list to include Building 592, and indicates it to Former Air Force Building (AF-15) used for storage for AMD. The 1976 building index indicates that Building 592 is the Telephone Exchange Building. The next available building index is dated 2003 and indicates that Building 592 is the "Vet Clinic" is a 1,621-square-foot structure constructed in 1950. This construction date is consistent with aerial photographs and historical site plans.
- According to an undated floor plan and review of historical aerial photographs and plans, sometime between 1968 and 1976 an addition was added to the west side of Building 592 which increased the building size by approximately one third. This addition included office spaces to the north and two rooms that included a testing and repair shop (more recently the veterinary services room) and a battery room (current furnace room). According to the floor plan, the existing northern portion the building housed office space, storage, restrooms and a switchboard room. The existing southeastern portion of the building was a large room labeled "Switch Gear Room" and included a battery rack and rectifier.
- In the early 1990s Building 592 was converted from the telephone exchange building to a veterinary clinic. According to historical building indexes, the new telephone exchange building, Building 43 (Telephone Exchange Building) and Building 87 (ASWOC) were built in 1988 and it is likely that the conversion of Building 592 to a veterinary clinic occurred in approximately this time frame.
- According to historical site plans, Building 592 was a veterinary clinic and the oil burning furnace and the indoor fuel oil AST were removed in 2003 (NAVFAC, 2003). According to the 2003 historical plan and NAS Brunswick Environmental Department personnel the heating system was converted to natural gas.
- According to the 2003 historical site plan (NAVFAC, 2003), the interior of the veterinary clinic consisted of a laboratory, furnace room, a procedure room, a waiting room, exam rooms, restrooms, and office space. According to NAS Brunswick Environmental Department personnel, procedures conducted in Building 592 consisted of autopsies and other medical procedures on animals.

HAZARDOUS WASTE STORAGE RECORDS

According to NAS Brunswick Environmental Department personnel, hazardous waste generation at Building 592 was episodic in nature, with no operations producing hazardous waste on a regular basis. The source of most hazardous waste generated by activities at Building 592 was aerosol paints and formaldehyde. Generally, small quantities (less than 50 gallons total) of wastes such as paint waste, aerosols, formaldehyde and fluorescent lamps were generated during the 2003 through 2009 time period. Hazardous waste generated prior to 2003 by Building 592 was not segregated in the database from other medical waste generated on the base. It is likely that similar types and quantities of waste were generated prior to 2003 by Building 592 when operated as a veterinary clinic.

The NAS Brunswick Aboveground Storage Tank (AST) and Underground Storage Tank (UST) inventory records for Building 592 indicate that no USTs have been associated with Building 592. Three ASTs are listed in the database for Building 592 as follows:

ID	Capacity	Material Stored	Manufacturer	Year Installed/Removed
A592.0	330 gallons	#1 fuel oil	Highland	1996/1998
A592.1	330 gallons	#1 fuel oil	Highland	1996/1998
A592.2	330 gallons	#1 fuel oil	Highland	1998/2003

No oil-water separators (OWS) have been associated with Building 592 (Navy, 2006). No septic systems were identified within this parcel, which has is currently being served by the base-wide sanitary sewer system (Navv, 2006).

MISCELLANEOUS NOTES

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

(SEE ATTACHED SITE SKETCH AND HWSA SKETCH)

(SEE ATTACHED PHOTOGRAPHS)

INSPECTOR SIGNATURE: Mindi Messmer

PHOTOGRAPHS



No. 1 Building 592 – Veterinary Clinic Building, NAS Brunswick September 30, 2010
Building 592 east elevation showing metal access plate in right foreground



No. 2 Building 592 – Veterinary Clinic Building, NAS Brunswick September 30, 2010
Veterinary Clinic Building southwest elevation; Structure MMM (Storage Shed) visible in left background



No. 3 Building 592 – Veterinary Clinic Building, NAS Brunswick September 30, 2010
Veterinary Clinic Building - laboratory area; stainless steel sink in left foreground and work bench in background



No. 4 Building 592 – Veterinary Clinic Building, NAS Brunswick September 30, 2010
Veterinary Clinic Building - laboratory area; stainless steel sink at left drains to macerator pump (center)



No. 5 Building 592 – Veterinary Clinic Building, NAS Brunswick
Veterinary Clinic Building office area

September 30, 2010



No. 6 Building 592 – Veterinary Clinic Building, NAS Brunswick
Veterinary Clinic Building furnace room; red stains visible on floor

September 30, 2010