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NAS BRUNSWICK
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FINAL RESOURCE CONSERVATION AND RECOVERY ACT PARTIAL CLOSURE REPORT
FOR BUILDING 42 WITH TRANSMITTAL LETTER NAS BRUNSWICK ME
4/30/2010
NAS BRUNSWICK

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

April 30, 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 42

Dear Mr. Vigneault:

A copy of the Final RCRA Partial Closure Report for Buildings 42 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 42

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 42–PUMP HOUSE
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 Building 42 at Naval Air Station Brunswick (NAS Brunswick).

2. PROPERTY DESCRIPTION

Building 42 (Pump House) is located in the north-central portion of NAS Brunswick (see Figure 1). Building 42 is located south of Seahawk Avenue and directly north of Building 124, the associated water storage tank. Building 42, constructed in 1942, consists of a 660 square-foot, one-story, concrete-block structure on a slab foundation. The entrance to the building is located on the northern side of the building, as shown on Figure 2. No longer in service, Building 42 contains engine-driven fire suppression pumps, piping, and ancillary equipment for former Hangars 1, 2 and 3. It is heated by an installed electrical heating system. Photographs taken during the site visit are provided in an 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 Building 42, including past use and operations at that location.

According to NAS Brunswick Environmental Department personnel, since its construction in 1942, the sole use of Building 42 has been as a water supply system pump house. There is no record of hazardous waste generation, accumulation or storage at Building 42.

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, 1984, 1989, 1993, and 1997 (all produced by James W. Sewall Company) were reviewed to provide historical information. All available historical aerial photographs show Building 42 in its current location and form.

The NASB Removed Transformer Database lists one non-polychlorinated-biphenyl (PCB)-containing electrical transformer for Building 42: a 275-kVa pad-mounted Cooper RTE transformer with Serial No. 906004117. 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 42 transformer pad at some time in the past.

According to NAS Brunswick records, no underground storage tanks (USTs) were present at Building 42.

According to NAS Brunswick records, one 275-gallon single-wall steel (SWS), aboveground storage tank (AST) (A42.0) for the pump engine fuel was installed at an unknown date and removed in 1998. Other information relating to this tank was not found.

4. SITE VISIT AND INVESTIGATION

A Building 42 site visit was conducted on June 30, 2009 by Tetra Tech personnel, Mr. Brandon Smith, P.E. and Mr. James Forreli, P.E. The purpose of this 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 42 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 42 was not occupied and in fair condition. Water pumps and associated equipment were present.
- Potential evidence of current or past hazardous waste generation was observed: a "Lead Work Area" sign was observed on the eastern interior wall. According to NASB personnel, the area was used as a workshop by base electricians and soldering may have occurred.
- 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.
- A dry electrical transformer was observed along the eastern interior wall.

On October 7, 2009, Tetra Tech collected wipe samples from two locations at the lead work area, as shown on Figure 3. NASB-B42-WP01 was collected from the floor directly in front of the lead work area, and NASB-B42-WP02 was collected from the wall of the lead work area.

Both wipe samples were submitted for RCRA 8 metals analysis by Tetra Tech's subcontracted analytical laboratory (Analytics Environmental Laboratory [Analytics], Portsmouth, New Hampshire). Wipe sample results for the Building 42 investigation are presented in Table 1. The 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. For informational purposes, wipe sample results for the other seven metals were compared with available World Trade Center Settled Dust Screening Values (WTC, 2003).

Lead was detected in the floor wipe sample at a level of 8,268 $\mu\text{g}/\text{ft}^2$, which exceeds the MEDEP lead criteria for floors (40 $\mu\text{g}/\text{ft}^2$). As shown in Table 1, all levels of other detected metals are below the screening values, with the exception of arsenic in the floor sample, which slightly exceeds its screening criterion. Based on the analytical results, cleaning of the floor in the Building 42 lead work area was required to remove lead-contaminated residue exceeding the associated MEDEP criterion for dust on floors.

5. HAZARDOUS WASTE GENERATION AND STORAGE

Based on the records research, site visit observations and NAS Brunswick Environmental Department personnel interviews, hazardous waste was generated in Building 42 in the form of

lead-contaminated settled dust generated by a former soldering operation. The area impacted by lead dust was addressed by the closure actions described in Section 6.0.

6. CLOSURE ACTIONS

Tetra Tech's cleaning subcontractor (Global Remediation Services [Global]) performed floor-cleaning activities at Building 42 on March 22, 2010. Prior to cleaning, floor openings were covered and sealed with polyethylene sheeting. The floor was then manually swept and then vacuumed with a high-efficiency particulate air (HEPA) vacuum. After sweeping and vacuuming, floors 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 (15 gallons generated) 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 area.

On March 23, 2010, two confirmatory wipe samples were collected from the dried floor for lead analysis by Analytics. Confirmation sample results are provided in Table 1 (see Figure 4 for sample locations). As shown, lead levels in both samples are within the MEDEP floor location lead criterion.

7. OTHER ENVIRONMENTAL CONSIDERATIONS

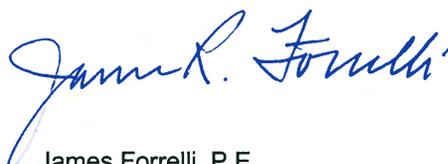
There are no USTs or ASTs known to be associated with Building 42, with the exception of the former AST already discussed in Section 3. No tanks were observed in the immediate vicinity of Building 42. The facility space features an installed electrical heating system.

8. LIMITATIONS

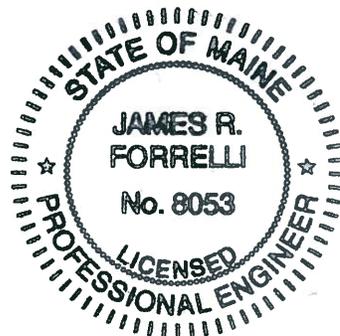
This investigation of the hazardous waste closure requirement applies to the Building 42 footprint (as shown on Figure 2) only. It does not apply to the land surrounding or the groundwater underlying Building 42.

8. CERTIFICATION

Based on the findings of the investigation, historical activity at Building 42, NAS Brunswick, Maine resulted in the generation of waste residue that required a removal closure action, which was completed as described in this report, to comply with MEDEP hazardous waste closure requirements. However, this historical activity did not result in the accumulation and storage of hazardous waste at Building 42. Therefore, the hazardous waste closure of Building 42 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 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

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

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

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, 1962. "Map of Streets," US Naval Air Station, Brunswick, Maine, NAS Brunswick, Maine. 1962.

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
WIPE SAMPLE METALS RESULTS
RCRA PARTIAL CLOSURE REPORT
BUILDING 42 – PUMPHOUSE
NAVAL AIR STATION BRUNSWICK, MAINE**

SAMPLE ID	WTC	MEDEP floor	MEDEP wall	NASB-B42-WP01	NASB-B42-WP02	NASB-B42-WP01	NASB-B42-WP02
LOCATION				lead work area floor	lead work area wall	lead work area floor	lead work area floor
MATRIX				wipe	wipe	wipe	wipe
EVENT				pre-cleaning	pre-cleaning	post-cleaning	post-cleaning
SAMPLE DATE				10/07/09	10/07/09	03/23/10	03/23/10
METALS ($\mu\text{g}/\text{ft}^2$)							
Arsenic	36	--	--	38	4.6 U	na	na
Barium	10000	--	--	399	13	na	na
Cadmium	140	--	--	102	0.93 U	na	na
Chromium	440	--	--	44 J	9.3 U	na	na
Lead	NA	40	250	8268	5.6	39	24
Mercury	15	--	--	0.35 J	0.09 UJ	na	na
Selenium	--	--	--	9.3 U	9.3 U	na	na
Silver	730	--	--	3.5	1.9 U	na	na

Notes:

Value in **bold** indicates exceedance of MEDEP criterion

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

J estimated result

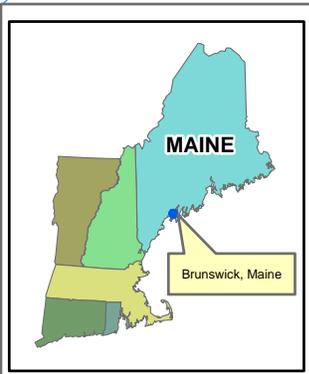
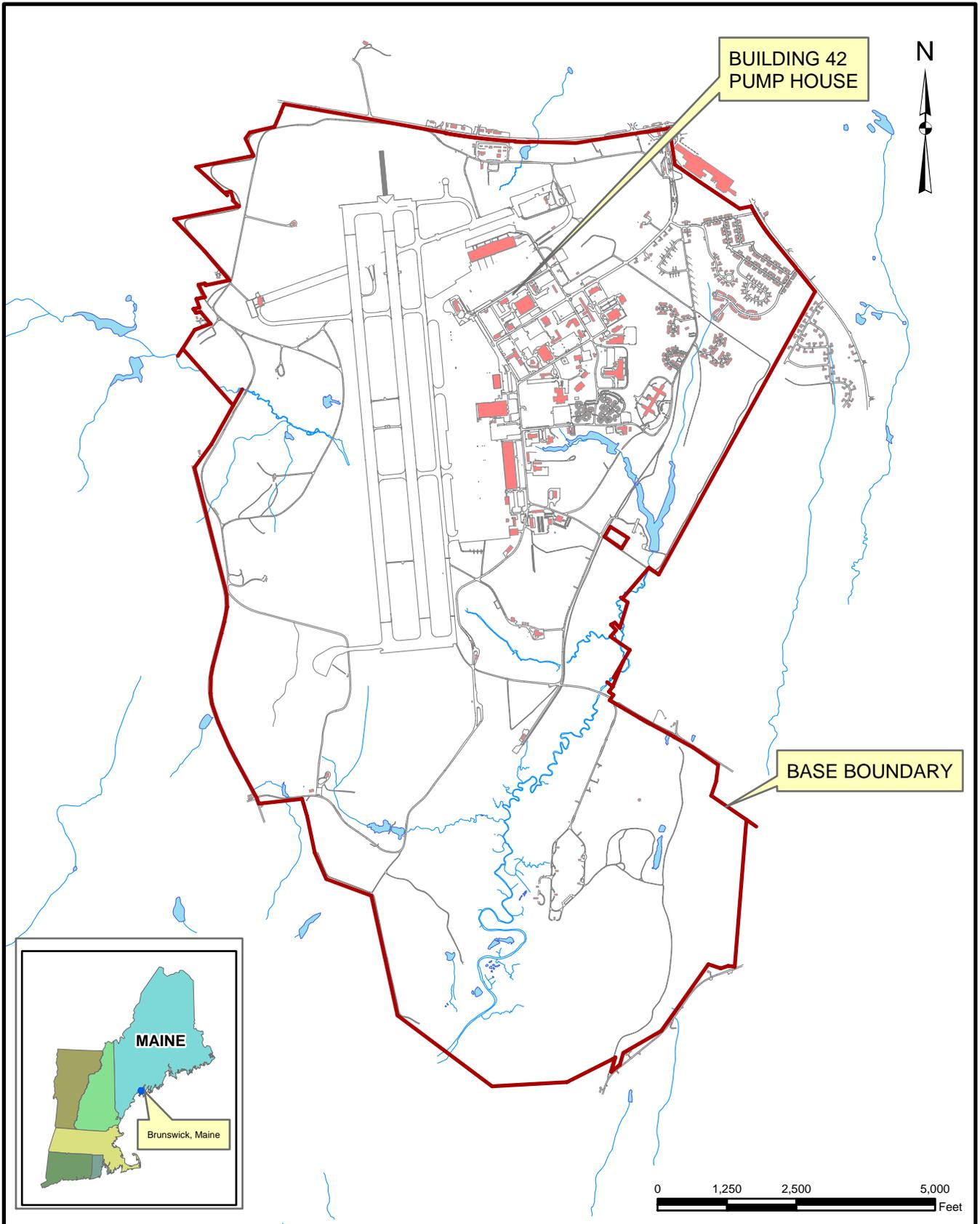
 $\mu\text{g}/\text{ft}^2$ micrograms per square foot

-- no criteria available

na not analyzed

NA not applicable

U not detected (with associated detection limit)



Tetra Tech NUS, Inc.

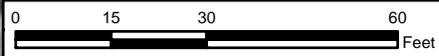
SITE LOCATION MAP
 BUILDING 42 - PUMP HOUSE
 RCRA PARTIAL CLOSURE REPORT
 NAS BRUNSWICK, MAINE

SCALE AS NOTED	
FILE I:_NASB_BLDG_42_LOCUS.MXD	
REV 0	DATE 04/30/10
FIGURE NUMBER 1	



Building 649 Corner	Northing	Easting
North	388482.600	3015084.170
East	388463.350	3015095.920
South	388446.980	3015069.540
West	388466.100	3015057.670

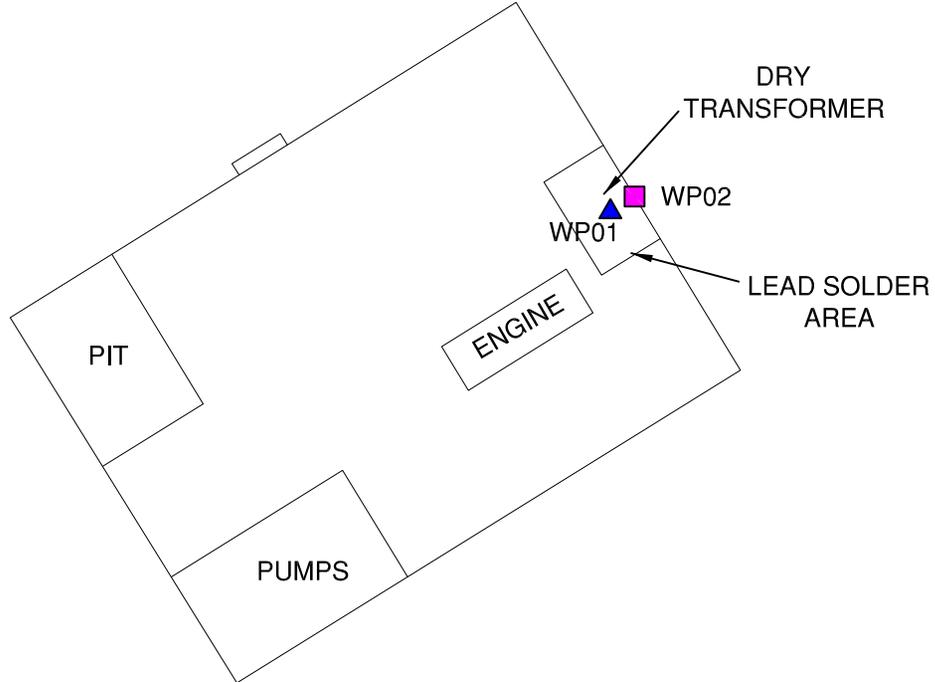
Coordinates are in NAD 1983, Maine West, Feet



Tetra Tech NUS, Inc.

SITE PLAN
BUILDING 42 - PUMP HOUSE
RCRA PARTIAL CLOSURE REPORT
NAVAL AIR STATION BRUNSWICK, MAINE

SCALE AS NOTED	
FILE \\.\WASB_BLDG_42_ORTHO.MXD	
REV 0	DATE 04/30/10
FIGURE NUMBER 2	

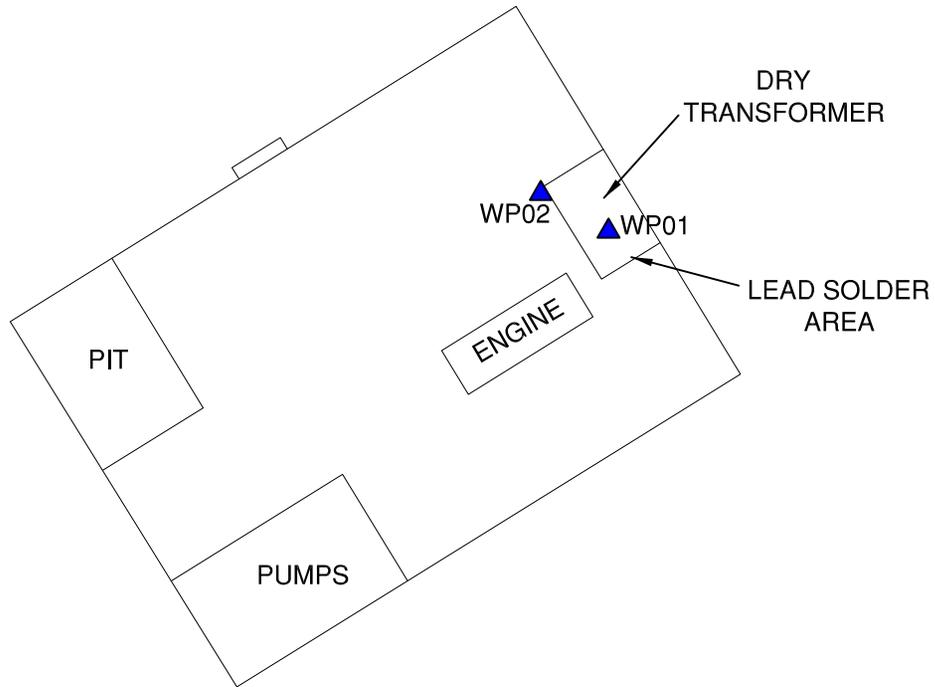


LEGEND

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



 TETRA TECH NUS, INC.	PRE-CLEANING SAMPLE LOCATIONS BUILDING 42 - PUMP HOUSE RCRA PARTIAL CLOSURE REPORT NAVAL AIR STATION BRUNSWICK, MAINE	SCALE AS NOTED
		FILE \.. \NASB_BLDG_42_PRE_SAMP.DWG
		REV DATE 0 04/30/10
		FIGURE NUMBER 3



LEGEND

WP01 ▲ FLOOR WIPE SAMPLE LOCATION



 TETRA TECH NUS, INC.	POST-CLEANING SAMPLE LOCATIONS BUILDING 42 - PUMP HOUSE RCRA PARTIAL CLOSURE REPORT NAVAL AIR STATION BRUNSWICK, MAINE	SCALE AS NOTED				
		FILE \.. \NASB_BLDG_42_POST_SAMP.DWG				
		<table border="1"> <tr> <th>REV</th> <th>DATE</th> </tr> <tr> <td>0</td> <td>04/30/10</td> </tr> </table>	REV	DATE	0	04/30/10
	REV	DATE				
0	04/30/10					
	FIGURE NUMBER 4					

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

Inspection Date: 6/30/2009
Personnel: Brandon Smith, P.E. / James Forrelli, P.E.
Weather: Overcast, 60s

GENERAL BUILDING INFORMATION / USES	
Building Name:	Pump House
Function:	Water Pump House
Size:	660 SF
Year of Construction:	1944
<p>Building 42 is located south of Seahawk Avenue directly north of Building 124 (the associated water storage tank) at NAS Brunswick. It was constructed in 1944 and served as a fire suppression water pump house for it's entire history. Building 42 consists of a 660 square-foot single-story cement block building on a slab foundation.</p> <p>Building 42 was used as a water pump house supplied by the water reservoir tank to the south (Building 124) for it's entire history.</p> <p>Building 42 is heated by a natural gas boiler. It was heated previously via fuel oil and prior to that by the base's central steam plant.</p>	
BUILDING INSPECTION / CONDITION	
<p>No record of hazardous waste stored at Building 42.</p> <p>The building was unoccupied at the time of the site visit and appeared in fair condition. Water pumps and associated equipment were present.</p> <p>Potential evidence of current or past hazardous waste generation activities was observed. A "Lead Work Area" sign was observed on the eastern interior wall. According to NASB personnel, the area was used as a workshop by one of the base electricians and soldering may have occurred.</p> <p>No evidence of hazardous waste residues was observed.</p> <p>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.</p> <p>No hazardous waste storage areas or hazardous waste accumulation areas were observed.</p> <p>A dry electrical transformer is located on the eastern wall.</p>	
HAZARDOUS WASTE STORED / GENERATED	
<p>No record of hazardous waste stored or generated at Building 42, according to NASB personnel.</p>	
POTENTIAL PCB-CONTAINING TRANSFORMERS	
<p>The NASB transformer database lists the following transformer associated with Building 42: 225 KVA Pad-Mounted - Cooper RTE Serial No. 906004117 - Non-PCB containing (<2 ppm PCB)</p>	

APPLICABLE REPORTS / DOCUMENTS

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

- 1943 plan - Building 42 present with Building 124 (water tank) to the south
- 1946 plan - Same as 1943 plan
- 1952 plan - Same as 1946
- 1956 plan - Same as 1952
- 1958 aerial - Building 42 present with Building 124 to the south
- 1978 aerial - Same as 1958
- 1983 plan - Same as 1956 plan
- 1984 aerial - same as 1978 aerial
- 1989 plan - same as 1983 plan
- 1989 aerial - same as 1978 aerial
- 2006 plan - same as 1989 plan.

According to NASB records, no USTs were present at Building 42.

According to NASB records, a 275 gallon SWS fuel AST (A42.0) was installed in at an unknown date and removed in 1998.

HAZARDOUS WASTE STORAGE RECORDS

No hazardous waste was historically stored at Building 42, according to NAS Brunswick Hazardous Waste Manager, D. Bruce Smith.

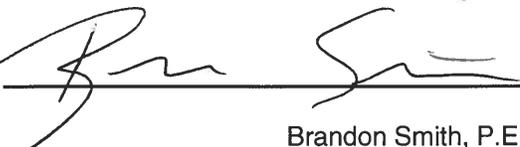
MISCELLANEOUS NOTES

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

Only the Building 42 footprint was inspected at the time. The transformer pad and surrounding land will be addressed as part of the land closure of the surrounding area.

(SEE ATTACHED BUILDING FLOOR PLAN AND PHOTOGRAPHS)

INSPECTOR SIGNATURE:



Brandon Smith, P.E.

PHOTOGRAPHS



No. 1 Building 42 – NAS Brunswick
Building 42 – Pump House west elevation

April 27, 2010



No. 2 Building 42 – NAS Brunswick
Building 42 – Pump House lead work area on eastern interior wall.

June 30, 2009

PHOTOGRAPHS



No. 3 Building 42 – NAS Brunswick
Building 42 – Pump House floor in front of lead work area post-cleaning

March 22, 2010



No. 4 Building 42 – NAS Brunswick
Building 42 – Pump House floor in front of lead work area post-cleaning

March 22, 2010