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FINAL RESOURCE CONSERVATION AND RECOVERY ACT PARTIAL CLOSURE REPORT  
FOR BUILDING 44 WITH TRANSMITTAL LETTER NAS BRUNSWICK ME  
3/14/2011  
NAS BRUNSWICK

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

March 14, 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 44

Dear Mr. Vigneault:

A copy of the Final RCRA Partial Closure Report for Building 44 at Naval Air Station Brunswick is provided as Enclosure (1).

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

Sincerely,

  
*For* LISA M. JOY  
Environmental Director

Enclosure: (1) Final RCRA Partial Closure Report for Building 44

Copy to:  
NAVFAC Mid-Atlantic (B. Abraham)  
NAS Brunswick (M. Fagan/D. Smith)  
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**RCRA PARTIAL CLOSURE REPORT**  
**for**  
**BUILDING 44 – FITCH AVENUE MAGAZINE PARCEL**  
**NAVAL AIR STATION BRUNSWICK, MAINE**  
**USEPA IDENTIFICATION NUMBER ME8170022018**  
**MARCH 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) Resource Conservation and Recovery Act (RCRA) or hazardous waste closure requirements have been completed for the Building 44 parcel at Naval Air Station Brunswick (NAS Brunswick).

## **2. PROPERTY DESCRIPTION**

The Building 44 parcel is located in the central portion of NAS Brunswick, at the intersection of Fitch Avenue and Pelican Street (Figure 1). The approximately 0.8-acre parcel is bordered to the north and east by the Building 294 (Supply Warehouse) parcel; to the south, by Fitch Avenue and the Building 585 (Chapel) parcel; and to the west, by Pelican Street and the Building 9 (Housing Office) parcel. In addition to Building 44 (Fitch Avenue Magazine), the parcel includes a concrete loading dock, identified as Building 556, and associated paved parking and grass-covered areas (Figure 2).

Building 44 is located in the central portion of the parcel. It was constructed in 1943 and is comprised of one room, measuring 1,258 square feet in area. The building is an earth-covered, metal-arch-roof magazine, or bunker, built on a concrete slab foundation. The front of the structure is constructed of a steel-plate wing wall, featuring a security/blast door, and the interior walls are constructed of corrugated, galvanized steel sheets. Building 44 is not heated, and features a ventilation stack through the roof.

Building 556, the loading dock structure at the parcel, is a cast-in-place-concrete, end and side loading dock, located immediately north of Building 44 (Figure 2). This structure is 1,760 square feet and was used for the loading and unloading of materials and equipment from former rail lines located east of the structure (PWD, 1976).

Photographs of Building 44 and the loading dock (Building 556) are provided as an attachment to this report.

## **3. PROPERTY HISTORY AND RECORDS RESEARCH**

The Tetra Tech NUS, Inc. (Tetra Tech) project team interviewed NAS Brunswick Environmental Department personnel and performed records research at both NAS Brunswick and the MEDEP office in Augusta, Maine to collect available information concerning the Building 44 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. Public Works Department (PWD) site base maps dated 1943, 1946, 1952, 1956, 1975, 1989, and 2006 (PWD, 1943, 1946, 1952, 1956, 1975, 1989, and 2006) and site building lists for 1950, 1965, 1976, 2003, and 2008 (Navy, 1950; PWD, 1965, 1976, 2003, and 2008a) were also reviewed.

According to NAS Brunswick Environmental Department personnel and records, Building 44 was originally constructed (in 1943) for torpedo storage, but has been used for multiple purposes

since then. Since the mid-1960s, Building 44 has not been used for torpedo or other munitions storage, but has been used as a personnel shelter, and for the storage of small-engine landscaping and snow-clearing equipment (lawn mowers and snow blowers). There is no record of hazardous waste generation or accumulation at Building 44.

A review of the historical records listed above indicates the following for Building 44:

- The NAS Brunswick 1946 map and 1950 building list describe Building 44 as “Torpedo Storage” (PWD, 1946; Navy, 1950).
- The 1965 and 1976 NAS Brunswick building lists describe the use of Building 44 as “Disaster Control Shelter” (PWD, 1965 and 1976).
- In the 1983 Initial Assessment Study (IAS), Building 44 is not listed in Table 6-10, a table entitled “Weapons and Ordnance Stored at Brunswick Naval Air Station”, indicating it was used for other purposes at this time. (According to the IAS, the Department of Defense (DOD) Explosives Safety Board of Alexandria, Virginia conducted annual surveys at NAS Brunswick for the 5 years prior to the 1983 study, to inspect conditions relating to ammunition and explosives at the base) (NEESA, 1983).
- Building lists from 2006 and 2008 describe Building 44 as “Inert Ordnance Storage” (PWD, 2006 and 2008a). (According to NAS Brunswick Environmental Department personnel, Building 44 was not used for ordnance storage in the mid-2000s).

(An additional building list which is undated denotes Building 44 as “Small Arms Magazine [Weapons]”).

Building 556 has been used as a loading dock since its construction in 1957, according to NAS Brunswick Environmental Department personnel. Building 556 was listed as an “End and Side Loading Dock” on the 1965 and 1976 building lists, however it was not listed on the 2003 or 2008 NAS Brunswick building lists.

No oil/water separators (OWS), aboveground storage tanks (ASTs), or underground storage tanks (USTs) are associated with Buildings 44 or 556, according to NAS Brunswick records (PWD, 2008b; Environmental Department, 2009).

The NAS Brunswick Transformer Database lists no electrical transformers for Buildings 44 or 556 (PWD, 2009).

A review of the MEDEP spills database and the NAS Brunswick spill logbooks identified no reported spills within the Fitch Avenue Magazine parcel (MEDEP, 2010; Environmental Department, 1999 and 2005).

Buildings 44 and 556 are not served by the base-wide sanitary sewer system and no individual septic systems are located on the parcel (Navy, 2006).

No groundwater investigations have been conducted in the vicinity of the Building 44 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 44 parcel could potentially be impacted by another (off-parcel) source.

Data is available from studies related to four areas/sites in the general vicinity of the Building 44 parcel, as summarized below.

An ongoing screening investigation of Areas of Potential Interest (AOPI) includes former Buildings 7 and 10, located immediately southwest of the Building 44 parcel, beyond Fitch Avenue and Pelican Street (Figure 2). Preliminary screening data indicate groundwater flows southwest from the former Buildings 7 and 10 site, away from the Building 44 parcel (northeast of the site), and

that detected contaminants are the result of historic Buildings 7 and 10 site disposal activities (Tetra Tech, 2010a).

Installation Restoration Program (IRP) Site 17 (Former Pesticide Shop, Building 95) and Petroleum-Oil-Lubricants (POL) site, Old Navy Fuel Farm (ONFF), are respectively located approximately 1,000 feet and 1,300 feet northeast of the Building 44 parcel. The ONFF was decommissioned in 1993 and remediated in 2000. In technical investigation reports relating to Site 17 and the ONFF, groundwater flows to the southeast from both of these sites, and is therefore unlikely to impact groundwater underlying the Building 44 parcel, which is located west-southwest of these sites (Tetra Tech, 2009 and 2010b; ESI, 2009).

The POL site, NEX Service Station (Building 538), is approximately 800 feet south-southeast of Building 44. According to the 2004 Corrective Action Plan for the site, prepared by EA Engineering, Science, and Technology, Inc., historical groundwater surface contour data have shown a prominent groundwater flow pattern from the NEX Service Station site toward the southwest. Therefore, groundwater at this site would not impact groundwater underlying the Building 44 parcel, located to the northwest of the site (EA, 2004).

#### 4. SITE VISIT AND INVESTIGATION

A site visit was conducted by Mr. Brian Geringer and Mr. Mark K. Speer, P.E., of Tetra Tech on July 29, 2010. 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. The interior and exterior of Building 44, along with the exterior of Building 556, were observed during the site visit and the parcel was visually inspected for signs of hazardous waste generation or storage. Photographs taken during the site visit are provided in an attachment. Site visit observations, recorded on the attached Building Inspection Form <sup>(1)</sup>, are summarized below:

- Buildings 44 and 556 were unoccupied at the time of the site visit and appeared in fair to good condition.
- No gasoline or diesel fuel odors were detected in Building 44 or in the area of Building 556.
- No evidence of current or past hazardous waste generation was observed.
- No evidence of current or past hazardous materials use was observed.
- Minor staining of the interior floor of Building 44 was observed, including water stains and lubricant and oil staining attributable to fork-lift truck use within the building.
- No staining within Building 556 was observed.
- No signs of a past release (unusual odors, stressed vegetation, etc.) nor structural modifications that could conceal signs of a past release were observed.
- No hazardous waste storage was observed.
- No transformers that could be a potential source of PCB contamination were observed.
- No ASTs, USTs, or oil/water separators associated with Buildings 44 or 556 were observed.
- Minor, localized, loose paint was observed on the exterior wing wall; an insufficient quantity was available to collect samples for analysis.
- Localized corrosion of the interior metal walls of Building 44 was observed.
- In the interior northwest corner of Building 44, a minor amount of yellow paint overspray was observed, which was not peeling or flaking.
- No paint was observed on the exterior of Building 556.

Due to the age of Building 44 and its use as a weapons magazine, wipe sampling was conducted to evaluate potential hazardous waste residue in the building. On September 17, 2010, six wipe samples were collected, four from the floor, and one each from the north and south sidewalls

(Figure 3). The samples were collected for analysis of RCRA metals and semi-volatile organic compounds (SVOCs). Wipe samples were collected with cotton gauze saturated with dilute nitric acid (1:4 nitric acid to distilled water) for metals analysis, or with acetone for semi-volatile organic compound (SVOC) analysis. A 10-centimeter (cm) by 10-cm sampling area was wiped with the cotton gauze while applying moderate pressure. Wipe samples were submitted analysis, by Tetra Tech's subcontracted analytical laboratory, Analytics Environmental Laboratories (Analytics) of Portsmouth, New Hampshire. The resulting analytical data underwent limited data validation consisting of blank contamination evaluation and completeness evaluation. Analytical results are presented in Table 1.

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. However, for these RCRA Partial Closure activities, the MEDEP has approved the use of World Trade Center (WTC) Settled Dust Screening Values (WTC, 2003) as clearance values for wipe sample results for six of the other seven metals (there are no WTC screening values for selenium). Therefore, the investigation and closure actions were designed to meet the lead-contaminated settled dust criteria and all other metals contaminated settled dust clearance values.

In all four floor-wipe samples collected, lead levels exceeded the MEDEP criterion ( $40 \mu\text{g}/\text{ft}^2$ ), with levels ranging from 2,400 to 160,000  $\mu\text{g}/\text{ft}^2$ , as shown in Table 1. In addition, the screening criteria for three other metals were exceeded in floor-wipe samples, as follows: arsenic, in three samples; cadmium, in one sample; and chromium, in one sample. One SVOC, benzo(b)fluoranthene, was detected at a low level in one floor-wipe sample. In wall-wipe samples, only chromium exceeded the clearance value, in both samples.

Based on the analytical results, cleaning of Building 44 was required to remove metals-contaminated residue exceeding the screening criteria (metals-contaminated residue on floors, and chromium-contaminated residue on walls) as discussed in Section 6.

## 5. HAZARDOUS WASTE GENERATION AND STORAGE

Based on the records research, no hazardous waste generation, hazardous waste accumulation, or hazardous waste storage occurred at the Building 44 parcel. However, based on site visit observations and sampling results, past Building 44 activities resulted in the generation of metals-contaminated settled dust on the floor and chromium-contaminated settled dust on the walls of the building at level exceeding clearance criteria. The impacted areas were also addressed by the closure actions described in Section 6.0.

## 6. CLOSURE ACTIONS

Based on the investigation results as discussed in Section 4, closure actions were required at Building 44 to satisfy the MEDEP hazardous waste closure requirements. Closure actions were conducted at Building 44 in January, February, and March 2011, as discussed below.

On January 13 and 14, 2011, Tetra Tech's cleaning subcontractor, Global Remediation Services (Global), performed floor-cleaning activities in Building 44, as well as the cleaning of walls up to a height of 8 feet. The floor was manually swept and then vacuumed with a high-efficiency particulate air (HEPA) vacuum. After sweeping and vacuuming, floors and walls were sprayed and scrubbed with a 2-percent, lead-specific detergent solution. Floors and walls were then pressure-washed using a 5,000-pounds-per-square-inch (psi) steam-cleaner. All cleaning

wastewater was containerized using a wet-vacuum, placed in two 55-gallon drums, 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.

After the work areas were allowed to dry, post-cleaning confirmatory sampling was conducted on January 18, 2011. Four wipe samples were collected from the floors and two from the walls, and were submitted for RCRA metals analysis by Tetra Tech's subcontracted analytical laboratory, Katahdin Analytical Services, Inc. (Katahdin) of Scarborough, Maine (Figure 4). The resulting analytical data underwent limited data validation, consisting of field duplicate evaluation, blank contamination evaluation, and completeness evaluation. As shown in Table 2, the associated analytical results indicated that lead levels at all four floor locations exceeded the applicable MEDEP criterion of 40  $\mu\text{g}/\text{ft}^2$ , with lead levels ranging from 59 to 290  $\mu\text{g}/\text{ft}^2$ . The chromium levels in one of two wall-location wipe samples and its duplicate, 460 and 980  $\mu\text{g}/\text{ft}^2$ , respectively, exceeded the associated WTC criterion for chromium-contaminated settled dust on walls (440  $\mu\text{g}/\text{ft}^2$ ).

A second decontamination event (Event 2) for the floors and walls of Building 44 was performed on February 1, 2011, using the procedures described above. All cleaning wastewater was containerized using a wet-vacuum, placed in one 55-gallon drum, and transferred to the NAS Brunswick hazardous waste department for disposal. After the work areas were allowed to dry, six post-cleaning confirmatory wipe samples were collected on February 1, 2011, four from the floors and two from the walls (Figure 4). Floor-wipe samples were analyzed for lead and wall-wipe samples were analyzed for RCRA 8 metals by Katahdin. The resulting analytical data underwent limited data validation. As shown in Table 3, following this second decontamination event, wipe sample analytical results indicated that lead levels at all four of the floor locations exceeded the applicable MEDEP criterion of 40  $\mu\text{g}/\text{ft}^2$ .

Based on Event 2 results, a third decontamination event (Event 3) was conducted at Building 44 on February 23, 2011, using the procedures described above. All cleaning wastewater was containerized using a wet-vacuum, placed in 55-gallon drums, 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. After the work areas were allowed to dry, four floor-wipe samples were collected on February 25, 2011, for lead analysis by Katahdin (Figure 4). The resulting analytical data underwent limited data validation. Event 3 wipe sample results (Table 4) showed that lead levels in the post-cleaning confirmatory floor-wipe samples were well below the associated MEDEP floor criterion. Therefore, additional closure action is not warranted at Building 44.

## 7. OTHER ENVIRONMENTAL CONSIDERATIONS

No tanks or transformers were observed in the immediate vicinity of the Building 44 parcel, and none are known to exist in this area, as discussed in Sections 3 and 4.

## 8. LIMITATIONS

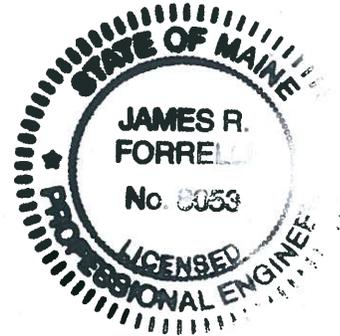
This investigation of the hazardous waste closure requirement applies to the Building 44 parcel (as shown on Figure 2) only.

## 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 metals-contaminated residue on the floor, and chromium-contaminated residue on the walls of Building 44, NAS Brunswick, Maine. Closure actions were conducted to remove lead-contaminated residue to levels meeting MEDEP criteria for contaminated settled dust surfaces, applicable for RCRA closures, and to remove other metals-contaminated residue to levels meeting clearance

values. Therefore, the hazardous waste closure of the Building 44 parcel was completed in accordance with the provisions of MEDEP Regulations Chapter 851, Standards for Generators of Hazardous Waste, Section 11.

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



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

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**TABLE 1  
INVESTIGATION WIPE SAMPLE RESULTS  
RCRA PARTIAL CLOSURE REPORT  
BUILDING 44 – FITCH AVENUE MAGAZINE  
NAVAL AIR STATION BRUNSWICK, MAINE**

SAMPLE ID <sup>(1)</sup>				B44-WP01	B44-WP02	B44-WP03	B44-WP04	B44-WP05	B44-WP06
LOCATION				northwest corner, floor	southwest corner, floor	northeast corner, floor	southeast corner, floor	north, wall	south, wall
MATRIX				wipe	wipe	wipe	wipe	wipe	wipe
EVENT				pre-cleaning	pre-cleaning	pre-cleaning	pre-cleaning	pre-cleaning	pre-cleaning
DATE				9/17/09	9/17/09	9/17/09	9/17/09	9/17/09	9/17/09
				CRITERIA					
METALS (µg/ft <sup>2</sup> )				WTC	MEDEP wall	MEDEP floor			
arsenic	36	--	--	62	35	100	97	5.6 J	6.1 J
barium	10000	--	--	1400	780	1100	1200	5.8	7.7
cadmium	140	--	--	30	33	700	87	2.8 U	2.8 U
chromium	440	--	--	21000	190	390	290	2100	1500
lead	NA	250	40	160000	2400	69000	3700	110	72
mercury	15	--	--	0.28	0.074 J	0.093 J	0.28	0.019 J	0.0074 J
selenium	--	--	--	6.5 U	6.5 U	6.5 UJ	10 U	6.7 UJ	6.5 UJ
silver	730	--	--	3.7 UJ	3.7 UJ	3.7 UJ	3.3 J	3.7 UJ	3.7 UJ
SEMIVOLATILES (µg/ft <sup>2</sup> )									
benzo(b)fluoranthene	--	--	--	9.3 U	9.3 U	20	9.3 U	--	--

Notes:

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

(2) Only positive detection results 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

µg/ft<sup>2</sup> micrograms per square foot

-- no criteria available

J estimated

NA not applicable

U not detected (with associated detection limit)

shading indicates criteria exceeded

**TABLE 2  
POST-CLEANING EVENT 1 - FLOOR AND WALL WIPE SAMPLE RESULTS  
RCRA PARTIAL CLOSURE REPORT  
BUILDING 44 – FITCH AVENUE MAGAZINE  
NAVAL AIR STATION BRUNSWICK, MAINE**

SAMPLE ID <sup>(1)</sup>				B44-WP07	B44-WP08	B44-WP09	B44-WP10	B44-WP11	B44-WP11 (duplicate)	B44-WP12			
LOCATION				northeast corner, floor	southeast corner, floor	northwest corner, floor	southwest corner, floor	north, wall	north, wall	south, wall			
MATRIX				wipe	wipe	wipe	wipe	wipe	wipe	wipe			
EVENT				post-cleaning event 1	post-cleaning event 1	post-cleaning event 1	post-cleaning event 1	post-cleaning event 1	post-cleaning event 1	post-cleaning event 1			
DATE				1/18/11	1/18/11	1/18/11	1/18/11	1/18/11	1/18/11	1/18/11			
				CRITERIA									
METALS (µg/ft <sup>2</sup> )				WTC	MEDEP floor	MEDEP wall							
arsenic				36	--	--	2.1 J	1.9 J	2.5 J	3 J	1.4 J	3.7 J	4.6 U
barium				10000	--	--	38	29 U	31 U	50	6.5 UJ	5.7 UJ	5.9 UJ
cadmium				140	--	--	1.8 J	3 J	1.9 J	2.9 J	2.8 UJ	1.5 J	2.8 UJ
chromium				440	--	--	10 UJ	13 UJ	45 J	9.3 UJ	460 J	980 J	71 J
lead				NA	40	250	160 J	59 J	290 J	130 J	29 J	59 J	8.6 J
mercury				15	--	--	0.093 UJ	0.093 UJ	0.093 UJ	0.093 UJ	0.093 UJ	0.093 UJ	0.093 UJ
selenium				--	--	--	6.5 U	6.5 U	6.5 U	6.5 U	6.5 U	6.5 U	6.5 U
silver				730	--	--	3.7 U	3.7 U	3.7 U	3.7 U	0.65 J	0.83 J	3.7 U

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

µg/ft<sup>2</sup> micrograms per square foot

-- no criteria available

J estimated

NA not applicable

U not detected (with associated detection limit)

shading indicates criteria exceeded

**TABLE 3  
POST-CLEANING EVENT 2 - FLOOR AND WALL WIPE SAMPLE RESULTS  
RCRA PARTIAL CLOSURE REPORT  
BUILDING 44 – FITCH AVENUE MAGAZINE  
NAVAL AIR STATION BRUNSWICK, MAINE**

SAMPLE ID <sup>(1)</sup>				B44-WP13	B44-WP14	B44-WP14 (duplicate)	B44-WP15	B44-WP16	B44-WP17	B44-WP18
LOCATION				northeast corner, floor	southeast corner, floor	southeast corner, floor	northwest corner, floor	southwest corner, floor	north, wall	south, wall
MATRIX				wipe	wipe	wipe	wipe	wipe	wipe	wipe
EVENT				post-cleaning event 2	post-cleaning event 2	post-cleaning event 2				
DATE				2/1/11	2/1/11	2/1/11	2/1/11	2/1/11	2/1/11	2/1/11
CRITERIA										
METALS (µg/ft <sup>2</sup> )	WTC	MEDEP floor	MEDEP wall							
arsenic	36	--	--	na	na	na	na	na	4.6U	4.6U
barium	10000	--	--	na	na	na	na	na	2.9J	3.0J
cadmium	140	--	--	na	na	na	na	na	0.1J	0.1J
chromium	440	--	--	na	na	na	na	na	58.5	253
lead	NA	40	250	53	46.5	78	1189	1464	5.3	11.1
mercury	15	--	--	na	na	na	na	na	0.03J	0.1J
selenium	--	--	--	na	na	na	na	na	6.5U	6.5U
silver	730	--	--	na	na	na	na	na	3.7U	3.7U

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

µg/ft<sup>2</sup> micrograms per square foot

NA not applicable

na not analyzed

shading indicates criteria exceeded

**TABLE 4  
 POST-CLEANING EVENT 3 - FLOOR WIPE SAMPLE RESULTS  
 RCRA PARTIAL CLOSURE REPORT  
 BUILDING 44 – FITCH AVENUE MAGAZINE  
 NAVAL AIR STATION BRUNSWICK, MAINE**

<b>SAMPLE ID<sup>(1)</sup></b>	B44-WP19	B44-WP20	B44-WP21	B44-WP22
<b>LOCATION</b>	northeast corner, floor	southeast corner, floor	northwest corner, floor	southwest corner, floor
<b>MATRIX</b>	wipe	wipe	wipe	wipe
<b>EVENT</b>	post-cleaning event 3	post-cleaning event 3	post-cleaning event 3	post-cleaning event 3
<b>DATE</b>	2/25/11	2/25/11	2/25/11	2/25/11
<b>METALS (µg/ft<sup>2</sup>)</b>				
	<b>WTC</b>	<b>MEDEP floor</b>		
lead	NA	40	4.2 J	3.2 J
			24.2	10.2

Notes:

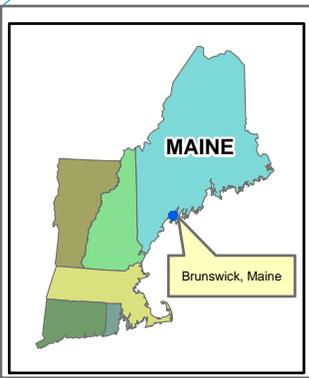
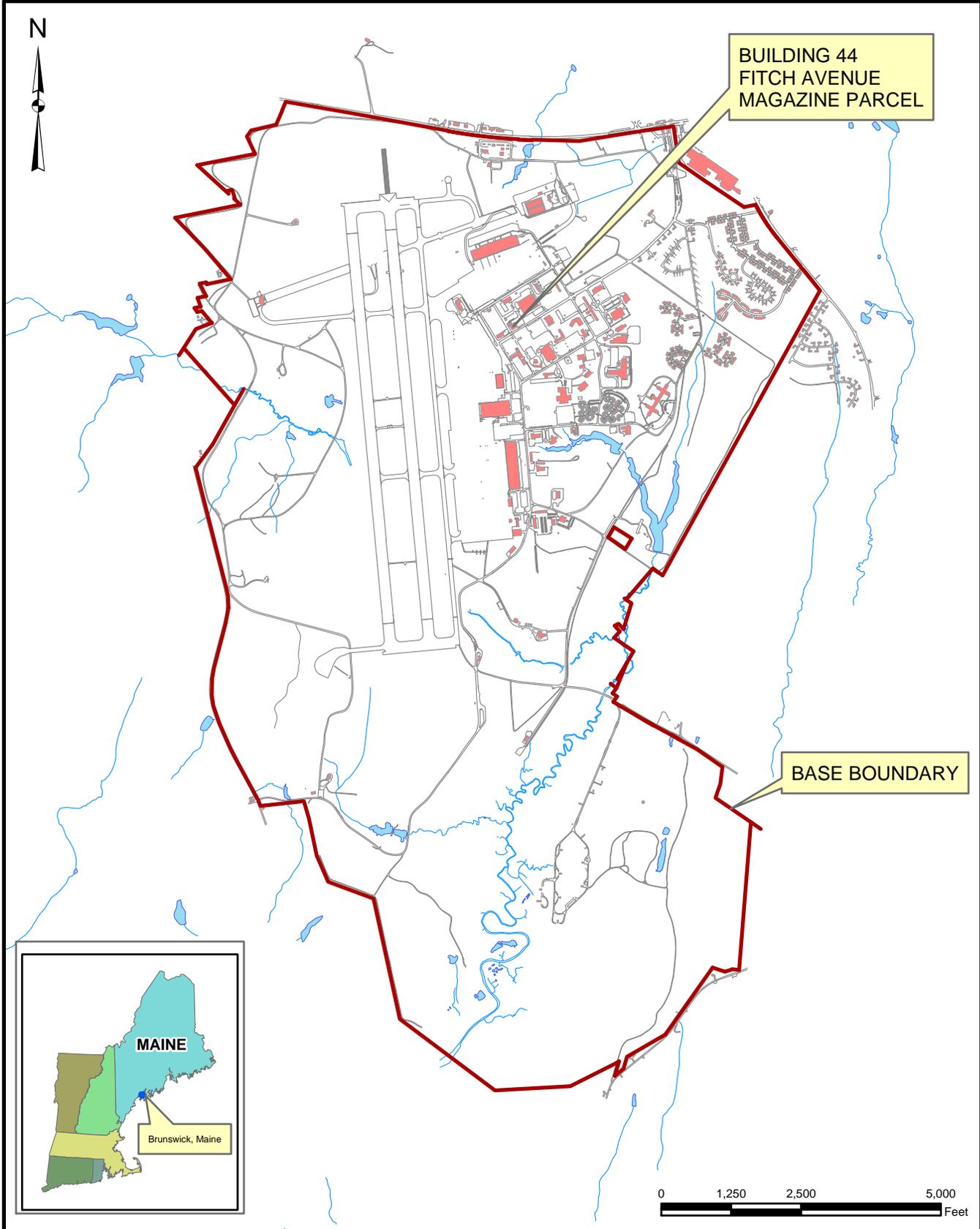
(1) Sample prefix "NASB" is not shown.

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

µg/ft<sup>2</sup> micrograms per square foot

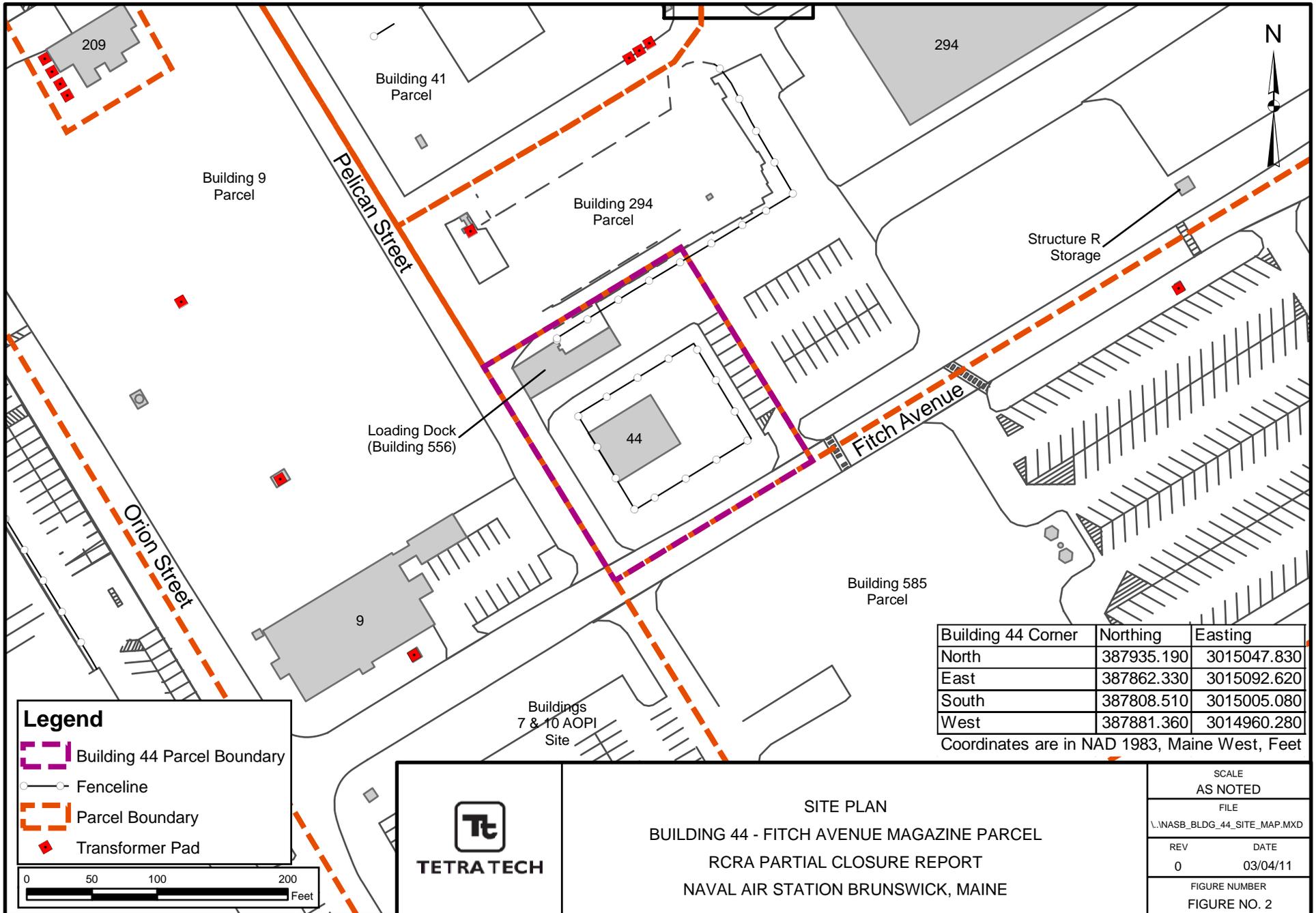
NA not applicable



Tetra Tech NUS, Inc.

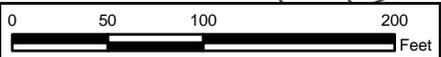
**SITE LOCATION MAP**  
**BUILDING 44 - FITCH AVENUE MAGAZINE PARCEL**  
**RCRA PARTIAL CLOSURE REPORT**  
**NAVAL AIR STATION BRUNSWICK, MAINE**

SCALE AS NOTED	
FILE I:\WASB_BLDG_44_LOCUS.MXD	
REV 0	DATE 01/25/11
FIGURE NUMBER 1	



**Legend**

- Building 44 Parcel Boundary
- Parcel Boundary
- Fenceline
- ◆ Transformer Pad



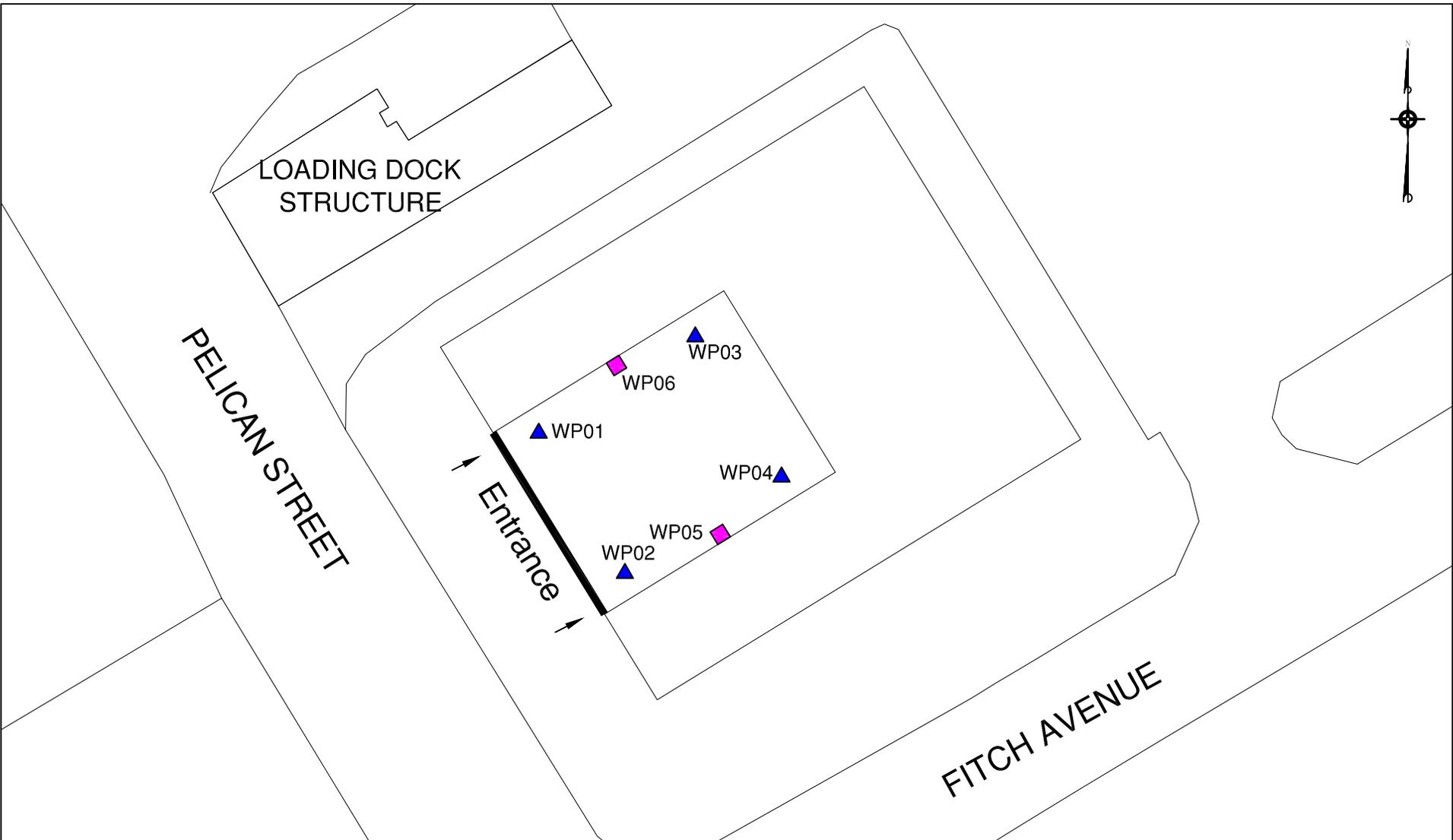
Building 44 Corner	Northing	Easting
North	387935.190	3015047.830
East	387862.330	3015092.620
South	387808.510	3015005.080
West	387881.360	3014960.280

Coordinates are in NAD 1983, Maine West, Feet

**TETRA TECH**

**SITE PLAN**  
**BUILDING 44 - FITCH AVENUE MAGAZINE PARCEL**  
**RCRA PARTIAL CLOSURE REPORT**  
**NAVAL AIR STATION BRUNSWICK, MAINE**

SCALE AS NOTED	
FILE \\NASB_BLDG_44_SITE_MAP.MXD	
REV 0	DATE 03/04/11
FIGURE NUMBER FIGURE NO. 2	



**LEGEND**

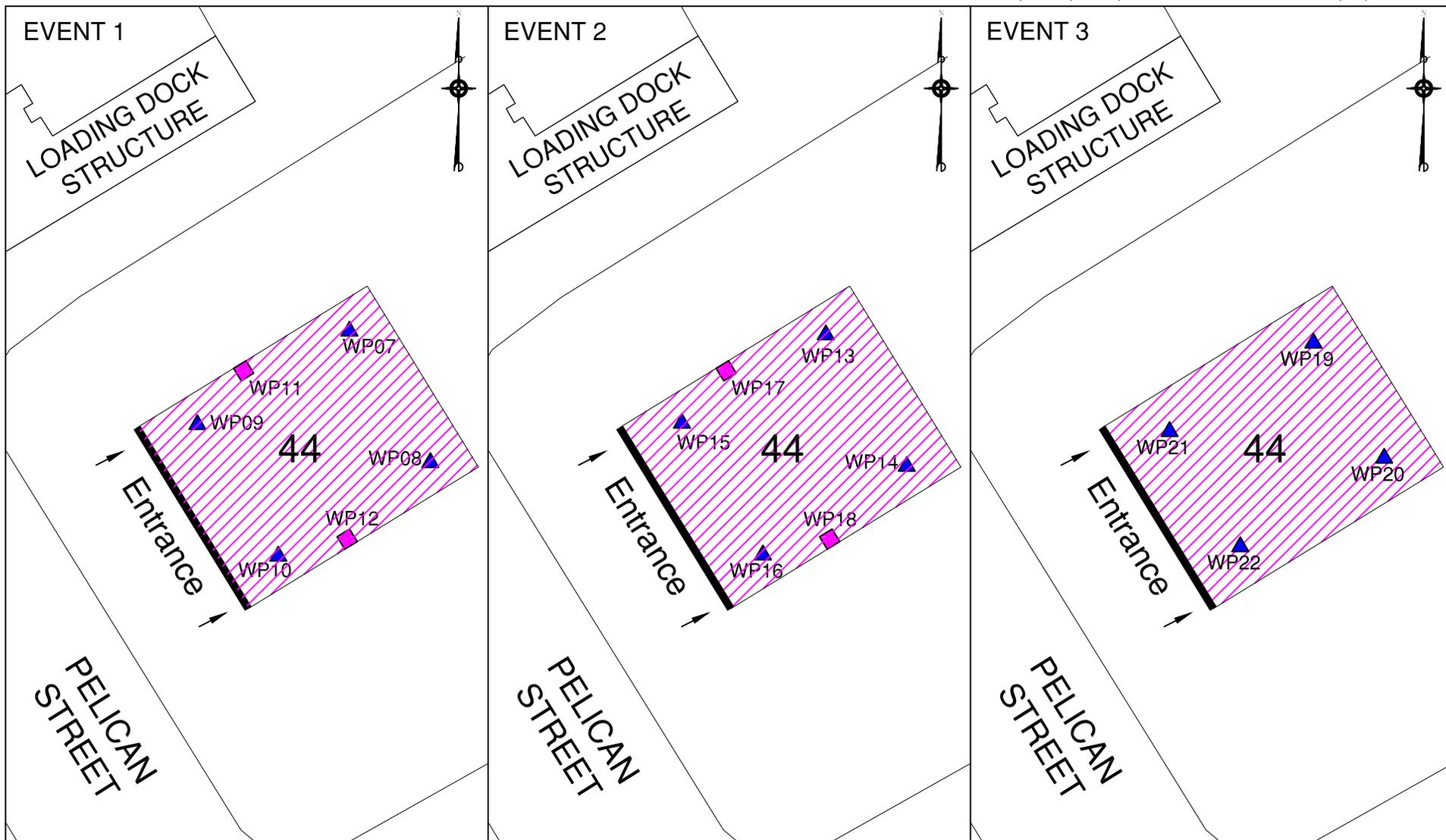
- WP01 ▲ FLOOR WIPE SAMPLE LOCATION
- WP06 ◆ WALL WIPE SAMPLE LOCATION



**TETRA TECH NUS, INC.**

**PRE-CLEANING SAMPLE LOCATIONS**  
**BUILDING 44 - FITCH AVENUE MAGAZINE PARCEL**  
**RCRA PARTIAL CLOSURE REPORT**  
**NAVAL AIR STATION BRUNSWICK, MAINE**

SCALE AS NOTED	
FILE \\.\NASB_BLDG_44_PRE.DWG	
REV 0	DATE 02/08/11
FIGURE NUMBER 3	



**LEGEND**

- WP09 ▲ FLOOR WIPE SAMPLE LOCATION
- WP11 ◆ WALL WIPE SAMPLE LOCATION
- DECONTAMINATION WORK AREA

GRAPHIC SCALE



TETRA TECH NUS, INC.

POST-CLEANING SAMPLE LOCATIONS  
 BUILDING 44 - FITCH AVENUE MAGAZINE PARCEL  
 RCRA PARTIAL CLOSURE REPORT  
 NAVAL AIR STATION BRUNSWICK, MAINE

SCALE  
 AS NOTED

FILE  
 \.. \NASB\_BLDG\_44\_POST.DWG

REV DATE  
 0 03/04/11

FIGURE NUMBER  
 4

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

**Inspection Date:** 7/29/10

**Personnel:** Brian Geringer / Mark Speer, P.E.

**Weather:** Partly Sunny, 70s

**GENERAL BUILDING INFORMATION / USES**

Building Name: Bld 44 (Fitch Avenue Magazine)

Function: Inert Ordinance Storage

Size: 1,258 SF

Year of Construction: 1943

Building 44 is located in the north-central portion of the former air station; located on the northeast corner of the intersection of Fitch Avenue and Pelican Street. Construction date of Building 44 is noted as 1943, and has served as munitions/ordnance storage for its entire history.

Building 44 is a one-story, one-room; earthen-covered corrugated metal-arch magazine structure on a concrete slab foundation. The front of the structure is constructed of metal plates bolted together, and fitted with a metal security/blast door. A vent stack was located in the roof, on the eastern side of the structure. No hazardous materials were used in its operation and no hazardous waste was generated here, according to NAS Brunswick personnel. Building 44 is unheated.

An end and side loading dock structure (Building 556) is located immediately north of Building 44. This structure is approximately 1,760 SF, and constructed of concrete in 1957 (approximately) at the terminus of a former railroad line. No hazardous materials were used in its operation and no hazardous waste was generated here, according to NAS Brunswick personnel. The loading dock structure (Building 556) is unheated.

**HWSA INSPECTION / CONDITION**

At the time of inspection, Building 44 was in use and in fair condition. This munitions/ordnance storage facility is not manned. 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, other than noted below. No modifications to the structure, which may conceal signs of a past release, were observed.

There was some minor staining of the floor throughout the structure, including water stains, stains from dust/dirt, and lubricants and oils attributable to forklift trucks. Yellow and black colored stains were observed in the northwest corner of the structure.

No hazardous waste storage areas or hazardous waste accumulation areas were observed.

Some peeling/chipping paint was observed, although it appears less than a metal TCLP analysis requires. There are no windows in the structure.

**POTENTIAL PCB-CONTAINING TRANSFORMERS**

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

**APPLICABLE REPORTS / DOCUMENTS**

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

- 1943 map – Building 44, Torpedo Storage.
- 1946 map – Same as 1943 map.
- 1950 building list – Building 44, Torpedo Storage.
- 1952 map – Same as 1943 map.
- 1953 aerial – Building 44.
- 1956 map – Same as 1943 map.
- 1957 map – Buildings 44 and 556.
- 1958 aerial – Same as 1953 aerial.
- 1965 building list – Buildings 44, Disaster Control Shelter; and 556, End & Side Loading Dock.
- 1975 map – Same as 1957 map.
- 1976 building list – Same as 1965 list.
- 1978 map – Building 44.
- 1978 aerial – Buildings 44 and 556.
- 1979 map – Same as 1957 map.
- 1981 aerial – Same as 1978 aerial.
- 1984 aerial – Same as 1978 aerial.
- 1989 map – Undetermined, map lacks sufficient detail in area of current Buildings 44 and 556 footprints.
- 1989 aerial – Same as 1978 aerial.
- 1993 aerial – Same as 1978 aerial.
- 1997 aerial – Same as 1978 aerial.
- 2003 building list – Building 44, Inert Ordinance Storage is listed; Building 556 is not listed.
- 2006 map – Buildings 44 and 556.
- 2008 building list – Same as 2003 list.
- Current Google aerial – Current site configuration.

According to NASB records, No underground storage tanks (USTs), above ground storage tanks (ASTs), or oil-water separators (OWS) were registered to Building 44 or Building 556.

**HAZARDOUS WASTE STORAGE RECORDS**

No hazardous waste was historically stored at Building 44 or 556 according to NAS Brunswick Hazardous Waste Manager, D. Bruce Smith.

**MISCELLANEOUS NOTES**

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

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

**PHOTOGRAPHS**



No. 1 Building 44 – Fitch Avenue Magazine, NAS Brunswick August 31, 2010  
Fitch Avenue Magazine (Building 44) west elevation, with facility entrance



No. 2 Building 44 – Fitch Avenue Magazine, NAS Brunswick July 29, 2010  
West elevations of Loading Dock (Building 556) at left of frame and Building 44 in right background



No. 3 Building 44 – Fitch Avenue Magazine, NAS Brunswick July 29, 2010  
Interior of Building 44, prior to cleaning



No. 4 Buildings 44 – Fitch Avenue Magazine, NAS Brunswick July 29, 2010  
Building 44 floor stains and yellow paint, northwest corner of the facility prior to cleaning



No. 5                      Building 44 – Fitch Avenue Magazine, NAS Brunswick                      January 14, 2011  
Building 44, view of northwest interior, with yellow paint overspray on floor, post-cleaning Event 1