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FINAL RESOURCE CONSERVATION AND RECOVERY ACT PARTIAL CLOSURE REPORT
FOR BUILDING 200 WITH TRANSMITTAL LETTER NAS BRUNSWICK ME
3/31/2011
NAS BRUNSWICK

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

March 31, 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 200

Dear Mr. Vigneault:

A copy of the Final RCRA Partial Closure Report for Building 200 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 200

Copy to:
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RCRA PARTIAL CLOSURE REPORT
for
BUILDING 200 – OPERATIONS-CONTROL TOWER BUILDING 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) RCRA or hazardous waste closure requirements have been completed for the Building 200 parcel at Naval Air Station Brunswick (NAS Brunswick).

2. PROPERTY DESCRIPTION

The Building 200 (Operations-Control Tower Building) parcel is located in the north-central portion of NAS Brunswick (Figure 1). The approximately 3.4-acre parcel is bordered to the north and east by the Hangar 6 parcel; to the south by Building 292 parcel; and to the west by the Airfield Parking Apron Area and the Runways Area (Figure 2). Building 200 is located in the central portion of the parcel, with surrounding grass-covered areas and an asphalt-paved parking driveway and parking areas.

Building 200 was constructed in 1954 and has an area of 22,409 square feet. The building consists of a two-story, steel-framed structure with stucco siding, on a concrete foundation, and a five-story control tower with similar construction. It was used as an air operations and air traffic control tower prior to 2006. Recently, the building has been used as an air passenger terminal, for a weather forecast service office, and for cargo services. Building 200 was originally heated via steam, and then by an oil-fired boiler, until the base was converted to a natural gas supply in 2001.

Photographs of the Building 200 exterior and interior 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 the Building 200 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, 1969, 1975, 1989, and 2006 (PWD, 1943, 1946, 1952, 1956, 1969, 1975, 1989, and 2006) and PWD building lists for 1965, 1976, 2003, and 2008 (PWD, 1965, 1976, 2003, and 2008a) were also reviewed.

According to NAS Brunswick Environmental Department personnel and records, Building 200 has been used for air operations and as an air traffic control tower since its original construction in 1954. A review of the historical records listed above indicates the following:

- The 1943 base map shows former Building 5 (listed as “control tower”), former Buildings 49 (Crash Garage) and former Building 78 within the current Building 200 parcel. The former Buildings 5, 49 and 78 were located southwest of the current Building 200.
- The 1946 map indicates that former Building 78 has been demolished. The concrete airfield apron is shown north of the current Building 200 parcel and was used for aircraft parking. The 1946 facility plan shows a ball field located southwest of the current Building 200 parcel. The new runway configuration is first shown in the 1952 facility plan. Between 1943 and 1952, there is no observed change within the former Buildings 5 and 49 footprints.
- The 1956 base map shows the current Building 200 and indicates that former Building 5 has been demolished. No change is observed within the former Building 49 footprint.
- The 1957 map indicates that former Building 49 has been demolished. Between 1956 and 1984, there is no observed change within the Building 200 footprint.
- In the 1965 base building list, Building 200 is listed as “Operations Building”. Based on the 2003 building list, the name of Building 200 was changed to “Operations-Control Tower Building” sometime between 1976 and 2003.
- The footprint of Building 200 changed in approximately 1985, when a new garage was constructed as an addition at the northeast corner of the building. This estimated time frame for the garage room construction is based on the dated drawings of repairs and alterations.
- 1989 aerial photograph and plan show the footprint change of Building 200. No further changes are noted after 1989.

According to the Initial Assessment Study (IAS) the NAS Brunswick photography shop was located in Building 200 and used standard Kodak chemicals for color and black and white processing. This facility operated a maximum of 8 hours per day and discharged rinse water at a rate of 1 gallon per minute to the base sanitary sewer system. The IAS report states that most of the concentrated baths, including developers, stabilizers, and conditioners, were also discharged to the sanitary sewer. On an annual basis, 1,000 gallons of bleach and fixer, with RCRA waste code D011 (silver), were returned for silver recovery, and 5 cubic yards of film were disposed of through the Defense Property Disposal Office (DPDO). (The DPDO transfer facility was formerly located in Building 584; it is believed that these materials were sent off-base for silver recovery and disposal.) The IAS also states that trichloroethane and other organic solvents were used for cleaning at the photography shop (NEESA, 1983).

No information documenting the start date of the photography shop operations was found. An unlabeled and undated floor plan shows the photography shop process areas, and indicates that color and black and white film processing and printing occurred at the facility. This drawing also indicates that wastewater streams from the various process areas were discharged to a collection piping system located in the floor.

Historical plans dated 1985 and entitled “Repairs and Alterations to Operations Building 200” indicate that a photography shop was located in the southern portion of the second floor, occupying the area where current rooms 221B through 235 are located (Navy, 1985). The plans indicate the photography shop was removed and the area was converted to office space, in the current configuration.

NAS Brunswick has a program in place that tracks hazardous waste to ensure proper handling and disposal. According to NAS Brunswick Hazardous Waste Manager, D. Bruce Smith, hazardous waste generation was tracked by squadron and/or activity (department). An itemized list of hazardous wastes associated with air operations and air traffic control activities was obtained from the NAS Brunswick Hazardous Waste Database, for the period from 1990 through 2009. Information on the associated RCRA waste codes and quantities of waste was also included. This listing is provided as Table 1.

Building 200 has historically been (and is currently being) served by the base-wide sanitary sewer system (Navy, 2006). Wastewater from Building 200 discharges to the sanitary sewer system.

The NAS Brunswick Revised Oil/Water Separator List indicates no oil/water separators for Building 200 (PWD, 2008b).

According to MEDEP and NAS Brunswick spill records, no spills were reported in the Building 200 parcel (Environmental Department, 1999; Environmental Department 2005; and MEDEP, 2010).

The NAS Brunswick Transformer Database lists one 300-kVA, non-polychlorinated-biphenyl (PCB), pad-mounted transformer for Building 200. The transformer was reported to have been manufactured by Cooper Rural Transformer & Electric (RTE) in 1990 (Serial No. 906005744) (PWD, 2009). This transformer was installed in Room 111 of Building 200 (formerly identified as Room 117, prior to the 1980s renovation). The first two digits of the serial number indicate that the transformer was manufactured in 1990, and is therefore unlikely to contain polychlorinated-biphenyl (PCB). As of July 1, 1979, the United States Environmental Protection Agency (EPA) prohibited all manufacturing of new PCB electrical equipment (transformers and capacitors). In addition, according to an electrical utility guide for identifying non-PCB transformers, all RTE transformers are non-PCB-containing (DTM, 2006). The above-named database does not provide information on transformers that were in service prior to installation of the current unit. However, the 1983 IAS states that a transformer containing 300 gallons of Pyranol (trade name for PCB dielectric fluid) was located in the northwest area of Building 200. The IAS states that the transformer was installed on a concrete pad and featured a spill-prevention dike (NEESA, 1983). Historical plans dated 1985 and entitled "Repairs and Alterations to Operations Building 200" indicate that a transformer with a dike was located in Room 114 (identified as Room 111 after the 1980s renovation) (Navy, 1985).

According to NAS Brunswick records, one 550-gallon, fiberglass-reinforced plastic (FRP) underground storage tank (UST) (10045-427) was installed in October 1987 and removed in August 1992. The UST contained diesel fuel for the generator at Building 200. A 550-gallon aboveground storage tank (AST) (A200.0) replaced the UST in 1992 and is currently active. The AST is a double-walled steel tank used to contain diesel fuel. In 1999, a 3,000-gallon fuel oil tank (A200.1) was installed south of Building 200 as part of the base-wide Boiler Decentralization and Facility Consolidation project. The tank is double-walled with double-walled piping and is located in a paved area. It was closed in April 2009. Currently, the building's boiler uses natural gas.

No groundwater investigations have been conducted in the vicinity of the Building 200 parcel; therefore, groundwater characterization information for the parcel is not available. Information on known groundwater contamination areas at NAS Brunswick was reviewed to determine if groundwater underlying the Building 200 parcel could potentially be impacted by another (off-parcel) source area. Based upon the available groundwater information, it is unlikely that groundwater at the Building 200 parcel is impacted by another source area.

4. SITE VISIT AND INVESTIGATION

An initial site visit was conducted on January 20, 2010 by Mr. Brandon Smith, P.E., Ms. Mindi Messmer, and Mr. James Forrelli, P.E., of Tetra Tech. The interior and exterior areas of Building 200 were inspected. The purpose of the site visit was to verify information gathered during the records search and to collect 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 listed above 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 the site visit, Building 200 was unoccupied, and in fair condition.

- Building 200 consists of offices, an air traffic control operations room, repair shop, instrument repair rooms, weather service room, generator and boiler room, transformer room, storage rooms and garage (see Figure 3).
- The garage (Room 109) was used for vehicle storage and maintenance. Some staining was observed on the floor.
- The Instrument Repair Rooms (219 and 221) were used for radio repair and maintenance. Two fume hoods for soldering were installed in Room 219.
- The Repair Shop (Room 212) was used for radar repair and maintenance.
- The Chief's Mess (Room 108) was used as electronics repair room.
- The floor space where the former photography shop was located on the second floor is now office and administrative space.
- No peeling or flaking paint was observed on the exterior or interior of the building.
- One non-polychlorinated-biphenyl (PCB), pad-mounted transformer was installed in Room 111. Staining was observed on the floor.
- A 500-gallon AST (A200.0) was observed at the northwest corner of Building 200. The AST is a double-walled steel tank for diesel fuel. No evidence of a past leak from this AST was observed.
- A closed, 3,000-gallon, fuel oil AST (A200.1) was observed south of Building 200. The tank appeared to be in good condition and no evidence of a past leak from this AST was observed.
- Vinyl floor tiling was observed throughout the building and appeared to be in good condition. All tiles were replaced in 1992, according to NAS Brunswick personnel.
- In a March 9, 2011 follow-up site visit, it was observed that the generator located in Room 113 was tagged with information indicating that the fuel system had been drained and the batteries disconnected.

Based on the site visit observations and records research findings, wipe samples were collected at Building 200 to investigate the potential presence of hazardous waste residue that may be present in several rooms as a result of historical activities at the building. The areas investigated through the collection of samples are Rooms 108, 109, 111, 212, 219 and 221. The Transformer Room (Room 111) was investigated for possible PCB contamination, because the previous transformer at Building 200 contained PCBs. The former photography shop that operated on the second floor of the building generated hazardous waste, including silver-bearing waste materials, which were recycled and disposed of off site. However, the former photography shop space was not sampled because the area underwent major alteration when it was converted to office and administrative space during a renovation project in the mid-1980s. It is likely that any waste residue resulting from the former photography shop operation was removed during the renovation. The investigation sample results are discussed below.

On December 15, 2010, wipe samples were collected from 13 locations in Building 200, including lab benches and floors, as shown on Figure 3. Eleven samples were analyzed for RCRA metals and two samples (collected from the floor of the Transformer Room [111]), were analyzed for PCBs. Wipe samples were collected with cotton gauze saturated with deionized water. A 10-centimeter (cm) by 10-cm sampling area was wiped with the cotton gauze while applying moderate pressure. The samples were submitted for analysis by Tetra Tech's subcontracted laboratory, Katahdin Analytical Services (Katahdin). The resulting analytical data underwent limited data validation consisting of blank contamination evaluation and completeness evaluation.

Metals wipe-sample results for the Building 200 investigation are presented in Table 2, and PCB wipe-sample results are presented in Table 3.

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.

As shown in Table 2, the lead levels in four floor-wipe samples exceeded the MEDEP criterion for floors ($40 \mu\text{g}/\text{ft}^2$), ranging from 44 to $220 \mu\text{g}/\text{ft}^2$ (two exceedances in the Instrument Repair Room [Room 219] and two exceedances in the garage [Room 109]). All levels of other detected metals were below the RCRA clearance values. PCBs were not detected in the two wipe samples submitted for this analysis, as shown in Table 3.

Based on the analytical results, cleaning of Building 200 (discussed in Section 6) was required to remove lead-contaminated residue from the garage and from Room 219, where lead residue was present at levels that exceeded the associated MEDEP criterion for dust on floors.

5. HAZARDOUS WASTE GENERATION AND STORAGE

Based on the records research and NAS Brunswick Environmental Department personnel interviews, former operations at Building 200 generated 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, lead-contaminated residue exceeding the associated MEDEP criterion was generated at Building 200, in the garage and in Room 219, the Instrument Repair Room. No other metals exceeded applicable settled dust clearance values. The areas impacted by lead-dust were also addressed by the closure actions described in Section 6.0.

6. CLOSURE ACTIONS

Based on analytical results discussed in Section 4, closure actions were required at Building 200 to satisfy the MEDEP hazardous waste closure requirements. Closure actions were conducted at Building 200 on March 1, 2011, as discussed below.

Tetra Tech's cleaning subcontractor (TK&K Services [TK&K]) performed floor- and wall- cleaning activities in Room 219 and in the garage of Building 200, based on lead criterion exceedances in floor wipe samples, as discussed in Section 4. The floors were vacuumed with a high-efficiency particulate air (HEPA) vacuum. After vacuuming, the floors and walls were then sprayed and scrubbed with a 2-percent, lead-specific detergent solution, and pressure washed using a 2,500 - pounds-per-square-inch (psi) hot-water pressure-washer. 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.

After the work areas were allowed to dry, four post-cleaning floor-wipe samples (plus one duplicate) and three wall-wipe samples were collected from the cleaned areas on March 1, 2010 (Figure 4). Samples were submitted to Tetra Tech's subcontracted analytical laboratory, Katahdin, for lead analysis. The resulting analytical data underwent limited data validation consisting of field duplicate evaluation, blank contamination evaluation, and completeness evaluation. The March 1, 2010 wipe sample results are included in Table 4. Lead levels in these samples were well below the associated MEDEP criteria for floors and walls ($250 \mu\text{g}/\text{ft}^2$); therefore, additional closure action is not warranted at Building 200.

7. OTHER ENVIRONMENTAL CONSIDERATIONS

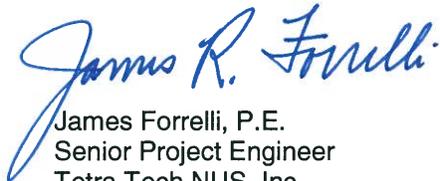
Any electrical transformers, USTs, or ASTs known to be associated with Building 200 are discussed in Sections 3 and 4. No other transformers or tanks were observed in the immediate vicinity of the building.

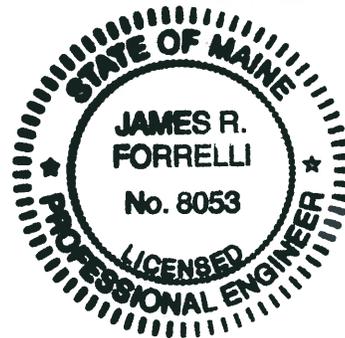
8. LIMITATIONS

This investigation of the hazardous waste closure requirement applies to the Building 200 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, including lead-contaminated residue in the Instrument Repair Room and in the garage of Building 200, NAS Brunswick, Maine. Closure actions were conducted to remove lead-contaminated residue to levels meeting MEDEP criteria for lead-contaminated settled dust surfaces, applicable for RCRA closures. Therefore, the hazardous waste closure of Building 200 was completed in accordance with the provisions of MEDEP Regulations Chapter 851, Standards for Generators of Hazardous Waste, Section 11.


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



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

REFERENCES

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

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

Environmental Department, 1999. Environmental Incident Log - Book No. 1, July 1988-November 1999, Environmental Department, NAS Brunswick, Maine.

Environmental Department, 2005. Environmental Incident Log - Book No. 2, December 1999-July 2005, Environmental Department, NAS Brunswick, Maine.

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

Environmental Department, 2010. Hazardous Waste Database, Naval Air Station Brunswick Environmental Department, Brunswick, Maine.

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

NEESA (Naval Energy and Environmental Support Activity), 1983. Initial Assessment Study of Naval Air Station, Brunswick, Maine (NEESA 13-031). June.

Navy (Naval Facilities Engineering Command), 1985. "Repairs and Alterations to Operations Building 200," Naval Air Station, Brunswick, Maine," NAS Brunswick, Maine.

Navy (Department of the Navy, Base Realignment and Closure Program Management Office), 2006. "Final (Revision 2) Environmental Condition of Property Report for the Naval Air Station, Brunswick, Maine," NAS Brunswick, Maine. May 30.

PWD (Public Works Department), 1943. "US Naval Air Station, Brunswick, Maine, Building Site Plan Showing Locations of Underground Water Distribution Lines and Hydrants," NAS Brunswick, Maine. September 4.

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

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

PWD, 1956. General Station Map, Enclosure 2. , NAS Brunswick, Maine.

PWD, 1957. "Map of US Naval Air Station," NAS Brunswick, Maine.

PWD, 1965. "Index of Structures, Department of the Navy Bureau of Yards & Docks Department," US Naval Air Station Brunswick, Maine. Updated May 13.

PWD, 1975. "General Development, Existing and Planned, Operations Area," US Naval Air Station, Brunswick, Maine, NAS Brunswick, Maine. Updated December 2.

PWD, 1976. "Index of Structures, Naval Facilities Engineering Command, Northeast Division Drawing No. 747 256," Naval Air Station Brunswick, Maine. Updated September 21.

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

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

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

PWD, 2003. "NAS Brunswick, Facility List," US Naval Air Station, Brunswick, Maine, NAS Brunswick, Maine. March 9.

PWD, 2006. Brunswick Naval Air Station, NAS Brunswick, Maine.

PWD, 2008a. "Draft NAS Brunswick, Facility List," US Naval Air Station, Brunswick, Maine, NAS Brunswick, Maine. March.

PWD, 2008b. Revised Oil/Water Separator List, Table J-C4(a). NAS Brunswick, Maine. January 1.

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

Sebago Technics, 1998. Existing Conditions, Naval Air Station Brunswick, Maine. Sebago Technics, Westbrook, Maine. August.

Sewall (James W. Sewall Company), 1953. NAS Brunswick Aerial Photographs. James W. Sewall Company, Old Town, ME. June 29.

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

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

Sewall, 1981. NAS Brunswick Aerial Photographs. James W. Sewall Company, Old Town, ME. October 17.

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

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

Sewall, 1993. NAS Brunswick Aerial Photographs. James W. Sewall Company, Old Town, ME. November 8.

Sewall, 1997. NAS Brunswick Aerial Photographs. James W. Sewall Company, Old Town, ME. May 27.

TABLE 1
HAZARDOUS WASTE QUANTITIES 1990 THROUGH 2009
RCRA PARTIAL CLOSURE REPORT
BUILDING 200 – OPERATIONS-CONTROL TOWER BUILDING
NAVAL AIR STATION BRUNSWICK, MAINE
PAGE 1 OF 2

Description	RCRA Waste Code	Quantity (pounds)
adhesive	D001, D035, G11	113.08
adhesive caulk	G11, NRCR	3.22
adhesive,sealing compound	NRCR	91
aerosol	NRCR, G06	5.27
aerosol empty	G06	2.30
Alcohol	G11	0.06
anti seize compound	NRCR	14
auto grease	NRCR	7
battery, lead	D002, D008	91
battery, lithium	FP, U01, D001, D003	80.96
battery, magnesium	D002	33
battery, mercury	D009	6
battery, Ni-Cad	ES, U01, D006, D002	721.65
battery, magnesium-carbon	D007	96
cathode ray tube (CRT)	FP, U01	281
cleaning compound	D001	8
cleaning compound solvent	NRCR	1
coating, epoxy	D001	21
corrosion preventive compound	D002, D001	160
cylinders empty frozen	D009	3
decontaminating kit	NRCR	290
dry cleaning solvent	D001	57
freezing compound	D001	4
fuel oil no.1	WO	21,600
fuel-water mix	G19	320
gas-soaked rags	G32	1.60
grease	F003, D008, NRCR, FP	70
grease-lubricant	N/R	49
hydraulic fluid	NRCR	4
insulating compound	D001	2
lamps, fluorescent 2 foot	U01	0.36
lamps, fluorescent 4 foot	FP, U01	25.44
lamps, fluorescent round	U01	6
lamps, fluorescent stick	U01	0.40
lead	G19	0.50
lube oil	NRCR	290
lube oil instrument	NRCR	1
lube oil, gear	D001	25
metal pre-treat	D002	81
oil/ water separator	G32	2,480
oil/gas	D005	1
paint	G06	0.50

TABLE 1
HAZARDOUS WASTE QUANTITIES 1990 THROUGH 2009
RCRA PARTIAL CLOSURE REPORT
BUILDING 200 – OPERATIONS-CONTROL TOWER BUILDING
NAVAL AIR STATION BRUNSWICK, MAINE
PAGE 2 OF 2

Description	RCRA Waste Code	Quantity (pounds)
paint filters	D007	84
paint latex	PD,G06	28.30
paint rags	D001, D035, F003, F004, F005	529
paint rags	G19	5.72
paint, metal polish	NRCR	56
paint, misc	D001, D035	101
paint, omd paint barrel	NRCR,D001, D007, D008,	15
paint, brown latex	D001	5
paint, clear finish	D001, D007	1
paint, primer coating	D001, D035	47
paint, waste	D001, D007, D008, D035	23
paint, rosin flux	D001	8
paint, rust preventative	NRCR	40
penetrating oil	D001	18
plastic polish	G09	1.08
sealant	FP	1
sealing compound	F005	8
soap	FP	2
tech petrolatum	D001	11
thinners c23 solvent	F003	8
toner	D001	17
varnish, electrical paint waste	D001	2
waste oil	WO	30
wax floor	G19	1

Note:

This table is a summary of all hazardous waste generated by air operations, including Building 200, based on NAS Brunswick Hazardous Waste Database.

TABLE 2
PRE-CLEANING INVESTIGATION WIPE SAMPLE RESULTS - METALS
RCRA PARTIAL CLOSURE REPORT
BUILDING 200 – OPERATIONS-CONTROL TOWER BUILDING
NAVAL AIR STATION BRUNSWICK, MAINE
PAGE 1 OF 2

SAMPLE ID ⁽¹⁾				B200-WP01	B200-WP02	B200-WP03	B200-WP04	B200-WP05	B200-WP06	B200-WP07
LOCATION				Room 109 garage floor - southeast	Room 109 garage floor - northwest	Room 108 Chief's Mess lab bench	Room 108 Chief's Mess floor - southeast	Room 108 Chief's Mess floor - northwest	Room 219 Instrument Repair floor - west	Room 219 Instrument Repair floor - east
MATRIX				wipe	wipe	wipe	wipe	wipe	wipe	wipe
SAMPLE DATE				12/15/10	12/15/10	12/15/10	12/15/10	12/15/10	12/15/10	12/15/10
				CRITERIA						
METALS ($\mu\text{g}/\text{ft}^2$)	WTC	MEDEP floor	MEDEP wall							
arsenic	36	--	--	5.1 UJ	8 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U
barium	10000	--	--	70	160	180	76	19 U	340	260
cadmium	140	--	--	52	18	6.3 J	3 J	1.8 J	2.4 J	2.6 J
chromium	440	--	--	120	35	7.2 UJ	4.4 UJ	3.9 UJ	3.7 UJ	4.3 UJ
lead	NA	40	250	46	45	17	6.3	4.1 UJ	44	220
mercury	15	--	--	0.093 J	0.065 J	0.0065 J	0.0074 J	0.093 UJ	0.0083 J	0.093 UJ
selenium	--	--	--	6.5 U	6.5 U	4.2 J	6.5 U	6.5 U	6.5 U	6.5 U
silver	730	--	--	0.83 J	3.7 U	1.1 J	3.7 U	3.7 U	3.7 U	3.7 U

TABLE 2
PRE-CLEANING INVESTIGATION WIPE SAMPLE RESULTS - METALS
RCRA PARTIAL CLOSURE REPORT
BUILDING 200 – OPERATIONS-CONTROL TOWER BUILDING
NAVAL AIR STATION BRUNSWICK, MAINE
PAGE 2 OF 2

SAMPLE ID ⁽¹⁾				B200-WP08	B200-WP09	B200-WP10	B200-WP11	B200-WP12	B200-WP13
LOCATION				Room 221 Instrument Repair floor - northwest	Room 221 Instrument Repair floor - southeast	Room 212 Repair Shop lab bench	Room 212 Repair Shop floor - west	Room 111 Transformer Room floor - east	Room 111 Transformer Room floor - west
MATRIX				wipe	wipe	wipe	wipe	wipe	wipe
SAMPLE DATE				12/15/2010	12/15/10	12/15/10	12/15/10	12/15/10	12/15/10
				CRITERIA					
METALS (µg/ft ²)	WTC	MEDEP floor	MEDEP wall						
arsenic	36	--	--	4.6 U	4.6 U	4.6 U	4.6 U	na	na
barium	10000	--	--	11 U	13 U	64	81	na	na
cadmium	140	--	--	2.8 UJ	1.7 J	52	13	na	na
chromium	440	--	--	3.7 UJ	3.7 UJ	71	10 UJ	na	na
lead	NA	40	250	21	12	44	32	na	na
mercury	15	--	--	0.093 UJ	0.093 UJ	1.9	0.19 J	na	na
selenium	--	--	--	6.5 U	6.5 U	6.5 U	4.1 J	na	na
silver	730	--	--	3.7 U	3.7 U	2.1 J	1.1 J	na	na

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/ft² micrograms per square foot

na not analyzed

U not detected (with associated detection limit)

J estimated result

UJ not detected, and associated detection limit is estimated

-- no criteria available

NA not applicable

Shading indicates criteria exceeded

**TABLE 3
PRE-CLEANING INVESTIGATION WIPE SAMPLE RESULTS - PCBs
RCRA PARTIAL CLOSURE REPORT
BUILDING 200 – OPERATIONS-CONTROL TOWER BUILDING
NAVAL AIR STATION BRUNSWICK, MAINE**

SAMPLE ID ⁽¹⁾	EPA PCB Spill Cleanup Policy ⁽²⁾	B200-WP12	B200-WP13
LOCATION		Room 111 Transformer Room floor - east	Room 111 Transformer Room floor - west
MATRIX		wipe	wipe
SAMPLE DATE		12/15/10	12/15/10
PCB ($\mu\text{g}/100 \text{ cm}^2$)			
Aroclor-1016	--	0.25 U	0.25 U
Aroclor-1221	--	0.25 U	0.25 U
Aroclor-1232	--	0.3 U	0.3 U
Aroclor-1242	--	0.25 U	0.25 U
Aroclor-1248	--	0.25 U	0.25 U
Aroclor-1254	--	0.25 U	0.25 U
Aroclor-1260	--	0.25 U	0.25 U
Total PCBs	10	1.8 U	1.8 U

Notes:

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

(2) Source: U.S. Environmental Protection Agency, Wipe Sampling and Double Wash/Rinse Cleanup as Recommended by the Environmental Protection Agency PCB Spill Cleanup Policy, June 23, 1987, Revised and Clarified on April 18, 1991.

Laboratory results reported as micrograms per wipe.

Wipe sample surface area: 100 cm^2 (10 cm by 10 cm)

$\mu\text{g}/100 \text{ cm}^2$ micrograms per 100 square centimeters

U not detected (with associated detection limit)

PCB polychlorinated biphenyl

-- no criteria available

**TABLE 4
POST-CLEANING INVESTIGATION WIPE SAMPLE RESULTS
RCRA PARTIAL CLOSURE REPORT
BUILDING 200 – OPERATIONS-CONTROL TOWER BUILDING
NAVAL AIR STATION BRUNSWICK, MAINE**

SAMPLE ID ⁽¹⁾			B200-WP14	B200-WP15	B200-WP16	B200-WP17	B200-WP17 (duplicate)	B200-WP18	B200-WP19	B200-WP20
LOCATION			Room 219 Instrument Repair floor - west	Room 219 Instrument Repair floor - east	Room 219 Instrument Repair north wall	Room 109 garage floor - northwest	Room 109 garage floor - northwest	Room 109 garage floor- southeast	Room 109 garage wall - southeast	Room 109 garage wall - northwest
MATRIX			wipe	wipe	wipe	wipe	wipe	wipe	wipe	wipe
SAMPLE DATE			3/1/2011	3/1/2011	3/1/2011	3/1/2011	3/1/2011	3/1/2011	3/1/2011	3/1/2011
			CRITERIA							
METALS (µg/ft ²)			MEDEP floor	MEDEP wall						
lead			40	250	1.4	0.15 J	0.12 J	0.29 J	0.35 J	0.9
			0.22 J							0.29 J

Notes:

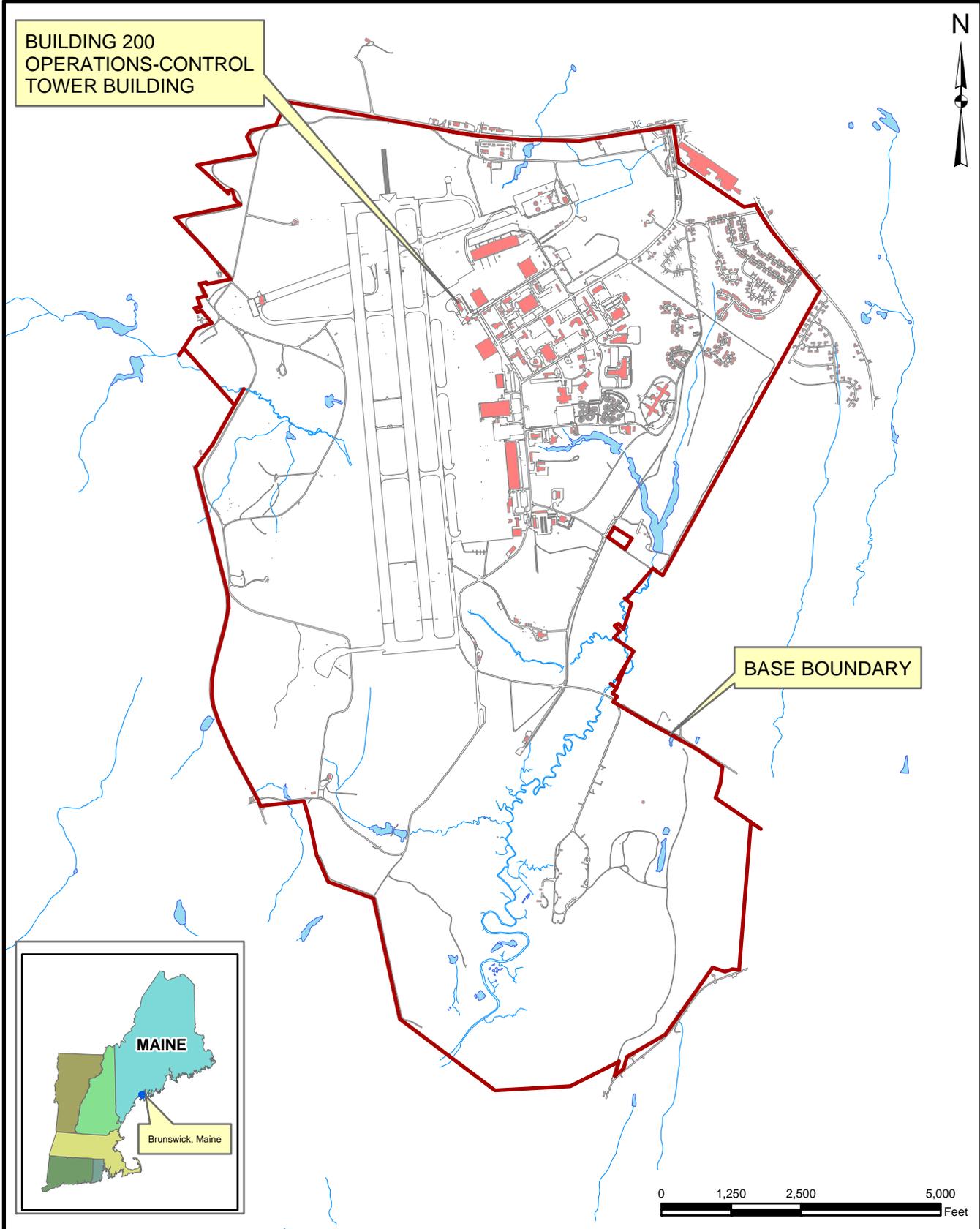
(1) Sample prefix "NASB" is not shown.

Wipe sample surface area: 10 centimeters (cm) by 10 cm

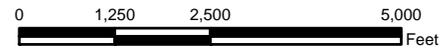
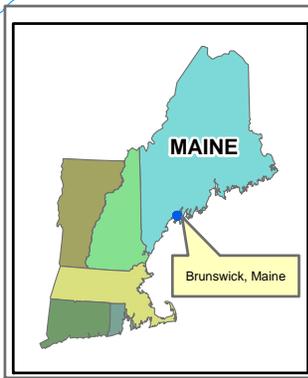
J estimated result

µg/ft² micrograms per square foot

BUILDING 200
OPERATIONS-CONTROL
TOWER BUILDING



BASE BOUNDARY



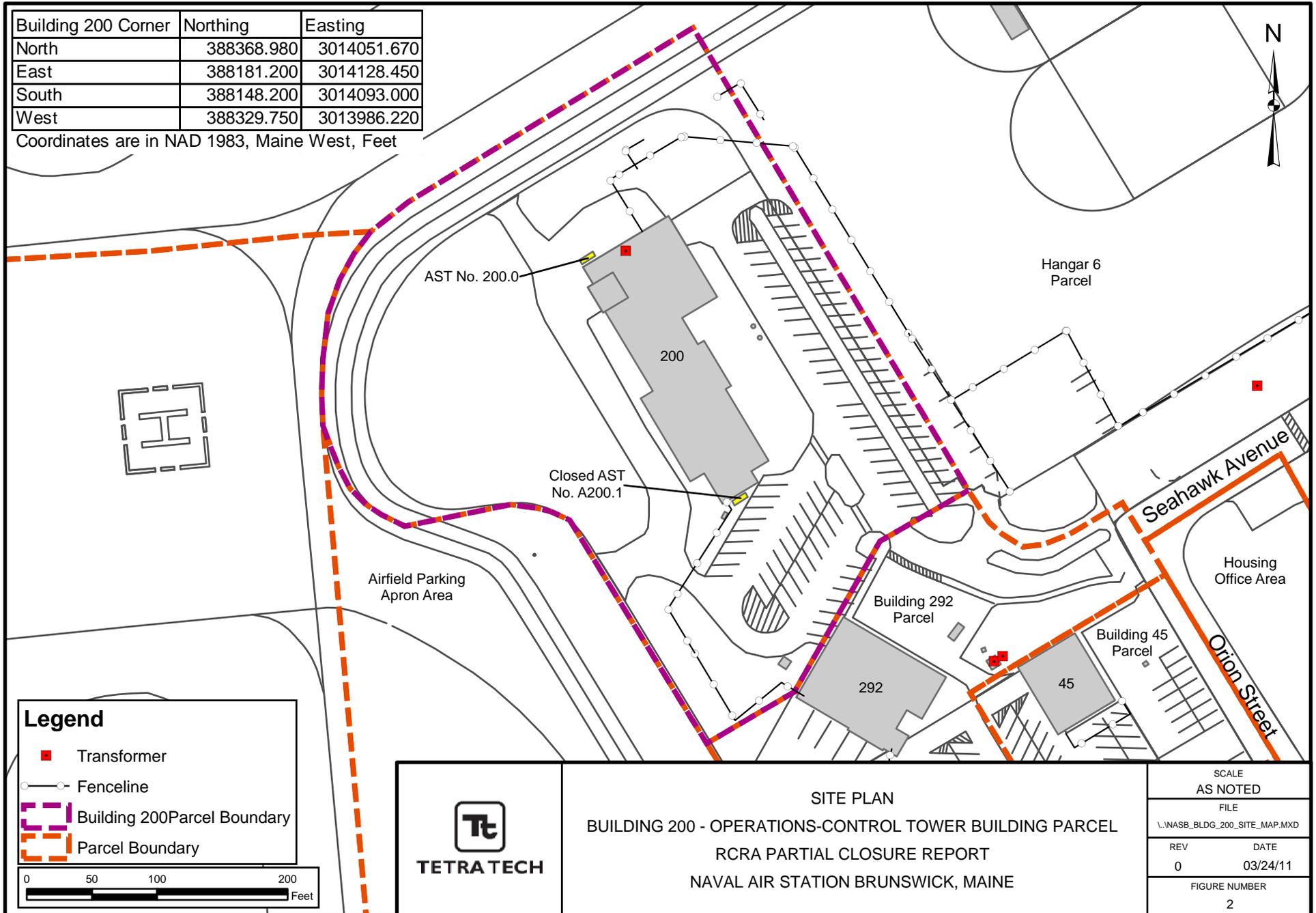
Tetra Tech NUS, Inc.

SITE PLAN
 BUILDING 200 - OPERATIONS-CONTROL TOWER BUILDING PARCEL
 RCRA PARTIAL CLOSURE REPORT
 NAVAL AIR STATION BRUNSWICK, MAINE

SCALE AS NOTED	
FILE I:_NASB_BLDG_200_LOCUS.MXD	
REV 0	DATE 03/23/11
FIGURE NUMBER 1	

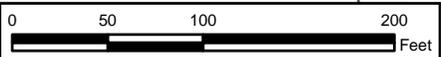
Building 200 Corner	Northing	Easting
North	388368.980	3014051.670
East	388181.200	3014128.450
South	388148.200	3014093.000
West	388329.750	3013986.220

Coordinates are in NAD 1983, Maine West, Feet



Legend

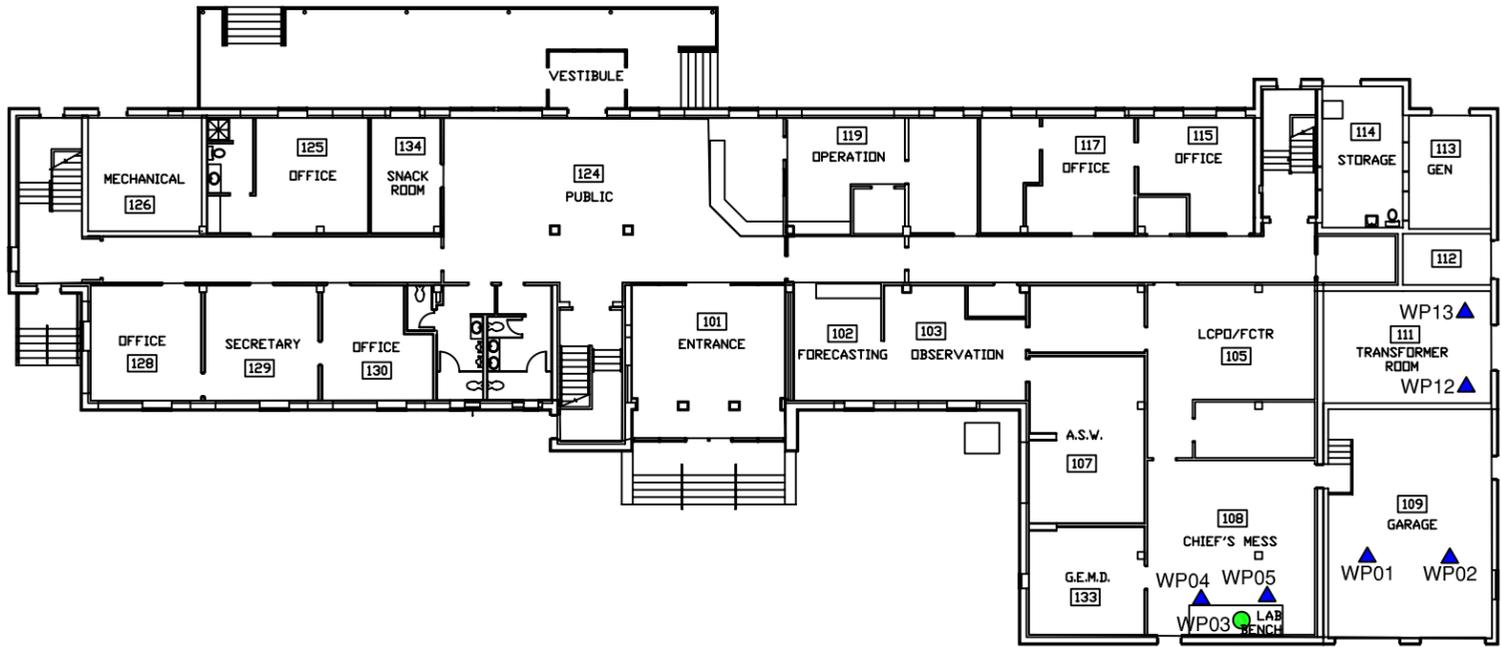
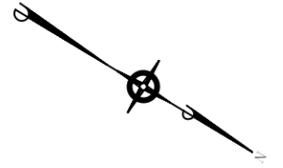
- Transformer
- Fenceline
- Building 200 Parcel Boundary
- Parcel Boundary



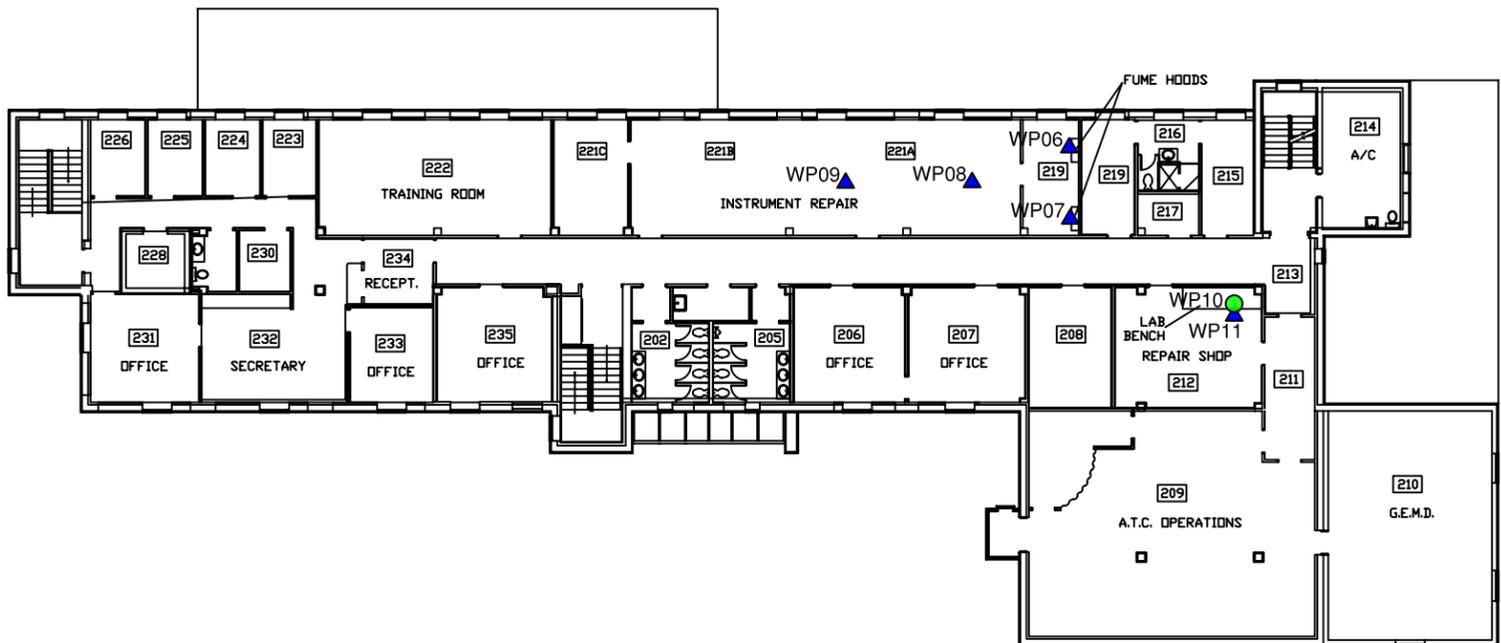
SITE PLAN
BUILDING 200 - OPERATIONS-CONTROL TOWER BUILDING PARCEL
RCRA PARTIAL CLOSURE REPORT
NAVAL AIR STATION BRUNSWICK, MAINE

SCALE AS NOTED	
FILE	
\L\NASB_BLDG_200_SITE_MAP.MXD	
REV	DATE
0	03/24/11
FIGURE NUMBER	
2	

FIRST FLOOR



SECOND FLOOR



LEGEND

- WP01 ▲ FLOOR WIPE SAMPLE LOCATION
- WP03 ● BENCH WIPE SAMPLE LOCATION

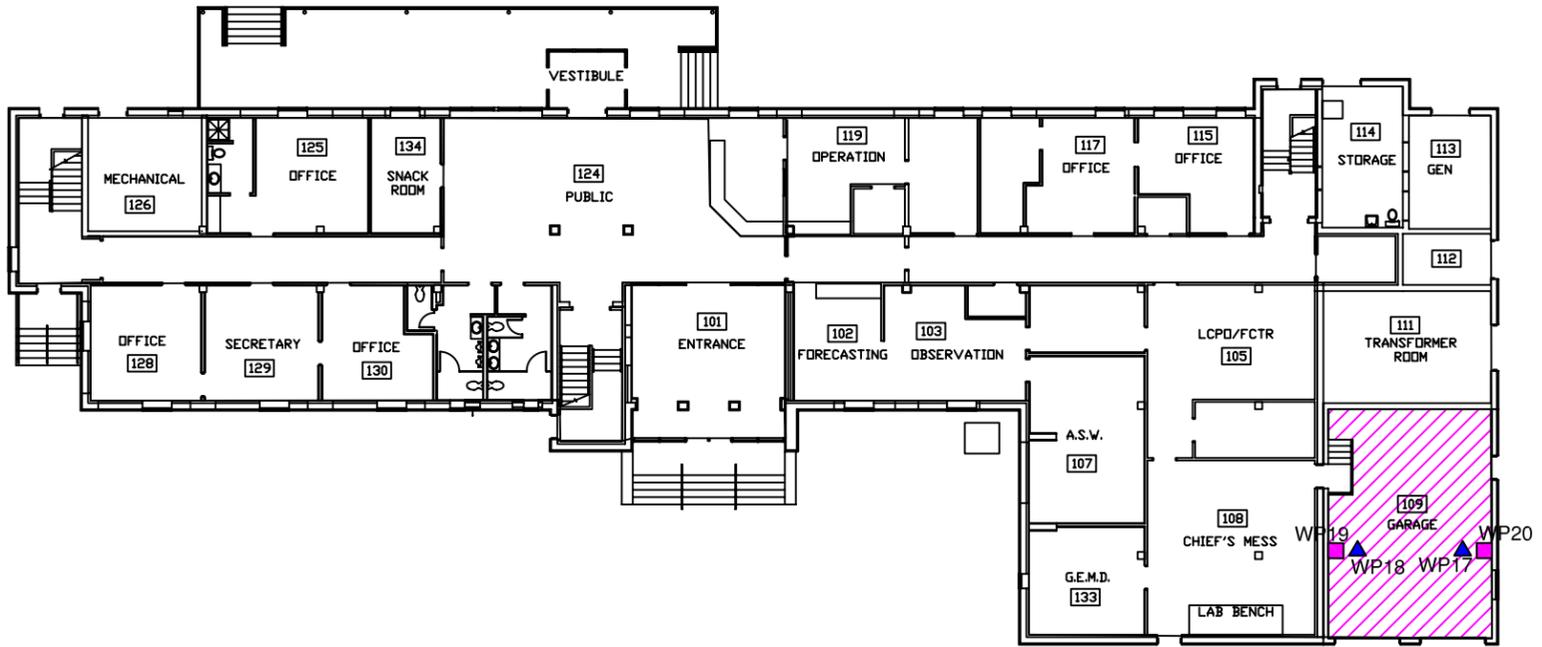
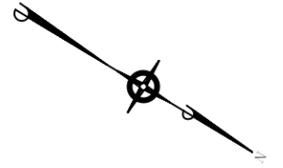


TETRA TECH NUS, INC.

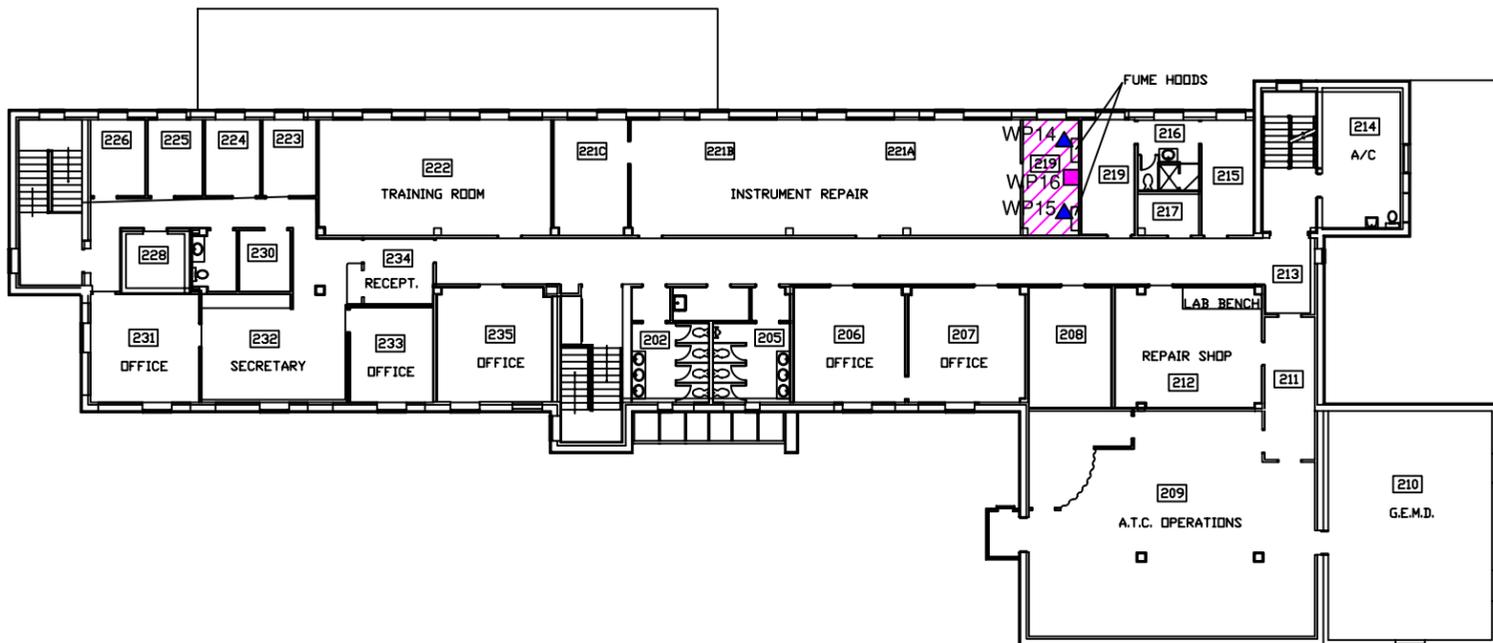
PRE-CLEANING SAMPLE LOCATIONS
 BUILDING 200 - OPERATIONS-CONTROL TOWER
 BUILDING PARCEL
 RCRA PARTIAL CLOSURE REPORT
 NAVAL AIR STATION BRUNSWICK, MAINE

FILE \\.\NASB_BLDG_200_PRE.DWG	SCALE AS NOTED
FIGURE NUMBER FIGURE NO. 3	REV 0
	DATE 3/23/11

FIRST FLOOR



SECOND FLOOR



LEGEND

- WP15 ▲ FLOOR WIPE SAMPLE LOCATION
- WP16 ■ WALL WIPE SAMPLE LOCATION
- DECONTAMINATION WORK AREA



TETRA TECH NUS, INC.

POST-CLEANING SAMPLE LOCATIONS
 BUILDING 200 - OPERATIONS-CONTROL TOWER
 BUILDING PARCEL
 RCRA PARTIAL CLOSURE REPORT
 NAVAL AIR STATION BRUNSWICK, MAINE

FILE \\.\NASB_BLDG_200_POST.DWG	SCALE AS NOTED
FIGURE NUMBER FIGURE NO. 4	REV 0
	DATE 3/23/11

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

Inspection Date: 1/20/2010

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

Weather: Clear, 20s

GENERAL BUILDING INFORMATION / USES

Building Name: Building 200 – Operations-Control Tower Building

Function: Operations Building

Size: 22,409 SF

Year of Construction: 1954

Building 200 parcel is located in the north-central portion of NAS Brunswick. This parcel is bordered to the north, east by the Hangar 6 parcel; to the south by Building 292 parcel and the Airfield Parking Apron Area; and to the west by the Airfield Parking Apron Area and the Runways Area.

Building 200 is a two-story steel framed structure with stucco siding on a concrete foundation and a five-story control tower with similar construction. Building 200 consists of offices, air traffic control operations room, repair shop, instrument repair rooms, weather service room, generator and boiler room, transformer room, storage rooms and garage. The building was used as air operations and air traffic control tower prior to 2006. Recently the building has been used for air passenger terminal, weather service, ground mount and cargo. Building 200 was originally heated via steam, and then by an oil-fired boiler until the base was converted to natural gas in 2001.

HWSA INSPECTION / CONDITION

Site visit observations are summarized below:

- At the time of the site visit, Building 200 was unoccupied, vacant, and in fair condition.
- 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.
- Building 200 consists of offices, air traffic control operations room, repair shop, instrument repair rooms, weather service room, generator and boiler room, transformer room, storage rooms and garage.
- Garage–Room 109 was used for vehicle storage and maintenance. Staining was observed on the floor.
- Instrument repair–Room 219 and Room 221 were used for radio repair and maintenance. Two fume hoods for soldering were installed in Room 219.
- Repair shop–Room 212 was used for radar repair and maintenance.
- Chief's Mess–Room 108 was used as electronics repair room.
- No peeling and flaking paint was observed on the exterior or interior of the building.
- One non-polychlorinated-biphenyl (PCB) pad-mounted transformer was installed in Room 111 of Building 200. Staining was observed on the floor.
- A 500-gallon steel AST was observed at northwest of Building 200. This AST is used to contain diesel fuel. No evidence of a past leak from this AST was observed.
- A closed 3,000-gallon fuel oil AST was observed at the southeast of Building 200. The tank appeared to be in good condition and no evidence of a past leak from this AST was observed.
- Vinyl floor tiling was observed throughout the building and appeared to be in good condition. All tiles were replaced in 1992.

POTENTIAL PCB-CONTAINING TRANSFORMERS

One pad-mounted transformer was observed in the Room 111 of Building 200. According to NASB records, the observed 300 kVA transformer was reported to have been manufactured in 1990 by Cooper Rural Transformer & Electric (RTE) with serial number 906005744. RTE transformers are non-PCB-containing.

APPLICABLE REPORTS / DOCUMENTS

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

1943 map – Former Buildings 5 (control tower), 49 and 78 are located in the current Building 200 parcel.

1946 map – Former Buildings 5 and 49 are shown and Building 78 is not shown.

1952 map – Same as 1946 map.

1953 aerial – Former Buildings 5 and 49 present.

1956 map – Buildings 49, 200 are shown and former Building 5 is not shown.

1957 map – Building 200 is shown and former Building 49 is not shown.

1958 aerial – Building 200 present.

1965 buildings list – Buildings 200 is listed as Operations Building.

1975 map – Building 200 present.

1976 buildings list – Buildings 200 is listed as Operations Building.

1978 map – Building 200 is shown.

1978 aerial – Buildings 200 present.

1979 map – Building 200 shown.

1981 aerial – Same as 1978 aerial.

1983 map – Building 200 is shown.

1984 aerial – Same as 1981.

1989 map – The footprint change of Building 200 is shown.

1989 aerial – The footprint change of Building 200 present.

1993 aerial – Same as 1989.

1997 aerial – Same as 1993 aerial

2003 building list – Buildings 200 is listed as Operations Control Tower.

2006 map – Same as 1989.

2008 building list – Same as 2003 Building List.

The following above ground storage tanks (ASTs), underground storage tanks (USTs) are associated with Building 200:

ASTs

- A 550-gallon AST (A200.0) was installed in 1992 and is currently active. The AST is a double-walled steel tank and used to contain diesel fuel for generator.
- A 3,000-gallon AST (A200.1) was installed in 1999 and was closed in April 2009. The fuel oil tank is double-walled with double-walled piping and is located in a paved area.

USTs

- One 550-gallon fiberglass-reinforced plastic (FRP) UST (10045-427) was installed in October 1987 and removed in August 1992. The UST was used to contain diesel fuel for generator.

According to NASB records, no oil-water separators (OWS) were registered to Building 200.

HAZARDOUS WASTE STORAGE RECORDS

According to NAS Brunswick Hazardous Waste Manager, D. Bruce Smith, hazardous waste generation was tracked by squadron and/or activity (department). An itemized list of hazardous wastes associated with air operations and air traffic control activities was obtained from the NAS Brunswick Hazardous Waste Database, for the period from 1990 through 2009.

According to MEDEP and NAS Brunswick spill records, no spills were reported in the Building 200 parcel.

MISCELLANEOUS NOTES

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

INSPECTOR SIGNATURE: _____

Handwritten signature of D. Bruce Smith in black ink, written over a horizontal line.

PHOTOGRAPHS



No. 1 Building 200— Operations-Control Tower Building, NAS Brunswick
Building 200 southwest elevation



No. 2 Building 200— Operations-Control Tower Building, NAS Brunswick
Building 200 northeast elevation, main entrance



No. 3 Building 200– Operations-Control Tower Building, NAS Brunswick
Room 109 - Garage



No. 4 Building 200– Operations-Control Tower Building, NAS Brunswick
Room 108 – Chief's Mess



No. 5 Building 200– Operations-Control Tower Building, NAS Brunswick
Room 111 – Transformer Room



No. 6 Building 200– Operations-Control Tower Building, NAS Brunswick
Room 219 – Instrument Repair Room with fume hoods



No. 7 Building 200– Operations-Control Tower Building, NAS Brunswick
Room 221 – Instrument Repair Room



No. 8 Building 200– Operations-Control Tower Building, NAS Brunswick
Room 232 – administrative area in the location of the former photography shop



No. 9 Building 200– Operations-Control Tower Building, NAS Brunswick
Closed AST - Tank A200.1; 3,000-gallon-capacity tank for No.1 heating oil, south of Building 200



No. 10 Building 200– Operations-Control Tower Building, NAS Brunswick
AST - Tank 200.0; 550-gallon-capacity tank for diesel oil, at northwest corner of Building 200