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FINAL RESOURCE CONSERVATION AND RECOVERY ACT PARTIAL CLOSURE REPORT
FOR BUILDING 19 WITH TRANSMITTAL LETTER NAS BRUNSWICK ME
2/11/2011
NAS BRUNSWICK

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

February 11, 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 19

Dear Mr. Vigneault:

A copy of the Final RCRA Partial Closure Report for Building 19 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,



LM LISA M. JOY
Environmental Director

Enclosure: (1) Final RCRA Partial Closure Report for Building 19

Copy to:
NAVFAC Mid-Atlantic (B. Abraham)
NAS Brunswick (M. Fagan/D. Smith)
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RCRA PARTIAL CLOSURE REPORT
for
BUILDING 19 – SEABEE/PUBLIC WORKS SHOPS
NAVAL AIR STATION BRUNSWICK, MAINE
USEPA IDENTIFICATION NUMBER ME8170022018
FEBRUARY 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 Building 19 at Naval Air Station Brunswick (NAS Brunswick).

2. PROPERTY DESCRIPTION

Building 19 (Public Works Shops) is located within the Public Works Buildings complex, in the south-central portion of NAS Brunswick, east of the Airfield Apron area (Figure 1). The building can be accessed from Huey Drive to the north or from Orion Street to the west (Figure 2). Immediately north of Building 19 is an asphalt-paved parking lot, with Huey Drive and the Building 50 (Groundwater Treatment Plant) parcel beyond. Building 19 is bordered to the east by the driveway for Building 53 (Public Works Administration Building) and the Building 53 parcel; to the south by grass-covered and forested land, and Buildings 57 and 408 to the southeast and southwest, respectively; to the west by an asphalt-paved parking area, and Building 590 (Transportation Maintenance) and Orion Street beyond; and to the northwest by Building 584 (General Warehouse).

Building 19 was constructed in 1981 and consists of a 6,000-square-foot, single-story structure on a concrete slab foundation, with aluminum siding and an aluminum roof. The building is used primarily for carpentry activities, and is comprised of storage areas and workshops, with a small administrative area. Two oil-fired unit heaters and two natural-gas-fired unit heaters serve shop areas, while a natural-gas furnace is provided to serve office and support areas (MRRR, 2006).

Photographs of the Building 19 exterior and interior are provided in an attachment.

The investigation conducted under this report applies only to the building footprint of Building 19 (as shown on Figure 2). The RCRA Partial Closure Report for the Building 584 (General Warehouse) Parcel addresses the land surrounding and the groundwater underlying Building 19.

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 19, including past use and operations at that location.

Records reviewed include historical aerial photographs, the NAS Brunswick Other Environmental Liabilities (OEL) Database, area-specific reports, facility plans and drawings, and hazardous waste records. Aerial photographs dated 1953, 1958, 1978, 1981, 1984, 1989, 1993 and 1997 (Sewall, 1953, 1958, 1978, 1981, 1984, 1989, 1993 and 1997) were reviewed. Additional aerial photographs for the parcel dated 1940, 1959, 1965, 1966, 1972, 1978, and 1980 were also reviewed (U.S. EPA, 1987). Public Works Department (PWD) site base maps dated 1943, 1946, 1952, 1956, 1957, 1975, 1978, 1979, 1989, and 2006 (PWD, 1943, 1946, 1952, 1956, 1957, 1975, 1978, 1979, 1989, and 2006a) and site building lists for 1950, 1965, 1976, 2003, 2006 and 2008 (PWD, 1950, 1965, 1976, 2003, 2006b and 2008a) were also reviewed.

Based on a review of the historical building lists and on discussions with NAS Brunswick Public Works Department (PWD) personnel, since its construction in 1981, Building 19 was used only as carpentry and plumbing shops. (Note: prior to the construction of the current Building 19, this building identification number had been previously assigned to a former barracks, which was located on the north side of Avenue E, which is now Burbank Avenue.)

The 2003 buildings index is the first available building list to include Building 19, and lists it as a 6,000-square-foot structure constructed in 1981. This construction date is consistent with aerial photographs and historical site plans. The following summarizes other historical observations relating to Building 19 and proximal areas:

- The 1940 aerial photograph shows the Building 19 area is primarily wooded, with Gurnet Road (now called Huey Drive) running northwest to southeast just north of the current Building 19 location. On historical plans dated between 1946 and 1952, the Building 19 area is shown just southeast of and within the cleared approach of the former airfield. In the aerial photograph dated 1953, no structures are yet visible in the vicinity of Building 19.
- The historical site plan dated 1956 indicates that five structures were located north of Building 19, along Gurnet Road. These structures were labeled T-204 (Public Works Storage), 71 (Administration), 59 (Public Works Storage), 60 (Public Works Storage) and 93 (Public Works Storage), and are visible in historical aerial photographs dated 1959, 1965, and 1966.
- The historical site plan dated 1957 shows a fenced area west of the approximate location of Building 19.
- In aerial photographs dated between 1958 and 1978, disturbed ground, a dirt roadway, and possible debris are visible in the approximate current location of Building 19. Visible on historical aerial photographs dated 1965 and 1966 are dirt roadways which allow access from Orion Street and Gurnet Road to the area behind Building 584, to the Building 19 area, and to the current parking lot located to the south. In aerial photographs dated 1972, 1978, and 1980, the area of Building 19 and the current parking areas to the west and southwest are used for extensive storage of possible transformers, tanks, and other debris. (It is noted that issues related to stored equipment at this location is addressed as part of the RCRA Partial Closure Report for the associated parcel, the Building 584 (General Warehouse) Parcel.
- Historical site plans between 1957 and 1989 show Building 584 (which was identified as "Supply/Disposal Building" on the 1966 NAS Brunswick Building List) to the northwest and former Building 93 (Public Works Storage) located northeast of the current Building 19 location, along Gurnet Road.
- Building 19 is visible in historical aerial photographs beginning in 1981. It appears that construction may have started in 1980, based upon observations from the 1980 aerial photographs.
- A building in the approximate area of current Building 53 (Public Works Administration Building) is shown on historical site plans beginning in 1983 and in the historical aerial photograph dated 1980.
- Building 19 is shown on historical site plans beginning in 2004.

Three Installation Restoration Program (IRP) sites are also located in the vicinity of Building 19, including Site 4 (Acid/Caustic Pit) to the north and northwest, Site 11 (the former Fire Training Area [FTA]) to the northeast, and Site 13 (Defense Reutilization and Marketing Office [DRMO] Area) to the south, as shown in Figure 2. The IRP Site 4 boundary extends across the very northernmost portion of the Building 19 footprint.

A Building 19 plan obtained from NAS Brunswick shows that a carpentry shop makes up the majority of the northern portion of the building, a paint-mixing area and conference room are

located in the central portion of Building 19, and a bulk storage area is located in the southern portion of the building, as indicated on Figure 3.

According to NAS Brunswick Environmental Department personnel, hazardous waste generation at Building 19 was episodic in nature, with no operations producing hazardous waste on a regular basis. The source of most hazardous waste generated by activities at Building 19 was primarily waste paint, varnish, stain, and paint thinner materials. Generally, small quantities (less than 50 gallons total) of wastes such as paint waste, varnishes, and empty and used aerosol paint cans, were generated during the 1990 through 2009 time period. For wastes generated by Building 19 and other buildings within Public Works Department, the hazardous waste database is not building-specific (i.e., the database did not segregate wastes by building) (Environmental Department, 2010).

According to NASB personnel, carpentry activities conducted in Building 19 typically included the construction of pieces that were to be installed or otherwise utilized at other buildings/areas of the base (i.e., wood cut for a door/frame would be taken to another building where it would be painted, installed, or otherwise used). Any paint or hazardous material required for carpentry projects to be conducted within Building 19 would be obtained through the Consolidated Hazardous Materials Reutilization and Inventory Management Program (CHRIMP). The majority of material ordered would be used up on the project; if hazardous materials remained after completion of a particular project, the materials would be stored and used as needed, until expended, thus limiting the amount of waste generated.

The NAS Brunswick Aboveground Storage Tank (AST) and Underground Storage Tank (UST) inventory records for Building 19 indicate that no USTs have been associated with Building 19. Four ASTs listed in the database for Building 19 are as follows:

| Tank ID | Capacity | Material Stored | Manufacturer | Year Installed/Removed |
|---------|-------------|-----------------|--------------|------------------------|
| A19.0 | 500 gallons | No. 1 fuel oil | Highland | 1995/1999 |
| A19.1 | 275 gallons | No. 1 fuel oil | Maine Tank | 1999/active |
| A19.2 | 275 gallons | No. 1 fuel oil | Maine Tank | 1999/active |
| A19.3 | 275 gallons | waste oil | Hoover | 1996/2006 |

No oil/water separators (OWS) are listed for Building 19 on the NAS Brunswick Revised Oil/Water Separator List (PWD, 2008b).

Building 19 is connected to the base-wide sanitary sewer system (Navy, 2006).

According to MEDEP and NAS Brunswick spill records, no spills were reported in the vicinity of Building 19 (Environmental Department, 1988; Environmental Department 1999; and MEDEP, 2010).

The NAS Brunswick Removed Transformer Database lists a number of non-polychlorinated biphenyl (non-PCB)-containing electrical transformers that were stored in the vicinity of Building 19; however, most were removed in 2002, and only one appears to have been directly associated with Building 19, as listed below (PWD, 2010).

| Transformer | Manufacturer | Serial Number | Manufacture Date | Notes |
|---------------------|--------------|---------------|------------------|-------------|
| 150 kVa, 270 gallon | RTE | 87600112 | 1987 | Mineral Oil |

This existing pad-mounted transformer is located to the north of Building 19 (Figure 2). The first two digits of the transformer serial number indicate that it was manufactured in 1987. It is therefore 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]).

4. SITE VISIT AND INVESTIGATION

A site visit was conducted on September 30, 2010 by Mr. Brandon Smith, P.E., and Ms. Mindi Messmer of Tetra Tech. The purpose of the visit was to verify information gathered during the records search and to collect additional information as necessary to prepare this closure report. Tetra Tech personnel were accompanied by Mr. D. Bruce Smith, the NAS Brunswick Hazardous Waste Manager. Building 19 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 19 was unoccupied and in good condition.
- The interior of Building 19 consisted of a carpentry shop, storage areas, a clean/mix paint room, and a paint room for distributing paint. An office space was located off the carpentry shop, adjacent to the primary entrance located on the west side of the carpentry shop.
- Tools/equipment in the carpentry shop included a radial saw, table saw, band saw, jig saw, planer, joiner, shaper, disc/belt sander, and drill press.
- In the "storage" room (Figure 3), staining was observed on the floor on the eastern side.
- In the "store" room, staining was observed on the northern corner of the floor (on the other side of the "clean/mix" room).
- Paint splatters and paint waste were observed in the sink of the clean/mix room. NAS Brunswick plans to remove and dispose of this sink in the near future.
- A former interceptor trap for the sink was removed and properly disposed of by NAS Brunswick.
- No modifications to the structure, which may conceal signs of a past release, were observed.
- A sawdust collection system was installed in the carpentry shop. The collection system was located on the western exterior of the building and consisted of cyclones with four 55-gallon drums to capture the dust.
- A flammables storage cabinet was observed in the northern part of the storage room.
- Two ASTs (A19.1 and A19.2) for fuel oil were observed in the northwestern corner of the storage room. According to NAS Brunswick Environmental Department personnel, the tanks were empty at the time of the visit and cleaning of the tanks was planned.
- Several work benches were observed in the carpentry shop.
- Four space heaters (two oil, two gas) were observed on the southern side of the storage room.
- One concrete-pad-mounted transformer was identified on the northern side of the building. No staining or other evidence of a release from this transformer was observed and it appeared to be in relatively good condition.

Based on the site visit observations and records research findings, environmental samples were collected at Building 19 to investigate the potential presence of hazardous waste residue potentially associated with the carpentry shop, the paint room and associated clean/mix and store rooms, and the bulk storage area. The investigation sample results are discussed below.

On October 20, 2010, wipe samples were collected from 11 locations in Building 19, including work benches, floors, and walls, as shown on Figure 3. Wipe samples were submitted for RCRA metals and semi-volatile organic compound (SVOC) analysis by Tetra Tech's subcontracted analytical laboratory, Analytics Environmental Laboratory. The resulting analytical data underwent limited data validation consisting of field duplicate evaluation, blank contamination evaluation, and completeness evaluation.

Wipe sample results for the Building 19 investigation 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 or for the SVOCs. However, as approved by Maine DEP for these RCRA Partial Closure activities, wipe sample results for six of the other seven metals were compared to World Trade Center (WTC) Settled Dust Screening Values (there are no WTC screening values for selenium) (WTC, 2003).

As shown in Table 1, lead was detected in all of the bench surface and floor-wipe samples collected from the carpentry shop, the paint shop, and the bulk storage area. Lead levels in these samples ranged from 42 $\mu\text{g}/\text{ft}^2$ (paint room floor) to 1,500 $\mu\text{g}/\text{ft}^2$ (stained area on the floor of the bulk storage room) and exceeded the MEDEP criterion for floors (40 $\mu\text{g}/\text{ft}^2$). In all wall-wipe samples, lead levels were below the MEDEP criterion for walls. All levels of other detected metals were below the WTC screening values.

Based on the analytical results, cleaning of Building 19 (discussed in Section 6) was required to remove lead-contaminated residue from the carpentry shop, the paint shop, and the bulk storage area, where lead residue was present at levels that exceeded the associated MEDEP criterion for dust on floors. SVOCs including butyl benzyl phthalate, di-n-butyl phthalate, and di-n-octyl phthalate were also detected in wipe samples collected from the paint shop and bulk storage area.

5. HAZARDOUS WASTE GENERATION AND STORAGE

Based on the records research and NAS Brunswick Environmental Department personnel interviews, former operations at Building 19 generated small quantities of various wastes on an episodic basis; these wastes were handled and disposed of under the NAS Brunswick hazardous waste department, as discussed in Section 3.

Based on site visit observations and sampling results, hazardous waste residue was generated at Building 19 in the form of lead-contaminated settled dust in the carpentry shop, paint-mixing shop, and in the bulk storage area, from activities conducted at the SeaBee/Public Works Shops. 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 19 to satisfy the MEDEP hazardous waste closure requirements. Closure actions were conducted at Building 19 on January 12, 2011, as discussed below.

Tetra Tech's cleaning subcontractor (TK&K Services [TK&K]) performed floor cleaning activities at Building 19, based on lead criteria exceedances in floor wipe samples, as discussed in Section 4. On January 12, 2011, cleaning activities were conducted in the carpentry shop, the paint shop, and bulk storage area. The floors were manually swept and then vacuumed with a high-efficiency particulate air (HEPA) vacuum. After sweeping and vacuuming, the 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, 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.

Thirteen (plus two duplicate) post-cleaning, confirmatory floor-wipe samples were collected from the cleaned rooms on January 13, 2011 (Figure 4). Samples were submitted to Tetra Tech's subcontracted analytical laboratory, Katahdin Analytical Services of Scarborough, Maine (Katahdin) for lead analysis. The resulting analytical data underwent limited data validation consisting of blank contamination, field duplicate evaluation, and completeness evaluation. The January 13, 2011 wipe sample results are included in Table 2.

The two post-cleaning confirmatory wipe samples from the "paint room" floor and the sample from the "clean/mix" room floor were below the MEDEP floor criterion.

In the carpentry shop, post-cleaning confirmatory wipe samples were collected from six locations on the carpentry shop floor (plus one duplicate sample). With the exception of one location (B19-WP13), the post-cleaning lead levels did not exceed the associated MEDEP floor criterion of 40 $\mu\text{g}/\text{ft}^2$. At B19-WP13, the lead level in the floor-wipe sample and its duplicate sample exceeded the criterion, at 64.1 and 52 $\mu\text{g}/\text{ft}^2$. However, the average lead level for all post-cleaning samples collected from the carpentry shop is 26.9 $\mu\text{g}/\text{ft}^2$, which is below the associated MEDEP floor criterion of 40 $\mu\text{g}/\text{ft}^2$.

In the bulk storage room, post-cleaning confirmatory wipe samples were collected from four locations on the "bulk storage" room floor (plus one duplicate sample). With the exception of two locations (B19-WP21 and B19-WP22), the post-cleaning lead levels did not exceed the associated MEDEP floor criterion of 40 $\mu\text{g}/\text{ft}^2$. At B19-WP21 the floor-wipe sample lead level of 40.9 $\mu\text{g}/\text{ft}^2$ slightly exceeded the criterion, while at B19-WP22, the floor-wipe sample lead level of 62.2 $\mu\text{g}/\text{ft}^2$ exceeded the criterion, but its duplicate sample result (22.3 $\mu\text{g}/\text{ft}^2$) did not exceed the criterion. The average lead level for all post-cleaning samples collected from the bulk storage room floor was 32.9 $\mu\text{g}/\text{ft}^2$, below the associated MEDEP floor criterion of 40 $\mu\text{g}/\text{ft}^2$.

Since the average lead levels in the carpentry shop and bulk storage room do not exceed the MEDEP floor criterion, additional closure action is not warranted at Building 19.

7. OTHER ENVIRONMENTAL CONSIDERATIONS

Any electrical transformers and ASTs known to be associated with Building 19 are discussed in Sections 3 and 4 of this report. No other transformers or ASTs were observed in the immediate vicinity of the building. No OWS or USTs are known to be associated with Building 19 and none were observed.

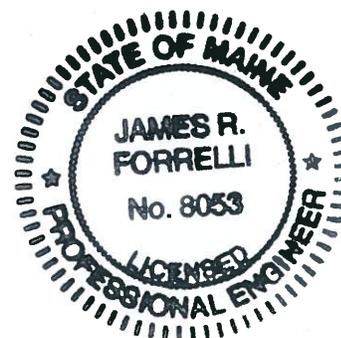
8. LIMITATIONS

This investigation of the hazardous waste closure requirement applies to the footprint of Building 19 (as shown on Figure 2), only. It does not apply to the land surrounding or the groundwater underlying Building 19.

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 residue in the form of lead-contaminated settled dust in the carpentry and paint shops and in the bulk storage room at Building 19, NAS Brunswick, Maine. In accordance with the provisions of MEDEP Regulations Chapter 851, Standards for Generators of Hazardous Waste, Section 11, the hazardous waste closure of Building 19 was completed.

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



⁽¹⁾ The Building Inspection Form provides preliminary information collected during the building inspection, including information from visual observations, Navy personnel interviews, and from documents reviewed during file reviews. It does 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
PRE-CLEANING WIPE SAMPLE RESULTS
RCRA PARTIAL CLOSURE REPORT
BUILDING 19 – PUBLIC WORKS SHOPS
NAVAL AIR STATION BRUNSWICK, MAINE
PAGE 1 OF 3**

| SAMPLE ID ⁽¹⁾ | WTC | MEDEP floor | MEDEP wall | B19-WP01 | B19-WP02 | B19-WP03 | B19-WP04 | B19-WP05 | B19-WP06 |
|--|-------|-------------|------------|------------------------------------|------------------------------------|-------------------------------|---|--------------------|---|
| LOCATION | | | | carpentry shop bench on north wall | carpentry shop bench on south wall | carpentry shop center of room | carpentry shop wall behind bench 3 feet high wall | "paint room" floor | "storage" room stained area northwest floor |
| MATRIX | | | | bench | bench | floor | wipe | wipe | Wipe |
| SAMPLE DATE | | | | 10/20/10 | 10/20/10 | 10/20/10 | 10/20/10 | 10/20/10 | 10/20/10 |
| METALS (µg/ft²) | | | | | | | | | |
| arsenic | 36 | -- | -- | 5.9 J | 1.2 J | 11 | 3.7 J | 1.1 J | NA |
| barium | 10000 | -- | -- | 94 | 310 | 250 | 31 | 96 | NA |
| cadmium | 140 | -- | -- | 1.9 J | 100 | 7.8 J | 0.19 J | 0.56 J | NA |
| chromium | 440 | -- | -- | 15 | 19 | 42 | 45 | 7.3 J | NA |
| lead | NA | 40 | 250 | 50 | 43 | 87 | 9.3 | 42 | NA |
| mercury | 15 | -- | -- | 0.083 J | 0.093 J | 0.19 J | 0.19 J | 0.056 J | NA |
| selenium | -- | -- | -- | 6.5 U | 6.5 U | 6.5 U | 6.5 U | 6.5 U | NA |
| silver | 730 | -- | -- | 3.7 U | 0.65 J | 0.46 J | 3.7 U | 3.7 U | NA |
| SEMIVOLATILES (µg/ft²) | | | | | | | | | |
| butyl benzyl phthalate | -- | -- | -- | NA | NA | NA | NA | 5900 | 21000 |
| di-n-butyl phthalate | -- | -- | -- | NA | NA | NA | NA | 65 | 54 |
| di-n-octyl phthalate | -- | -- | -- | NA | NA | NA | NA | 53 | 320 |
| other SVOCs | -- | -- | -- | NA | NA | NA | NA | ND | ND |

**TABLE 1
PRE-CLEANING WIPE SAMPLE RESULTS
RCRA PARTIAL CLOSURE REPORT
BUILDING 19 – PUBLIC WORKS SHOPS
NAVAL AIR STATION BRUNSWICK, MAINE
PAGE 2 OF 3**

| SAMPLE ID ⁽¹⁾ | WTC | MEDEP floor | MEDEP wall | B19-WP06 (Duplicate) | B19-WP07 | B19-WP08 | B19-WP09 | B19-WP10 | B19-WP11 |
|--|----------|-------------|------------|---------------------------------------|-------------------------------|-----------------------------|--|-------------------------|----------------------------------|
| LOCATION | | | | "storage" room stained area northwest | "paint room" wall 3 feet high | paint shop "clean/mix" room | paint shop "clean/mix" room behind sink backsplash 3 feet high | paint shop "store" room | "bulk storage" room stained area |
| MATRIX | | | | floor | wall | floor | wall | floor | floor |
| SAMPLE DATE | | | | wipe | wipe | wipe | wipe | wipe | wipe |
| METALS (µg/ft ²) | 10/20/10 | 10/20/10 | 10/20/10 | 10/20/10 | 10/20/10 | 10/20/10 | 10/20/10 | 10/20/10 | 10/20/10 |
| arsenic | 36 | -- | -- | NA | NA | 13 | NA | NA | 5.2 J |
| barium | 10000 | -- | -- | NA | NA | 510 | NA | NA | 1900 |
| cadmium | 140 | -- | -- | NA | NA | 5.7 J | NA | NA | 1.5 J |
| chromium | 440 | -- | -- | NA | NA | 69 | NA | NA | 26 |
| lead | NA | 40 | 250 | NA | NA | 340 | NA | NA | 1500 |
| mercury | 15 | -- | -- | NA | NA | 0.19 J | NA | NA | 0.093 J |
| selenium | -- | -- | -- | NA | NA | 5.6 J | NA | NA | 4.8 J |
| silver | 730 | -- | -- | NA | NA | 1.2 J | NA | NA | 0.56 J |
| SEMIVOLATILES (µg/ft²) | | | | | | | | | |
| butyl benzyl phthalate | -- | -- | -- | 18000 | 18 J | 300 | 31 | 100 | 100 |
| di-n-butyl phthalate | -- | -- | -- | 55 | 10 J | 10 J | 9.3 U | 9.3 U | 9.3 U |
| di-n-octyl phthalate | -- | -- | -- | 400 | 9.3 U | 9.3 U | 9.3 U | 9.3 U | 9.3 U |
| other SVOCs | -- | -- | -- | ND | ND | ND | ND | ND | ND |

Notes:

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

Wipe sample surface area: 10 cm by 10 cm

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

µg/ft² micrograms per square foot

**TABLE 1
PRE-CLEANING WIPE SAMPLE RESULTS
RCRA PARTIAL CLOSURE REPORT
BUILDING 19 – PUBLIC WORKS SHOPS
NAVAL AIR STATION BRUNSWICK, MAINE
PAGE 3 OF 3**

Notes (continued):

- J estimated result
 - U not detected (with associated detection limit)
 - no criteria available
 - NA not analyzed
 - ND not detected
- Shading indicates criteria exceeded

**TABLE 2
 POST-CLEANING WIPE SAMPLE RESULTS
 RCRA PARTIAL CLOSURE REPORT
 BUILDING 19 – PUBLIC WORKS SHOPS
 NAVAL AIR STATION BRUNSWICK, MAINE
 PAGE 1 OF 2**

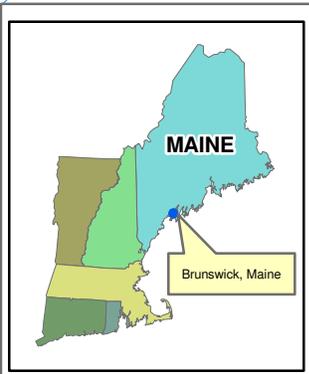
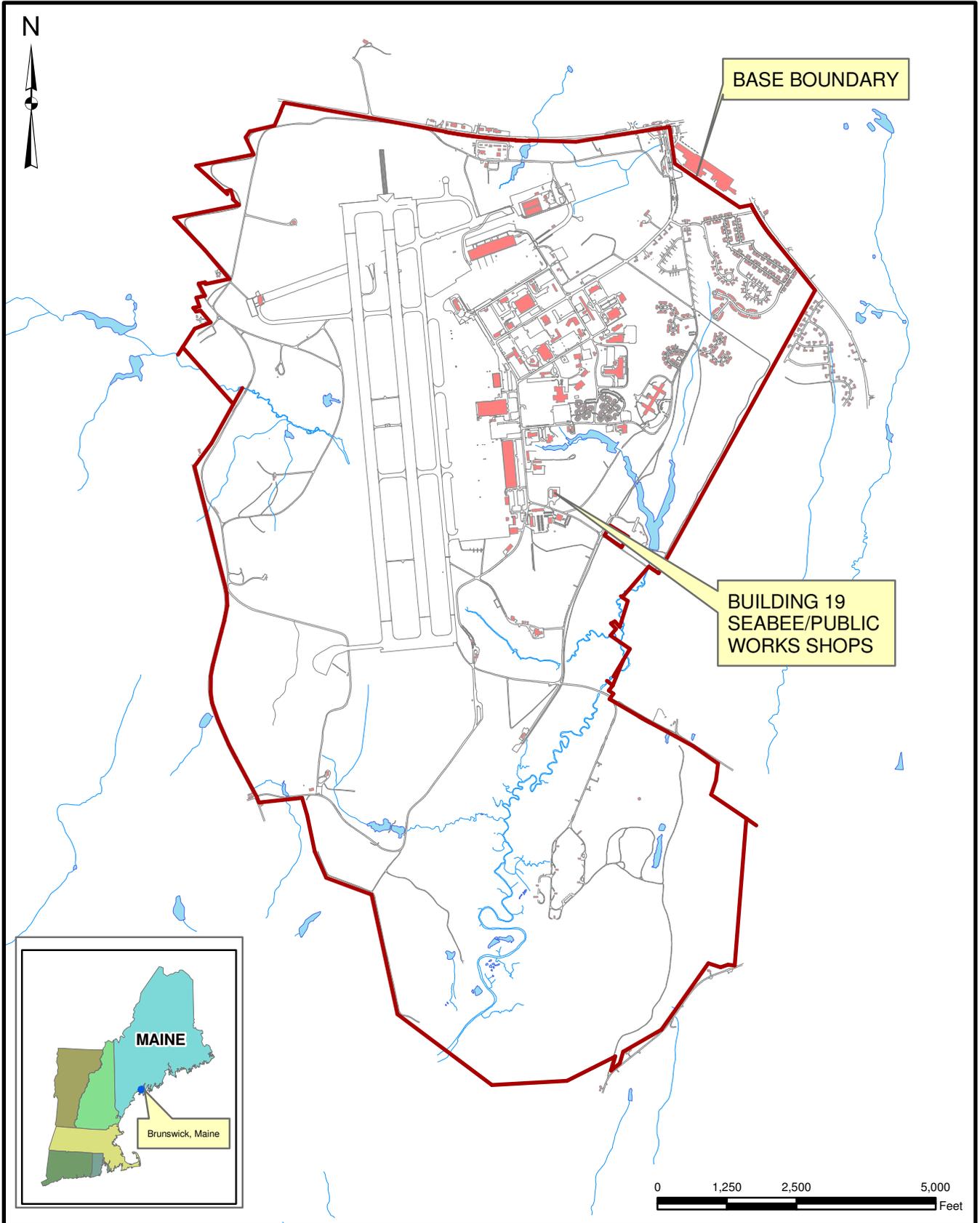
| SAMPLE ID ⁽¹⁾ | MEDEP floor | MEDEP wall | B19-WP12 | B19-WP13 | B19-WP13 (Duplicate) | B19-WP14 | B19-WP15 | B19-WP16 | B19-WP17 |
|------------------------------|----------------|---------------|---|---|---|-------------------------------------|-------------------------------------|---|---|
| LOCATION | | | carpentry shop northeast floor | carpentry shop southeast floor | carpentry shop southeast floor | carpentry shop north floor | carpentry shop south floor | carpentry shop northwest floor | carpentry shop southwest floor |
| MATRIX | | | wipe | wipe | wipe | wipe | wipe | wipe | wipe |
| SAMPLE DATE | | | 1/13/11 | 1/13/11 | 1/13/11 | 1/13/11 | 1/13/11 | 1/13/11 | 1/13/11 |
| METALS (µg/ft ²) | | | | | | | | | |
| lead | 40 | 250 | 14.9 | 64.1 | 52 | 15.8 | 14.9 | 18.6 | 39 |

**TABLE 2
POST-CLEANING WIPE SAMPLE RESULTS
RCRA PARTIAL CLOSURE REPORT
BUILDING 19 – PUBLIC WORKS SHOPS
NAVAL AIR STATION BRUNSWICK, MAINE
PAGE 2 OF 2**

| SAMPLE ID ⁽¹⁾ | MEDEP floor | MEDEP wall | B19-WP18 | B19-WP19 | B19-WP20 | B19-WP21 | B19-WP22 | B19-WP22 (Duplicate) | B19-WP23 | B19-WP24 | | |
|------------------------------|----------------|---------------|---------------------------------|-------------------------------|--|---|--|--|--|--|--|---|
| LOCATION | | | "paint room" center floor | "paint room" east floor | Building 19 "clean/mix" room southeast floor | "bulk storage" room southwest floor | "bulk storage" room northwest floor | "bulk storage" room northwest floor | "bulk storage" room southeast floor | "bulk storage" room northwest floor | "bulk storage" room southeast floor | "bulk storage" room northeast floor |
| MATRIX | | | wipe | wipe | wipe | wipe | wipe | wipe | wipe | wipe | wipe | Wipe |
| SAMPLE DATE | | | 1/13/11 | 1/13/11 | 1/13/11 | 1/13/11 | 1/13/11 | 1/13/11 | 1/13/11 | 1/13/11 | 1/13/11 | 1/13/11 |
| METALS (µg/ft ²) | | | | | | | | | | | | |
| lead | 40 | 250 | 6.4 | 4.6 | 9.3 | 40.9 | 62.2 | 22.3 | 13 | 35.3 | | |

Notes:

- (1) Sample prefix "NASB" is not shown.
- µg/ft² micrograms per square foot
- Shading indicates criteria exceeded



Tetra Tech NUS, Inc.

SITE LOCATION MAP
BUILDING 19 - SEABEE/PUBLIC WORKS SHOPS
RCRA PARTIAL CLOSURE REPORT
NAVAL AIR STATION BRUNSWICK, MAINE

| | |
|-----------------------------------|------------------|
| SCALE AS NOTED | |
| FILE I:\NASB_BLDG_19_LOCUS.MXD | |
| REV 0 | DATE 02/07/11 |
| FIGURE NUMBER 1 | |

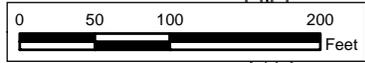
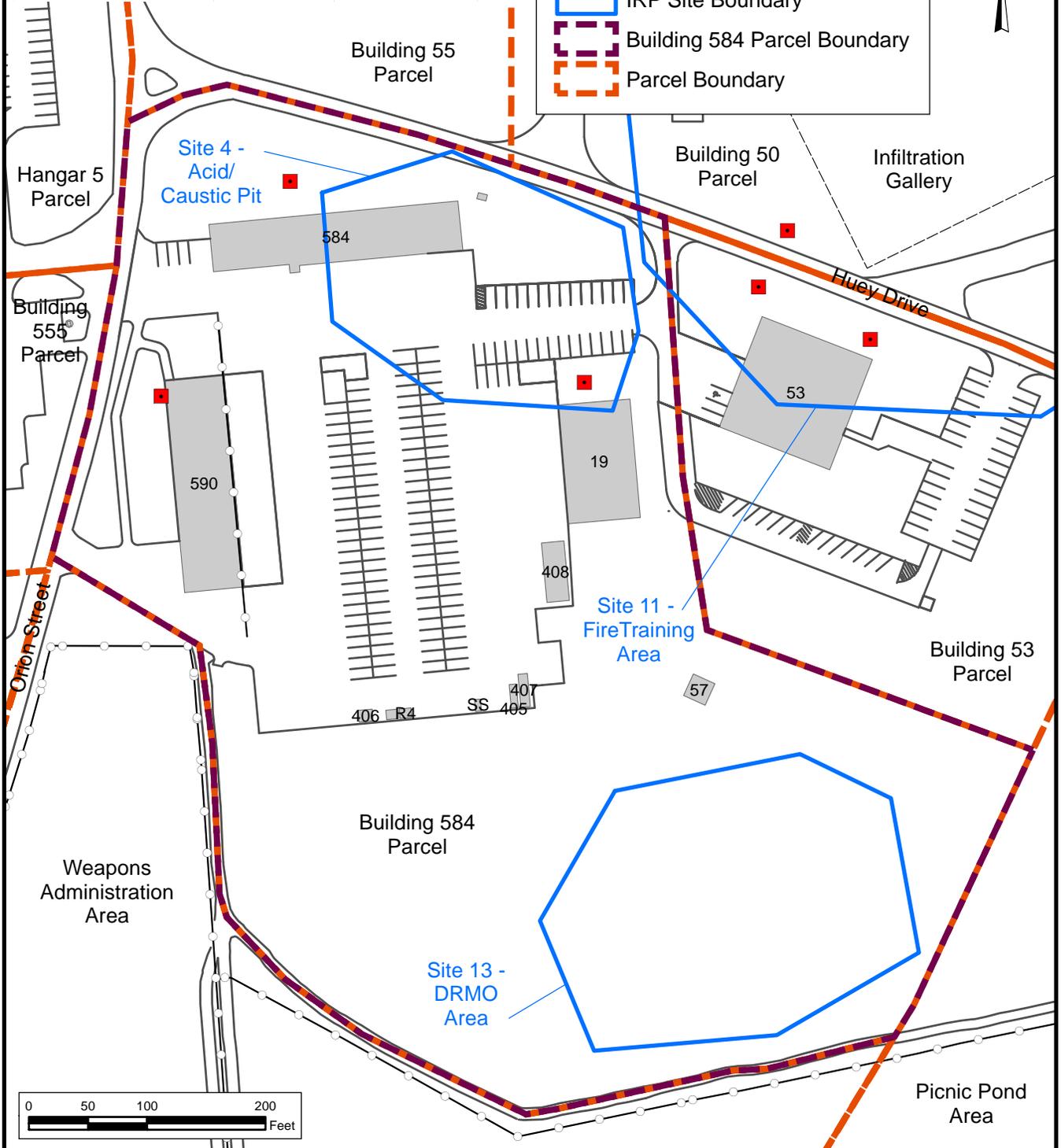
I:\02258CP_DR.WSB_BLDG_19_SITE_MAP.MXD NEC 02/07/2011

| Building 19 Corner | Northing | Easting |
|--------------------|-----------|------------|
| Northeast | 384425.41 | 3015770.48 |
| Southeast | 384325.29 | 3015779.23 |
| Southwest | 384320.04 | 3015718.36 |
| Northwest | 384420.29 | 3015709.73 |

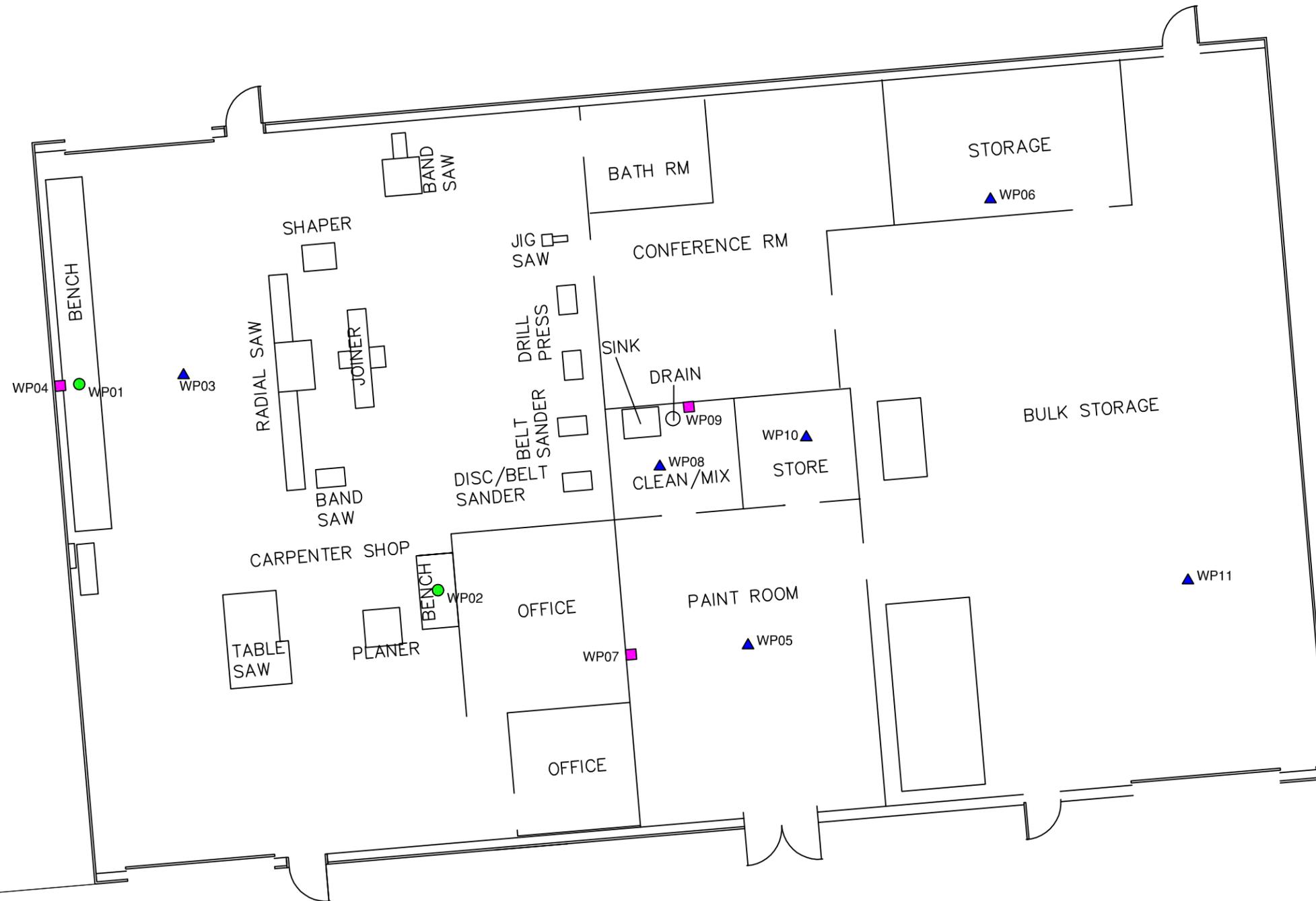
Coordinates are in NAD 1983, Maine West, Feet

Legend

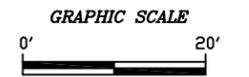
- Transformer
- Fenceline
- IRP Site Boundary
- Building 584 Parcel Boundary
- Parcel Boundary



| | | |
|--|---|---------------------------------------|
|  TETRA TECH | SITE MAP BUILDING 19 - SEABEE/PUBLIC WORKS SHOPS RCRA PARTIAL CLOSURE REPORT NAVAL AIR STATION BRUNSWICK, MAINE | SCALE AS NOTED |
| | | FILE I:_NASB_BLDG_19_SITE_MAP.MXD |
| | | REV DATE 0 02/07/11 |
| | | FIGURE NUMBER FIGURE NO. 2 |

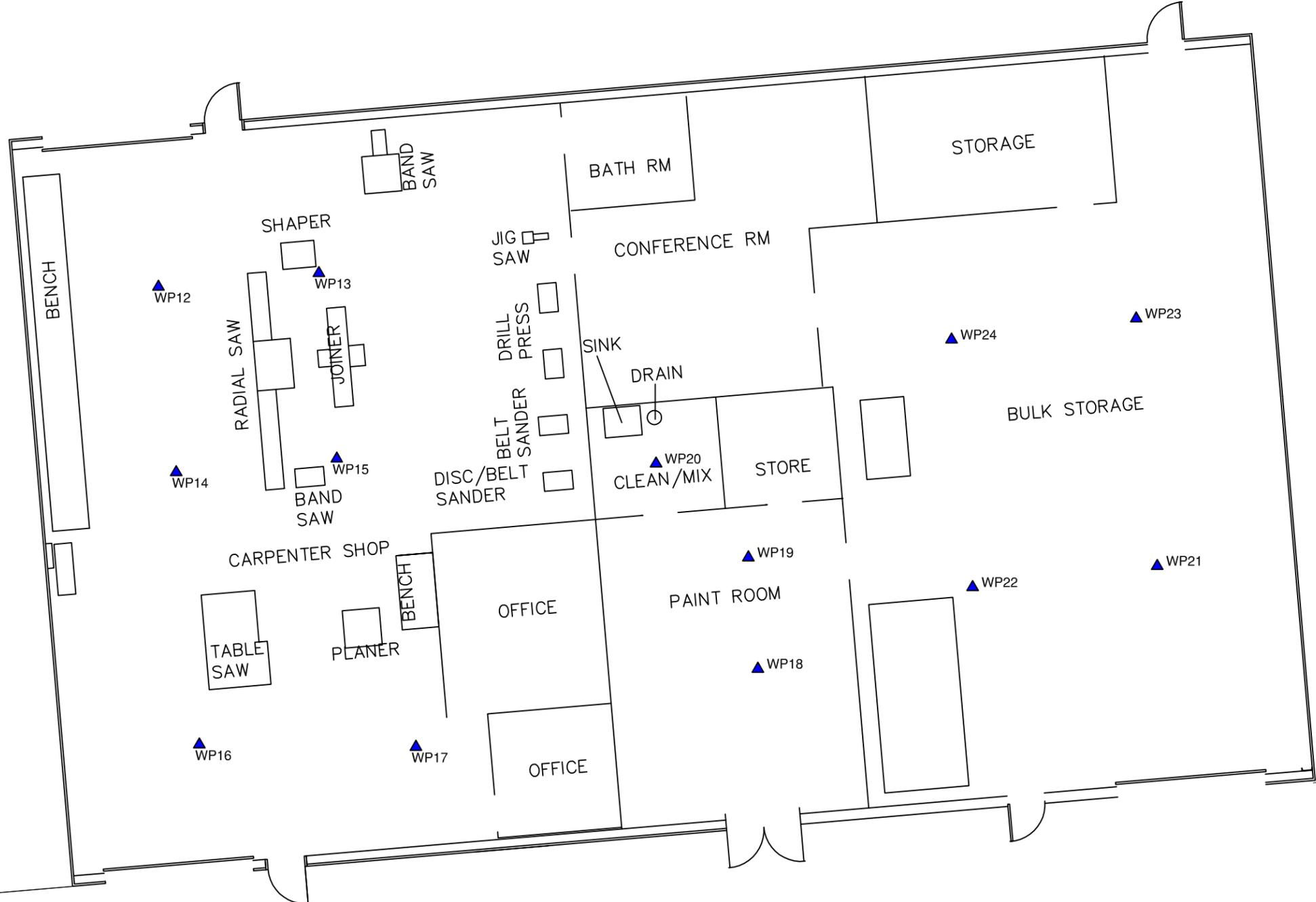


- LEGEND**
- WP03 ▲ FLOOR WIPE SAMPLE LOCATION
 - WP04 ■ WALL WIPE SAMPLE LOCATION
 - WP01 ● BENCH WIPE SAMPLE LOCATION

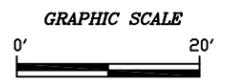


PRE-CLEANING SAMPLE LOCATIONS
 BUILDING 19 - SEABEE/PUBLIC WORKS SHOPS
 RCRA PARTIAL CLOSURE REPORT
 NAVAL AIR STATION BRUNSWICK, MAINE

| | |
|----------------------------------|------------------------|
| FILE \\.\NASB_BLDG_19_PRE.DWG | SCALE AS NOTED |
| FIGURE NUMBER FIGURE NO. 3 | REV DATE 0 02/07/11 |



LEGEND
 WP03 ▲ FLOOR WIPE SAMPLE LOCATION



POST-CLEANING SAMPLE LOCATIONS
 BUILDING 19 - SEABEE/PUBLIC WORKS SHOPS
 RCRA PARTIAL CLOSURE REPORT
 NAVAL AIR STATION BRUNSWICK, MAINE

| | |
|-----------------------------------|------------------------|
| FILE \\.\NASB_BLDG_19_POST.DWG | SCALE AS NOTED |
| FIGURE NUMBER FIGURE NO. 4 | REV DATE 0 02/07/11 |

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

Inspection Date: 9/30/10

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

Weather: Clear, 60's

GENERAL BUILDING INFORMATION / USES

Building Name: Building 19 – Public Works Shop
Function: Workshop
Size: 6,000 SF
Year of Construction: 1981

Building 19 is located in the southern portion of NAS Brunswick within the Public Works building area. The building is located south of Huey Drive and is bordered by the following roads and parcels: to the north by an asphalt-paved parking area and further to the north across Huey Drive, by Building 50 (Groundwater Treatment Plant) and Installation Restoration Program (IRP) Site 11, the former Fire Training Area (FTA). To the east, is Building 53 (Public Works Administration Building) and to the south is undeveloped land. To the west of Building 19 is Building 590 (Transportation Maintenance) and further to the west is Orion Street. Building 584 (General Warehouse) is located to the northwest of Building 19. Building 19 was constructed in 1981 and consists of a 6,000-square-foot, single-story structure on a concrete slab foundation with aluminum siding and an aluminum roof. Building 19 has an oil heating system. Building 19 is connected to the base-wide sanitary sewer system (Navy, 2006).

HWSA INSPECTION / CONDITION

- At the time of inspection, Building 19 was unoccupied and in good condition.
- The interior of Building 19 consisted of a carpentry shop, storage areas, a clean mix paint room, and a paint room for distributing paint. An office space was located off the carpentry shop adjacent to the primary entrance located on the west side of the carpentry shop.
- Tools/equipment in the carpentry shop included a radial saw, table saw, band saw, jig saw, planer, joiner, shaper, disc/belt sander, and drill press.
- Staining was observed on the floor of the "storage room" on the eastern side.
- Staining was observed on the floor of the "store" room in the northern corner on the other side of the clean mix room.
- Paint splatters and paint waste were observed in the sink of the clean mix room and the interceptor trap located adjacent to the sink.
- No modifications to the structure, which may conceal signs of a past release, were observed.
- A sawdust collection system was installed in the carpenter shop. The collection system was located on the western exterior of the building and consisted of cyclones with 4-55 gallon drums to capture the dust.
- A flammable storage cabinet was observed in the northern part of the storage room.
- Two ASTs (A201.1 and A201.2) for fuel oil were observed in the northwestern corner of the storage room. According to NAS Brunswick Environmental Department personnel the tanks were empty at the time of the visit and were planned for cleaning.
- Several work benches were observed in the carpentry shop.
- Four space heaters (2 oil, 2 gas) were observed on the southern side of the storage room.

POTENTIAL PCB-CONTAINING TRANSFORMERS

The parking lot located southwest of Building 19 was historically used as a spare transformer staging area. The NAS Brunswick Removed Transformer Database lists 37 electrical transformers for Building 19 (PWD, 2010) however all but one appear to have been removed in 2002. Currently a pad-mounted transformer is located on the northern side of Building 19 and is likely to be listed as below in the transformer database:

| Transformer | Manufacturer | Serial No. | Manufacture Date | Notes |
|---------------------|--------------|-------------------------|------------------|-------------|
| 150 kVa, 270 gallon | RTE | 87600112 ⁽¹⁾ | 1987 | Mineral Oil |

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

BUILDING 19

APPLICABLE REPORTS / DOCUMENTS

Available historical aerial photos were reviewed for past uses:

- The 1940 aerial photograph shows the Building 19 area is primarily vacant and wooded with Gurnet Road running northwest to southeast just north of the current Building 19 location. The Building 19 area is shown just southeast and within the cleared approach of the former airfield on historical plans dated between 1946 and 1952. No structures are visible in the vicinity of Building 19 in the historical aerial photograph dated 1953.
- The historical site plan dated 1956 indicates that five structures were located north of Building 19 along Gurnet Road. These structures were labeled T-204 (Public Works Storage), 71 (Administration), 59 (Public Works Storage), 60 (Public Works Storage) and 93 (Public Works Storage) and are visible in historical aerial photographs dated 1959, 1965, 1966.
- The historical site plan dated 1957 shows a fenced area approximately west of the location of Building 19.
- Disturbed ground, a dirt roadway and possible debris are visible in aerial photographs dated between 1958 and 1978 in the approximate location of Building 19. Dirt roadways are visible on historical aerial photographs dated 1965 and 1966 which allow access behind Building 584 to the Building 19 area and current parking lot located to the south from Orion Street and Gurnet Road. In aerial photographs dated 1972, 1978 and 1980 the area of Building 19 and the current parking areas to the west and southwest are used for extensive storage of possible transformers, tanks and other debris.
- Historical site plans between 1957 and 1989 show Building 584 (Supply/Disposal Building, 1966 NAS Building List) (northwest) and Building 93 (Public Works Storage) located northeast of the current Building 19 location along Gurnet Road (later renamed Huey Drive).
- Building 19 is visible in historical aerial photographs beginning in 1981. It appears that construction may have started in 1980 based upon observations from the 1980 historical aerial photographs.
- A building in the approximate area of current Building 53 (Public Works Administration Building) is shown on historical site plans beginning in 1983 and the historical aerial photograph dated 1980.
- Building 19 is shown on historical site plans beginning in 2004.

HAZARDOUS WASTE STORAGE RECORDS

According to NAS Brunswick Environmental Department personnel, hazardous waste generation at Building 19 was episodic in nature, with no operations producing hazardous waste on a regular basis. The source of most hazardous waste generated by activities at Building 19 was primarily paint wastes, varnishes. Generally, small quantities (less than 50 gallons total) of wastes such as paint waste, varnishes and aerosols, were generated during the 1990 through 2009 time period. Hazardous waste generated by Building 19 was not segregated in the database from other DRMO or Public Works wastes.

The NAS Brunswick Aboveground Storage Tank (AST) and Underground Storage Tank (UST) inventory records for Building 19 indicate that no USTs have been associated with Building 19. Seven ASTs are listed in the database for Building 19 as follows:

| ID | Capacity | Material Stored | Manufacturer | Year Installed/Removed |
|-------|-------------|-----------------|--------------|------------------------|
| A19.0 | 500 gallons | #1 fuel oil | Highland | 1995/1999 |
| A19.1 | 275 gallons | #1 fuel oil | Maine Tank | 1999/active |
| A19.2 | 275 gallons | #1 fuel oil | Maine Tank | 1999/active |
| A19.3 | 275 gallons | waste oil | Hoover | 1996/2006 |

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

MISCELLANEOUS NOTES

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

(SEE ATTACHED SITE SKETCH AND HWSA SKETCH)

(SEE ATTACHED PHOTOGRAPHS)

INSPECTOR SIGNATURE: Mindi Messmer

PHOTOGRAPHS



No. 1 Building 19 – SeaBee/Public Works Shops, NAS Brunswick
SeaBee/Public Works Shops southwest elevation

October 20, 2010



No. 2 Building 19 – SeaBee/Public Works Shops, NAS Brunswick
SeaBee/Public Works Shops elevation showing sawdust vacuum system

October 20, 2010



No. 3 Building 19 – SeaBee/Public Works Shops, NAS Brunswick
SeaBee/Public Works Shops northeast elevation

October 20, 2010



No. 4 Building 19 – SeaBee/Public Works Shops, NAS Brunswick
Transformer located on northern side of Building 19; Building 53 (Public Works Administration) in background

September 30, 2010



No. 5 Building 19 – SeaBee/Public Works Shops, NAS Brunswick October 20, 2010
North side of carpenter shop with table saw in left foreground; large workbench is visible along the northern side of the room adjacent to the overhead door



No. 6 Building 19 – SeaBee/Public Works Shops, NAS Brunswick October 20, 2010
Carpenter shop looking west with overhead sawdust collection system piping



No. 7 Building 19 – SeaBee/Public Works Shops, NAS Brunswick
Clean mix room sink after trap removal

October 20, 2010



No. 8 Building 19 – SeaBee/Public Works Shops, NAS Brunswick
Paint room looking west; clean mix room behind the photo view

September 30, 2010



No. 9 Building 19 – SeaBee/Public Works Shops, NAS Brunswick
Bulk storage area; storage shelves located along right of frame

October 20, 2010



No. 10 Building 19 – SeaBee/Public Works Shops, NAS Brunswick
Storage room northern corner showing floor stains in the foreground

October 20, 2010