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NAS BRUNSWICK  
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FINAL RESOURCE CONSERVATION AND RECOVERY ACT PARTIAL CLOSURE REPORT  
FOR BUILDING 86 WITH TRANSMITTAL LETTER NAS BRUNSWICK ME  
12/1/2010  
NAS BRUNSWICK

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

December 1, 2010

Mr. Edward Vigneault  
Maine Department of Environmental Protection  
Division of Oil and Hazardous Waste Facilities Registration  
17 State House Station  
Augusta, ME 04333-0017

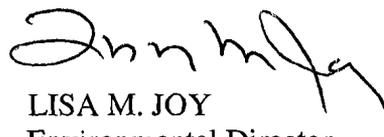
Subj: Final RCRA Partial Closure Report for Building 86

Dear Mr. Vigneault:

A copy of the Final RCRA Partial Closure Report for Building 86 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,



LISA M. JOY  
Environmental Director

Enclosure: (1) Final RCRA Partial Closure Report for Building 86

Copy to:  
NAVFAC Mid-Atlantic (B. Abraham)  
NAS Brunswick (M. Fagan/D. Smith)  
EPA Region I (M. Daly)  
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Lepage Environmental (C. Lepage)  
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**RCRA PARTIAL CLOSURE REPORT  
for  
BUILDING 86 – GROUND SUPPORT EQUIPMENT (GSE) MAINTENANCE SHOP PARCEL  
NAVAL AIR STATION BRUNSWICK, MAINE  
USEPA IDENTIFICATION NUMBER ME8170022018  
NOVEMBER 2010**

**1. INTRODUCTION**

The purpose of this report is to present the findings and conclusions of the investigation conducted to determine if the Maine Department of Environmental Protection (MEDEP) RCRA or hazardous waste closure requirements have been completed for the Building 86 parcel at Naval Air Station Brunswick (NAS Brunswick).

**2. PROPERTY DESCRIPTION**

The Building 86 parcel is located in the central portion of NAS Brunswick (Figure 1). The approximately 6.4-acre parcel is bordered to the north and west by the Airfield Parking Apron Area parcel; to the east by the Buildings 225 and 252 (Transportation) parcel, the Buildings 27 and 30 (Family Services Center) parcel, and the Field House parcel; and to the south by the Hangar 4 and Building 250 parcel (Figure 2). The parcel includes Building 86 (the Ground Support Equipment [GSE] Maintenance Shop), associated paved parking and grass-covered areas, a concrete parking apron, a propylene glycol distribution system, Structures EE and FF (hazardous materials storage structures), Structure GG (hazardous waste storage structure), and a portion of Orion Street. One other building located within the parcel has been addressed separately under the NAS Brunswick RCRA closure program: Building 251 – De-Ice/Rinse Pumphouse (Tetra Tech, 2010)

Building 86 itself is located in the central portion of the parcel (Figure 2). It was constructed in 1992 and consists of a 31,980-square-foot, two-story, steel-framed structure with concrete masonry unit (CMU) block exterior on a concrete slab foundation. The building floor plan is presented as Figure 3. Building 86 has a fuel-oil-fired boiler heating system. Photographs of the building are provided as an attachment to this report.

A number of temporary structures are located at the Building 86 parcel. These include a wooden shed and concrete sheds, as listed below and described in the paragraphs that follow:

**Building 86 Temporary Structures**

Satellite Accumulation Area (SAA) - located on the eastern exterior of Building 86	
Structure GG	Hazardous Waste Storage (wooden shed, 3 feet [ft] by 10 ft by 8 ft)
Northeast corner of Building 86:	
Structure EE	Hazardous Materials Storage (precast concrete shed, 12 ft by 18 ft by 12 ft)
Structure FF	Hazardous Materials Storage (precast concrete shed, 12 ft by 18 ft by 12 ft)

The SAA contains one aboveground storage tank (AST), a 250-gallon, double-walled, steel AST for waste oil. A wooden storage shed (Structure GG) equipped with a precast-concrete, secondary-containment bottom is also located at the SAA. The shed was used for the temporary storage of accumulated hazardous waste, prior to pick-up by the NAS Brunswick Environmental Department for transport to the Hazardous Waste Building (Building 45). All hazardous waste was then characterized and disposed of at approved off-site facilities. The SAA shed also typically stored universal waste, including fluorescent light bulbs, spent lithium and nickel-cadmium batteries, paint rags, oily rags, spent sealant, and spent aerosol cans.

Structures EE and FF, located near the northeast corner of Building 86, are immediately adjacent to the paved area of the parcel and behind the fence line, as shown on Figure 2. These two

temporary structures, constructed of precast concrete, were used for the storage of hazardous materials.

### 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 86 parcel, including past use and operations at that location.

Records reviewed include historical buildings lists, aerial photographs, maps, the NAS Brunswick Other Environmental Liabilities (OEL) Database, area-specific reports, facility plans and drawings, and hazardous waste records. Aerial photographs dated 1958, 1978, 1981, 1984, 1989, 1993 and 1997 (Sewall, 1958, 1978, 1981, 1984, 1989, 1993 and 1997) were reviewed along with Public Works Department (PWD) site base maps dated 1943, 1946, 1952, 1956, 1957, 1975, 1989, and 2006 (PWD, 1943, 1946, 1952, 1956, 1957, 1975, 1989, and 2006) to provide historical information.

Based on information available in building lists, maps, and other documents, since its construction in 1992, Building 86 has been used only as a maintenance shop for ground support equipment. Note, however, that from 1943 to approximately 1950, the building identification number "86" had been assigned to a different building that was used as a general storehouse, located to the south of Building 28 (Oxygen Shop). The building identification number "86" was later reassigned to the GSE Maintenance Shop when it was constructed, in 1992.

On the earliest historical site plan dated 1943, the area is shown with no buildings present; Former Hangar 1 is located to the north. In the 1946 and 1952 maps, Building 71 (Ready Magazine) is shown, and a portion of Range Road is shown in the southeastern corner of the parcel. The 1956 map shows no buildings present, and Range Road is no longer present. Beginning with the 1957 site map, Buildings 283 (Pyrotechnics Locker) and 513 (Inflammable Storage Cage), noted in Section 2, are shown. No further changes to the area are observed in photographs or site maps dated later than 1957, with the following exceptions: in the 1989 map, Ordnance Road No. 3 is labeled as the Old Gurnet Road; in the 2006 map, it is labeled as the Perimeter Road Cut-Off. Additional details are listed below.

- 1943 map – No buildings are shown on the Building 86 parcel.
- 1946 map – Building 71 (Ready Magazine) is shown on the parcel. A portion of Range Road runs through the southeastern corner of the parcel.
- 1956 map – No buildings are shown on the parcel. Building 71 is shown as a Public Works Storehouse on Old Gurnet Road, in the southern portion of the base. (Note that after 1956, building identification number "71" was reassigned to a Public Works Storehouse on Old Gurnet Road, in the southern portion of the base.)
- 1957 map – Building 283 (Pyrotechnics Locker) and Building 513 (Inflammable Storage Cage – Hangar 1) are present on the parcel.
- 1958 aerial photograph – Buildings 283 and 513 present, with the remainder of the parcel being comprised of aircraft apron, with parked Neptune P2 aircraft; some petroleum staining is present. A number of cargo containers/sheds are present on the parcel, along the southeastern and northeastern edges of the apron.
- 1978 map – No buildings are shown; Orion Street borders the parcel on the east side.
- 1978 aerial photograph – Building 283 is present with the remainder of the parcel being comprised of aircraft apron, with parked Orion P3 aircraft; less petroleum staining is present than in the 1958 photograph. The cargo containers/sheds visible in the 1958 photograph are no longer present.

- 1981 aerial photograph – No changes from the 1978 photograph are observed, except that a number of ground support vehicles are seen parked along the eastern edge of the apron. Some petroleum staining is present.
- 1993 photograph – Building 86 is present. The remainder of the parcel contains aircraft aprons and parked P-3 aircraft west of Building 86, and parking and grass areas to the east.
- 2006 map - Building 86 is shown in current location, with Building 251 (De-Ice/Rinse Pumphouse) and the waste glycol tank shown to the east.

According to NAS Brunswick personnel, the squadrons carried out maintenance of ground support equipment in Building 86. The table below provides a general description of activities conducted in Building 86 that may have generated hazardous waste, and the location associated with each activity.

**Building 86 Maintenance Activities**

Activity or Area	Description	Location <sup>(1)</sup>
Painting	Painting of equipment	Paint Booth
Sandblasting	Sandblasting of equipment and vehicle parts	Blast Booth
Welding	Welding of equipment and vehicle parts	Welding Shop
Parts Washing	Aqueous parts washing	Parts Washer
Hydraulics	Repair and maintenance of hydraulic parts	Hydraulic Patch Room
Vehicle Repair	Vehicle maintenance and repair	Vehicle Bays and Vehicle Repair Room
Hazardous Materials	Receiving and storage of hazardous materials for ready issue	Interior: Hazardous Materials/Waste Storage Area Exterior: Hazardous Materials Storage sheds (Structures EE and FF)
Satellite Accumulation Area	Accumulation of hazardous waste and used oil	Hazardous Waste Storage shed (Structure GG) and waste oil tank

<sup>(1)</sup> Location/room numbers are shown on Figure 3.

According to NAS Brunswick Environmental personnel, hazardous materials were signed out in small quantities (typically less than a week's supply) from the Consolidated Hazardous Material Reutilization and Inventory Management Program (CHRIMP) Building (Building 81), with unused quantities also returned to Building 81. Hazardous materials were temporarily stored in lockers in the interior Hazardous Materials Storage Area and in exterior Structures EE and FF.

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. The Hazardous Waste Department maintains a list of hazardous wastes generated by activity (department). The list summarizes materials generated by the ground support maintenance activities conducted in Building 86 from 2004 until 2009. The table below lists the hazardous waste quantities generated by ground support equipment maintenance activities.

**Building 86 Hazardous Waste Quantities (2004 through 2009)**

Description	Quantity (pounds)
adhesive	2.64
aerosol	88.87
aerosol empty	12.92
aircraft grease	2.08
battery lead (damaged)	370
blast booth filter	840
blast grit	8,455
blast media	21,227
caustic cleaner	1.5
fuel oil No. 1	23,920
fuel water mix	866
propylene glycol	492,124
jet washer sludge	278
JP rags	121
lamps, fluorescent	25.44
lead (debris from release clean-up)	621
paint	33.92
paint, aircraft	43.12
paint booth filters	545
paint consolidation	545
paint rags	90.5
paint, waste	595
parts washer fluid	791
POL rags	167
Sealant	0.9
Thinner	244
used oil	8,800

According to NAS Brunswick records, floor drains in the vehicle repair bays discharged to a 675-gallon, concrete oil/water separator (OWS), located along the southeastern exterior of Building 86. The OWS, which discharges to the sanitary sewer system, was serviced annually as part of the OWS maintenance program. The servicing of the OWS included removal of accumulated petroleum products and excessive sludge, and proper disposal of all collected petroleum-contaminated water, petroleum products, and sludge. The most recent OWS cleaning event was performed in early June 2010. The waters and sludges removed from the OWSs across the base during the June 2010 cleaning event were collectively disposed of as non-hazardous, oil-contaminated liquid and solids (Clean Harbors, 2010). The OWS has not been cleaned since the closure of Building 86. According to NAS Brunswick Public Works personnel, the cleaning event will not re-occur until Spring 2011. Therefore, an exception will be applied to the Building 86 Partial RCRA Closure for the OWS and associated floor drains. After OWS cleaning activities have occurred in Spring 2011, an addendum will be issued to the Partial RCRA Closure Report to document this event.

According to MEDEP and NAS Brunswick spill records, no spills were reported in the vicinity of the Building 86 parcel (Environmental Department, 1988; Environmental Department 1999; and MEDEP, 2010).

A release of dust containing cadmium, chromium, and lead occurred in February 2004, due to a malfunction in the Building 86 blast booth dust collection system. Associated documentation was reviewed and is summarized below.

On February 17, 2004, a fire alarm was triggered by the smoke detector in the air handling system of the blast booth at Building 86, however no evidence of fire was found in the building or the ductwork for the blast booth. On February 19, 2004, personnel from the Safety and Industrial

Hygiene Offices determined that the fire alarm was triggered by excess dust in the ductwork. At that time, it was concluded that the problem had occurred in the air scrubber system, allowing excess dust into the air handling system. At the direction of the Industrial Hygiene Office, the blast booth system was shut down (DON, 2004).

Dust samples were collected to determine the extent of contamination. According to a March 15, 2004 memorandum from Mr. Dale Mosher (NAS Brunswick) to Mr. Andy Slusarski (MEDEP), based on wipe tests, the area of contamination within Building 86 was confined to the tops of the blast booth, paint booth, welding shop, and the overhead beams in the north end of the building (Mosher, 2004a).

According to an April 15, 2004 memorandum from Mr. Mosher to Mr. Slusarski, a Navy contractor was tasked to clean the contaminated areas of the building, from floor to ceiling to required level of 100-micrograms/square foot ( $\mu\text{g}/\text{ft}^2$ ) lead. After cleaning was completed on April 2, 2004, clearance (confirmation) wipe samples were collected in the areas where contamination levels were highest. Lead levels in clearance samples did not exceed the required cleaning level, ranging from 10 to 60  $\mu\text{g}/\text{ft}^2$ . The remainder of the building was given a visual inspection. Some areas of the paint booth and the front of the blast booth were not adequately cleaned. These areas were re-cleaned and subsequently found to be clean. Prior to putting the blast booth back in operation, modifications needed to prevent further release were implemented with MEDEP concurrence (Mosher, 2004b).

The NAS Brunswick Removed Transformer Database lists one non-polychlorinated-biphenyl (non-PCB)-containing electrical transformer for Building 86 (PWD, 2010). Pertinent information regarding the transformer is provided in the table below.

Transformer	Manufacturer	Serial Number	Manufacture Date	Notes
500-kVa, non-PCB-containing, pad-mounted	Cooper	916005295 <sup>(1)</sup>	1991	PCB <2 parts per million

(1) The first two digits of the serial number denotes the year of manufacture (EES, 1998)  
> less than

The serial number for the Cooper-manufactured unit indicates that it was manufactured in 1991 and 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). Based on the 1992 construction date of Building 86, PCB-containing transformers were not in service at the transformer pad at any time in the past.

According to NAS Brunswick records, the following underground storage tanks (USTs) were present at Building 86 (Environmental Department, 2009).

**Building 86 Underground Storage Tanks**

Serial Number	Capacity and Make	Product	Installation Date	Removal Date
18694-001	10,000-gallon DW FRP	Propylene Glycol	1993	2010
18694-002	10,000-gallon DW FRP	Propylene Glycol	1993	2010

DW FRP                      double-walled fiberglass reinforced plastic

Also according to NAS Brunswick records, the following ASTs were/are present at Building 86 (Environmental Department, 2009).

**Building 86 Aboveground Storage Tanks**

Serial Number	Capacity and Make	Product	Installation Date	Removal Date
A86.0	275 gallons SWS	Waste Oil	1993	1996
A86.1	70-gallon SWS	Lube Oil	1992	Inactive
A86.2	70-gallon SWS	Lube Oil	1992	Inactive
A86.3	70-gallon SWS	Lube Oil	1992	Inactive
A86.4	70-gallon SWS	Lube Oil	1992	Inactive
A86.5	70-gallon SWS	Lube Oil	1992	Inactive
A86.6	70-gallon SWS	Lube Oil	1992	Inactive
A86.7	70-gallon SWS	Lube Oil	1992	Inactive
A86.8	70-gallon SWS	Lube Oil	1992	Inactive
A86.9	100-gallon SWS	Diesel (for generator)	1992	Inactive
A86.10	250-gallon DWSV	Waste Oil (exterior SAA)	1996	Inactive
A86.11	4,000-gallon DWS	No.1 Heating Oil	1999	Inactive
A86.12	90,000-gallon SWS-glass lined	Propylene glycol	2001	Inactive

DWS double-walled steel  
SWS single-walled steel  
DWSV double-walled steel vault

No groundwater investigations have been conducted on the Building 86 parcel and no parcel-specific groundwater characterization information is available. Information available for known groundwater contamination areas at NAS Brunswick was reviewed to determine if groundwater underlying the Building 86 parcel could potentially be impacted by another (off-parcel) source area, as discussed below.

The southeastern portion of the Building 86 parcel is bordered by the NEX Service Station (Building 538) Site, being investigated under the Petroleum Oil and Lubricant (POL) Program. The associated gasoline range organics (GRO) groundwater contaminant plume is approximately 200 to 250 feet east of the Building 86 parcel. Past active remediation at the NEX Service Station Site (the Site) has consisted of excavation and removal of petroleum-contaminated soil, air sparging and soil vapor extraction (SVE), and a chemical oxidation event (EA, 2004a). Long-term groundwater monitoring has also been conducted (Navy, 2010). The prominent groundwater flow direction from the NEX Service Station Site (the Site), is toward the southeast, toward the Buildings 27 and 30 parcel. The Building 86 parcel is therefore hydraulically upgradient of the Site and would not be impacted by contaminated groundwater flow from the Site.

#### 4. SITE VISIT AND INVESTIGATION

A site visit was conducted for Building 86 on January 21, 2010 by Mr. James Forrelli, P.E., and Mr. Brandon Smith, P.E. of Tetra Tech. The purpose of the visit was to verify information gathered during the records search and to collect additional information as necessary to prepare this closure report. Tetra Tech personnel were accompanied by Mr. D. Bruce Smith, the NAS Brunswick Hazardous Waste Manager. The building was visually inspected for signs of hazardous waste generation or storage. Site visit observations, recorded on the attached Building Inspection Form <sup>(1)</sup>, are summarized below:

- At the time of inspection, Building 86 was in good condition and ground support and maintenance equipment were present.
- Evidence of past hazardous waste generation activities was observed. A summary of previous potential hazardous waste areas identified during the building inspection is provided in Table A of the attached Building Inspection Form.
- Potential hazardous waste residue was observed in the paint booth, blast booth, blast-booth-media collection room, and decontamination room, and staining was observed in the main maintenance bays.

- No modifications to the structure, which may conceal signs of a past release, were observed.
- No peeling or flaking paint was observed on the exterior or interior of the building.
- Hazardous waste storage areas and hazardous waste accumulations areas were observed, as described in Section 2.

Based on the records research and site visit observations, specific areas within the Building 86 parcel were identified for investigation to determine if hazardous waste residues were present. Samples collected are summarized below and discussed in the following text.

**Building 86 Sampling Event**

Date	Description	Analytes
June 16, 2010	<b>Work Area Wipe Sampling:</b> 31 wipe samples collected from nine interior areas and from three exterior areas	RCRA metals SVOCs (select locations)
	<b>Blast Booth and Overhead Beam - Solids Sampling:</b> Two solids (blast media) samples collected from Blast Booth and overhead beam above the blast booth collection room	TCLP RCRA metals PCB

Notes:

- SVOCs semi-volatile organic compounds
- VOCs volatile organic compounds
- TAL Target Analyte List
- PCB polychlorinated biphenyl
- TCLP Toxicity Characteristic Leaching Procedure

All samples were submitted for analysis by Tetra Tech’s subcontracted analytical laboratory, Analytics Environmental Laboratory (Analytics), Portsmouth, New Hampshire. The resulting analytical data underwent limited data validation, consisting of field duplicate evaluation, blank contamination evaluation, and completeness evaluation.

**Wipe Sampling**

Twelve areas where hazardous waste may have been generated or stored were targeted for sample collection: nine interior areas and three exterior areas. These areas included the blast booth, blast booth accumulation and decontamination rooms, paint booth, parts washer area, vehicle bays, hazardous materials/waste storage areas, tool room, hydraulic patch room, external dust collection room, and the hazardous materials storage structures (Figure 3). On June 16, 2010, wipe and blast media samples were collected at the targeted areas, as shown on Figure 3. Building 86 wipe sample analytical results are presented in Table 1. The “location” description of each wipe sample in Table 1 indicates whether samples are “floor” or “wall” samples. It is noted that three of the six “wall” category wipe sample locations are from a beam, a duct, and a door. The “work bench” wipe sample is considered a floor sample in the discussion of data.

The wipe sample lead results were compared to the following MEDEP criteria for lead-contaminated settled dust, applicable for RCRA closures:

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

There are no Maine criteria for the other seven RCRA metals. For informational purposes, wipe sample results for six of the other seven metals were compared with available World Trade Center Settled Dust Screening Values (WTC, 2003). There are no screening values for selenium.

Lead levels in the majority of floor wipe samples were found to exceed the MEDEP criterion (40  $\mu\text{g}/\text{ft}^2$ ), with levels ranging from 28 to 440  $\mu\text{g}/\text{ft}^2$ . Lead levels in three of the six “wall” wipe samples exceeded the MEDEP criterion (250  $\mu\text{g}/\text{ft}^2$ ). It is noted that the two highest levels, by far the highest concentrations, were the “wall” wipe samples collected from a beam and a duct,

above 8 feet high, as indicated in Table 1. Including all wall wipe samples, lead concentrations ranged from 28 to 9,300  $\mu\text{g}/\text{ft}^2$ .

### **Solids Sampling**

Two blast media samples were collected and submitted for TCLP RCRA Metals and PCB analysis. As shown in Table 2, all metals were below the hazardous waste classification criteria, and PCBs were not detected.

## **5. HAZARDOUS WASTE GENERATION AND STORAGE**

The investigation results indicate that former activities at Building 86 resulted in the presence of hazardous waste residues requiring remedial actions to fulfill MEDEP hazardous waste closure requirements.

## **6. CLOSURE ACTIONS**

Based on the investigation results, closure remedial actions were undertaken at Building 86 to remove waste residues as required to achieve MEDEP hazardous waste closure requirements. Remedial actions consisted of the cleaning of floors and walls in the paint booth, blast booth, blast booth accumulation room, blast booth decontamination room, welding shop, parts washer area, vehicle bay, hazardous materials/waste storage area, hydraulic patch room, tool room, vehicle repair room, external dust collection room, and Structures EE and FF.

On September 30, 2010 through October 5, 2010, Tetra Tech's cleaning subcontractor, Global Remediation Services (Global), performed floor-cleaning activities in Building 86, as well as the cleaning of walls up to a height of 8 feet. The floor was then 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 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. In addition, the rubber-backing mats in the blast booth were removed up to a height of 8 feet and transferred to the hazardous waste department for disposal.

After the work areas were allowed to dry, post-cleaning confirmatory sampling was conducted. Twenty-four post-cleaning wipe samples were collected from the floor and 14 from the walls (Figure 4). As shown in Table 3, analytical results indicated that lead exceeded the applicable MEDEP criterion of 40  $\mu\text{g}/\text{ft}^2$  in the majority of the post-cleaning confirmation wipe samples in the vehicle bay, hazardous materials/waste storage area, tool room, vehicle repair room, welding shop, former parts washer, and Structure EE. Lead levels in confirmatory samples from wall locations did not exceed the associated MEDEP criterion (250  $\mu\text{g}/\text{ft}^2$ ), except in one sample from the welding shop.

On October 25 and 26, 2010, a second cleaning of the Building 86 floors and walls was performed at locations that were above the MEDEP criteria following the first cleaning event. The procedures described above were used. After the work areas were allowed to dry, a total of 21 samples were collected: 20 post-cleaning confirmatory wipe samples for lead analysis were collected from the floors (including one bench sample), and one from the wall (Figure 5). As shown in Table 3, following this second decontamination event, wipe sample analytical results indicated that lead was not detected at concentrations exceeding 40  $\mu\text{g}/\text{ft}^2$  at any of these post-cleaning sample locations, with the exception of the former parts washer floor location (56  $\mu\text{g}/\text{ft}^2$ ). However, the average lead level of 17  $\mu\text{g}/\text{ft}^2$  for the 20 post-cleaning floor wipe samples is well within the criterion and additional closure action is not warranted.

## 7. OTHER ENVIRONMENTAL CONSIDERATIONS

Tanks associated with the Building 86 parcel are discussed in Section 3. No additional tanks were observed in the immediate vicinity of Building 86, and none are known to exist in this area.

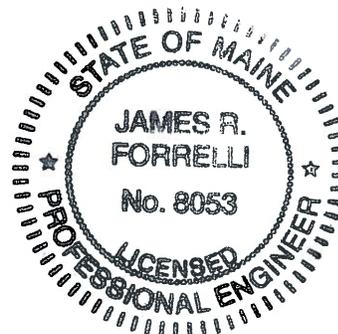
## 8. LIMITATIONS

This investigation of the hazardous waste closure requirement applies to the Building 86 parcel (as shown on Figure 2) only, with the exception of the oil/water separator and the floor drain system.

## 9. CERTIFICATION

Historical operations resulted in the generation, accumulation, and storage of hazardous waste at the Building 86 parcel, NAS Brunswick, Maine, based on the findings of the investigation as presented in this Partial Closure Report. With the exception of the oil/water separator and the floor drain system, the hazardous waste closure of the Building 86 parcel 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.



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

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

Sewall, 1997. NAS Brunswick Aerial Photographs. James W. Sewall Company, Old Town, Maine.

Tetra Tech, 2010. RCRA Partial Closure Report for Building 251 – De-Ice/Rinse Pumphouse, Naval Air Station Brunswick, Maine. Tetra Tech NUS, Inc, King of Prussia, Pennsylvania. March.

**TABLE 1  
INVESTIGATION WIPE SAMPLE RESULTS  
RCRA PARTIAL CLOSURE REPORT  
BUILDING 86 – GROUND SUPPORT EQUIPMENT (GSE) MAINTENANCE SHOP  
NAVAL AIR STATION BRUNSWICK, MAINE  
PAGE 1 OF 2**

SAMPLE ID <sup>(1)</sup>	B86-WP01	B86-WP02	B86-WP03	B86-WP04	B86-WP05	B86-WP06	B86-WP07	B86-WP08	B86-WP09	B86-WP10	B86-WP11	B86-WP12	B86-WP13	B86-WP14	B86-WP15	B86-WP16	B86-WP17	B86-WP18	B86-WP19	B86-WP20	B86-WP21	B86-WP22			
DATE	06/16/10	06/16/10	06/16/10	06/16/10	06/16/10	06/16/10	06/16/10	06/16/10	06/16/10	06/16/10	06/16/10	06/16/10	06/16/10	06/16/10	06/16/10	06/16/10	06/16/10	06/16/10	06/16/10	06/16/10	06/16/10	06/16/10			
LOCATION	Paint Booth Floor	Paint Booth Floor	Paint Booth Floor	Blast Booth Floor	Blast Booth Floor	Blast Booth Floor	Blast Booth Door	Beam Above Blast Accumulation Room	Blast Accumulation Room Floor	Welding Shop Work Bench	Duct above work bench – Welding Shop	Decontamination Room Floor	Decontamination Room Floor	Vehicle Bay Floor	Vehicle Bay Floor	Vehicle Repair Room Floor	Rag Accumulation Area Floor	Hazmat Storage Area Floor	Spray Paint Washer Floor	Parts Washer Floor	Tool Room Floor	Hydraulic Patch Room Floor			
METALS (µg/ft <sup>2</sup> )	CRITERIA																								
	WTC	MEDEP wall	MEDEP floor																						
arsenic	36	--	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	
barium	10000	--	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	110	84	120	170	160	400	200	190	67
cadmium	140	--	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	32	24	28	47	51	48	44	44	16
chromium	440	--	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	36	39	56	100	54	170	66	65	23
lead	--	250	40	82	190	180	55	31	30	43	9300 <sup>(2)</sup>	57	93	1200 <sup>(2)</sup>	300	140	130	100	340	240	120	300	210	250	52
mercury	15	--	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.093 U	0.093 U	0.093 U	0.093 U	0.093 U	0.093 U	0.093 U	0.093 U	0.093 U	0.093 U
selenium	--	--	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U
silver	730	--	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
<b>SEMIVOLATILES (µg/ft<sup>2</sup>)</b>																									
benzo(a)anthracene	--	--	--	19 U	19 U	19 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	19 U	19 U	19 U	19 U	21	19 U	19 U	19 U	19 U
benzo(b)fluoranthene	--	--	--	19 U	19 U	19 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	19 U	19 U	19 U	19 U	27	19 U	19 U	19 U	19 U
bis(2-ethylhexyl)phthalate	--	--	--	30 U	30 U	30 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	38 U	29 U	80 U	36 U	120 U	100 U	81 U	210 U	42 U
butyl benzyl phthalate	--	--	--	19 U	19 U	19 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	19 U	19 U	19 U	19 U	19 U	28	19 U	170	25
chrysene	--	--	--	19 U	19 U	19 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	19 U	19 U	19 U	19 U	26	19 U	19 U	19 U	19 U
di-n-butyl phthalate	--	--	--	19 U	19 U	19 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	19 U	19 U	19 U	19 U	19 U	19 U	19 U	19 U	19 U
di-n-octyl phthalate	--	--	--	19 U	19 U	19 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	19 U	19 U	19 U	19 U	19 U	19 U	19 U	19 U	19 U
fluoranthene	--	--	--	19 U	19 U	19 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	19 U	19 U	19 U	19 U	120	19 U	19 U	19 U	19 U
phenanthrene	--	--	--	19 U	19 U	19 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	19 U	19 U	19 U	19 U	84	19 U	19 U	19 U	19 U
pyrene	--	--	--	19 U	19 U	19 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	19 U	19 U	19 U	19 U	93	19 U	19 U	19 U	19 U

Notes:  
 (1) Sample prefix "NASB" is not shown.  
 (2) Samples B86-WP08 and B86-WP11 were collected from a beam and duct greater than eight feet above the ground and are compared to the MEDEP Wall criteria for lead (below eight feet) for informational purposes only.  
 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 1  
INVESTIGATION WIPE SAMPLE RESULTS  
RCRA PARTIAL CLOSURE REPORT  
BUILDING 86 – GROUND SUPPORT EQUIPMENT (GSE) MAINTENANCE SHOP  
NAVAL AIR STATION BRUNSWICK, MAINE  
PAGE 2 OF 2**

SAMPLE ID <sup>(1)</sup>				B86-WP23	B86-WP24	B86-WP25	B86-WP26	B86-WP27	B86-WP28	B86-WP29	B86-WP30	B86-WP31	B86-WP-DUP01	B86-WP-DUP02	B86-WP-DUP03	B86-WP-DUP04
DATE				06/16/10	06/16/10	06/16/10	06/16/10	06/16/10	06/16/10	06/16/10	06/16/10	06/16/10	06/16/10	06/16/10	06/16/10	06/16/10
LOCATION				Floor beneath Hydraulic Oil Storage	Hazmat Storage Area Wall	Welding Shop Wall	Hazmat Storage Area Floor	Vehicle Repair Room Floor	Structure EE Floor	Structure FF Floor	Vehicle Bay Floor	Dust Collection Room Floor	Blast Booth Floor	Parts Washer Floor	Welding Shop Wall	Rag Accumulation Area Floor
METALS (µg/ft <sup>2</sup> )	CRITERIA					Field DUP03							Field Dup – 86-WP06	Field Dup – 86-WP20	Field Dup – 86-WP25	Field Dup – 86-WP17
	WTC	MEDEP wall	MEDEP floor													
arsenic	36	--	--	NA	NA	NA	NA	NA	7.6	5.3	4.6 U	NA	NA	4.6 U	NA	4.8
barium	10000	--	--	NA	NA	NA	NA	NA	150	240	100	NA	NA	160	NA	140
cadmium	140	--	--	NA	NA	NA	NA	NA	35	67	22	NA	NA	29	NA	34
chromium	440	--	--	NA	NA	NA	NA	NA	56	56	37	NA	NA	57	NA	80
lead	--	250	40	61	28	250	180	440	150	210	140	180	28	130	240	190
mercury	15	--	--	NA	NA	NA	NA	NA	0.093 U	0.093 U	0.093 U	NA	NA	0.093 U	NA	0.093 U
selenium	--	--	--	NA	NA	NA	NA	NA	9.3 U	9.3 U	9.3 U	NA	NA	9.3 U	NA	9.3 U
silver	730	--	--	NA	NA	NA	NA	NA	1.9 U	1.9 U	1.9 U	NA	NA	1.9 U	NA	1.9 U
SEMIVOLATILES (µg/ft <sup>2</sup> )																
benzo(a)anthracene	--	--	--	NA	NA	NA	19 U	NA	19 U	19 U	19 U	NA	NA	19 U	NA	19 U
benzo(b)fluoranthene	--	--	--	NA	NA	NA	19 U	NA	19 U	19 U	19 U	NA	NA	19 U	NA	19 U
bis(2-ethylhexyl)phthalate	--	--	--	NA	NA	NA	93 U	NA	19 U	690	310 U	NA	NA	72 U	NA	140 U
butyl benzyl phthalate	--	--	--	NA	NA	NA	19 U	NA	19 U	24	19 U	NA	NA	19 U	NA	19 U
chrysene	--	--	--	NA	NA	NA	19 U	NA	19 U	19 U	19 U	NA	NA	19 U	NA	19 U
di-n-butyl phthalate	--	--	--	NA	NA	NA	19 U	NA	19 U	19 U	50	NA	NA	19 U	NA	19 U
di-n-octyl phthalate	--	--	--	NA	NA	NA	19 U	NA	19 U	19 U	19 U	NA	NA	19 U	NA	19 U
fluoranthene	--	--	--	NA	NA	NA	19 U	NA	19 U	19 U	19 U	NA	NA	19 U	NA	19 U
phenanthrene	--	--	--	NA	NA	NA	19 U	NA	19 U	19 U	19 U	NA	NA	19 U	NA	19 U
pyrene	--	--	--	NA	NA	NA	19 U	NA	19 U	19 U	19 U	NA	NA	19 U	NA	19 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 analyzed  
 U not detected (with associated detection limit)  
 shading indicates criteria exceeded

**TABLE 2**  
**INVESTIGATION BLAST MEDIA SAMPLE RESULTS**  
**RCRA PARTIAL CLOSURE REPORT**  
**BUILDING 86 – GROUND SUPPORT EQUIPMENT (GSE) MAINTENANCE SHOP**  
**NAVAL AIR STATION BRUNSWICK, MAINE**

**POLYCHLORINATED BIPHENYLS ANALYSIS**

<b>SAMPLE ID<sup>(1)</sup></b>		B86-S01	B86-S02
<b>DATE</b>		06/16/10	06/16/10
<b>LOCATION</b>		Blast Booth Floor	Beam above Blast Media Accumulation Area
<b>MATRIX</b>		Blast Media	Blast Media
	<b>CRITERIA</b>		
<b>PCB (µg/kg)</b>	<b>MEDEP</b>		
Aroclor-1016	--	33 U	33 U
Aroclor-1221	--	33 U	33 U
Aroclor-1232	--	33 U	33 U
Aroclor-1242	--	33 U	33 U
Aroclor-1248	--	33 U	33 U
Aroclor-1254	--	33 U	33 U
Aroclor-1260	--	33 U	33 U
Total Aroclor	1,000	33 U	33 U

**TCLP ANALYSIS**

<b>SAMPLE ID<sup>(1)</sup></b>		B86-S01	B86-S02
<b>DATE</b>		06/16/10	06/16/10
<b>LOCATION</b>		Blast Booth Floor	Beam above Blast Media Accumulation Area
<b>MATRIX</b>		Blast Media	Blast Media
	<b>CRITERIA</b>		
<b>METALS (mg/L)</b>	<b>TCLP Limit</b>		
arsenic	5	0.2 U	0.2 U
barium	100	1 U	1 U
cadmium	1	0.1 U	0.1 U
chromium	5	0.65	0.38
lead	5	0.34	0.23
mercury	0.2	0.02 U	0.02 U
selenium	1	0.5 U	0.5 U
silver	5	0.1 U	0.1 U

Notes:

- (1) Sample prefix "NASB" is not shown.  
µg/kg microgram per kilogram  
mg/L milligram per liter  
U not detected (with associated detection limit)  
TCLP Toxicity Characteristic Leaching Procedure

**TABLE 3  
POST-CLEANING EVENT 1 - FLOOR AND WALL WIPE SAMPLE RESULTS  
RCRA PARTIAL CLOSURE REPORT  
BUILDING 86 – GROUND SUPPORT EQUIPMENT (GSE) MAINTENANCE SHOP  
NAVAL AIR STATION BRUNSWICK, MAINE**

SAMPLE ID <sup>(1)</sup>	B86-WP33	B86-WP34	B86-WP35	B86-WP36	B86-WP37	B86-WP38	B86-WP39	B86-WP40	B86-WP41	B86-WP42	B86-WP43	B86-WP44	B86-WP45	B86-WP46	B86-WP47	B86-WP48	B86-WP49	B86-WP50	B86-WP51	B86-WP52	B86-WP53	B86-WP54			
	DATE	10/04/10	10/04/10	10/04/10	10/04/10	10/04/10	10/04/10	10/04/10	10/04/10	10/04/10	10/04/10	10/04/10	10/04/10	10/04/10	10/04/10	10/04/10	10/04/10	10/04/10	10/04/10	10/04/10	10/04/10	10/04/10	10/04/10		
LOCATION	Vehicle Bay Floor	Vehicle Bay Floor	Vehicle Bay Floor	Vehicle Bay Floor	Vehicle Bay Wall	Hazmat Storage Floor	Hazmat Storage Floor	Hazmat Storage Wall	Hydraulic Patch Room Floor	Hydraulic Patch Room Wall	Tool Room Floor	Tool Room Wall	Vehicle Repair Room Floor	Vehicle Repair Room Floor	Vehicle Repair Room Wall	Vehicle Repair Room Wall	Paint Booth Floor	Paint Booth Floor	Paint Booth Floor	Paint Booth Wall	Welding Shop Work Bench	Welding Shop Floor			
METALS (µg/ft <sup>2</sup> )	CRITERIA																								
	WTC	MEDEP wall	MEDEP floor								Field Dup03														
lead	--	250	40	180	200	210	260	21	99	140	17	27	209 J	170	6.7	460	210	37	170	31 U	94 U	11 U	110	230	350

SAMPLE ID <sup>(1)</sup>	B86-WP55	B86-WP56	B86-WP57	B86-WP58	B86-WP59	B86-WP60	B86-WP61	B86-WP62	B86-WP63	B86-WP64	B86-WP65	B86-WP66	B86-WP67	B86-WP68	B86-WP69	B86-WP70	B86-WP-DUP03	B86-WP-DUP04	B86-WP-DUP05			
	DATE	10/04/10	10/04/10	10/04/10	10/04/10	10/04/10	10/04/10	10/04/10	10/04/10	10/04/10	10/04/10	10/04/10	10/04/10	10/04/10	10/04/10	10/04/10	10/04/10	10/04/10	10/04/10	10/04/10		
LOCATION	Welding Shop Wall	Spray Paint Washer Floor	Parts Washer Floor	Blast Booth Floor	Blast Booth Floor	Blast Booth Wall	Blast Booth wall	Blast Booth Door	Decon Room Floor	Decon Room Floor	Decon Room Wall	Blast Accumulation Room Floor	Blast Accumulation Room Wall	Structure EE Floor	Structure FF Floor	Dust Collection Room Floor	Hydraulic Patch Room Floor	Blast Booth Door	Decon Room Floor			
METALS (µg/ft <sup>2</sup> )	CRITERIA																			Field Dup B86-WP41	Field Dup B86-WP62	Field Dup B86-WP64
	WTC	MEDEP wall	MEDEP floor								Field Dup04											
lead	--	250	40	350	95	360	36	35	210	140	34 U	20 U	10 UJ	18 U	57 U	100 U	120	72 U	54 U	20 U	40 U	44 UJ

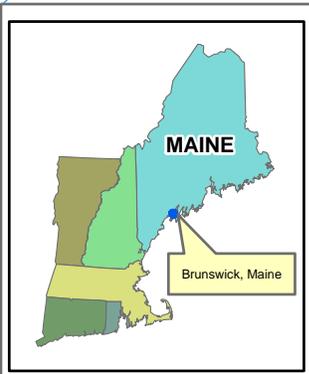
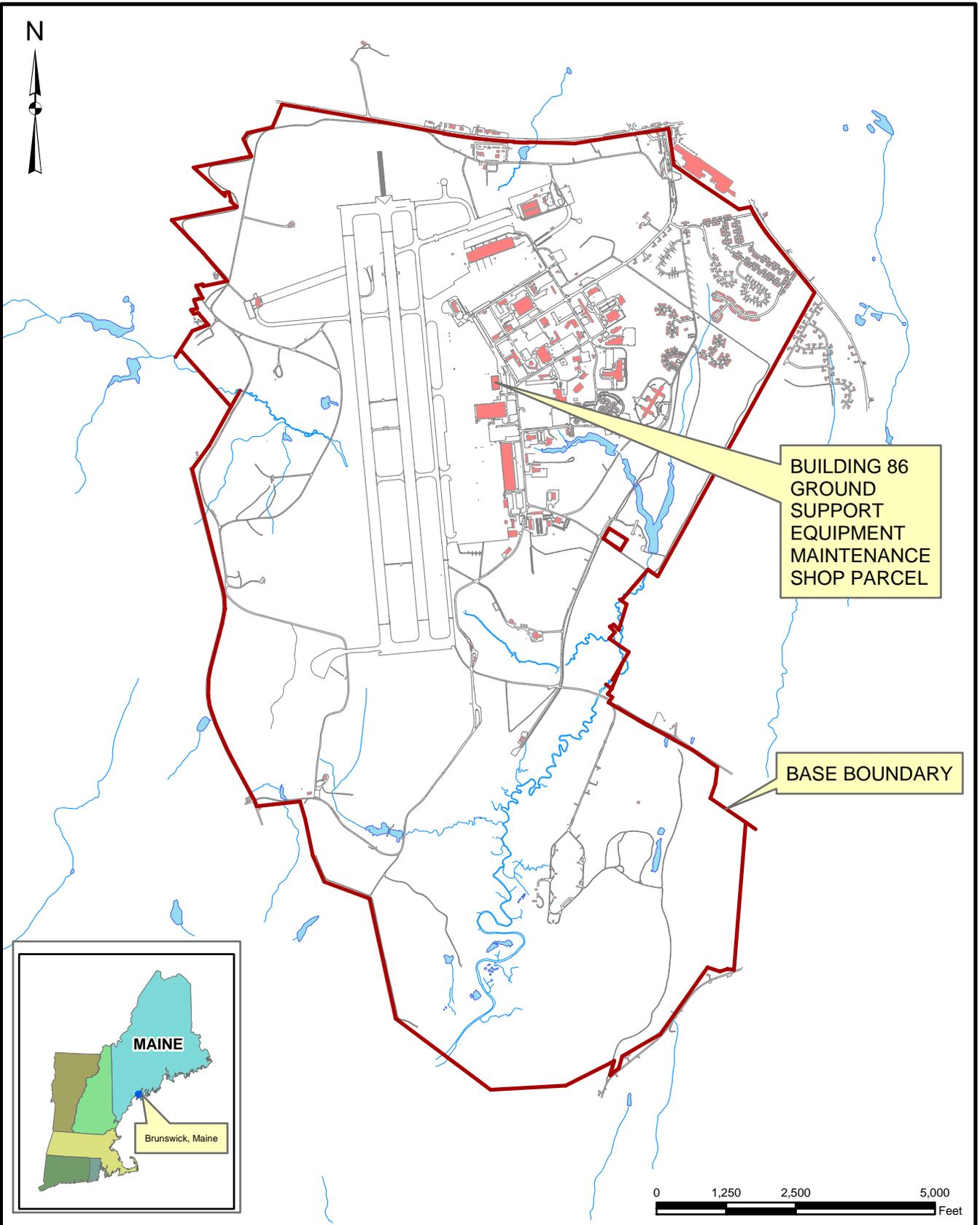
Notes:  
 (1) Sample prefix "NASB" is not shown.  
 Wipe sample surface area: 10 cm by 10 cm  
 WTC Source: Table A-3 Settled Dust Screening Values and Supporting Toxicity Criteria from World Trade Center Indoor Environment Assessment: Selecting Contaminants of Potential Concern and Setting Health-Based Benchmarks, May 2003  
 µg/ft2 micrograms per square foot  
 -- no criteria available  
 J estimated  
 NA not analyzed  
 U not detected (with associated detection limit)  
 shading indicates criteria exceeded

**TABLE 4  
POST-CLEANING EVENT 2 - FLOOR AND WALL WIPE SAMPLE RESULTS  
RCRA PARTIAL CLOSURE REPORT  
BUILDING 86 – GROUND SUPPORT EQUIPMENT (GSE) MAINTENANCE SHOP  
NAVAL AIR STATION BRUNSWICK, MAINE**

SAMPLE ID <sup>(1)</sup>	B86-WP71	B86-WP72	B86-WP73	B86-WP74	B86-WP75	B86-WP76	B86-WP77	B86-WP78	B86-WP79	B86-WP80	B86-WP81	B86-WP82	B86-WP83	B86-WP84	B86-WP85	B86-WP86	B86-WP87	B86-WP88	B86-WP89	B86-WP90	B86-WP90			
DATE	10/26/10	10/26/10	10/26/10	10/26/10	10/26/10	10/26/10	10/26/10	10/26/10	10/26/10	10/26/10	10/26/10	10/26/10	10/26/10	10/26/10	10/26/10	10/26/10	10/26/10	10/26/10	10/26/10	10/26/10	10/26/10			
LOCATION	Vehicle Bay Floor	Vehicle Bay Floor	Vehicle Bay Floor	Vehicle Bay Floor	Hazmat Storage Area Floor	Hazmat Storage Area Floor	Vehicle Repair Room Floor	Vehicle Repair Room Floor	Tool Room Floor	Paint Shop Floor	Paint Shop Floor	Paint Shop Floor	Welding Shop Work Bench	Welding Shop Floor	Welding Shop Wall	Spray Paint Washer Floor	Parts Washer Floor	Blast Accumulation Room Floor	Structure EE Floor	Structure FF Floor	Dust Collection Room Floor			
METALS (µg/ft <sup>2</sup> )	CRITERIA																							
	WTC	MEDEP wall	MEDEP floor																					
lead	--	250	40	27	15	15	15	13	22	32	12	10	4.9	6	3.6 J	12	16	37	25	56	24	13	12	21

SAMPLE ID <sup>(1)</sup>	B86-WP-DUP01	B86-WP-DUP02	B86-WP-DUP03			
DATE	10/26/10	10/26/10	10/26/10			
LOCATION	Hazmat Storage Area Floor	Welding Shop Work Bench	Structure FF Floor			
METALS (µg/ft <sup>2</sup> )	CRITERIA			Field Dup B86-WP75	Field Dup B86-WP83	Field Dup B86-WP90
	WTC	MEDEP wall	MEDEP floor			
lead	--	250	40	12	6.5	14

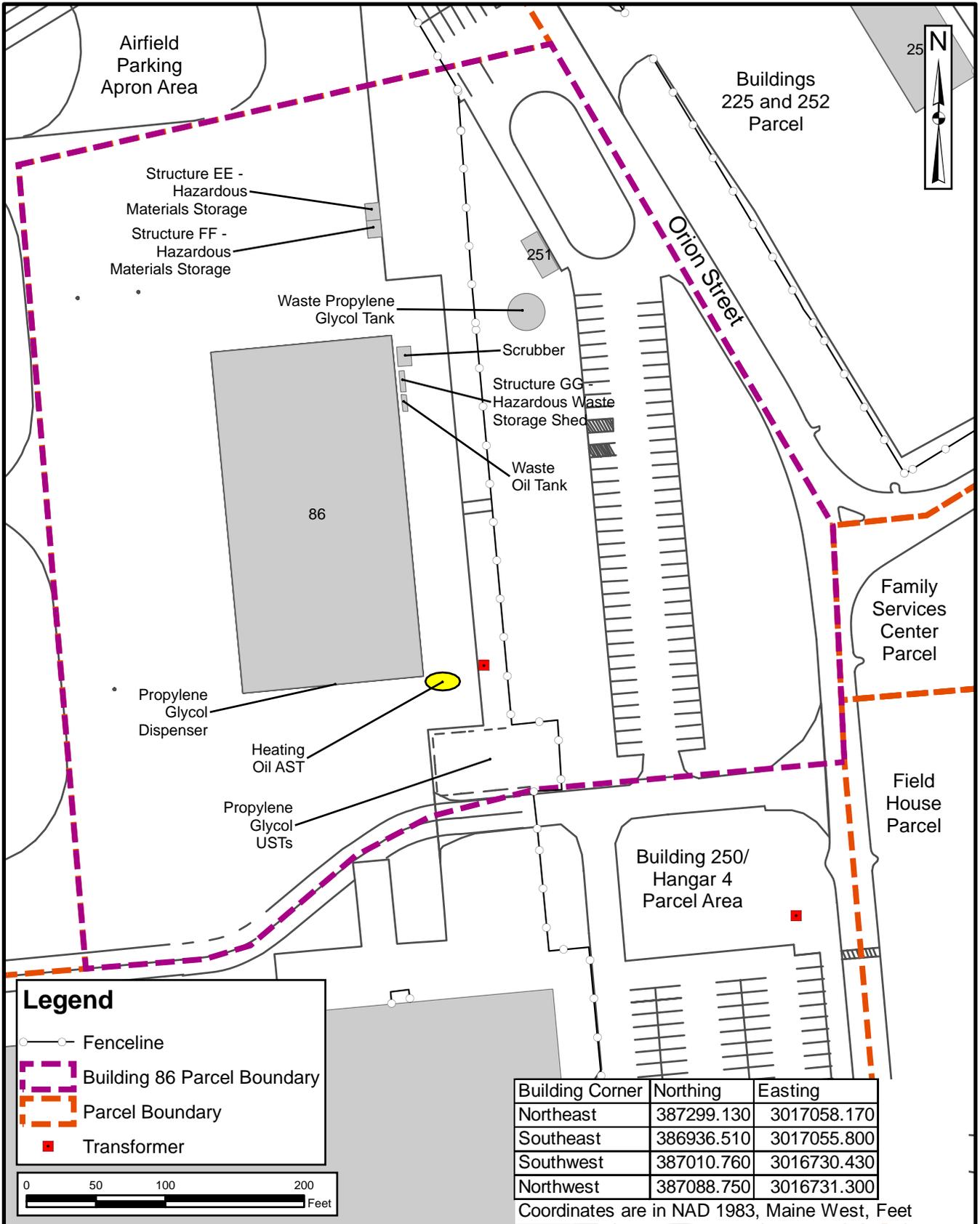
Notes:  
 (1) Sample prefix "NASB" is not shown.  
 Wipe sample surface area: 10 cm by 10 cm  
 WTC Source: Table A-3 Settled Dust Screening Values and Supporting Toxicity Criteria from World Trade Center Indoor Environment Assessment: Selecting Contaminants of Potential Concern and Setting Health-Based Benchmarks, May 2003  
 µg/ft<sup>2</sup> micrograms per square foot  
 -- no criteria available  
 J estimated  
 NA not analyzed  
 shading indicates criteria exceeded



**SITE LOCATION MAP**  
**BUILDING 86 - GROUND SUPPORT EQUIPMENT**  
**MAINTENANCE SHOP PARCEL**  
**RCRA PARTIAL CLOSURE REPORT**  
**NAVAL AIR STATION BRUNSWICK, MAINE**

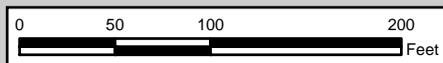
SCALE AS NOTED	
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REV	DATE
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FIGURE NUMBER	
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**Legend**

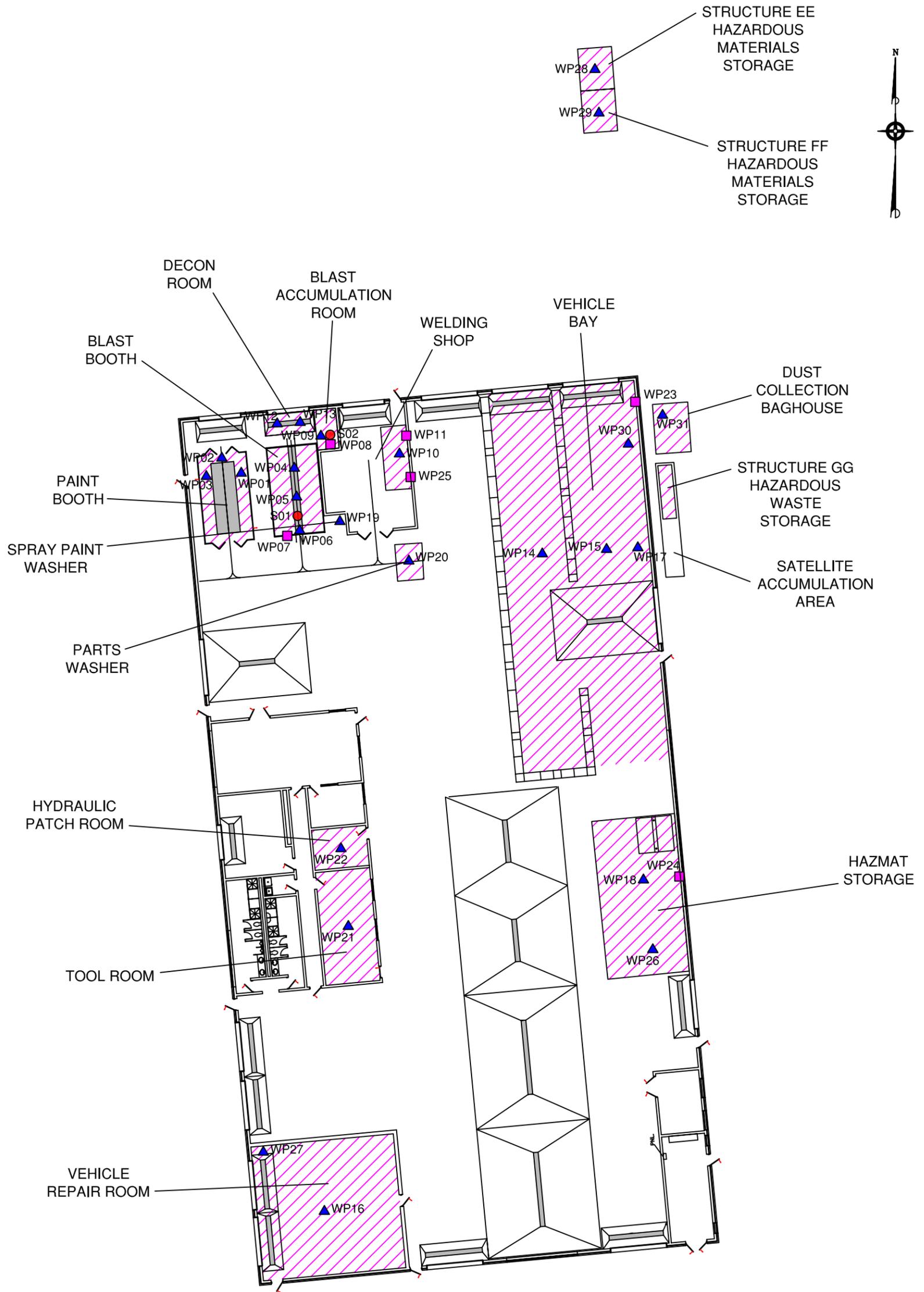
- Fenceline
- Building 86 Parcel Boundary
- Parcel Boundary
- Transformer



Tetra Tech NUS, Inc.

**SITE PLAN**  
**BUILDING 86 - GROUND SUPPORT EQUIPMENT**  
**MAINTENANCE SHOP PARCEL**  
**RCRA PARTIAL CLOSURE REPORT**  
**NAVAL AIR STATION BRUNSWICK, MAINE**

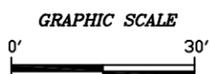
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FIGURE NUMBER FIGURE NO. 2	



**LEGEND**

- S01 ● BLAST MEDIA SAMPLE LOCATION
- WP01 ▲ FLOOR WIPE SAMPLE LOCATION
- WP08 ■ WALL WIPE SAMPLE LOCATION

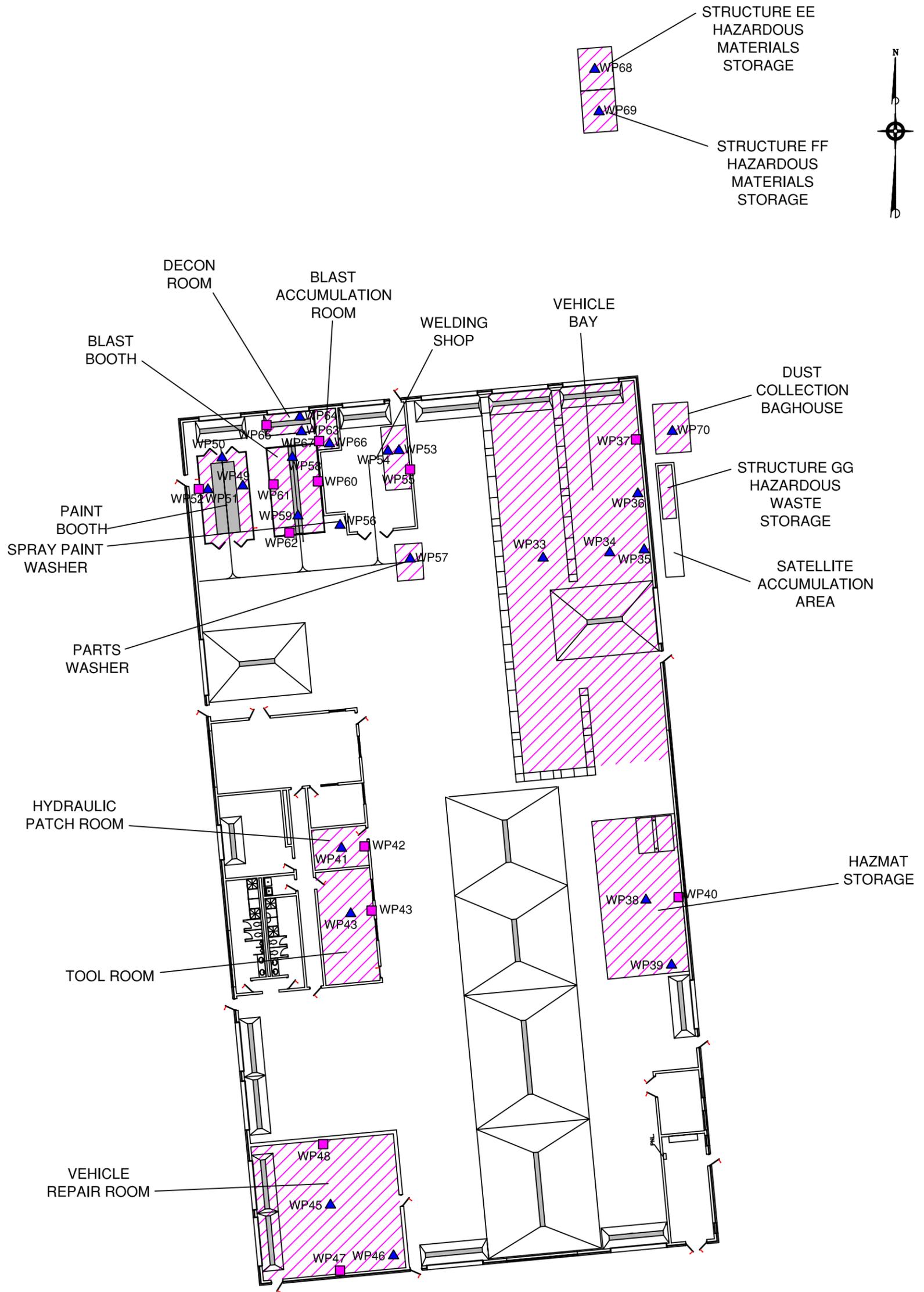
DECONTAMINATION WORK AREA



**TETRA TECH** NUS, INC.

INVESTIGATION SAMPLE LOCATIONS  
 BUILDING 86 – GROUND SUPPORT  
 EQUIPMENT MAINTENANCE SHOP PARCEL  
 RCRA PARTIAL CLOSURE REPORT  
 NAVAL AIR STATION, MAINE

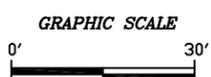
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FIGURE NUMBER 3	REV 0
	DATE 11/22/10



**LEGEND**

- WP01 ▲ FLOOR WIPE SAMPLE LOCATION
- WP08 ■ WALL WIPE SAMPLE LOCATION

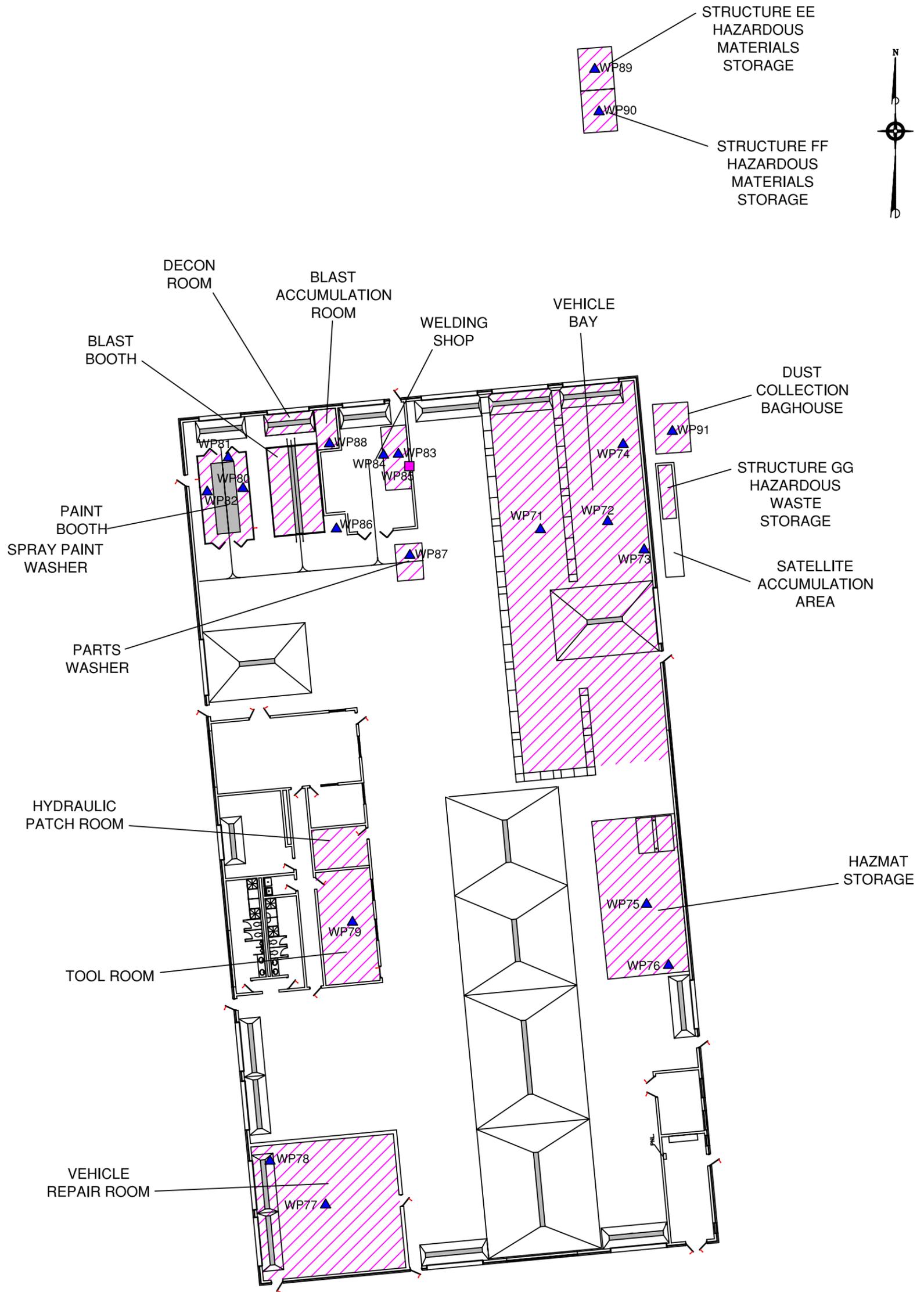
DECONTAMINATION WORK AREA



**TETRA TECH** NUS, INC.

POST-CLEANING SAMPLES – EVENT 1  
 BUILDING 86 – GROUND SUPPORT  
 EQUIPMENT MAINTENANCE SHOP PARCEL  
 RCRA PARTIAL CLOSURE REPORT  
 NAVAL AIR STATION, MAINE

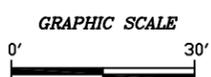
FILE \\.\NASB_BLDG_86_POST1.DWG	SCALE AS NOTED
FIGURE NUMBER 4	REV DATE 0 11/19/10



**LEGEND**

- WP01 ▲ FLOOR WIPE SAMPLE LOCATION
- WP08 ■ WALL WIPE SAMPLE LOCATION

DECONTAMINATION WORK AREA



TETRA TECH NUS, INC.

POST-CLEANING SAMPLES - EVENT 2  
 BUILDING 86 - GROUND SUPPORT  
 EQUIPMENT MAINTENANCE SHOP PARCEL  
 RCRA PARTIAL CLOSURE REPORT  
 NAVAL AIR STATION, MAINE

FILE \\.\NASB_BLDG_86_POST2.DWG	SCALE AS NOTED
FIGURE NUMBER 5	REV 0
	DATE 11/19/10

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

**Inspection Date: 1/21/10**

**Personnel: Brandon Smith, P.E. / James Forrelli, P.E.**

**Weather: Clear, 20s**

**GENERAL BUILDING INFORMATION / USES**

Building Name: Building 86 – Ground Support Equipment (GSE) Maintenance Shop

Function: Maintenance Shop

Size: 31,980 SF

Year of Construction: 1992

Building 86 is located at NASB Brunswick west of Orion Street and Building 251, north of the Building 250/Hangar 4 and the airfield apron, south of the airfield apron and Orion Street, and east of the airfield apron and taxiways. It was constructed in 1992 and served as the GSE Maintenance Shop for its entire history. Building 86 is a 31,980 SF two story steel framed building with CMU backup that consists of a large open maintenance area with administrative offices with a mezzanine level, blast booth, paint booth, and maintenance shops on a concrete slab foundation. An external satellite accumulation area was located on the north exterior, two precast concrete sheds that stored hazardous materials are located on the eastern exterior of the building, two propylene glycol tanks are located to southeast of the building.

The building is heated by fuel-oil fired boilers.

**HWSA INSPECTION / CONDITION**

Hazardous waste was temporarily stored at the interior hazardous waste accumulation area located along the eastern portion of Building 86 prior to being moved to the exterior satellite accumulation area (SAAs) located on the eastern exterior. The SAA included HW storage lockers and 2 waste oil ASTs each. A dust collector for the blast booth is located on the eastern exterior of the building as well.

At the time of inspection, Building 86 was in good condition and ground support equipment and maintenance equipment were present.

Potential evidence of past hazardous waste generation activities was observed. See the attached Table A for a summary of potential hazardous waste areas identified during the building inspection.

Potential hazardous waste residue was observed in the paint booth, blast booth, blast booth media collection room, decontamination room, and staining was observed in the main maintenance bays.

No modifications to the structure, which may conceal signs of a past release, were observed.

Hazardous waste storage areas and hazardous waste accumulation areas were observed as described above.

**POTENTIAL PCB-CONTAINING TRANSFORMERS**

One transformer that could be a potential source of polychlorinated biphenyls (PCBs) contamination in the event of a leak was observed at the building.

500 kVa pad-mounted Cooper transformer (serial no. 916005295) containing <2ppm PCB (installed 1991)

**APPLICABLE REPORTS / DOCUMENTS**

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

1943 Map – No buildings are shown on the B86 parcel. A former Building 86 is shown as a storehouse south of Building 28.

1946 Map – Building 71 (Ready magazine) is shown in the B86 parcel. A portion of Range Road runs through the southeastern corner of the B86 parcel.

1952 Map – Same as 1946 map.

1956 Map – No buildings are shown in the B86 parcel. B71 is now shown as a PW Storehouse on Old Gurnet Road in the southern portion of the base.

1957 Map – Buildings 283 (Pyrotechnics locker) and Building 513 (Inflammable storage cage – Hangar 1) are present in the parcel.

1958 aerial – Buildings 283 and 513 present; remainder of the parcel contains aircraft apron with parked P2 aircraft, some petroleum staining is present. A number of cargo containers/sheds are present along the southeastern and northeastern edges of the apron in the parcel.

1975 Map – Same as 1957 map; proposed buildings P-030 (Maintenance Facility) and P-032 (unknown) are also shown.

1978 Map – No buildings are shown; Orion Street borders the parcel on the east side now.

1978 aerial – B283 present; remainder of the parcel contains aircraft apron with parked P3 aircraft, less petroleum staining present than in 1958 aerial. The cargo containers/sheds present in the 1958 aerial are not present.

1979 Map - Building 283 present. Building 513 and proposed buildings not shown.

1981 aerial B283 present; remainder of the parcel contains aircraft apron with parked P3 aircraft, some petroleum staining present. A number of ground support vehicles are parked along the eastern edge of the apron.

1983 Map – same as 1979 map.

1984 aerial - same as 1981 aerial.

1989 Map - same as 1983 map

1989 aerial - same as 1984 aerial.

1993 aerial – Building 86 present; remainder of parcel contains aircraft aprons and parked P-3 aircraft west of B86 and parking and grass areas to the east of B86.

1997 aerial - same as 1989 aerial.

2006 Map - Building 86 shown in current location with Building 251 and waste glycol tank (De-Ice/Rinse Pumphouse) shown to the east.

The following underground storage tanks (USTs) were registered to Building 86:

18694-001 - FRP/DW 10,000-gallon - Propylene Glycol - October 1993, removed 3/17/10

18694-002 - FRP/DW 10,000-gallon - Propylene Glycol - October 1993, removed 3/22/10

The following above ground storage tanks (ASTs) were registered to Building 86:

A86.0 - 275-gallon SWS - Waste Oil - 1993, 1996

A86.1 - 70-gallon SWS - Lube Oil - 1992, inactive - Lube oil (Inside building)

A86.2 - 70-gallon SWS - Lube Oil - 1992, inactive - Lube oil (Inside building)

A86.3 - 70-gallon SWS - Lube Oil - 1992, inactive - Lube oil (Inside building)

A86.4 - 70-gallon SWS - Lube Oil - 1992, inactive - Lube oil (Inside building)

A86.5 - 70-gallon SWS - Lube Oil - 1992, inactive - Lube oil (Inside building)

A86.6 - 70-gallon SWS - Lube Oil - 1992, inactive - Lube oil (Inside building)

A86.7 - 70-gallon SWS - Lube Oil - 1992, inactive - Lube oil (Inside building)

**APPLICABLE REPORTS / DOCUMENTS (CONTINUED)**

- A86.8 - 70-gallon SWS - Lube Oil - 1992, inactive - Lube oil (Inside building)
- A86.9 - 100-gallon SWS - Diesel for generator - 1992, inactive
- A86.10 - 250-gallon DWSV - waste oil - 1996, inactive - GSW Waste Oil (East Side of Building)
- A86.11 - 4,000-gallon DWS - #1 oil for heating - 1999, inactive - Dual Fuel heating system
- A86.12 - 90,000-gallon SWS-glass liner - Waste propylene glycol - 2001, inactive (associated with B251)

There was one oil/water separator (OWS) registered to Building 86:

675 gallon, concrete manhole sourced from floor drains in the repair bays and discharges to the sanitary sewer.

No spills were noted in either the MEDEP spill database or the NASB Spill Logbook. Documentation regarding a February 2004 release of lead contaminated dust from a malfunction in the dust collection system associated with the blast booth. Remediation of the release was conducted and is discussed in the RCRA partial closure report.

**HAZARDOUS WASTE STORAGE RECORDS**

Hazardous waste was historically stored at Building 86. According to NAS Brunswick Hazardous Waste Manager, D. Bruce Smith, hazardous waste generation was tracked by department, not by building. As a result, specific records of hazardous waste qualities and types generated in Building 86 are not available. However, the Hazardous Waste department maintains a list of hazardous waste generated by GSE that shows what would typically be generated by maintenance activities conducted in Building 86.

**MISCELLANEOUS NOTES**

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

(SEE ATTACHED PHOTOGRAPHS)

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



**Table A  
Potential Hazardous Waste Areas - Building 86  
RCRA Partial Closure  
NAS Brunswick, Maine**

<b>Building</b>	<b>Room Name/Description</b>	<b>Description of Operations</b>	<b>Notes/Equipment/Materials</b>	<b>Potential RCRA Issue</b>
Building 86	Paint Booth interior	Paint Booth Area	Collect floor wipe samples (2 on concrete, 1 in trench)	Lead / paint waste residue
	Blast Booth, collection trench	Blast booth area	Collect wipe samples in collection trench	Lead / spent blast media residue
	Blast Booth, interior		Collect wipe sample on floor along concrete strip	Lead / spent blast media residue
	Blast Booth, front		Collect wipe sample on front wall	Lead
	Blast Booth, top		Collect wipe sample on steel beam	Lead
	Blast Accumulation Room		Collect wipe sample on floor, behind blast booth	Lead / spent blast media residue
	Blast Room Decon Room		Collect wipe samples on floor	Lead / spent blast media residue
	Welding Shop		Welding area	Collect wipe sample on bench
	Weld Booth Air Duct	Collect wipe sample inside duct above weld bench		Lead
	Beam east side weld shop	Collect sample on beam, (within wall limits of samples)		Lead
	Vehicle Bay 1	Vehicle storage/maintenance area	Collect wipe sample on floor	RCRA 8 Metals/SVOCs
	Vehicle Bay 2		Collect wipe sample on floor	RCRA 8 Metals/SVOCs
	Repair bay		Collect wipe sample on floor	RCRA 8 Metals/SVOCs
	Drum Storage/Accumulation	Interior hazardous material area	Collect wipe sample on floor, along northeast wall	RCRA 8 Metals/SVOCs
	Rag Accumulation Area		Collect wipe sample on floor, along east wall	RCRA 8 Metals/SVOCs
	HAZMAT Area		Collect wipe sample on floor	RCRA 8 Metals/SVOCs
	Concrete sheds northeast of building	Exterior hazardous material storage area	Collect wipe sample on floor of each storage shed	RCRA 8 Metals/SVOCs
	Spray Paint wash	Miscellaneous areas	Collect wipe sample on floor	RCRA 8 Metals/SVOCs
	Parts Washer Area		Collect wipe sample on floor	RCRA 8 Metals/SVOCs
	Tool Room		Collect wipe sample on floor	RCRA 8 Metals/SVOCs
	Hydraulic Room		Collect wipe sample on floor	RCRA 8 Metals/SVOCs
	Support North side		Collect wipe sample on steel beam	Lead
	Above south oil drum		Collect wipe sample on wall	Lead
	Degreasing Area		Collect wipe sample on floor	RCRA 8 Metals/SVOCs
	Discretionary locations		Target stained areas or dust (lead only)	RCRA 8 Metals/SVOCs

**PHOTOGRAPHS**



No. 1 Building 86 – NAS Brunswick May 12, 2010  
GSE Maintenance Shop northwest elevation; Structures EE and FF and Waste Glycol tank at left of frame



No. 2 Building 86 – NAS Brunswick May 12, 2010  
GSE Maintenance Shop east elevation; non-PCB transformer and closed heating oil AST in left foreground



No. 3 Building 86 – NAS Brunswick  
GSE Maintenance Shop south elevation

May 12, 2010



No. 4 Building 86 – NAS Brunswick  
GSE Maintenance Shop west elevation

April 28, 2010



No. 5 Building 86 – NAS Brunswick June 8, 2010  
GSE Maintenance Shop glycol filling station along the south side of building



No. 6 Building 86 – NAS Brunswick May 12, 2010  
Propylene glycol underground storage tanks south of GSE Maintenance Shop



No. 7 Building 86 – NAS Brunswick June 8, 2010  
Satellite accumulation area; waste oil tank, hazardous waste storage shed (Structure GG), and blast media air scrubber (from to right)



No. 8 Building 86 – NAS Brunswick May 12, 2010  
Blast booth dust collector bag house and scrubber unit



No. 9 Building 86 – NAS Brunswick June 8, 2010  
Hazardous materials storage sheds (Structures EE and FF) northeast of GSE Maintenance Shop



No. 10 Building 86 – NAS Brunswick May 12, 2010  
Closed heating oil AST at southeast corner of Building 86



No. 11 Building 86 – NAS Brunswick  
Northeast repair bays in GSE Maintenance Shop

June 8, 2010



No. 12 Building 86 – NAS Brunswick  
Northern and central portion of main vehicle repair bays in GSE Maintenance Shop

May 12, 2010



No. 13 Building 86 – NAS Brunswick May 12, 2010  
Southern and central portion of main vehicle repair bays in GSE Maintenance Shop



No. 14 Building 86 – NAS Brunswick May 12, 2010  
Paint booth, blast booth, paint sprayer washer area, and welding shop (from left to right).



No. 15 Building 86 – NAS Brunswick  
Blast booth interior prior to decontamination activities

January 21, 2010



No. 16 Building 86 – NAS Brunswick  
Blast booth west trench prior to cleaning

October 4, 2010



No. 17 Building 86 – NAS Brunswick January 21, 2010  
Paint booth interior prior to decontamination activities



No. 18 Building 86 – NAS Brunswick June 2, 2010  
Welding shop interior prior to decontamination activities



No. 19 Building 86 – NAS Brunswick  
Blast booth west trench after cleaning

October 4, 2010



No. 20 Building 86 – NAS Brunswick  
Former aqueous parts washer after decontamination activities

October 4, 2010