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NAS BRUNSWICK ME

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TETRA TECH

Technical Memorandum

Former Old Navy Fuel Farm Site Assessment

Naval Air Station Brunswick Brunswick, Maine

Naval Facilities Engineering Command Mid-Atlantic

Contract Number N62470-08-D-1001
Contract Task Order WE09

July 2012

TECHNICAL MEMORANDUM

FORMER OLD NAVY FUEL FARM SITE ASSESSMENT

FORMER NAVAL AIR STATION BRUNSWICK, MAINE

COMPREHENSIVE LONG-TERM ENVIRONMENTAL ACTION - NAVY (CLEAN) CONTRACT

Submitted to:
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As per the State of Maine Department of Professional and Financial Regulations, Title 32, Chapter 73, the undersigned as reviewed the geological content of the attached report entitled: "*Technical Memorandum, Former Old Navy Fuel Farm Site Assessment, Former Naval Air Station Brunswick, Brunswick, Maine*", dated July 2012.

7/2/12

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TABLE OF CONTENTS

SECTION **PAGE**

ACRONYMS vii

1.0 INTRODUCTION 1

2.0 BACKGROUND 1

3.0 FIELD INVESTIGATION PROGRAM 5
- 3.1 Utility Clearance 5
- 3.2 Direct Push Soil Sampling / Well Installation/Development 5
- 3.3 Groundwater Sampling 7
- 3.4 Well Surveying 7
- 3.5 Water-Level Gauging 8
- 3.6 Well Abandonment 8
- 3.7 Investigation-Derived Waste 8

4.0 RESULTS 8
- 4.1 Geology 8
- 4.2 Hydrogeology 9
- 4.3 Soil Sampling Results 9
- 4.4 Groundwater Sampling Results 11

5.0 RECOMMENDATIONS 12

REFERENCES 13

APPENDICES

A FIELD FORMS
- **A-1 SOIL BORING LOGS**
- **A-2 WELL CONSTRUCTION LOGS**
- **A-3 WELL DEVELOPMENT LOGS**
- **A-4 LOW-FLOW PURGE DATA SHEETS AND GROUNDWATER SAMPLE LOGS**

B ANALYTICAL RESULTS
- **B-1 COMPLETE SOIL ANALYTICAL RESULTS**
- **B-2 COMPLETE GROUNDWATER ANALYTICAL RESULTS**
- **B-3 CHAIN OF CUSTODY FORMS**
- **B-4 MAINE ELECTRONIC DATA DELIVERABLE**

C RESPONSES TO COMMENTS

TABLES

NUMBER

1 Well Completion Summary
2 Groundwater Elevation Data
3 Analytical Results - Soil
4 Soil Summary Statistics
5 Analytical Results - Groundwater
6 Groundwater Summary Statistics

FIGURES

NUMBER

1 Site Location Map
2 Site Plan
3 Groundwater Contour Map – June 28, 2011
4 Groundwater Contour Map – July 11, 2011
5 Groundwater Contour Map – July 14, 2011
6 Exceedances of Screening Levels in Soil
7 Exceedances of Screening Levels in Groundwater

ACRONYMS

AOPI	Area of Potential Interest
bgs	below ground surface
CCME	Canadian Council of Ministers of the Environment
CLEAN	Comprehensive Long-Term Environmental Action Navy
COC	chemical of concern
Eco SSL	ecological soil screening level
EPA	United States Environmental Protection Agency
EPH	extractable petroleum hydrocarbons
ERP	Environmental Restoration Program
GPR	ground-penetrating radar
GPS	global positioning system
GSE	ground support equipment
IAS	Initial Assessment Study
MADEP	Massachusetts Department of Environmental Protection
MCL	Maximum Contaminant Level
MEDEP	Maine Department of Environmental Protection
MEG	Maximum Exposure Guideline
NAS	Naval Air Station
NAVFAC	Naval Facilities Engineering Command
ng/m^3	nanogram per cubic meter
NOAA	National Oceanic and Atmospheric Administration
ORNL	Oak Ridge National Laboratory
PAH	polynuclear aromatic hydrocarbon
PCB	polychlorinated biphenyl
PCE	tetrachloroethene
PFOA	perfluorooctanoic acid
PFOS	perfluorooctane sulfonic acid
PID	photoionization detector
RAG	Remedial Action Guideline
RSL	Regional Screening Level
SIM	Selected Ion Monitoring
SQuirt	Screening Quick Reference Table
SSL	Soil Screening Level
SVOC	semivolatile organic compound
TAL	Target Analyte List

TCE	trichloroethene
Tetra Tech	Tetra Tech, Inc.
UPL	upper prediction limit
UST	underground storage tank
VI	vapor intrusion
VPH	volatile petroleum hydrocarbons
VOC	volatile organic compound

1.0 INTRODUCTION

This Technical Memorandum documenting the 2011 soil and groundwater assessment of the former Old Navy Fuel Farm (ONFF) at the former Naval Air Station (NAS) Brunswick has been prepared by Tetra Tech, Inc., under Contract Task Order (CTO) WE09, as part of the Comprehensive Long-Term Environmental Action Navy (CLEAN) Contract Number N62470-08-D-1001, which is part of the Navy's Environmental Restoration Program (ERP). Work was performed following the final work plan (Tetra Tech, 2011a) and discussions with the Navy and regulators. The scope of work performed included advancement of 48 soil borings; three of the soil borings were completed as piezometers and fifteen as temporary monitoring wells. The objective of this investigation was to characterize current soil and groundwater conditions at the former ONFF. More specifically, the objectives were to: assess residual soil and groundwater conditions approximately 10 years after the soil removal action that occurred in the fall of 2000; compare petroleum impacts to Maine Department of Environmental Protection (MEDEP) remedial guidelines using the extractable petroleum hydrocarbon/volatile petroleum hydrocarbon (EPH/VPH) methods; determine if a shallow groundwater divide is present at the north side of the ONFF near MW-NASB-62; and determine if Buildings 117 and 118 are a source of low-level petroleum detections at Site 17.

2.0 BACKGROUND

This section summarizes background information from the following documents:

- EA, 1998. Results of Bio-Monthly Monitoring Well Gauging program Conducted at Buildings 95, Old Navy Fuel Farm, and Site 7 Naval Air Station Brunswick, Maine, August.

- EA, 2000a. Bi-Annual Progress Report on Soil Vapor Extraction/Aquifer Air Sparging Remedial System Operations for the Period 1 January – 30 June 1999 Old Navy Fuel Farm, Naval Air Station, Brunswick, Maine. February (Final).

- EA, 2000b. Direct-Push Investigation at the Old Navy Fuel Farm, Naval Air Station, Brunswick, Maine. April.

- EA, 2000c. Bi-Annual Progress Report on Soil Vapor Extraction/Aquifer Air Sparging Remedial System Operations for the Period 1 July – 31 December 1999 Old Navy Fuel Farm, Naval Air Station, Brunswick, Maine. August (Final).

- ECC, 2010. Proposed Direct-Push Investigation Old Navy Fuel Farm Naval Air Station Brunswick, Maine, letter dated 23 April.

- ECOR Solutions (ECOR), 2011. Final Summary Initial Baseline EPH and VPH Groundwater Sampling Letter Report Old Navy Fuel Farm Naval Air Station Brunswick, Maine, January.

- Foster Wheeler Environmental Corporation (FWEC), 2002. Final Removal Action Report for Old Navy Fuel Farm, January.

- MEDEP, 2009. Remediation Guidelines for Petroleum Contaminated Sites in Maine, December

- Tetra Tech, 2011a. Work Plan Site Assessment Former Old Navy Fuel Farm, Naval Air Station, Brunswick, Maine. June 17.

- Tetra Tech, 2011b. Remedial Investigation Report for Site 17, Former Building 95 Naval Air Station Brunswick, Maine, July.

The former ONFF is located on the northeast portion of the former NAS Brunswick (Figure 1); it is bounded to the south by Fitch Avenue, to the west by 6th Street, and to the north and east by undeveloped land (Figure 2). The topography of the ONFF area is generally flat and exhibits little relief. Surface features include two baseball fields, grass, and paved access roads.

The ONFF consisted of two, separate, bulk-storage, petroleum tank farms, which included a total of nine mounded underground storage tanks (USTs), piping, and associated appurtenances. The western tank farm included five USTs (T-101 through T-105), which were used from 1951 to 1993. Tanks T-101 through T-103 each had a 100,000-gallon capacity and stored petroleum sludge, unleaded gasoline, and aviation gasoline, respectively. Tanks T-104 and T-105 both had a 25,000-gallon capacity and stored ethylene glycol (deicing fluid). The eastern tank farm included four USTs (T-202 through T-205), used from 1953 to 1993. Each of the 567,000-gallon capacity tanks was used for storage of JP-5 fuel. The tank farms were removed in 1993 during facility decommissioning (FWEC, 2002).

Prior to ONFF decommissioning, groundwater investigations indicated the presence of a dissolved-phase hydrocarbon plume in the eastern portion of the ONFF. The plume in the eastern portion consisted of benzene, toluene, ethylbenzene, and xylenes (BTEX). The BTEX plume extended from a former Tank T-202 in the southeast direction. A groundwater investigation indicated that significant reductions in BTEX concentrations took place between April 1990 and November 1993 in the plume located in the east-central portion of the ONFF. Groundwater samples collected during the period of 1990 to 1993 indicated the presence of a dissolved-phase plume in the western portion; however, insufficient samples were collected to delineate the extent of this western plume.

Soil investigations were performed in August 1999 to support removal of contaminated soil (EA, 2000b). A total of 175 direct-push soil samples were collected and analyzed for total BTEX. These results indicated that soil contamination ranged in depth from 2 to 10 feet below ground surface (bgs) and in thickness from 2 to 6 feet (EA, 2000b). The photoionization detector (PID)/flame ionization detector (FID) field screening results indicated that soils 3 to 6 feet bgs contained the highest concentrations of petroleum contamination across the ONFF, which is consistent with groundwater fluctuations of 2 to 5 feet bgs.

In June 1999, groundwater samples were collected for BTEX, methyl tertiary butyl ether (MTBE), GRO, and DRO analysis from 19 locations in the vicinity of the former soil vapor extraction/air sparging (SVE/AS) system. These locations were installed by OHM in early 1996 in the eastern and western dissolved-phase plume areas to evaluate the extent of petroleum contamination (EA, 2000a). The sample results indicated that the highest contaminant concentrations occurred at former well points WP-02 and WP-21 in the western portion of the former ONFF, and at WP-22 in the eastern portion. It was determined that the water quality data collected at the 19 well points was not accurately representing site conditions, due to the well installation method. Therefore, the well points were removed from the monitoring and sampling program following the June 1999 sampling event (EA, 2000a).

In July 1999, the Navy performed an evaluation of various remedial alternatives that could be implemented at the ONFF (FWEC, 2002). The selected alternative was removal of contaminated soils and monitored natural attenuation of the groundwater plume.

In August 2000, FWEC excavated test pits to verify and expand on excavation areas identified in the August 1999 investigation. Test pits were placed at the intersections of a 50-foot grid system, with a total of 163 test pits excavated. Locations with PID readings greater than 700 parts per million (ppm) were sampled and analyzed for diesel range organics (DRO) and gasoline range organics (GRO). In addition, samples from selected test pits that did not have PID readings greater than 700 ppm were collected. Based on the test pit excavation/sampling activities, FWEC determined that only four of the 12 hot spots exceeded the interim action level of 2,500 ppm for DRO and GRO combined.

In September-November 2000, 14,677 tons of petroleum impacted soil was removed from the ONFF (FWEC, 2002). Excavation areas are depicted on Figure 2. The depth of excavation was 10 feet or to the top of clay. Confirmation soil samples collected along the excavation bottom and sidewalls indicated that residual petroleum contaminated soil remained at the ONFF in some areas. Because preliminary soil analytical data indicated only 4 of 12 hot spot areas exceeded the interim action level of 2,500 ppm for DRO and GRO combined, the Navy reduced the site cleanup level to 870 ppm (FWEC, 2002).

In December 1999, groundwater samples were collected for BTEX, GRO, and DRO analysis from 11 monitoring wells in the vicinity of the former SVE/AS system to evaluate the extent of petroleum contamination (EA, 2000b). Volatiles were not detected in any samples. DRO exceeded the MEDEP cleanup goal (50 micrograms per liter [µg/L]) in four wells (MW-NASB-46, -49, -54, and -61R). Trend data indicated DRO was decreasing over time.

Between December 2000 and April 2009, 18 groundwater monitoring events were conducted in accordance with the Groundwater Monitoring Plan (GMP) prepared by EA in 2000. The GMP listed 17 monitoring wells (MW-NASB-044, -046, -049, -051, -054, -058, -061R, -062, -098, -206, -207, -208, -209R, -210, -213, -244, and -045) for sampling/gauging. Several wells were removed and added between 2000 and 2007, with MEDEP approval (ECC, 2010). In 2000, MW-NASB-044 was removed during the ONFF soil removal actions; it was not replaced, as it was located in the source area within the ONFF, and the soil removal eliminated the source. In 2003, three monitoring wells (MW-NASB-054, -061R, and -213) were decommissioned in preparation for ONFF ball field construction. Three monitoring wells (MW-NASB-701, -702, and -703) were installed to further delineate the plume. In 2004, six monitoring wells (MW-NASB-046, -049, -206, -209R, -244, and -245) were recommended for gauging without sampling. In 2007, two monitoring wells (MW-NASB-701 and 703) were irreparably damaged during snow removal and made unusable.

In 2009, MEDEP guidance for remediation petroleum sites was changed. The new guidance, *Remediation Guidelines for Petroleum Contaminated Sites in Maine,* became effective December 1, 2009. The previous analytical methods for GRO and DRO analysis were replaced by VPH and EPH, respectively. The new methods include aromatic and aliphatic carbon ranges, as well as target analytes, including BTEX compounds and polycyclic aromatic hydrocarbons (PAHs).

In April 2010, ECC proposed a direct push investigation at the former ONFF (ECC, 2010). The goals of the direct push investigation were to: assess residual soil and groundwater conditions approximately 10 years after the soil removal action in fall 2000; compare petroleum impacts to MEDEP remedial guidelines using the EPH/VPH methods; and determine if a shallow groundwater divide is present at the north side of the ONFF near MW-NASB-62.

Specific target areas were identified based on evaluation of historic petroleum bulk storage features and environmental data. ECC prepared figures showing interpreted sorbed-phase and dissolved-phase TPH isopleths. TPH impacts are associated with multiple release areas at the ONFF. The two most significant release areas appear to be located near the fueling islands near former Building 206 and suspected product line leaks between former tanks T-202 and T-203 used to store jet fuel (ECC, 2010).

In June 2010, the first groundwater sampling round using EPH/VPH methods was conducted (ECOR, 2011) at the ONFF. Fourteen monitoring wells were sampled. The VPH results indicated that all VPH aliphatic (C5-C8) and aromatic (C9-C10) fractions in all groundwater samples were not detected, and methyl tert-butyl ether (MTBE) was the only target VPH compound that was detected (1 µg/L in the field duplicate collected from MW-NASB-098). The EPH results indicated that all EPH aliphatics (C9-C18, and C19-C36) and aromatic (C11-C22) fractions were not detected, nor were any EPH target analytes detected. Field data for DP-20 and DP-24 show evidence for ongoing biodegradation (reducing conditions, low dissolved oxygen, odors, and elevated PID and OVM jar headspace values). These results confirmed there is no significant migration of petroleum compounds dissolved in groundwater south of Avenue B.

The geology beneath the ONFF consists of fine to coarse sand (Upper Sand) underlain by silt/clay (Presumpscot Clay). The thickness of the Upper Sand ranges from approximately 2.5 to 9.0 feet, with thicker zones located in the northwest portion of the former ONFF. The depth to groundwater ranges from approximately 2.5 to 9 feet bgs, based on a review of historical data. The hydraulic gradient ranged from 0.005 (August 1996, June 2010) to 0.009 (May 1997, December 1999) beneath the ONFF. Historical groundwater contour maps, based on gauging data from ONFF, Site 7 and Site 17 measured in January, March, May, July, September, and November 1997 (EA, 1998), consistently demonstrate regional groundwater flow is in a southeast direction and a groundwater divide does not exist at the ONFF.

3.0 FIELD INVESTIGATION PROGRAM

3.1 Utility Clearance

Utility clearance was performed prior to initiating sampling activities. The soil boring locations were marked and both Dig Safe and Navy Caretaker Office personnel were contacted for locating underground utilities. Tetra Tech subcontracted a utility locate service (Dig Smart of Maine) to perform additional utility locating services in the vicinity of the former ONFF to further assure the boring locations were clear of underground utilities. Based on DigSmart observations, some boring locations were adjusted slightly (within 10 feet or less) and re-marked.

3.2 Direct Push Soil Sampling / Well Installation/Development

Fifteen shallow temporary monitoring wells and three permanent piezometers were installed at the former ONFF using direct push technology (DPT); locations are presented on Figure 2. Well screen intervals

were selected to intersect the water table. Table 1 provides a summary of well completion data. Boring logs and well construction logs were completed for each well (Appendices A-1 and A-2).

A total of 45 soil borings were advanced using a DPT Geoprobe drill rig. Three borings (DP-43, -44, and -45) were added by the Navy in the area of Building 103, just southwest of the tank farm, in response to a MEDEP request after the work plan was finalized. Soil cores were collected continuously, using a 1.5-inch inside diameter (ID) dual-tube sampler equipped with a 5-foot-long disposable acetate liner. Soil samples were classified according to the Unified Soil Classification System (USCS) and recorded on boring logs. Soil cores were initially screened using a PID, and soil was collected for field screening using the jar headspace method. The results of jar headspace PID and FID readings were recorded on the boring logs. Soil was screened every 6 inches above the water table and every 12 inches below the water table. Petroleum odors were noted in borings DP-06, -07, -08, -09, -13, -14, -16, -18, -21, -22, -25, -27, -31 through -36, and -40. The depth interval chosen for analytical sampling was the interval with the highest PID and/or FID screening results. One sample was sent for analysis from each boring. Oleophilic dye testing was also used in the screening process at select intervals, following MEDEP's Standard Operating Procedure (SOP) TS004 for field screening. MEDEP oleophillic dye tests were performed on select soil samples with elevated PID headspace. The dye testing results were positive for select samples at DP-06, -08, -14, -18, -32, -33, -35, and -36, and negative at DP-22.

Each temporary well and piezometer installed consisted of 1-inch ID Schedule 40 polyvinyl chloride (PVC) casing equipped with a 5- to 10-foot-long well screen (0.010-inch slot openings), depending on the thickness of the target monitoring zone. Piezometer screens were surrounded by 20-40 grade "pre-pack" silica sand, and in temporary wells the sand was added to the borehole after the well screen was in place. The bottom of each well had a flush-threaded bottom plug. Silica sand was placed 0.5 to 2 feet above the top of the well screen, followed by bentonite rock chips hydrated in place from 0.5 to 2 feet thick; depending on the depth of the water table. A sand drainage layer was placed on top of the bentonite at the piezometers, and at temporary wells, backfill soils were used to the ground surface. All temporary wells, except DP-39, -43, -44, and -45, were finished as PVC stick-up wells with a locking plug. Temporary wells DP-39, -43, -44, and -45 were finished with a flush-mount cast-iron casing and a locking j-plug because these wells are located in mowed areas. The piezometers were finished as stick-up wells surrounded by cast-iron stick-up casings that locked from the outside. Each temporary well was developed no sooner than 24 hours and each piezometer no sooner than 48-hours, after well completion. Wells were developed using a peristaltic pump until the turbidity level reached 10 nephelometric turbidity units (NTUs) or 2 hours of well development elapsed (whichever occurred first) (Appendix A-3).

3.3 Groundwater Sampling

Groundwater samples were collected between July 11 and July 13, 2011. Each of the 15 temporary wells and the three piezometers were sampled. All groundwater samples were collected following Environmental Protection Agency (EPA) low-flow purging and sampling procedures. Non-dedicated submersible bladder pumps were used for low-flow groundwater sampling at each location except PZ-01. PZ-01 had an obstruction that did not allow the bladder pump beyond a certain point in the well; therefore, this well was sampled with a peristaltic pump. Pumps were decontaminated between each well. Dedicated tubing was used for each temporary monitoring well to minimize cross-contamination between wells. DP-30 could not be sampled because it was effectively dry (less than 0.5 inches of water). During well purging, water level drawdown and flow rate were recorded on groundwater collection forms (Appendix A-4). Groundwater was pumped through a flow-through cell, and the pH, conductivity, temperature, dissolved oxygen (DO), and oxidation-reduction potential (ORP) were measured with a YSI 650 water-quality instrument equipped with a flow-through cell. The instrument was calibrated according to the manufacturer's specifications and SOP GW-0001. Turbidity was measured separately with a nephelometer. Every effort was made to lower the turbidity to less than 5 NTUs before sampling. If turbidity and stability criteria were not met after 2 hours of pumping, it was documented and the groundwater sample was collected.

Groundwater samples were delivered to Katahdin Analytical Services (Scarborough, ME). All wells were analyzed for VPH and EPH following Massachusetts Department of Environmental Protection guidelines. Four wells were selected for methane sampling, based on FID screening results, these included DP-01, -07, -12, and -42. Standard turnaround time was requested for analytical results. The complete analytical results (detects and non-detects) are included in Appendix B.

3.4 Well Surveying

The location and elevation of each monitoring well was surveyed by a State of Maine licensed land surveyor (Spivey Surveying Services). Horizontal and vertical measurements were made to the nearest 0.01 foot. Horizontal control of each data point was determined and reported based on the North American Datum 1983 (NAD83) West Zone Coordinate System. Vertical control was established in accordance with National Geodetic Vertical Datum 1988. Elevation measurements were made at ground surface, the top of temporary well casings, and the top of the protective casing. Surveyed top of well casing and ground surface data is included in Table 1.

3.5 Water-Level Gauging

A total of three synoptic gauging rounds were performed at existing wells located at the former ONFF and Site 17, as required by the approved Work Plan. The first two rounds were conducted June 28, 2011 and July 7, 2011, after the temporary wells were installed at the ONFF. The third round, in July 14, 2011, was performed the same day as a gauging round by MEDEP in areas surrounding the former ONFF and Site 17. The depth to groundwater and elevations are summarized in Table 2.

3.6 Well Abandonment

Temporary wells and existing wells MW-NASB-701 and 703 will be decommissioned upon stakeholder approval in accordance with MEDEP requirements. Bituminous asphalt patch material will be used to cap boreholes in paved areas.

3.7 Investigation-Derived Waste

Investigative derived waste (IDW) generated during this assessment included soil, groundwater and decontamination liquids. The IDW liquids were containerized and transported to the Base treatment facility (Building 50) for treatment. The small amounts of soil IDW generated were used as backfill.

4.0 RESULTS

The following section presents a summary of results from the 2011 field investigation.

4.1 Geology

The geology at this area consists of fine to coarse sand (Upper Sand Unit), underlain by interbedded fine sand, and silt (Transition Unit), and/or silt/clay (Presumpscot Clay). The Transition Unit and clay act as a confining layer in this area. Depths to the silt-clay layer ranged from approximately 6 feet bgs at DP-31 to approximately 23 feet bgs at the DP-11 and DP-42 locations. The overburden materials above the Transition Unit are thickest within and next to the ball fields, as well as at Building 103. This appears to be due to the filling and grading of these areas so they could be used for their intended purpose.

Bituminous asphalt material was noted in the boring logs for DP-01, -07, and -12. Concrete pieces were noted in borings DP-14, -18, and PZ-FF01. Wood fragments and peat-like lenses were noted at borings DP-02, -04, -07, -08, -10, -13, -14, -15, -17, -22, -24, -28, -29, -37, -38, and -39.

Shallow refusal was encountered in the northeast part of the ONFF at DP-27, -30, -33, and -35, which had refusal at 18-, 8-, 6-, and 11-feet bgs, respectively. Rock chips recovered indicate that this area may be a bedrock knob composed of schist. A silt/clay layer was not encountered at DP-33.

4.2 Hydrogeology

Groundwater elevations can be found in Table 2 and groundwater contours have been drawn for each of the three recent gauging rounds on Figures 3, 4, and 5. The depth to groundwater varied from 4 to11 feet bgs. Groundwater was generally deeper in areas with a higher ground elevation due to fill. DP-30, located in the northeast part of the ONFF, had the greatest depth to groundwater. This well was dry during the last groundwater round, and is located in an area with shallow refusal/possible bedrock knob. This well was not included in groundwater contouring of the ONFF, due to its anomalous groundwater elevation readings.

Groundwater elevations range from approximately 71 feet mean sea level (msl) in the north-northwest portion of the ONFF, to 62 feet msl in the south-southeast portion. Groundwater flow direction is generally to the southeast beneath the study area.

The hydraulic gradient was calculated for each gauging round in the western and eastern portions of the ONFF. In the western portion, wells MW-17-01 and MW-NASB-244 were used to calculate the lateral hydraulic gradient. In the eastern portion, wells PZ-01 and MW-NASB-049 were used. The gradient was 0.006 ft/ft in the western portion of the ONFF for each gauging round, and 0.007 ft/ft in the eastern portion of the ONFF for each gauging round. The lateral hydraulic gradient is basically the same spatially and temporally at the ONFF, based on the data collected during this investigation. The comprehensive gauging round on July 14, 2011, shows that a groundwater divide exists north and west of the former ONFF and Site 17.

4.3 Soil Sampling Results

Soil samples were collected from each of the 45 DPT borings. Analytical soil sample results for each analyte detected were compared to applicable criteria from MEDEP's *Remediation Guidelines for Petroleum Contaminated Sites in Maine,* effective December 1, 2009. The concentration of each soil analyte was compared to Tier 2 Cumulative Risk-based Soil Remediation Guidelines for Petroleum Target Compounds and Hydrocarbon Fractions for Residential, Park User, Outdoor Commercial Worker, Excavation/Construction Worker, and Tier I Soil Remediation Guidelines based on Leaching to Groundwater. Detected soil analytical results, in comparison with the Tier I and Tier 2 guidelines, are summarized in Table 3. The exceedances are summarized in Table 4 and on Figure 6. The complete analytical results are in Appendix B. A summary of the criteria exceedances follows:

- A total of 21 of 45 sample locations (47 percent) showed one or more exceedances of minimum criteria.

- Analytes exceeding minimum criteria were C11-C22 aromatics (one location), benzo(a)anthracene (three locations), benzo(a)pyrene (13 locations), benzo(b)fluoranthene (four locations), dibenzo(a,h)anthracene (eight locations), indeno(1,2,3-CD)pyrene (three locations), C5-C8 aliphatics (six locations), and ethyl benzene (one location).

- Soil samples with C5-C8 aliphatics, C9-C10 aromatics, and/or ethylbenzene exceedances included DP-14, -26, -32, -33, -34, -35, -36, and -37. These locations, with one exception (DP-14), occur in the vicinity of former Tanks 201, 203, 204, and 205 (see Figure 6), which stored JP-5 jet fuel. DP14 is located in a former excavation area near Tank 104 used to store ethylene glycol. DP-32, -34, and -36 are located between Tanks 203 and 205. DP-26, -33, and -35 are located near former JP-5 fuel lines. C9-C10 and C11-C22 aromatics also occur with PAHs at DP-06 near JP-5 fuel lines, in the western portion of the former ONFF.

- Soil sample locations with benzo(a)pyrene, benzo(a)anthracene benzo(b)fluorantehene, dibenzo(a,h)anthracene, and/or indeno(1,2,3-cd)pyrene included DP-01, -02, -03, -06, -07, -08, -12, -16, -20, -21, -22, -24, -41, and -44. These locations are all in the western half of the ONFF, as indicated on Figure 6. It should be noted that these analytes are common constituents of bituminous asphalt. Small asphalt particles can cause elevated levels of these analytes. Bituminous asphalt is present in parking areas and along roadways, and asphalt pieces were observed in soil. Small particles of asphalt cannot be distinguished visually from other natural soil particles, but can be common in fill. Any asphalt particles in soil samples can cause elevated PAH concentrations. Field evidence for site impacts that correspond to elevated PAHs follow (PID headspace value in ppm/v): DP-01 (asphalt, organic soil [filled area], 0.6-0.7 ppm), DP-02 (organic soil [filled area], 0.5-0.6 ppm), DP-03 (organic soil [filled area], 2.4-2.8 ppm), DP-06 (petroleum odor, 599 ppm), DP-07 (asphalt , peat-like soil [filled area], petroleum odor, 50.7 ppm), DP-08 (petroleum odor, wood [filled area], 119 ppm), DP-12 (asphalt, sand/gravel [fill], 2.2-3.1 ppm), DP-16 (former soil horizon [fill above], 28-30 ppm), DP-20 (dark-brown [organic soil/filled area], 0.3-0.5 ppm), DP-21 (petroleum odor, 1,240-1,357 ppm), DP-22 (peat-like [filled area], 0.4-1.8 ppm), DP-24 (organic soil [filled area], 2.6-3.6 ppm), DP-41 (4.8 ppm), and DP-44 (peat-like [filled area], 2.0 ppm).

4.4 Groundwater Sampling Results

A total of 17 groundwater samples were collected from temporary wells and piezometers located at the former ONFF, including three temporary wells completed upgradient of Site 17. A groundwater sample could not be collected from temporary well DP-30 because it was dry at the time of sampling.

Analytical groundwater sample results were screened against the Maine Maximum Exposure Guidelines (MEGs) and EPA Maximum Contaminant Levels (MCLs). The minimum screening criterion for each analyte was used as the PAL. Detected groundwater analytical results are summarized in Table 5 and exceedances are summarized on Figure 7. The complete analytical results are in Appendix B. A summary of the MCL/MEG exceedances follows:

- Benzo(a)pyrene (0.15 J µg/L) exceeded its MEG (0.05 µg/L) in a groundwater sampled collected from DP-28.

- Benzene (7.1 µg/L), exceeded its MEG (4 µg/L) in the sample collected from DP-42.

- Naphthalene (48.5 µg/L) exceeded its MEG (10 µg/L) in the sample collected from DP-42.

- C9-C10 aromatics (355 µg/L) exceeded its MEG (200 µg/L) in the sample collected from DP-42.

- C5-C8 aliphatics exceeded its MEG (300 µg/L) in samples collected from DP-12 (790 µg/L), DP-20 (400 µg/L), and DP-37 (600 µg/L).

In summary, MCLs/MEGs were exceeded in samples collected from five of 17 well locations (DP-12, -20, -28, -37, and -42). Only one analyte exceeded criteria at DP-12, -20, and -37, slightly exceeding its MEG by a factor of 3 or less. Three exceedances were detected in the sample from DP-42, two of the analytes exceeded MCLs/MEGs slightly (less than a factor of 2), and one analyte (naphthalene) exceeded minimum criteria by a factor of approximately five.

Well DP-42 is located on the western portion of the former ONFF, in the vicinity of former Tank 102, which stored unleaded gasoline (see Figure 7). The remaining wells with exceedances (DP-12, -20, and -37) are located in other areas of the former ONFF and are in the vicinity of other wells where there are no detections or exceedances of MCLs/MEG, indicating groundwater contamination is localized, not continuous across the former ONFF. Figure 7 also includes the Long Term Monitoring Plan (LTMP) results from the most-recent VPH/EPH groundwater sampling round monitoring wells and tags for the June 2010 sampling round that further show that groundwater impacts are not extensive and do not appear to extend downgradient past Avenue B.

Methane was analyzed in groundwater samples from DP-01, -07, -12, and -42 at concentrations ranging from 1,100 (DP-01) to 6,200 µg/L (DP-42). There are no MEGs/MCLs established for methane in groundwater. The methane results generally correlated with the VPH results and indicate that natural biodegradation of petroleum compounds is ongoing in the groundwater at the former ONFF. Natural biodegradation is expected to continue to reduce petroleum contaminant concentrations in the future.

Based on the ONFF investigation results, former Buildings 118 and 119, located upgradient of Site 17, are not a source of low levels (1.4 µg/L) of MTBE detected at monitoring well MW-17-01 at Site 17 during the April 2011 sampling event (Tetra Tech, 2011). Gasoline constituents such as the unleaded gasoline additive MTBE were not detected in groundwater samples from temporary wells completed upgradient of Site 17. Only trace levels of PAHs, specifically fluorene (0.71 J µg/L) and phenanthrene (1.5 J µg/L) were detected and are well below the Maine drinking water criteria of 300 µg/L and 200 µg/L, respectively. Further, the source of MTBE contamination at Site 17 is not the former ONFF, because MTBE was not detected in groundwater samples in July 2011 at that site. The low levels of MTBE associated with Site 17 (maximum 5.6 µg/L) are not a concern because contaminant concentrations are well below the associated MEG (35 µg/L). There is no MCL for MTBE. There does not appear to be a continuing offsite source for the impacted groundwater at DP-42.

5.0 RECOMMENDATIONS

The following recommendations are a result of the Site Assessment. 1) Consider additional soil sampling in areas that appear to contain high levels of residual petroleum contamination in an effort to better define these areas. Based on the soil sampling results, develop the long term management strategy for the ONFF. 2) Consider land use controls for the former ONFF to limit exposures to soil and groundwater. 3) Sample a select number of perimeter wells on a 2-year schedule for VPH analysis to determine groundwater quality from the ONFF area. 4) Consider retaining DP-20 and DP-37 to assess attenuation within the site boundary; otherwise, all temporary wells will be decommissioned in accordance with MEDEP requirements.

REFERENCES

EA, 1998. Results of Bio-Monthly Monitoring Well Gauging Program Conducted at Buildings 95, Old Navy Fuel Farm, and Site 7 Naval Air Station Brunswick, Maine, August.

EA, 2000a. Bi-Annual Progress Report on Soil Vapor Extraction/Aquifer Air Sparging Remedial System Operations for the Period 1 January – 30 June 1999 Old Navy Fuel Farm, Naval Air Station, Brunswick, Maine. February (Final).

EA, 2000b. Direct-Push Investigation at the Old Navy Fuel Farm, Naval Air Station, Brunswick, Maine. April.

EA, 2000c. Bi-Annual Progress Report on Soil Vapor Extraction/Aquifer Air Sparging Remedial System Operations for the Period 1 July – 31 December 1999 Old Navy Fuel Farm, Naval Air Station, Brunswick, Maine. August (Final).

ECC, 2010. Proposed Direct-Push Investigation Old Navy Fuel Farm Naval Air Station Brunswick, Maine, letter dated 23 April.

ECOR, 2011. Final Summary Initial Baseline EPH and VPH Groundwater Sampling Letter Report Old Navy Fuel Farm Naval Air Station Brunswick, Maine, January.

FWEC, 2002. Final Removal Action Report for Old Navy Fuel Farm, January.

MEDEP, 2009. Remediation Guidelines for Petroleum Contaminated Sites in Maine, December.

Tetra Tech, 2011a. Work Plan Site Assessment Former Old Navy Fuel Farm, Naval Air Station, Brunswick, Maine. June 17.

Tetra Tech, 2011b. Remedial Investigation Report for Site 17, Former Building 95 Naval Air Station Brunswick, Maine, July.

TABLES

TABLE 1

WELL COMPLETION SUMMARY
FORMER OLD NAVY FUEL FARM SITE ASSESSMENT
FORMER NAVAL AIR STATION BRUNSWICK, MAINE

Monitoring Well	Date Installed	Diameter (in)	Top of Riser Elevation (ft above msl)	Ground Elevation (ft above msl)	Screened Interval (ft bgs)
ONFF-PZ-FF01	6/27/2011	1	77.75	75.21	6 - 11
ONFF-PZ-FF02	6/27/2011	1	79.34	76.24	8 - 13
ONFF-PZ-FF03	6/27/2011	1	75.51	72.57	7 - 12
ONFF-DP-01	6/28/2011	1	75.23	72.14	2 - 10
ONFF-DP-07	6/28/2011	1	74.56	71.71	4 - 14
ONFF-DP-12	6/30/2011	1	75.07	71.92	2 - 12
ONFF-DP-17	7/1/2011	1	77.32	73.50	4 - 14
ONFF-DP-20	6/29/2011	1	74.83	71.86	2 - 12
ONFF-DP-22	6/30/2011	1	75.50	72.29	2 - 12
ONFF-DP-24	7/6/2011	1	76.25	73.36	2 - 11
ONFF-DP-28	7/1/2011	1	76.33	72.87	1.5 - 11.5
ONFF-DP-30	7/1/2011	1	75.91	72.49	2 - 8
ONFF-DP-37	7/5/2011	1	74.98	72.14	3.5 - 9.5
ONFF-DP-39	6/29/2011	1	71.10	71.27	2 - 12
ONFF-DP-42	6/30/2011	1	75.12	72.10	2 - 12
ONFF-DP-43	7/6/2011	1	74.93	75.24	3 - 13
ONFF-DP-44	7/6/2011	1	73.76	74.09	2 - 12
ONFF-DP-45	7/6/2011	1	75.67	75.98	3 - 13
MW-17-01	10/17/2008	1	77.94	76.28	13 - 23
MW-17-02R	2/11/2011	1	74.94	72.59	3.8 - 8.8
MW-17-03	10/16/2008	1	74.93	72.61	6 - 16
MW-17-04	10/16/2008	1	75.18	73.25	5.2 - 15.2
MW-NASB-46	11/8/1991	2	71.30	69.80	5 - 15
MW-NASB-49	10/24/1991	2	68.29	65.00	5 - 15
MW-NASB-51	10/30/1991	2	73.41	71.20	3 - 13
MW-NASB-58	11/5/1991	2	69.80	68.00	5 - 15
MW-NASB-62	11/5/1991	2	80.73	78.70	5 - 15
MW-NASB-65	1/15/1993	2	73.64	72.32	3 - 13
MW-NASB-66	1/16/1993	2	78.14	76.93	8 - 18
MW-NASB-68	1/18/1993	2	74.21	72.81	3.5 - 13.2

TABLE 1

WELL COMPLETION SUMMARY
FORMER OLD NAVY FUEL FARM SITE ASSESSMENT
FORMER NAVAL AIR STATION BRUNSWICK, MAINE

Monitoring Well	Date Installed	Diameter (in)	Top of Riser Elevation (ft above msl)	Ground Elevation (ft above msl)	Screened Interval (ft bgs)
MW-NASB-96	7/20/1988	2	73.33	71.70	4.5 - 9.5
MW-NASB-97	3/21/2000	2	73.41	73.58	2 - 12
MW-NASB-98	3/20/2000	2	76.53	73.40	3 - 13
MW-NASB-205	NA	2	NA	NA	NA
MW-NASB-244	NA	2	70.73	NA	NA
MW-NASB-702	3/15/2004	2	73.63	70.83	2.5 - 12.5
MW-H123-01S	2/17/2011	1	65.80	66.19	7 - 17
MW-H123-01D	2/16/2011	1	65.92	66.19	25.5 - 35.5
MW-H123-02	2/17/2011	1	66.53	66.86	25 - 35
MW-H123-03	2/17/2011	1	66.78	67.11	3.5 - 13.5
MW-H123-04S	2/16/2011	1	67.01	67.24	7 - 17
MW-H123-04D	2/16/2011	1	67.08	67.24	20.5 - 25.5
MW-H123-05S	2/18/2011	1	71.45	71.67	8 - 18
MW-H123-05D	2/18/2011	1	71.42	71.67	20.5 - 25.5
MW-H123-06	2/18/2011	1	71.59	71.85	23.2 - 33.2
MW-H123-07	2/18/2011	1	71.06	71.33	7 - 12
MW-H123-08	2/15/2011	1	71.86	72.18	6 - 16
MW-H123-09	2/14/2011	1	74.49	74.18	4.5 - 9.5
MW-H123-10	2/14/2011	1	75.06	75.35	3.2 - 8.2
MW-H123-11	2/14/2011	1	74.56	74.84	2.2 - 12.5
MW-H123-12	2/14/2011	1	75.26	75.46	2.5 - 12.5
MW-772	6/20/2007	2	78.72	75.93	4 - 11.5
MW-771	6/20/2007	2	75.77	72.81	2.5 - 7.5
MW-770	6/20/2007	2	76.23	73.70	2.5 - 8.5
MW-092	11/29/1984	2	76.99	73.20	7.5 - 17.5
MW-093	11/30/1984	2	77.46	74.70	6 - 16
MW-095	7/18/1988	2	78.87	76.80	10 - 15
MW-096	7/20/1988	2	73.33	71.37	4.5 - 9.5
MW-099	2001	2	78.43	75.40	5.5 - 10.5

TABLE 1

WELL COMPLETION SUMMARY
FORMER OLD NAVY FUEL FARM SITE ASSESSMENT
FORMER NAVAL AIR STATION BRUNSWICK, MAINE

Monitoring Well	Date Installed	Diameter (in)	Top of Riser Elevation (ft above msl)	Ground Elevation (ft above msl)	Screened Interval (ft bgs)
MW-228	3/11/1999	2	75.95	72.40	2.5 - 6.5
PZ-1	2008	1	75.85	73.92	NA
PZ-2	2008	1	76.09	73.37	NA
MW-NASB-011	3/25/1994	2	76.26	72.68	0.8 - 5.8
MW-NASB-016	3/25/1994	2	77.01	73.66	1.6 - 6.6
MW-NASB-013	3/25/1994	2	76.79	73.16	2 - 7
MW-NASB-019	3/25/1994	2	76.53	72.86	1.2 - 6.2
MW-NASB-018	3/25/1994	2	77.13	73.40	1.4 - 6.4
MW-7&10-01	10/13/2010	1	68.53	68.73	7 - 17
MW-7&10-02	10/12/2010	1	67.14	67.53	8 - 18
MW-7&10-03S	10/8/2010	1	66.54	66.85	9.5 - 19.5
MW-7&10-03D	10/8/2010	1	66.50	66.85	25 - 35
MW-7&10-04	10/13/2010	1	67.48	67.80	7 - 17
MW-7&10-05S	10/12/2010	1	65.58	65.87	7 - 17
MW-7&10-05D	10/12/2010	1	65.51	65.87	31 - 41
MW-7&10-06S	10/12/2010	1	66.15	66.47	7 - 17
MW-7&10-06D	10/12/2010	1	66.07	66.47	30 - 40
MW-7&10-07	10/8/2010	1	66.03	60.32	8 - 18
MW-NEX-NEW-02	11/7/2008	1	59.20	59.45	2.5 - 8

Elevations are based on feet mean sea level realtive to the North American Vertical Datum (NAVD) of 1988.

NA - Not available.
ft - Feet.
bgs - Below ground surface.
in - Inches.

TABLE 2

GROUNDWATER ELEVATION DATA
FORMER OLD NAVY FUEL FARM
FORMER NAVEL AIR STATION BRUNSWICK, MAINE

Monitoring Well	Elevation of Top of Well Screen (ft above msl)	Elevation of Bottom of Well Screen (ft above msl)	June 28, 2011		July 7, 2011		July 14, 2011	
			Depth to Groundwater (ft below TPVC)	Groundwater Elevation (ft above msl)	Depth to Groundwater (ft below TPVC)	Groundwater Elevation (ft above msl)	Depth to Groundwater (ft below TPVC)	Groundwater Elevation (ft above msl)
ONFF-PZ-FF01	69.21	64.21	6.77	70.98	7.17	70.58	7.47	70.28
ONFF-PZ-FF02	68.24	63.24	8.38	70.96	8.73	70.61	9.05	70.29
ONFF-PZ-FF03	65.57	60.57	4.87	70.64	5.28	70.23	5.48	70.03
ONFF-DP-01	70.14	62.14	NA	NA	4.95	70.28	5.12	70.11
ONFF-DP-07	67.71	57.71	NA	NA	5.65	68.91	5.71	68.85
ONFF-DP-12	69.92	59.92	NA	NA	6.07	69.00	6.22	68.85
ONFF-DP-17	69.5	59.5	NA	NA	9.06	68.26	9.32	68.00
ONFF-DP-20	69.86	59.86	NA	NA	7.68	67.15	7.89	66.94
ONFF-DP-22	70.29	60.29	NA	NA	7.44	68.06	7.66	67.84
ONFF-DP-24	71.36	62.36	NA	NA	9.07	67.18	9.24	67.01
ONFF-DP-28	71.37	61.37	NA	NA	6.62	69.71	6.98	69.35
ONFF-DP-30	70.49	64.49	NA	NA	10.75	65.16	Dry	<64.49
ONFF-DP-37	68.64	62.64	NA	NA	9.21	65.77	9.42	65.56
ONFF-DP-39	69.27	59.27	NA	NA	3.90	67.20	4.09	67.01
ONFF-DP-42	70.10	60.10	NA	NA	6.15	68.97	6.41	68.71
ONFF-DP-43	72.24	62.24	NA	NA	4.68	70.25	4.92	70.01
ONFF-DP-44	72.09	62.09	NA	NA	3.98	69.78	4.21	69.55
ONFF-DP-45	72.98	62.98	NA	NA	5.65	70.02	5.86	69.81
MW-17-01	63.28	53.28	7.93	70.01	8.25	69.69	8.50	69.44
MW-17-02R	68.79	63.79	5.72	69.22	6.03	68.91	6.23	68.71
MW-17-03	66.61	56.61	5.72	69.21	6.02	68.91	6.27	68.66
MW-17-04	68.05	58.05	6.46	68.72	6.75	68.43	6.97	68.21
MW-NASB-46	64.80	54.80	5.32	65.98	5.61	65.69	5.76	65.54
MW-NASB-49	60.00	50.00	5.26	63.03	5.69	62.60	5.79	62.50
MW-NASB-51	68.20	58.20	5.04	68.37	5.61	67.80	7.91	65.50
MW-NASB-58	63.00	53.00	6.16	63.64	6.23	63.57	6.32	63.48
MW-NASB-62	73.70	63.70	9.29	71.44	9.61	71.12	10.00	70.73
MW-NASB-65	69.32	59.32	4.34	69.30	4.64	69.00	4.89	68.75
MW-NASB-66	68.93	58.93	8.18	69.96	8.50	69.64	8.77	69.37

TABLE 2

GROUNDWATER ELEVATION DATA
FORMER OLD NAVY FUEL FARM
FORMER NAVEL AIR STATION BRUNSWICK, MAINE

Monitoring Well	Elevation of Top of Well Screen (ft above msl)	Elevation of Bottom of Well Screen (ft above msl)	June 28, 2011		July 7, 2011		July 14, 2011	
			Depth to Groundwater (ft below TPVC)	Groundwater Elevation (ft above msl)	Depth to Groundwater (ft below TPVC)	Groundwater Elevation (ft above msl)	Depth to Groundwater (ft below TPVC)	Groundwater Elevation (ft above msl)
MW-NASB-68	69.31	59.61	5.08	69.13	5.38	68.83	5.59	68.62
MW-NASB-96	67.20	62.20	4.52	68.81	4.77	68.56	5.06	68.27
MW-NASB-97	71.58	61.58	4.59	68.82	3.95	69.46	4.19	69.22
MW-NASB-98	70.40	60.40	7.16	69.37	7.49	69.04	7.69	68.84
MW-NASB-205	NA	NA	Obstruction, could not gauge well					
MW-NASB-244	NA	NA	4.61	66.12	4.81	65.92	5.04	65.69
MW-NASB-702	68.33	58.33	7.03	66.60	7.16	66.47	7.23	66.40
MW-H123-01S	59.19	49.19	NA	NA	NA	NA	7.60	58.20
MW-H123-01D	40.69	30.69	NA	NA	NA	NA	7.34	58.58
MW-H123-02	41.86	31.86	NA	NA	NA	NA	NA	--
MW-H123-03	63.61	53.61	NA	NA	NA	NA	5.73	61.05
MW-H123-04S	60.24	50.24	NA	NA	NA	NA	7.44	59.57
MW-H123-04D	46.74	41.74	NA	NA	NA	NA	7.43	59.65
MW-H123-05S	63.67	53.67	NA	NA	NA	NA	NA	--
MW-H123-05D	51.17	46.17	NA	NA	NA	NA	8.81	62.61
MW-H123-06	48.65	38.65	NA	NA	NA	NA	9.00	62.59
MW-H123-07	64.33	59.33	NA	NA	NA	NA	6.64	64.42
MW-H123-08	66.18	56.18	NA	NA	NA	NA	7.69	64.17
MW-H123-09	69.68	64.68	NA	NA	NA	NA	4.58	69.91
MW-H123-10	72.15	67.15	NA	NA	NA	NA	4.99	70.07
MW-H123-11	72.64	62.34	NA	NA	NA	NA	3.81	70.75
MW-H123-12	72.96	62.96	NA	NA	NA	NA	4.68	70.58
MW-772	71.93	64.43	NA	NA	NA	NA	9.06	69.66
MW-771	70.31	65.31	NA	NA	NA	NA	6.21	69.56
MW-770	71.20	65.20	NA	NA	NA	NA	6.71	69.52
MW-092	65.70	55.70	NA	NA	NA	NA	7.45	69.54
MW-093	68.70	58.70	NA	NA	NA	NA	7.71	69.75
MW-095	66.80	61.80	NA	NA	NA	NA	8.96	69.91
MW-096	66.87	61.87	NA	NA	NA	NA	5.05	68.28

TABLE 2

GROUNDWATER ELEVATION DATA
FORMER OLD NAVY FUEL FARM
FORMER NAVEL AIR STATION BRUNSWICK, MAINE

Monitoring Well	Elevation of Top of Well Screen (ft above msl)	Elevation of Bottom of Well Screen (ft above msl)	June 28, 2011		July 7, 2011		July 14, 2011	
			Depth to Groundwater (ft below TPVC)	Groundwater Elevation (ft above msl)	Depth to Groundwater (ft below TPVC)	Groundwater Elevation (ft above msl)	Depth to Groundwater (ft below TPVC)	Groundwater Elevation (ft above msl)
MW-099	69.90	64.90	NA	NA	NA	NA	8.64	69.79
MW-228	69.90	65.90	NA	NA	NA	NA	6.34	69.61
PZ-1	NA	NA	NA	NA	NA	NA	6.27	69.58
PZ-2	NA	NA	NA	NA	NA	NA	6.74	69.35
MW-NASB-011	71.87	66.87	NA	NA	NA	NA	7.41	68.85
MW-NASB-016	72.09	67.09	NA	NA	NA	NA	NA	--
MW-NASB-013	71.11	66.11	NA	NA	NA	NA	8.59	68.20
MW-NASB-019	71.65	66.65	NA	NA	NA	NA	NA	--
MW-NASB-018	72.02	67.02	NA	NA	NA	NA	7.93	69.20
MW-7&10-01	61.73	51.73	NA	NA	NA	NA	7.45	61.08
MW-7&10-02	59.53	49.53	NA	NA	NA	NA	7.18	59.96
MW-7&10-03S	57.35	47.35	NA	NA	NA	NA	6.50	60.04
MW-7&10-03D	31.85	41.85	NA	NA	NA	NA	6.21	60.29
MW-7&10-04	60.80	50.80	NA	NA	NA	NA	6.79	60.69
MW-7&10-05S	58.87	48.87	NA	NA	NA	NA	6.62	58.96
MW-7&10-05D	34.87	24.87	NA	NA	NA	NA	6.29	59.22
MW-7&10-06S	59.47	49.47	NA	NA	NA	NA	6.74	59.41
MW-7&10-06D	36.47	26.47	NA	NA	NA	NA	6.46	59.61
MW-7&10-07	52.32	42.32	NA	NA	NA	NA	6.37	59.66
MW-NEX-NEW-02	56.95	51.45	NA	NA	NA	NA	2.23	56.97

Elevations are based on feet mean sea level realtive to the North American Vertical Datum (NAVD) of 1988.

NA - Not available.
ft - Feet.
bgs - Below ground surface.
TPVC - Top of polyvinyl chloride riser.

TABLE 3

ANALYTICAL RESULTS - SOIL
FORMER OLD NAVY FUEL FARM SITE ASSESSMENT
FORMER NAVAL AIR STATION BRUNSWICK, MAINE

PARAMETER	MAINE TIER 2 SOIL REMEDIATION GUIDELINES[1]				MAINE TIER 1 LEACHING TO GROUNDWATER GUIDELINE[1]	MINIMUM CRITERION	NASB-ONFF-			PARAMETER	MINIMUM CRITERION	NASB-ONFF				
	EXCAVATION CONTRUCTION WORKER	OUTDOOR COMMERCIAL WORKER	PARK USER	RESIDENTIAL USER			DP01	DP02	DP03			DP04	DP05	DP06	DP07	DP08
							3-4 ft bgs	3-4 ft bgs	3-4 ft bgs			4 5 ft bgs	3.5-4.5 ft bgs	7-8 ft bgs	2-3 ft bgs	9-10 ft bgs
POLYCYCLIC AROMATIC HYDROCARBONS (µg/kg)										**POLYCYCLIC AROMATIC HYDROCARBONS (µg/kg)**						
2-METHYLNAPHTHALENE	35000	480000	160000	94000	3600	3600	95 UJ	100 UJ	67 UJ	2-METHYLNAPHTHALENE	3600	66 UJ	57 UJ	1900 J	23 J	67 UJ
ACENAPHTHENE	110000	2000000	1600000	970000	170000	110000	95 UJ	100 UJ	67 UJ	ACENAPHTHENE	110000	66 UJ	57 UJ	1100 J	150 J	16 J
ACENAPHTHYLENE	130000	2200000	1700000	1000000	68000	68000	95 UJ	100 UJ	67 UJ	ACENAPHTHYLENE	68000	66 UJ	57 UJ	63 UJ	66 UJ	67 UJ
ANTHRACENE	430000	7800000	7200000	4300000	2400000	430000	95 U	100 U	67 U	ANTHRACENE	430000	66 U	57 U	3700	390	35 J
BENZO(A)ANTHRACENE	43000	3500	440	260	NC	260	23 J	100 U	22 J	BENZO(A)ANTHRACENE	260	66 U	15 J	10000	1600	110 J
BENZO(A)PYRENE	4300	350	44	26	NC	26	140 J	100 J	56 J	BENZO(A)PYRENE	26	26 J	57 U	10000	1600	120 J
BENZO(B)FLUORANTHENE	43000	3500	440	260	NC	260	160 J	97 J	55 J	BENZO(B)FLUORANTHENE	260	66 U	57 U	13000	2000	160
BENZO(G,H,I)PERYLENE	10000000	5500000	1200000	750000	NC	750000	42 J	38 J	34 J	BENZO(G,H,I)PERYLENE	750000	21 J	57 U	6600	950	99 J
BENZO(K)FLUORANTHENE	430000	35000	4400	2600	NC	2600	64 J	42 J	26 J	BENZO(K)FLUORANTHENE	2600	66 U	57 U	2100 J	820	59 J
CHRYSENE	4300000	350000	44000	26000	NC	26000	27 J	20 J	30 J	CHRYSENE	26000	66 U	12 J	9400	1300	100 J
DIBENZO(A,H)ANTHRACENE	4300	350	44	26	NC	26	95 U	100 U	67 U	DIBENZO(A,H)ANTHRACENE	26	66 U	57 U	2000 J	310	31 J
FLUORANTHENE	10000000	7300000	1700000	1000000	NC	1000000	20 J	25 J	36 J	FLUORANTHENE	1000000	66 U	12 J	21000	2900	240
FLUORENE	200000	2700000	1400000	830000	120000	120000	95 U	100 U	67 U	FLUORENE	120000	66 U	57 U	1300	180	67 U
INDENO(1,2,3-CD)PYRENE	43000	3500	440	260	NC	260	110 J	100 J	80 J	INDENO(1,2,3-CD)PYRENE	260	65 J	39 J	10000	1400	160
NAPHTHALENE	32000	200000	330000	200000	1700	1700	110 UJ	100 UJ	67 UJ	NAPHTHALENE	1700	66 UJ	57 UJ	680 J	240 J	67 UJ
PHENANTHRENE	470000	3600000	1200000	700000	97000	97000	95 U	100 U	67 U	PHENANTHRENE	97000	66 U	57 U	9400	1200	110 J
PYRENE	10000000	5500000	1200000	750000	NC	750000	95 U	100 U	35 J	PYRENE	750000	66 U	57 U	12000	2000	170
EXTRACTABLE PETROLEUM HYDROCARBONS (mg/kg)										**EXTRACTABLE PETROLEUM HYDROCARBONS (mg/kg)**						
C11-C22 AROMATICS	4700	4500	1200	730	460	460	86	130	17 U	C11-C22 AROMATICS	460	16 U	14 U	560	62	14 J
C19-C36 ALIPHATICS	10000	10000	10000	10000	NC	10000	57	89	14 J	C19-C36 ALIPHATICS	10000	16 U	11 J	28	16 U	17 U
C9-C18 ALIPHATICS	7300	10000	4400	2600	NC	2600	24 U	26 U	17 U	C9-C18 ALIPHATICS	2600	16 U	14 U	1300	16 U	34
VOLATILE PETROLEUM HYDROCARBONS (mg/kg)										**VOLATILE PETROLEUM HYDROCARBONS (mg/kg)**						
BENZENE	30	86	28	17	0.51	0.51	2.9 UJ	3.2 UJ	1.3 U	BENZENE	0.51	1.4 U	1.2 U	1.3 U	1.3 U	1.3 U
C5-C8 ALIPHATICS	10000	10000	2300	1400	1600	1400	58 UJ	64 UJ	27 U	C5-C8 ALIPHATICS	1400	29 U	36	26 U	26 U	54 J
C9-C10 AROMATICS	5500	5100	1200	740	75	75	58 UJ	64 UJ	27 U	C9-C10 AROMATICS	75	29 U	25 U	500 J	26 U	61
C9-C12 ALIPHATICS	9800	10000	4400	2600	NC	2600	58 UJ	64 UJ	27 U	C9-C12 ALIPHATICS	2600	29 U	51	390	26 U	51 J
ETHYLBENZENE	2700	420	210	130	0.81	0.81	2.9 UJ	3.2 UJ	1.3 U	ETHYLBENZENE	0.81	0.19 J	0.55 J	1.3 U	1.3 U	1.3 U
M+P-XYLENES	7000	10000	10000	6600	NC	6600	0.84 J	6.4 UJ	2.7 U	M+P-XYLENES	6600	0.67 J	0.75 J	2.6 U	2.6 U	2.6 U
METHYL TERT-BUTYL ETHER	10000	2600	1300	780	0.19	0.19	2.9 UJ	3.2 UJ	1.3 U	METHYL TERT-BUTYL ETHER	0.19	1.4 U	1.2 U	1.3 U	1.3 U	1.3 U
NAPHTHALENE	32	200	330	200	1.7	1.7	2.9 UJ	3.2 UJ	1.3 U	NAPHTHALENE	1.7	1.4 U	1.2 U	1.3 U	1.3 U	1.3 U
O-XYLENE	7000	10000	10000	6600	NC	6600	0.22 J	3.2 UJ	1.3 U	O-XYLENE	6600	0.2 J	0.31 J	1.3 U	1.3 U	1.3 U
TOLUENE	10000	10000	4500	2700	8.1	8.1	2.9 UJ	3.2 UJ	1.3 U	TOLUENE	8.1	0.31 J	0.3 J	1.3 U	1.3 U	1.3 U
TOTAL PAHs	NC	NC	NC	NC	NC	NC	2.9 UJ	3.2 UJ	1.3 U	TOTAL PAHs	NC	1.4 U	1.2 U	1.3 U	1.3 U	1.3 U
TOTAL XYLENES	7000	10000	10000	6600	26	26	1.06 J	4.8 UJ	2 U	TOTAL XYLENES	26	0.87 J	1.06 J	1.95 U	1.95 U	1.95 U

TABLE 3

ANALYTICAL RESULTS - SOIL
FORMER OLD NAVY FUEL FARM SITE ASSESSMENT
FORMER NAVAL AIR STATION BRUNSWICK, MAINE

						NASB-ONFF-											
DP09	**DP10**	**DP11**	**DP12**	**PARAMETER**	**MINIMUM CRITERION**	**DP13**	**DP14**	**DP15**	**DP16[(2)]**	**DP17**	**DP18**	**DP19**	**DP20**	**DP21**	**PARAMETER**	**MINIMUM CRITERION**	**DP22**
7-8 ft bgs	**3.5 4.5 ft bgs**	**8-9 ft bgs**	**4-8 ft bgs**			**5-6 ft bgs**	**7-8 ft bgs**	**1 -13 ft bgs**	**4-5 ft bgs**	**6-7 ft bgs**	**9-10 ft bgs**	**12-13 ft bgs**	**3-4 ft bgs**	**10-12 ft bgs**			**2.5-3.5 ft bgs**
				POLYCYCLIC AROMATIC HYDROCARBONS (µg/kg)											**POLYCYCLIC AROMATIC HYDROCARBONS (µg/kg)**		
61 UJ	67 UJ	74 U	64 UJ	2-METHYLNAPHTHALENE	3600	58 UJ	190 J	76 UJ	63 U	68 UJ	68 U	54 U	64 U	69 U	2-METHYLNAPHTHALENE	3600	70 UJ
61 UJ	67 UJ	74 U	64 UJ	ACENAPHTHENE	110000	58 UJ	14 J	76 UJ	37 J	68 UJ	68 UJ	54 UJ	66 J	69 U	ACENAPHTHENE	110000	70 UJ
61 UJ	67 UJ	74 U	8.6 J	ACENAPHTHYLENE	68000	58 UJ	8.5 J	76 UJ	63 UJ	68 UJ	68 UJ	54 UJ	64 UJ	69 U	ACENAPHTHYLENE	68000	70 UJ
61 U	67 U	74 U	36 J	ANTHRACENE	430000	58 U	68 U	76 U	75.5 J	68 U	68 U	54 U	420	69 U	ANTHRACENE	430000	70 U
61 U	67 U	53 J	220	BENZO(A)ANTHRACENE	260	58 U	68 U	76 U	230	68 U	68 U	54 U	1200	150	BENZO(A)ANTHRACENE	260	32 J
61 U	67 U	74 U	200	BENZO(A)PYRENE	26	58 U	68 U	76 U	180	68 U	68 U	54 U	1100	130 J	BENZO(A)PYRENE	26	34 J
16 J	67 UJ	19 J	300	BENZO(B)FLUORANTHENE	260	58 U	68 U	76 UJ	260	68 UJ	68 U	54 U	1400	210	BENZO(B)FLUORANTHENE	260	59 J
20 J	67 U	19 J	110 J	BENZO(G,H,I)PERYLENE	750000	58 U	68 U	76 U	97 J	68 U	68 U	54 U	670	89 J	BENZO(G,H,I)PERYLENE	750000	25 J
61 U	67 U	74 U	100 J	BENZO(K)FLUORANTHENE	2600	58 U	68 U	76 U	105 J	68 U	68 U	54 U	500	53 J	BENZO(K)FLUORANTHENE	2600	70 U
12 J	67 U	74 U	220	CHRYSENE	26000	58 U	68 U	76 U	230	68 U	68 U	54 U	1000	120 J	CHRYSENE	26000	49 J
61 U	67 U	15 J	32 J	DIBENZO(A,H)ANTHRACENE	26	58 U	68 U	76 U	31.5 J	68 U	68 U	54 U	190	13 J	DIBENZO(A,H)ANTHRACENE	26	70 U
20 J	67 U	21 J	460	FLUORANTHENE	1000000	58 U	20 J	76 U	605	68 U	68 U	54 U	2900	270	FLUORANTHENE	1000000	86 J
61 U	67 UJ	74 U	64 UJ	FLUORENE	120000	58 UJ	68 UJ	76 UJ	41 J	68 UJ	68 UJ	54 UJ	93 J	69 U	FLUORENE	120000	70 UJ
59 J	67 UJ	60 J	180	INDENO(1,2,3-CD)PYRENE	260	58 U	43 J	76 UJ	155	68 UJ	38 J	54 U	830	160	INDENO(1,2,3-CD)PYRENE	260	65 J
61 UJ	67 UJ	71 UJ	64 UJ	NAPHTHALENE	1700	58 UJ	130 J	76 UJ	65 UJ	68 UJ	68 UJ	54 UJ	64 UJ	69 UJ	NAPHTHALENE	1700	70 UJ
61 U	67 U	74 U	140	PHENANTHRENE	97000	58 U	18 J	76 U	320	68 U	68 U	54 U	1300	89 J	PHENANTHRENE	97000	38 J
15 J	67 U	20 J	310	PYRENE	750000	58 U	16 J	76 U	390	68 U	68 U	54 U	1900	240	PYRENE	750000	61 J
				EXTRACTABLE PETROLEUM HYDROCARBONS (mg/kg)											**EXTRACTABLE PETROLEUM HYDROCARBONS (mg/kg)**		
15 U	17 U	19 U	16 U	C11-C22 AROMATICS	460	14 U	22 J	19 U	23.5	17 U	17 U	13 U	30	17 U	C11-C22 AROMATICS	460	15 J
15 U	17 U	19 U	16 U	C19-C36 ALIPHATICS	10000	14 U	17 U	19 U	10 J	17 U	17 U	13 U	16 U	17 U	C19-C36 ALIPHATICS	10000	18 U
12 J	17 U	19 U	16 U	C9-C18 ALIPHATICS	2600	14 U	30	19 U	16 J	17 U	17 U	13 U	16 U	17 U	C9-C18 ALIPHATICS	2600	18 U
				VOLATILE PETROLEUM HYDROCARBONS (mg/kg)											**VOLATILE PETROLEUM HYDROCARBONS (mg/kg)**		
1.3 U	1.2 U	1.4 U	1.4 U	BENZENE	0.51	1.3 U	1.4 U	1.4 U	1.25 U	1.3 U	1.4 U	1.3 U	1.4 U	1.2 U	BENZENE	0.51	1.9 U
27 U	23 U	28 U	27 U	C5-C8 ALIPHATICS	1400	26 U	550	27 U	37 J	26 U	37 J	25 U	28 U	22 J	C5-C8 ALIPHATICS	1400	39 U
27 U	23 U	28 U	27 U	C9-C10 AROMATICS	75	26 U	170 J	27 U	25.5 U	26 U	56	25 U	28 U	24 U	C9-C10 AROMATICS	75	39 U
44	23 U	28 U	27 U	C9-C12 ALIPHATICS	2600	26 U	170	27 U	26 J	26 U	74	25 U	28 U	24 U	C9-C12 ALIPHATICS	2600	39 U
1.3 U	0.14 J	1.4 U	1.4 U	ETHYLBENZENE	0.81	1.3 U	1.4 U	0.096 J	0.22 J	1.3 U	1.4 U	1.3 U	1.4 U	1.2 U	ETHYLBENZENE	0.81	1.9 U
2.7 U	0.35 J	2.8 U	2.7 U	M+P-XYLENES	6600	2.6 U	2.7 U	0.66 J	0.565 J	0.25 J	2.8 U	2.5 U	2.8 U	2.4 U	M+P-XYLENES	6600	0.55 J
1.3 U	1.2 U	1.4 U	1.4 U	METHYL TERT-BUTYL ETHER	0.19	1.3 U	1.4 U	1.4 U	1.25 U	1.3 U	1.4 U	1.3 U	1.4 U	1.2 U	METHYL TERT-BUTYL ETHER	0.19	1.9 U
1.3 U	1.2 U	1.4 UJ	1.4 U	NAPHTHALENE	1.7	1.3 U	1.4 U	1.4 U	1.25 U	1.3 U	1.4 U	1.3 U	1.4 U	1.2 UJ	NAPHTHALENE	1.7	1.9 U
1.3 U	0.11 J	1.4 U	1.4 U	O-XYLENE	6600	1.3 U	1.4 U	0.2 J	0.25 J	0.1 J	1.4 U	1.3 U	1.4 U	1.2 U	O-XYLENE	6600	0.2 J
1.3 U	0.13 J	1.4 U	1.4 U	TOLUENE	8.1	1.3 U	1.4 U	1.4 U	0.415 J	0.11 J	1.4 U	1.3 U	1.4 U	1.2 U	TOLUENE	8.1	1.9 U
1.3 U	1.2 U	1.4 UJ	1.4 U	TOTAL PAHs	NC	1.3 U	1.4 U	1.4 U	1.25 U	1.3 U	1.4 U	1.3 U	1.4 U	1.2 UJ	TOTAL PAHs	NC	1.9 U
2 U	0.46 J	2.1 U	2.05 U	TOTAL XYLENES	26	1.95 U	2.05 U	0.86 J	0.815 J	0.35 J	2.1 U	1.9 U	2.1 U	1.8 U	TOTAL XYLENES	26	0.75 J

TABLE 3

ANALYTICAL RESULTS - SOIL
FORMER OLD NAVY FUEL FARM SITE ASSESSMENT
FORMER NAVAL AIR STATION BRUNSWICK, MAINE

NASB-ONFF-								PARAMETER	MINIMUM CRITERION	NASB-ONFF-						
DP23	DP24	DP25	DP26[2]	DP27	DP28	DP29	DP30[2]			DP31	DP32	DP33	DP34	DP35	DP36	DP37
11-12 ft bgs	3-4 ft bgs	5-6 ft bgs	6-7 ft bgs	8-9 ft bgs	1.5-2.5 ft bgs	3.5-4.5 ft bgs	4-5 ft bgs			5-6 ft bgs	9-10 ft bgs	4-5 ft bgs	5.5-6.5 ft bgs	10-11 ft bgs	7-8 ft bgs	6-7 ft bgs
POLYCYCLIC AROMATIC HYDROCARBONS (µg/kg)																
65 U	65 U	68 U	67 U	68 UJ	60 UJ	63 UJ	66.5 UJ	2-METHYLNAPHTHALENE	3600	66 UJ	66 UJ	72 UJ	160 J	54 UJ	71 UJ	69 UJ
65 U	65 U	68 U	67 U	68 UJ	60 UJ	63 UJ	66.5 UJ	ACENAPHTHENE	110000	66 UJ	66 UJ	72 UJ	18 J	8.6 J	71 UJ	69 UJ
65 U	65 U	68 U	67 U	68 UJ	60 UJ	63 UJ	66.5 UJ	ACENAPHTHYLENE	68000	66 UJ	66 UJ	72 UJ	68 UJ	54 UJ	71 UJ	69 UJ
65 U	65 U	68 U	67 U	68 U	60 U	63 U	66.5 U	ANTHRACENE	430000	66 UJ	66 UJ	72 UJ	68 UJ	54 UJ	71 UJ	69 UJ
36 J	87 J	68 U	36.5 J	39 J	16 J	63 U	38 J	BENZO(A)ANTHRACENE	260	66 UJ	54 J	40 J	45 J	40 J	50 J	69 UJ
65 U	58 J	68 U	67 U	68 U	60 U	63 U	66.5 U	BENZO(A)PYRENE	26	66 UJ	66 UJ	72 UJ	68 UJ	54 UJ	71 UJ	69 UJ
65 U	96 J	68 U	67 U	68 U	25 J	63 UJ	66.5 UJ	BENZO(B)FLUORANTHENE	260	66 UJ	66 UJ	72 UJ	68 UJ	54 UJ	71 UJ	69 UJ
65 U	28 J	68 U	67 U	68 U	14 J	63 U	66.5 U	BENZO(G,H,I)PERYLENE	750000	66 UJ	66 UJ	72 UJ	68 UJ	54 UJ	71 UJ	69 UJ
65 U	65 U	68 U	67 U	68 U	60 U	63 U	66.5 U	BENZO(K)FLUORANTHENE	2600	66 UJ	66 UJ	72 UJ	68 UJ	54 UJ	71 UJ	69 UJ
65 U	28 J	68 U	67 U	68 U	21 J	63 U	66.5 U	CHRYSENE	26000	66 UJ	66 UJ	72 UJ	68 UJ	54 UJ	71 UJ	69 UJ
65 U	65 U	68 U	67 U	68 U	60 U	63 U	23 J	DIBENZO(A,H)ANTHRACENE	26	66 UJ	66 UJ	72 UJ	68 UJ	54 UJ	71 UJ	69 UJ
65 U	110 J	68 U	67 U	68 U	30 J	63 U	18 J	FLUORANTHENE	1000000	66 UJ	50 J	72 UJ	28 J	63 J	44 J	69 UJ
65 U	65 U	68 U	67 U	68 UJ	60 UJ	63 UJ	66.5 UJ	FLUORENE	120000	66 UJ	66 UJ	72 UJ	68 UJ	54 UJ	71 UJ	69 UJ
65 U	74 J	68 U	67 U	68 U	48 J	63 UJ	66.5 UJ	INDENO(1,2,3-CD)PYRENE	260	66 UJ	66 UJ	72 UJ	68 UJ	54 UJ	71 UJ	69 UJ
65 UJ	65 UJ	68 UJ	67 UJ	68 UJ	60 UJ	63 UJ	66.5 UJ	NAPHTHALENE	1700	66 UJ	66 UJ	72 UJ	68 UJ	54 UJ	71 UJ	69 UJ
65 U	36 J	68 U	67 U	68 U	60 U	63 U	66.5 U	PHENANTHRENE	97000	66 UJ	42 J	72 UJ	68 UJ	54 UJ	25 J	69 UJ
65 U	86 J	68 U	67 U	68 U	25 J	63 U	16 J	PYRENE	750000	66 UJ	44 J	72 UJ	37 J	60 J	39 J	69 UJ
EXTRACTABLE PETROLEUM HYDROCARBONS (mg/kg)																
16 U	35	17 U	17 U	17 U	15 U	16 U	11.5 J	C11-C22 AROMATICS	460	16 UJ	16 J	18 UJ	41 J	14 UJ	18 UJ	17 UJ
16 U	16 U	17 U	17 U	17 U	15 U	16 U	17 U	C19-C36 ALIPHATICS	10000	16 UJ	250 J	18 UJ	17 UJ	14 UJ	18 UJ	17 UJ
16 U	16 U	17 U	17 U	17 U	15 U	16 U	17 U	C9-C18 ALIPHATICS	2600	16 UJ	40 J	16 J	170 J	14 UJ	18 UJ	17 UJ
VOLATILE PETROLEUM HYDROCARBONS (mg/kg)																
1.3 U	1.3 U	1.3 U	1.25 U	1.1 U	1.1 U	1.2 UJ	1.55 U	BENZENE	0.51	1.3 U	1.3 UJ	1.5 U	1.2 U	1.3 U	1.4 U	1.2 U
26 U	26 U	130 J	3500	25 J	22 U	27 J	31.5 UJ	C5-C8 ALIPHATICS	1400	27 U	3900	4500	1800	5300	6400	25 U
26 U	26 U	42 J	41.5	23 U	22 U	23 UJ	31.5 U	C9-C10 AROMATICS	75	27 U	30 J	38 J	330	30 J	54	25 U
26 U	26 U	53 J	51.5 J	23 U	22 U	23 UJ	31.5 UJ	C9-C12 ALIPHATICS	2600	27 U	39 J	53	300 J	28 J	59	25 U
1.3 U	1.3 U	1.3 U	1.25 U	1.1 U	0.12 J	1.2 UJ	1.55 U	ETHYLBENZENE	0.81	1.3 U	1.3 UJ	1.5 U	1.2 U	1.3 U	1.9	1.2 U
2.6 U	2.6 U	1.2 J	1.72 J	2.3 U	0.27 J	2.3 UJ	3.15 U	M+P-XYLENES	6600	2.7 U	2.5 UJ	3 U	2.4 U	2.6 U	4.9	2.5 U
1.3 U	1.3 U	1.3 U	1.25 U	1.1 U	1.1 U	1.2 UJ	1.55 U	METHYL TERT-BUTYL ETHER	0.19	1.3 U	1.3 UJ	1.5 U	1.2 U	1.3 U	1.4 U	1.2 U
1.3 UJ	1.3 UJ	1.3 U	1.25 UJ	1.1 U	1.1 U	1.2 UJ	1.55 U	NAPHTHALENE	1.7	1.3 U	1.3 UJ	1.5 U	1.2 U	1.3 U	1.4 U	1.2 U
1.3 U	1.3 U	1.3 U	1.25 U	1.1 U	0.088 J	1.2 UJ	1.55 U	O-XYLENE	6600	1.3 U	1.3 UJ	1.5 U	1.2 U	1.3 U	1.4 U	1.2 U
1.3 U	1.3 U	1.3 U	1.25 U	1.1 U	0.12 J	1.2 UJ	1.55 U	TOLUENE	8.1	1.3 U	1.3 UJ	1.5 U	1.2 U	1.3 U	1.4 U	1.2 U
1.3 UJ	1.3 UJ	1.3 U	1.25 UJ	1.1 U	1.1 U	1.2 UJ	1.55 U	TOTAL PAHs	NC	1.3 U	1.3 UJ	1.5 U	1.2 U	1.3 U	1.4 U	1.2 U
1.95 U	1.95 U	1.2 J	1.58 J	1.7 U	0.358 J	1.75 UJ	2.35 U	TOTAL XYLENES	26	2 U	1.9 UJ	2.25 U	1.8 U	1.95 U	4.9	1.85 U

TABLE 3

ANALYTICAL RESULTS - SOIL
FORMER OLD NAVY FUEL FARM SITE ASSESSMENT
FORMER NAVAL AIR STATION BRUNSWICK, MAINE

PARAMETER	MINIMUM CRITERION	NASB-ONFF-							
		DP38	DP39	DP40	DP41[2]	DP42	DP43[2]	DP44	DP45
		6-7 ft bgs	3-4 ft bgs	11-12 ft bgs	12-13 ft bgs	6-7 ft bgs	4-5 ft bgs	5-6 ft bgs	4-5 ft bgs
POLYCYCLIC AROMATIC HYDROCARBONS (µg/kg)									
2-METHYLNAPHTHALENE	3600	63 U	76 UJ	69 U	72 UJ	66 UJ	67.5 U	78 U	64 U
ACENAPHTHENE	110000	63 UJ	76 UJ	69 UJ	72 UJ	66 UJ	67.5 U	78 U	64 U
ACENAPHTHYLENE	68000	63 UJ	76 UJ	69 UJ	72 UJ	66 UJ	67.5 U	78 U	64 U
ANTHRACENE	430000	63 U	76 U	69 U	72 U	66 U	67.5 U	11 J	64 U
BENZO(A)ANTHRACENE	260	63 U	76 U	69 U	72 U	66 U	67.5 U	96 J	34 J
BENZO(A)PYRENE	26	63 U	76 U	69 U	72 U	66 U	67.5 U	57 J	64 U
BENZO(B)FLUORANTHENE	260	63 U	76 U	69 U	72 U	66 U	67.5 U	81 J	64 U
BENZO(G,H,I)PERYLENE	750000	63 U	76 U	69 U	42.5 U	66 U	67.5 U	57 J	64 U
BENZO(K)FLUORANTHENE	2600	63 U	76 U	69 U	72 U	66 U	67.5 U	78 U	64 U
CHRYSENE	26000	63 U	76 U	69 U	24.5 J	66 U	67.5 U	14 J	64 U
DIBENZO(A,H)ANTHRACENE	26	63 U	76 U	69 U	27 J	66 U	67.5 U	44 J	64 U
FLUORANTHENE	1000000	63 U	76 U	69 U	72 U	66 U	67.5 U	48 J	64 U
FLUORENE	120000	63 UJ	76 UJ	69 UJ	72 UJ	66 UJ	67.5 U	78 U	64 U
INDENO(1,2,3-CD)PYRENE	260	37 J	43 J	39 J	46 J	66 U	67.5 U	130 J	64 U
NAPHTHALENE	1700	63 UJ	76 UJ	69 UJ	72 UJ	66 UJ	67.5 UJ	78 UJ	64 UJ
PHENANTHRENE	97000	63 U	76 U	69 U	72 U	66 U	67.5 U	19 J	64 U
PYRENE	750000	63 U	76 U	69 U	72 U	66 U	67.5 U	57 J	64 U
EXTRACTABLE PETROLEUM HYDROCARBONS (mg/kg)									
C11-C22 AROMATICS	460	16 U	19 U	17 U	17.5 U	16 U	17 U	21 J	16 U
C19-C36 ALIPHATICS	10000	16 U	19 UJ	17 U	17.5 U	16 U	17 U	20 U	16 U
C9-C18 ALIPHATICS	2600	16 U	19 UJ	17 U	17.5 U	16 U	17 U	20 U	16 U
VOLATILE PETROLEUM HYDROCARBONS (mg/kg)									
BENZENE	0.51	1.3 U	1.5 U	1.3 U	1.2 U	1.2 U	1.25 U	1.9 UJ	1.3 U
C5-C8 ALIPHATICS	1400	26 U	30 U	26 UJ	25 U	23 U	25 U	38 UJ	25 U
C9-C10 AROMATICS	75	26 U	30 U	26 U	25 U	23 U	25 U	38 UJ	25 U
C9-C12 ALIPHATICS	2600	26 U	30 U	26 UJ	25 U	23 U	25 U	38 UJ	25 U
ETHYLBENZENE	0.81	1.3 U	1.5 U	1.3 U	1.2 U	1.2 U	0.395 J	1.9 UJ	1.3 U
M+P-XYLENES	6600	2.6 U	3 U	2.6 U	2.5 U	2.3 U	0.95 J	0.34 J	2.5 U
METHYL TERT-BUTYL ETHER	0.19	1.3 U	1.5 U	1.3 U	1.2 U	1.2 U	1.25 U	1.9 UJ	1.3 U
NAPHTHALENE	1.7	1.3 U	1.5 U	1.3 U	1.2 U	1.2 U	1.25 UJ	1.9 UJ	1.3 U
O-XYLENE	6600	1.3 U	1.5 U	1.3 U	1.2 U	1.2 U	0.435 J	0.13 J	1.3 U
TOLUENE	8.1	1.3 U	0.1 J	1.3 U	1.2 U	1.2 U	0.46 J	0.14 J	1.3 U
TOTAL PAHs	NC	1.3 U	1.5 U	1.3 U	1.2 U	1.2 U	1.25 UJ	1.9 UJ	1.3 U
TOTAL XYLENES	26	1.95 U	2.25 U	1.95 U	1.85 U	1.75 U	0.91 J	0.47 J	1.9 U

1 Remediation Guidelines for Petroleum Contaminated Sites in Maine (November 2009).
2 Values presented are averagees of sample and duplicate concentrations.
Light shading - Concentration exceeds detection limit.
Dark shading - Concentration exceeds minimum screening criterion.
NC - No criterion.

U - Not detected at associated detection limit.
J - Estimated concentration.
NA - Not analyzed.

TABLE 4

SOIL SUMMARY STATISTICS
FORMER OLD NAVY FUEL FARM
FORMER NAVAL AIR STATION BRUNSWICK, MAINE

PARAMETER	FREQUENCY OF DETECTION	MINIMUM DETECTION	MAXIMUM DETECTION	AVERAGE OF DETECTIONS	SAMPLE WITH MAXIMUM DETECTION (NASB-ONFF-)	NUMBER OF EXCEEDANCES OF MAINE PETROLEUM CONTAMINATED SITES CRITERIA				
						EXCAVATION CONTRUCTION WORKER	OUTDOOR COMMERCIAL WORKER	PARK USER	RESIDENT	LEACHING TO GROUNDWATER
POLYCYCLIC AROMATIC HYDROCARBONS (µg/L)										
2-METHYLNAPHTHALENE	4/45	23	1900	568	DP06-0708	0	0	0	0	0
ACENAPHTHENE	8/45	8.6	1100	176	DP06-0708	0	0	0	0	0
ACENAPHTHYLENE	2/45	8.5	8.6	8.55	DP12-0408	0	0	0	0	0
ANTHRACENE	7/45	11	3700	667	DP06-0708	0	0	0	0	0
BENZO(A)ANTHRACENE	25/45	15	10000	571	DP06-0708	0	1	3	3	0
BENZO(A)PYRENE	14/45	26	10000	986	DP06-0708	1	3	12	13	0
BENZO(B)FLUORANTHENE	16/45	16	13000	1120	DP06-0708	0	1	3	4	0
BENZO(G,H,I)PERYLENE	17/45	14	6600	524	DP06-0708	0	0	0	0	0
BENZO(K)FLUORANTHENE	10/45	26	2100	387	DP06-0708	0	0	0	0	0
CHRYSENE	17/45	12	9400	742	DP06-0708	0	0	0	0	0
DIBENZO(A,H)ANTHRACENE	11/45	13	2000	247	DP06-0708	0	1	3	8	0
FLUORANTHENE	23/45	12	21000	1260	DP06-0708	0	0	0	0	0
FLUORENE	4/45	41	1300	404	DP06-0708	0	0	0	0	0
INDENO(1,2,3-CD)PYRENE	24/45	37	10000	582	DP06-0708	0	1	3	3	0
NAPHTHALENE	3/45	130	680	350	DP06-0708	0	0	0	0	0
PHENANTHRENE	13/45	18	9400	980	DP06-0708	0	0	0	0	0
PYRENE	20/45	15	12000	876	DP06-0708	0	0	0	0	0
EXTRACTABLE PETROLEUM HYDROCARBONS (mg/kg)										
C11-C22 AROMATICS	14/45	11.5	560	76.2	DP06-0708	0	0	0	0	1
C19-C36 ALIPHATICS	7/45	10	250	65.6	DP32-0910	0	0	0	0	0
C9-C18 ALIPHATICS	8/45	12	1300	202	DP06-0708	0	0	0	0	0
VOLATILE PETROLEUM HYDROCARBONS (mg/kg)										
C5-C8 ALIPHATICS	15/45	22	6400	1750	DP36-0708	0	0	5	6	6
C9-C10 AROMATICS	11/45	30	500	123	DP06-0708	0	0	0	0	3
C9-C12 ALIPHATICS	14/45	26	390	99.2	DP06-0708	0	0	0	0	0
ETHYLBENZENE	8/45	0.096	1.9	0.451	DP36-0708	0	0	0	0	1
M+P-XYLENES	14/45	0.25	4.9	1	DP36-0708	0	0	0	0	0
O-XYLENE	11/45	0.088	0.435	0.204	DP43-0405-AVG	0	0	0	0	0
TOLUENE	9/45	0.1	0.46	0.232	DP43-0405-AVG	0	0	0	0	0
TOTAL XYLENES	14/45	0.35	4.9	1.12	DP36-0708	0	0	0	0	0

TABLE 5

ANALYTICAL RESULTS - GROUNDWATER
FORMER OLD NAVY FUEL FARM SITE ASSESSMENT
FORMER NAVAL AIR STATION BRUNSWICK, MAINE

PARAMETER	EPA MCL	MAINE MEG	MINIMUM CRITERION	ONFF-GW-							
				DP01	DP07	DP12[1]	DP17	DP20	DP22	DP24	DP28
POLYCYCLIC AROMATIC HYDROCARBONS (µg/L)											
2-METHYLNAPHTHALENE	NC	30	30	0.19 U	0.19 UJ	0.19 UJ	0.19 UJ	0.19 UJ	0.19 UJ	0.19 UJ	0.19 UJ
ACENAPHTHENE	NC	400	400	0.19 U	0.19 U	0.19 U	0.15 J	0.19 U	0.19 U	0.19 U	0.19 U
ACENAPHTHYLENE	NC	NC	NC	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
ANTHRACENE	NC	2000	2000	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
BENZO(A)ANTHRACENE	NC	0.5	0.5	0.19 U	0.19 UJ	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
BENZO(A)PYRENE	0.2	0.05	0.05	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.15 J
BENZO(B)FLUORANTHENE	NC	0.5	0.5	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
BENZO(G,H,I)PERYLENE	NC	NC	NC	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
BENZO(K)FLUORANTHENE	NC	5	5	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
CHRYSENE	NC	50	50	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
DIBENZO(A,H)ANTHRACENE	NC	0.05	0.05	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
FLUORANTHENE	NC	300	300	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
FLUORENE	NC	300	300	0.19 U	0.19 U	0.19 U	0.13 J	0.19 U	0.19 U	0.19 U	0.19 U
INDENO(1,2,3-CD)PYRENE	NC	0.5	0.5	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
NAPHTHALENE	NC	10	10	0.27 UJ	0.52 UJ	0.525 UJ	0.27 UJ	0.2 UJ	0.32 UJ	0.26 UJ	0.3 UJ
PHENANTHRENE	NC	NC	NC	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
PYRENE	NC	200	200	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
EXTRACTABLE PETROLEUM HYDROCARBONS (mg/kg)											
C11-C22 AROMATICS	NC	200	200	71 U	71 UJ	71.5 UJ	71 U	71 UJ	72 UJ	71 UJ	77 J
C19-C36 ALIPHATICS	NC	10000	10000	71 UJ	71 U	71.5 U	71 UJ	71 U	72 U	71 U	71 U
C9-C18 ALIPHATICS	NC	700	700	71 U	71 U	71.5 U	71 UJ	71 U	72 U	71 U	71 U
VOLATILE PETROLEUM HYDROCARBONS (mg/kg)											
BENZENE	5	4	4	3.8 U	3.8 U	3.8 U	1 J	3.8 U	3.8 U	3.8 U	3.8 U
C5-C8 ALIPHATICS	NC	300	300	53 J	250	790	75 U	400	190	75 U	75 U
C9-C10 AROMATICS	NC	200	200	75 U	75 U	110	75 U	75 U	75 U	75 U	75 U
C9-C12 ALIPHATICS	NC	700	700	75 U	86 J	75 U	75 U	75 U	64 J	75 U	75 U
ETHYLBENZENE	700	30	30	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U
M+P-XYLENES	10000	NC	10000	7.5 U	5.8 J	14	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U
METHYL TERT-BUTYL ETHER	NC	35	35	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U
NAPHTHALENE	NC	10	10	3.8 UJ	3.8 UJ	3.8 UJ	3.8 UJ	3.8 UJ	3.8 UJ	3.8 U	3.8 UJ
O-XYLENE	10000	NC	10000	3.8 U	2.1 J	12	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U
TOLUENE	1000	600	600	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U
TOTAL PAHS	NC	NC	NC	3.8 UJ	3.8 UJ	3.8 UJ	3.8 UJ	3.8 UJ	3.8 UJ	3.8 U	3.8 UJ
TOTAL XYLENES	10000	1000	1000	5.65 U	7.9 J	26	5.65 U	5.65 U	5.65 U	5.65 U	5.65 U
VOLATILE GASES (µg/L)											
METHANE	NC	NC	NC	1100	2900	4200	NA	NA	NA	NA	NA

TABLE 5

ANALYTICAL RESULTS - GROUNDWATER
FORMER OLD NAVY FUEL FARM SITE ASSESSMENT
FORMER NAVAL AIR STATION BRUNSWICK, MAINE

PARAMETER	MINIMUM CRITERION	ONFF-GW-						ONFF-		
		DP37	DP39	DP42[1]	DP43	DP44	DP45	PZ01	PZ02	PZ03
POLYCYCLIC AROMATIC HYDROCARBONS (µg/L)										
2-METHYLNAPHTHALENE	30	0.19 UJ	0.19 UJ	0.97 J	0.2 U	0.19 UJ	0.19 U	0.19 UJ	0.19 U	0.19 U
ACENAPHTHENE	400	0.22 J	0.19 U	0.205 J	0.2 U	0.19 UJ	0.19 U	0.19 U	0.19 U	0.19 U
ACENAPHTHYLENE	NC	0.19 U	0.19 U	0.19 U	0.2 U	0.28 J	0.19 U	0.19 U	0.19 U	0.19 U
ANTHRACENE	2000	0.19 U	0.19 U	0.19 U	0.2 U	0.19 UJ	0.19 U	0.19 U	0.19 U	0.19 U
BENZO(A)ANTHRACENE	0.5	0.19 U	0.19 U	0.19 U	0.2 UJ	0.19 UJ	0.19 UJ	0.19 U	0.19 U	0.19 U
BENZO(A)PYRENE	0.05	0.19 U	0.19 U	0.19 U	0.2 U	0.19 UJ	0.19 U	0.19 U	0.19 U	0.19 U
BENZO(B)FLUORANTHENE	0.5	0.19 U	0.19 U	0.19 U	0.2 U	0.19 UJ	0.19 U	0.19 U	0.19 U	0.19 U
BENZO(G,H,I)PERYLENE	NC	0.19 U	0.19 U	0.19 U	0.2 U	0.19 UJ	0.19 U	0.19 U	0.19 U	0.19 U
BENZO(K)FLUORANTHENE	5	0.19 U	0.19 U	0.19 U	0.2 U	0.19 UJ	0.19 U	0.19 U	0.19 U	0.19 U
CHRYSENE	50	0.19 U	0.19 U	0.19 U	0.2 U	0.19 UJ	0.19 U	0.19 U	0.19 U	0.19 U
DIBENZO(A,H)ANTHRACENE	0.05	0.19 U	0.19 U	0.19 U	0.2 U	0.19 UJ	0.19 U	0.19 U	0.19 U	0.19 U
FLUORANTHENE	300	0.19 U	0.19 U	0.19 U	0.2 U	0.19 UJ	0.19 U	0.19 U	0.19 U	0.19 U
FLUORENE	300	0.19 U	0.19 U	0.18 J	0.2 U	0.71 J	0.19 U	0.19 U	0.19 U	0.19 U
INDENO(1,2,3-CD)PYRENE	0.5	0.19 U	0.19 U	0.19 U	0.2 U	0.19 UJ	0.19 U	0.19 U	0.19 U	0.19 U
NAPHTHALENE	10	0.39 UJ	0.27 UJ	25.5 J	0.3 UJ	0.42 UJ	0.34 UJ	0.23 UJ	0.28 UJ	0.34 UJ
PHENANTHRENE	NC	0.19 U	0.19 U	0.19 U	0.2 U	1.5 J	0.19 U	0.19 U	0.19 U	0.19 U
PYRENE	200	0.19 U	0.19 U	0.19 U	0.2 U	0.19 UJ	0.19 U	0.19 U	0.19 U	0.19 U
EXTRACTABLE PETROLEUM HYDROCARBONS (mg/kg)										
C11-C22 AROMATICS	200	71 UJ	71 UJ	130 J	74 U	71 U	73 U	72 U	71 U	71 U
C19-C36 ALIPHATICS	10000	71 U	71 U	71.5 U	74 UJ	71 U	73 UJ	72 UJ	71 UJ	71 UJ
C9-C18 ALIPHATICS	700	71 U	71 U	54 J	74 U	71 U	73 U	72 UJ	71 U	71 U
VOLATILE PETROLEUM HYDROCARBONS (mg/kg)										
BENZENE	4	1.3 J	3.8 U	7.1	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U
C5-C8 ALIPHATICS	300	600	75 U	49.2 J	75 U	75 U	75 U	75 U	75 U	75 U
C9-C10 AROMATICS	200	75 U	75 U	355	75 U	75 U	75 U	75 U	75 U	75 U
C9-C12 ALIPHATICS	700	75 U	75 U	140	75 U	75 U	75 U	75 U	75 U	75 U
ETHYLBENZENE	30	3.8 U	3.8 U	3.85 J	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U
M+P-XYLENES	10000	2.4 J	7.5 U	3.2 J	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U
METHYL TERT-BUTYL ETHER	35	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U
NAPHTHALENE	10	3.8 U	3.8 UJ	48.5 J	3.8 UJ	3.8 UJ	3.8 UJ	3.8 U	3.8 UJ	3.8 UJ
O-XYLENE	10000	3.8 U	3.8 U	7.95	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U
TOLUENE	600	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U
TOTAL PAHS	NC	3.8 U	3.8 UJ	48.5 J	3.8 UJ	3.8 UJ	3.8 UJ	3.8 U	3.8 UJ	3.8 UJ
TOTAL XYLENES	1000	2.4 J	5.65 U	11.2 J	5.65 U	5.65 U	5.65 U	5.65 U	5.65 U	5.65 U
VOLATILE GASES (µg/L)										
METHANE	NC	NA	NA	6200	NA	NA	NA	NA	NA	NA

1 Values presented are averagees of sample and duplicate concentrations.
Light shading - Concentration exceeds detection limit.
Dark shading - Concentration exceeds minimum screening criterion.
MCL - Maximum Contaminant Level.
MEG - Maximum Exposure Guideline.

NC - No criterion.
U - Not detected at associated detection limit.
J - Estimated concentration.
NA - Not analyzed.

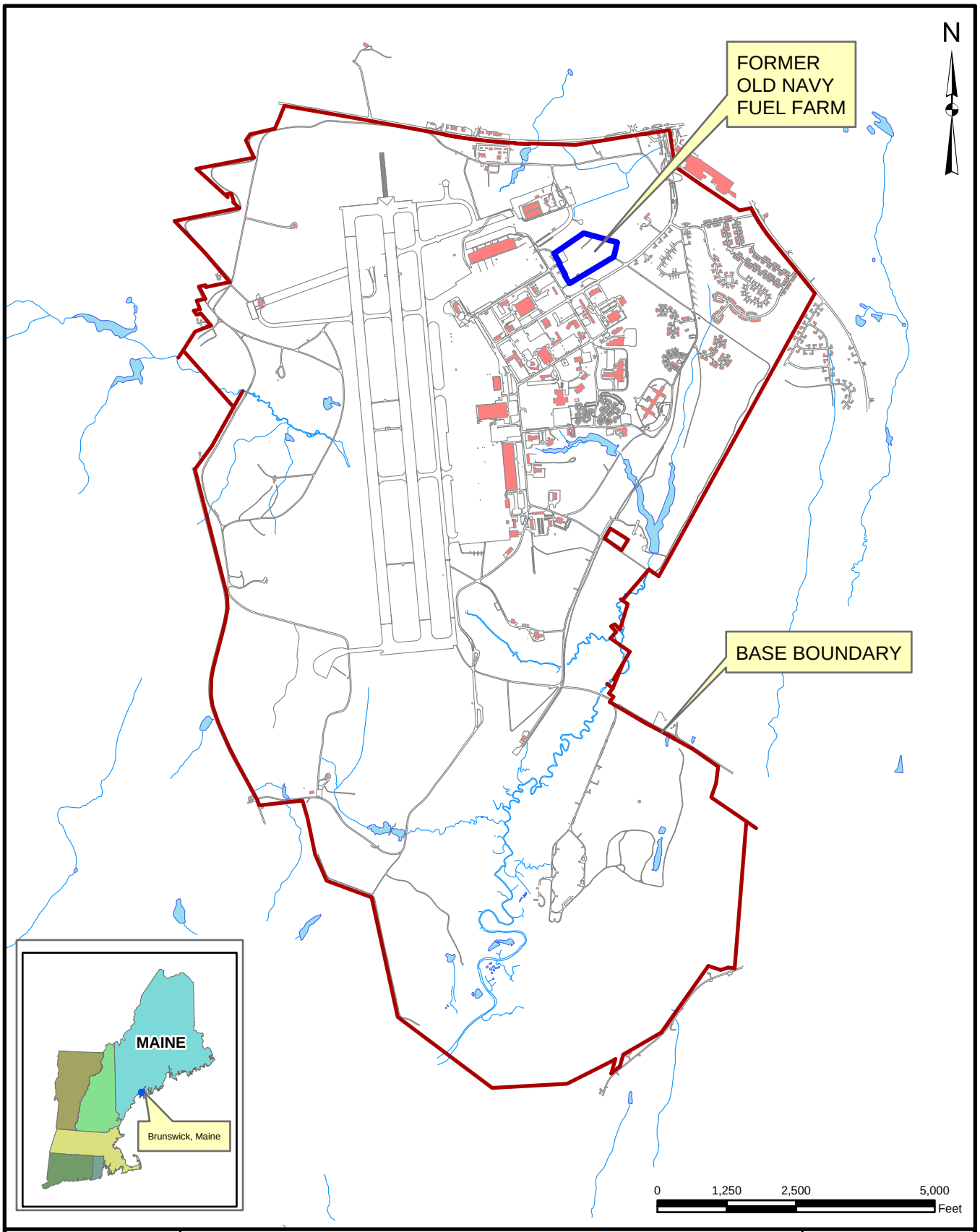
TABLE 6

GROUNDWATER SUMMARY STATISTICS
FORMER OLD NAVY FUEL FARM
FORMER NAVAL AIR STATION BRUNSWICK, MAINE

PARAMETER	FREQUENCY OF DETECTION	MINIMUM DETECTION	MAXIMUM DETECTION	AVERAGE OF DETECTIONS	SAMPLE WITH MAXIMUM DETECTION (NASB-ONFF-GW-)	NUMBER OF EXCEEDANCES	
						EPA MAXIMUM CONTAMINANT LEVEL	MAINE MAXIMUM EXPOSURE GUIDELINE
POLYCYCLIC AROMATIC HYDROCARBONS (µg/L)							
2-METHYLNAPHTHALENE	1/17	0.97	0.97	0.97	DP42-AVG	0	0
ACENAPHTHENE	3/17	0.15	0.22	0.192	DP37	0	0
ACENAPHTHYLENE	1/17	0.28	0.28	0.28	DP44	0	0
BENZO(A)PYRENE	1/17	0.15	0.15	0.15	DP28	0	1
FLUORENE	3/17	0.13	0.71	0.34	DP44	0	0
NAPHTHALENE	1/17	25.5	25.5	25.5	DP42-AVG	0	1
PHENANTHRENE	1/17	1.5	1.5	1.5	DP44	0	0
EXTRACTABLE PETROLEUM HYDROCARBONS (mg/kg)							
C11-C22 AROMATICS	2/17	77	130	104	DP42-AVG	0	0
C9-C18 ALIPHATICS	1/17	54	54	54	DP42-AVG	0	0
VOLATILE PETROLEUM HYDROCARBONS (mg/kg)							
BENZENE	3/17	1	7.1	3.13	DP42-AVG	1	1
C5-C8 ALIPHATICS	7/17	49.2	790	333	DP12-AVG	0	3
C9-C10 AROMATICS	2/17	110	355	232	DP42-AVG	0	1
C9-C12 ALIPHATICS	3/17	64	140	96.7	DP42-AVG	0	0
ETHYLBENZENE	1/17	3.85	3.85	3.85	DP42-AVG	0	0
M+P-XYLENES	4/17	2.4	14	6.35	DP12-AVG	0	0
NAPHTHALENE	1/17	48.5	48.5	48.5	DP42-AVG	0	1
O-XYLENE	3/17	2.1	12	7.35	DP12-AVG	0	0
TOTAL PAHs	1/17	48.5	48.5	48.5	DP42-AVG	0	0
TOTAL XYLENES	4/17	2.4	26	11.9	DP12-AVG	0	0
VOLATILE GASES (µg/L)							
METHANE	4/4	1100	6200	3600	DP42-AVG	0	0

FIGURES

I:\02063\2570\NASB_PARCEL_ONFF_LOCUS.MXD DWM/NEC 08/24/11



TETRA TECH

SITE LOCATION MAP
FORMER OLD NAVY FUEL FARM
FORMER NAVAL AIR STATION BRUNSWICK, MAINE

SCALE	AS NOTED
FILE	I:\..\NASB_PARCEL_ONFF_LOCUS.MXD
REV	0
DATE	08/24/11
FIGURE NUMBER	1

I:\02063\2570\NASB_ONFF_SITE_PLAN.MXD DWM 08/25/11

N

Notes:

1. Iso-concentration lines are total TPH-GRO and TPH-DRO based on historical analytical data.
2. Isopleths were developed based on results reported in the most recent groundwater monitoring reports for the Old Navy Fuel Farm in conjunction with historical site investigation data.

Legend

Approximate Locations of Excavation Areas By Foster Wheeler, January 2000

- Extent of Excavation (6' Deep)
- Extent of Excavation (8'Deep)
- Extent of Excavation (10' Deep)
- Fenceline
- Monitoring Well (Existing)
- Monitoring Well (Abandoned)
- Direct-Push Boring
- Piezometer
- Temporary Well
- Former Underground Tank
- Jet Fuel Line
- Aviation Gas Line
- Appurtenances

660
PZ03
PZ01
PZ02
MW-NASB-063
MW-NASB-062
MW-NASB-213
MW-NASB-096
TANK 204 (JP-5)
TANK 205 (JP-5)
TANK 201 (JP-5)
DP28
DP29
DP35
DP33
DP27
DP30
MW-044
DP08
DP10
DP06
DP07
DP23
MW-211
DP34
DP36
DP25
DP26
DP11
DP09
DP31
DP37
DP32
MW-NASB-051
MW-NASB-205 (OBSTRUCTION)
Fitch Avenue
10
DP04
DP02
DP05
DP03
Parking
32
MW-NASB-061R
DP01
DP12
TANK 104 (ETHYLENE GLYCOL)
DP21
MW-NASB-061
TANK 102 (UNLEADED GASOLINE)
TANK 105 (ETHYLENE GLYCOL)
DP14
DP15
DP16
TANK 203 (JP-5)
DP24
Ballfield
MW-NASB-047
MW-NASB-046
First Street
MW-NASB-703 (DAMAGED)
MW-NASB-050
MW-NASB-049
1155
239
1144
110
117
118
DP17
TANK 103 (AVIATION GASOLINE)
DP13
DP18
DP41
MW-NASB-702
DP43
DP42
Ballfield
DP20
DP19
MW-NASB-701 (DAMAGED)
MW-NASB-058
MW-NASB-206
Sixth Street
103
TANK 101 (PETROLEUM SLUDGE)
MW-NASB-054
DP22
47
DP40
Avenue B
DP44
Pegasus Street
DP45
MW-17-01
DP38
DP39
MW-NASB-244
Parking
Site 17
MW-NASB-066
MW-NASB-065
MW-NASB-067 (REMOVED)
MW-NASB-068
MW-17-03
MW-17-02R
MW-NASB-097
MW-NASB-098
MW-17-04
Parking
Fitch Avenue
Ballfield
MW-NASB-207
151
0 50 100 200 Feet

TETRA TECH

SITE PLAN
FORMER OLD NAVY FUEL FARM
FORMER NAVAL AIR STATION BRUNSWICK
BRUNSWICK, MAINE

FILE	SCALE
\..\NASB_ONFF_SITE_PLAN.MXD	AS NOTED
FIGURE NUMBER	REV / DATE
FIGURE NO. 2	0 / 08/25/11

I:\02063\2570\NASB_ONFF_GW_CONT_MAP_062811.MXD DWM 08/25/11

N

Legend

- Fenceline
- Monitoring Well (Existing)
- Monitoring Well (Abandoned)
- Direct-Push Boring
- Piezometer
- Temporary Well
- Groundwater Contour
- Groundwater Flow Direction
- 68.56 Groundwater Elevation
- (69.37) Groundwater Elevation Not Used For Groundwater Contouring

PZ03 70.64
PZ01 70.98
PZ02 70.96
MW-NASB-062 71.44
MW-NASB-096 68.81
MW-NASB-051 68.37
MW-NASB-046 65.98
MW-NASB-050
MW-NASB-049 63.03
MW-NASB-058 63.64
MW-NASB-702 66.60
MW-NASB-244 66.12
MW-17-01 70.01
MW-NASB-066 69.96
MW-NASB-065 69.30
MW-NASB-068 69.13
MW-17-02R 69.22
MW-17-03 69.21
MW-NASB-097 68.82
MW-17-04 68.72
MW-NASB-098 (69.37)

70 69 68 67 66 65 64 63 71

MW-NASB-213
DP28 DP35 DP29 DP33 DP27 DP30 DP34 DP36 DP37 DP31 DP32 DP21 DP24 DP20 DP18 DP19 DP17 DP13 DP41 DP42 DP22 DP44 DP45 DP43 DP01 DP02 DP03 DP04 DP05 DP06 DP07 DP08 DP09 DP10 DP11 DP12 DP14 DP15 DP16 DP23 DP25 DP26 DP38 DP39 DP40
MW-044 MW-211 MW-NASB-061R MW-NASB-061 MW-NASB-054 MW-NASB-703 (DAMAGED) MW-NASB-701 (DAMAGED) MW-NASB-047 MW-NASB-205 (OBSTRUCTION) MW-NASB-206 MW-NASB-207 MW-NASB-067 (REMOVED)

Parking
Ballfield
Site 17
Pegasus Street
Sixth Street
Avenue B
First Street
Fitch Avenue

660 10 32 117 118 103 47 151 1155 239 1144 110

0 62.5 125 250 Feet

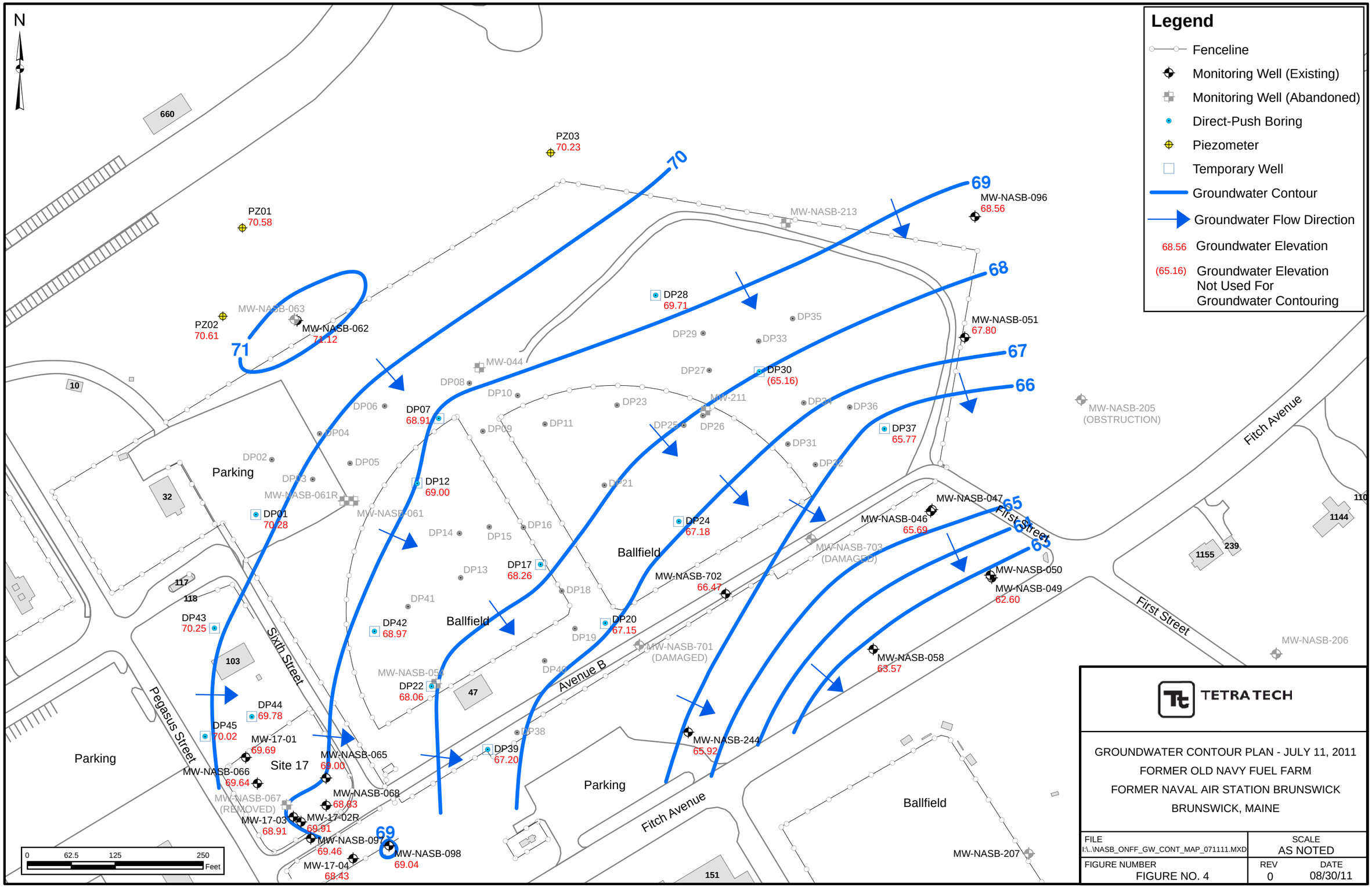
TETRA TECH

GROUNDWATER CONTOUR PLAN - JUNE 28, 2011
FORMER OLD NAVY FUEL FARM
FORMER NAVAL AIR STATION BRUNSWICK
BRUNSWICK, MAINE

FILE	SCALE
\..\NASB_ONFF_GW_CONT_MAP_062811.MXD	AS NOTED

FIGURE NUMBER	REV	DATE
FIGURE NO. 3	0	08/25/11

I:\02063\2570\NASB_ONFF_GW_CONT_MAP_071111.MXD DWM 08/30/11

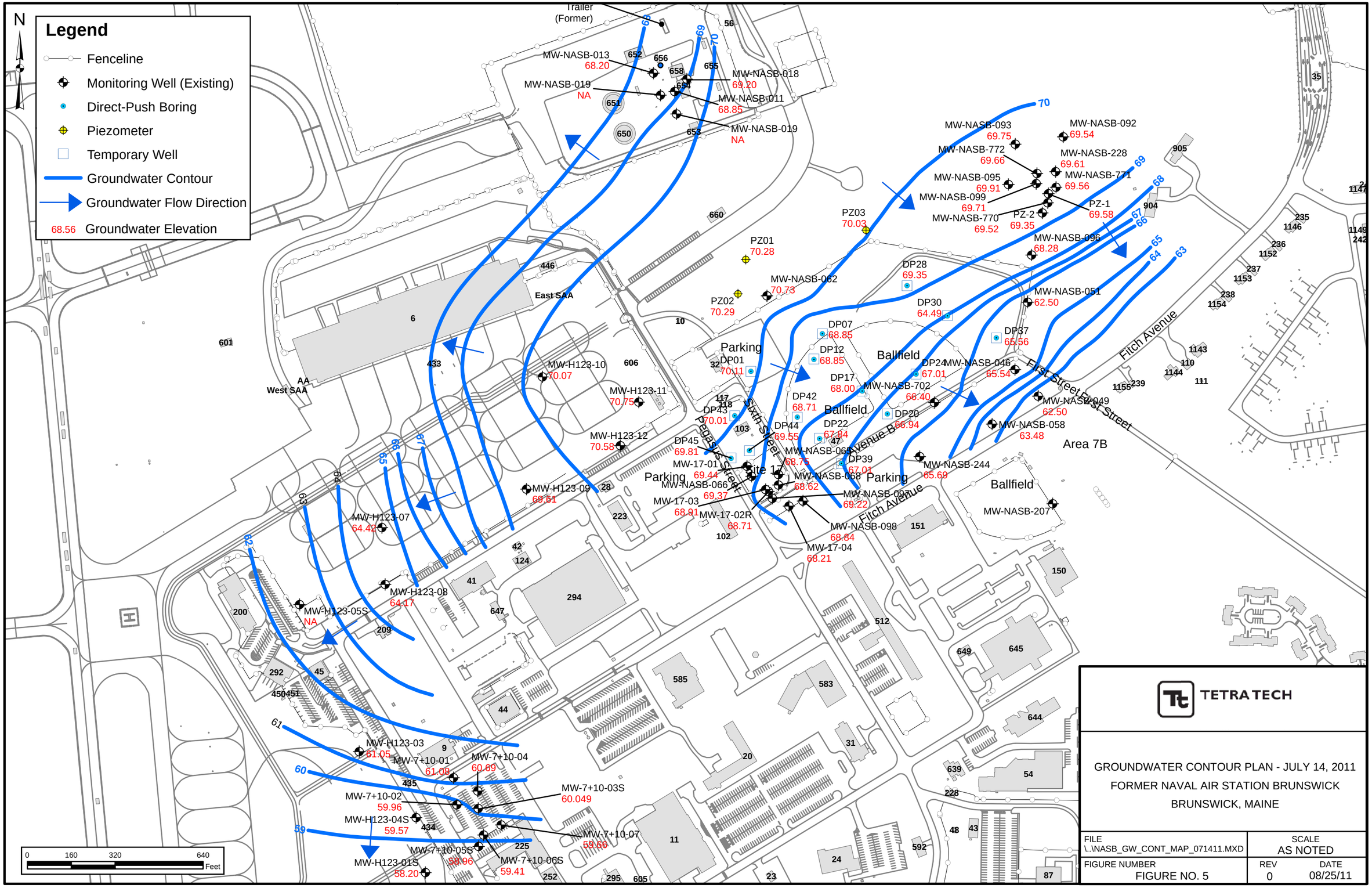


TETRA TECH

GROUNDWATER CONTOUR PLAN - JULY 11, 2011
FORMER OLD NAVY FUEL FARM
FORMER NAVAL AIR STATION BRUNSWICK
BRUNSWICK, MAINE

FILE	SCALE
I:\..\NASB_ONFF_GW_CONT_MAP_071111.MXD	AS NOTED

FIGURE NUMBER	REV	DATE
FIGURE NO. 4	0	08/30/11



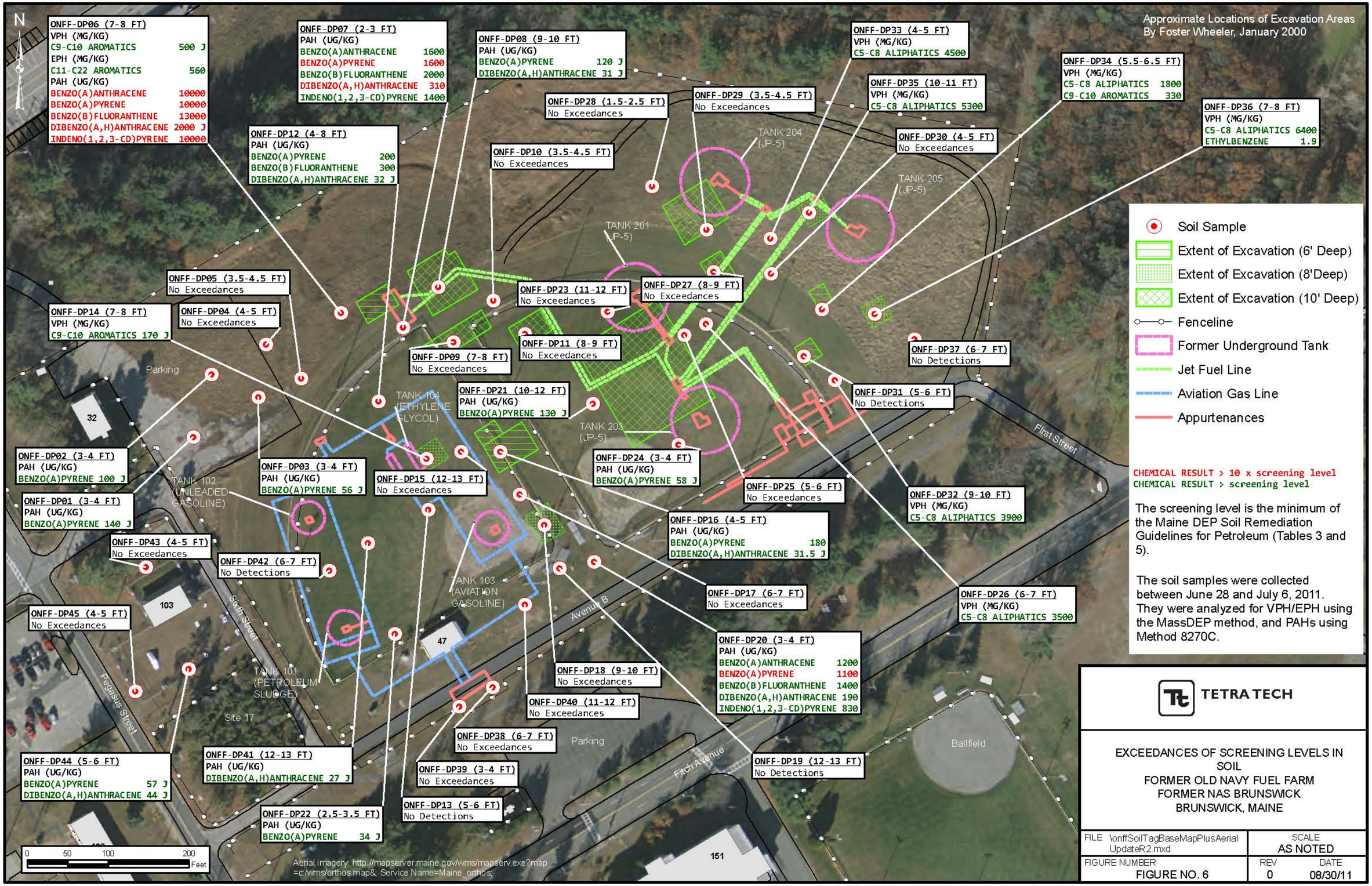
TETRA TECH

GROUNDWATER CONTOUR PLAN - JULY 14, 2011
FORMER NAVAL AIR STATION BRUNSWICK
BRUNSWICK, MAINE

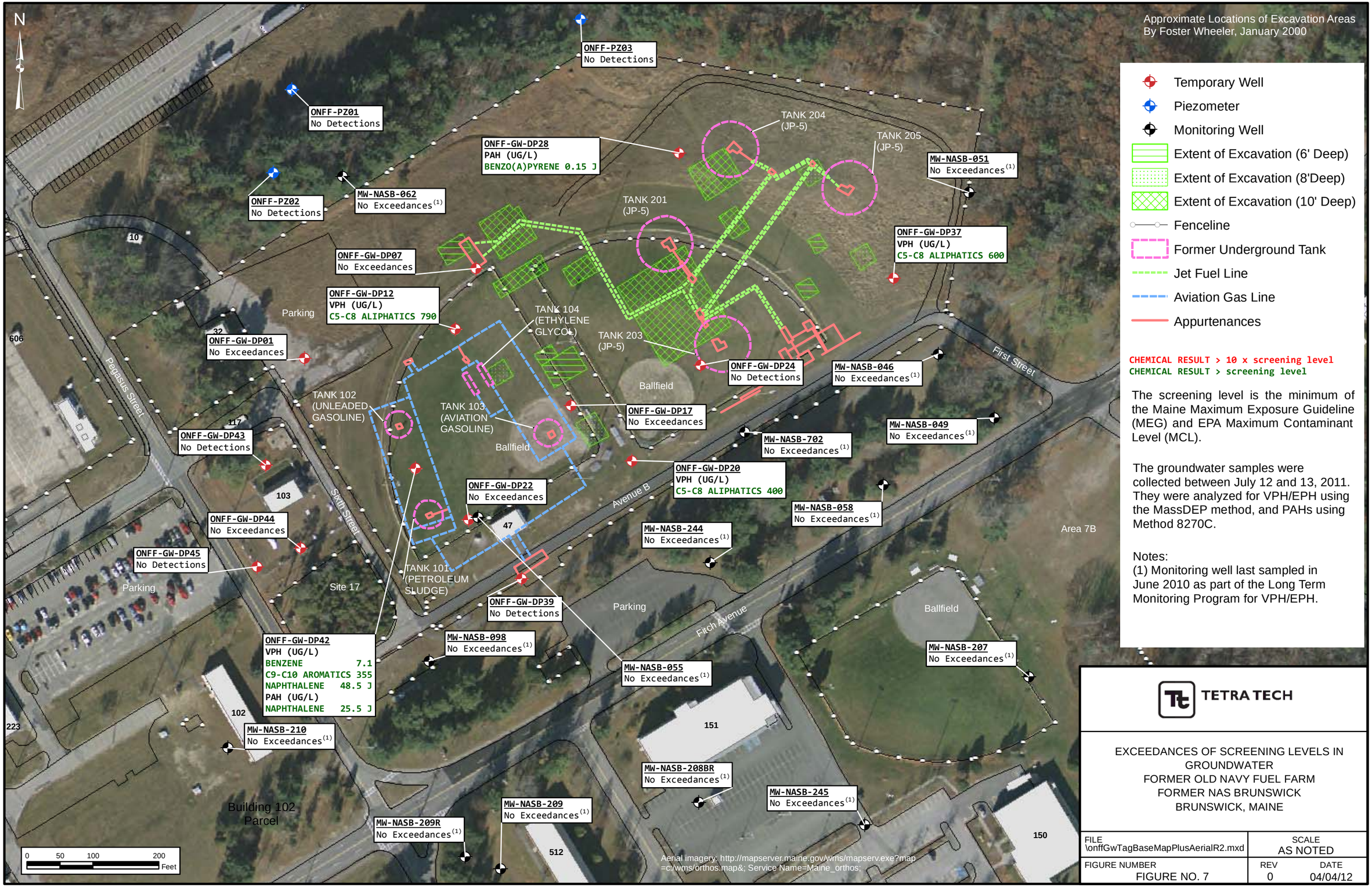
FILE	SCALE
\..\NASB_GW_CONT_MAP_071411.MXD	AS NOTED

FIGURE NUMBER	REV	DATE
FIGURE NO. 5	0	08/25/11

I:\02063\2570\NASB_GW_CONT_MAP_071411.MXD DWM 08/25/11


Approximate Locations of Excavation Areas
By Foster Wheeler, January 2000
N
ONFF-DP06 (7-8 FT)
VPH (MG/KG)
C9-C10 AROMATICS 500 J
EPH (MG/KG)
C11-C22 AROMATICS 560
PAH (UG/KG)
BENZO(A)ANTHRACENE 10000
BENZO(A)PYRENE 10000
BENZO(B)FLUORANTHENE 13000
DIBENZO(A,H)ANTHRACENE 2000 J
INDENO(1,2,3-CD)PYRENE 10000
ONFF-DP07 (2-3 FT)
PAH (UG/KG)
BENZO(A)ANTHRACENE 1600
BENZO(A)PYRENE 1600
BENZO(B)FLUORANTHENE 2000
DIBENZO(A,H)ANTHRACENE 310
INDENO(1,2,3-CD)PYRENE 1400
ONFF-DP08 (9-10 FT)
PAH (UG/KG)
BENZO(A)PYRENE 120 J
DIBENZO(A,H)ANTHRACENE 31 J
ONFF-DP33 (4-5 FT)
VPH (MG/KG)
C5-C8 ALIPHATICS 4500
ONFF-DP34 (5.5-6.5 FT)
VPH (MG/KG)
C5-C8 ALIPHATICS 1800
C9-C10 AROMATICS 330
ONFF-DP35 (10-11 FT)
VPH (MG/KG)
C5-C8 ALIPHATICS 5300
ONFF-DP29 (3.5-4.5 FT)
No Exceedances
ONFF-DP28 (1.5-2.5 FT)
No Exceedances
ONFF-DP36 (7-8 FT)
VPH (MG/KG)
C5-C8 ALIPHATICS 6400
ETHYLBENZENE 1.9
ONFF-DP12 (4-8 FT)
PAH (UG/KG)
BENZO(A)PYRENE 200
BENZO(B)FLUORANTHENE 300
DIBENZO(A,H)ANTHRACENE 32 J
ONFF-DP10 (3.5-4.5 FT)
No Exceedances
ONFF-DP30 (4-5 FT)
No Exceedances
TANK 204 (JP-5)
TANK 205 (JP-5)
TANK 201 (JP-5)
ONFF-DP05 (3.5-4.5 FT)
No Exceedances
ONFF-DP23 (11-12 FT)
No Exceedances
ONFF-DP27 (8-9 FT)
No Exceedances
ONFF-DP14 (7-8 FT)
VPH (MG/KG)
C9-C10 AROMATICS 170 J
ONFF-DP04 (4-5 FT)
No Exceedances
ONFF-DP11 (8-9 FT)
No Exceedances
ONFF-DP37 (6-7 FT)
No Detections
ONFF-DP09 (7-8 FT)
No Exceedances
Parking
ONFF-DP21 (10-12 FT)
PAH (UG/KG)
BENZO(A)PYRENE 130 J
TANK 104 (ETHYLENE GLYCOL)
ONFF-DP31 (5-6 FT)
No Detections
TANK 203 (JP-5)
First Street
32
ONFF-DP02 (3-4 FT)
PAH (UG/KG)
BENZO(A)PYRENE 100 J
ONFF-DP03 (3-4 FT)
PAH (UG/KG)
BENZO(A)PYRENE 56 J
ONFF-DP15 (12-13 FT)
No Exceedances
ONFF-DP24 (3-4 FT)
PAH (UG/KG)
BENZO(A)PYRENE 58 J
TANK 102 (UNLEADED GASOLINE)
ONFF-DP01 (3-4 FT)
PAH (UG/KG)
BENZO(A)PYRENE 140 J
ONFF-DP25 (5-6 FT)
No Exceedances
ONFF-DP32 (9-10 FT)
VPH (MG/KG)
C5-C8 ALIPHATICS 3900
ONFF-DP16 (4-5 FT)
PAH (UG/KG)
BENZO(A)PYRENE 180
DIBENZO(A,H)ANTHRACENE 31.5 J
ONFF-DP43 (4-5 FT)
No Exceedances
ONFF-DP42 (6-7 FT)
No Detections
TANK 103 (AVIATION GASOLINE)
ONFF-DP17 (6-7 FT)
No Exceedances
ONFF-DP26 (6-7 FT)
VPH (MG/KG)
C5-C8 ALIPHATICS 3500
ONFF-DP45 (4-5 FT)
No Exceedances
Sixth Street
Avenue B
103
47
ONFF-DP20 (3-4 FT)
PAH (UG/KG)
BENZO(A)ANTHRACENE 1200
BENZO(A)PYRENE 1100
BENZO(B)FLUORANTHENE 1400
DIBENZO(A,H)ANTHRACENE 190
INDENO(1,2,3-CD)PYRENE 830
TANK 101 (PETROLEUM SLUDGE)
ONFF-DP18 (9-10 FT)
No Exceedances
Pegasus Street
Site 17
ONFF-DP40 (11-12 FT)
No Exceedances
ONFF-DP38 (6-7 FT)
No Exceedances
Parking
Ballfield
ONFF-DP44 (5-6 FT)
PAH (UG/KG)
BENZO(A)PYRENE 57 J
DIBENZO(A,H)ANTHRACENE 44 J
ONFF-DP41 (12-13 FT)
PAH (UG/KG)
DIBENZO(A,H)ANTHRACENE 27 J
ONFF-DP39 (3-4 FT)
No Exceedances
Fitch Avenue
ONFF-DP19 (12-13 FT)
No Detections
ONFF-DP22 (2.5-3.5 FT)
PAH (UG/KG)
BENZO(A)PYRENE 34 J
ONFF-DP13 (5-6 FT)
No Detections
151
0 50 100 200 Feet
Aerial imagery: http://mapserver.maine.gov/wms/mapserv.exe?map=c:/wms/orthos.map&; Service Name=Maine_orthos
Soil Sample
Extent of Excavation (6' Deep)
Extent of Excavation (8'Deep)
Extent of Excavation (10' Deep)
Fenceline
Former Underground Tank
Jet Fuel Line
Aviation Gas Line
Appurtenances
CHEMICAL RESULT > 10 x screening level
CHEMICAL RESULT > screening level
The screening level is the minimum of the Maine DEP Soil Remediation Guidelines for Petroleum (Tables 3 and 5).
The soil samples were collected between June 28 and July 6, 2011. They were analyzed for VPH/EPH using the MassDEP method, and PAHs using Method 8270C.
TETRA TECH
EXCEEDANCES OF SCREENING LEVELS IN SOIL
FORMER OLD NAVY FUEL FARM
FORMER NAS BRUNSWICK
BRUNSWICK, MAINE
FILE \onffSoilTagBaseMapPlusAerialUpdateR2.mxd
SCALE AS NOTED
FIGURE NUMBER FIGURE NO. 6
REV 0
DATE 08/30/11

I:\02063\12570\onffGwTagBaseMapPlusAerialR2.mxd DWM/GLG 04/04/12



TETRA TECH

EXCEEDANCES OF SCREENING LEVELS IN GROUNDWATER
FORMER OLD NAVY FUEL FARM
FORMER NAS BRUNSWICK
BRUNSWICK, MAINE

FILE	SCALE
\onffGwTagBaseMapPlusAerialR2.mxd	AS NOTED

FIGURE NUMBER	REV	DATE
FIGURE NO. 7	0	04/04/12

APPENDIX A

FIELD FORMS

A-1 SOIL BORING LOGS

A-2 WELL CONSTRUCTION LOGS

A-3 WELL DEVELOPMENT LOGS

A-4 LOW-FLOW PURGE DATA SHEETS AND GROUNDWATER SAMPLE LOGS

A-1 SOIL BORING LOGS

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-PZ-FF01
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	06/27/11
LOGGED BY:	B.Geringer	TRANSCRIBED BY:	
		COMPLETION: DATE:	06/27/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	NASB-ONFF-PZ-FF01
GRD. SURFACE ELEVATION:		ELEVATION FROM:	
		CHECKED BY:	CAR

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
		1.1 / 2.0	1000	SAND		Dk Brown	(0.0-0.2) Sand(F) & Silt, Topsoil	SM/SP		P = 0.1 P = 0.1	F=0.0 F=0.0
2						Brown	(0.2-1.1) Sand(m-c) & Gravel	GP	Moist	P = 0.0 P = 0.0	F=0.1 F=0.0
		1.2 / 2.0	1003			Brown/Gray	(0.0-1.2) SAA - Some Concrete Chunks	↓	Dry	P= 0.0 P= 0.0	F=0.2 F=0.2
4						↓	↓			P= 0.7 P= 0.6	F=2.3 F=2.3
		1.4 / 2.0	1007			Gray	(0.0-0.3) SAA	↓	moist	P= 0.7 P= 0.4	F= 2.3 F=26.9
6						Dk. Brown	(0.3-1.4) - Sand(F-m), T-Silt - Wood Chunks	SP	wet	P= 0.6 P= 0.3	F=39.5 F=0.8
		2.0 / 2.0	1010			Brown	(0.0-1.5) - Sand (F-m)	↓	wet	P=0.2	F= 12.(
8						Lt Brown	(1.5-2.0) - SAA		↓	P= 0.3	F = 7.8
		/		TRANSITION		LT. Brown	(0.0-3.2) - SAA - increasing Silt	↓	wet	P = 0.3	F=6.8
10						↓	Content at Depth		↓	P= 0.3	F= 8.3
		4.0 / 4.0	1015			Gray	↓	SM	↓	P= 0.3	F= 4.4
12				CLAY		Gray	(3.2-4.0) Clay-T.Silt)	CL	Moist	P= 0.3	F= 2.3
		/		EOB							
							Installed Piezometer - Screened				
		/					6-11' bgs				

TYPE OF DRILLING RIG:	Geoprobe 6620 DT
METHOD OF ADVANCING BORING:	Direct Push Technology
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve
METHOD OF ROCK CORING:	N/A
GROUNDWATER LEVELS:	
OTHER OBSERVATIONS:	

Tetra Tech NUS, Inc.

BORING NO.: NASB-ONFF-PZ-FF

TINUS Form 0018

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-PZ-FF02
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	6/27/11
LOGGED BY:	B.Geringer	COMPLETION: DATE:	6/27/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	PZ-FF02
GRD. SURFACE ELEVATION:		CHECKED BY:	CAR
TRANSCRIBED BY:		ELEVATION FROM:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
		1.0/2.0	1118			Dk Brown	(0.0-0.3) Sand(F) & Silt, organic	SM/SP		P= 4.4 P= 17.0	F= 1.0 F= 3.0
2						Brown	(0.3-1.0) - Sand(F-M)	SP	Dry	P= 2.7 P= 0.0	F= 0.0 F= 0.0
		1.6/2.0	1122			LT. Brown	(0.0-1.6) - SAA			P= 0.0 P= 0.0	F= 0.0 F= 0.0
4						↓	↓		Dry	P= 0.0 P= 0.0	F= 0.0 F= 0.0
		1.8/2.0	1126			LT Brown	(0.0-1.8) - SAA		Moist	P= 0.0 P= 0.0	F= 0.0 F= 0.0
6						↓	Some mottling at 1.3-1.6' (orange)		Wet at 1.5	P= 0.2 P= 0.0	P= 0.0 P= 0.0
		2.0/2.0	1129			Lt. Brown/	(0.0-2.0) Sand(F-M), (Some C)		Wet	P= 0.0	F= 0.0
8						orange	↓		↓	P= 0.0	F= 0.0
						LT. Brown/	(0.0-2.0) Sand(F-M)		Wet	P= 0.0	F= 0.2
10		/~~4.0~~ 4.05		SAND		LT. Gray	Mica Seam at 2.1			P= 0.0	F= 0.0
		4.0/4.0	1135							P= 0.0	F= 0.0
12						↓	↓		↓	P= 0.0	F= 0.0
		/				Gray	(0.0-1.5) SAA	↓	Wet	P= 0.0	F= 0.0
14							(1.5-4.0) Clay - T-Silt	CL	Moist	~~P= BG~~	~~F= BG~~
		4.0/4.0	1140	CLAY							
16						↓	↓	↓	↓		
				EOB							

TYPE OF DRILLING RIG:	Geoprobe 6620 DT
METHOD OF ADVANCING BORING:	Direct Push Technology
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve
METHOD OF ROCK CORING:	N/A
GROUNDWATER LEVELS:	
OTHER OBSERVATIONS:	

Tetra Tech NUS, Inc.

BORING NO.: NASB-ONFF-PZ-FF

TtNUS Form 0018

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-PZ-FF03
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	6/27/11
LOGGED BY:	B.Geringer	TRANSCRIBED BY:	
		COMPLETION: DATE:	6/27/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	PZ-FF03
GRD. SURFACE ELEVATION:		ELEVATION FROM:	
		CHECKED BY:	CM

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
		1.2/2.0	1350			DK Brown	(0-0.3) Sand(f), T-Silt: organic	SP		P= 0.2	F=0.0
										P= 0.1	F=0.0
2						Brown	(0.3-1.2) Sand(f-m), T-Silt		Moist	P= 0.0	F=0.0
										P=0.0	F=0.0
		1.8/2.0	1353			Brown	(0.0-1.8) Sand(f-m), Some C Sand (0.8-1.3)		Moist	P= 0.0	F=0.0
										P= 0.0	F=0.0
4						↓	↓		Wet at 0.8	P= 0.0	F=0.0
										P= 0.0	F=0.0
		0.8/2.0	1357			Brown/	(0.0-0.8) SAA		Wet	P= 0.0	F=0.0
6				SAND		Lt Brown	↓		↓	P= 0.0	F=1.9
							(0.0-4.0) SAA - Flowing Sands		Wet	P= 0.0	F=2.0
8		/40 BG				↓	↓		↓	P= 0.0	F= 0.0
		4.0/40	1404			Lt. Gray				P= 0.0	F=0.0
10						↓	↓		↓	P= 0.0	F=0.0
		/				Gray	(0.0-2.0) SAA		Wet	P= 0.0	F=0.0
12						↓	↓	↓	↓	P= 0.0	F=0.0
		4.0/4.0	1408	LAY			(2.0-4.0) - Clay - T-Silt	CL	↓	P= 0.0	F=0.0
14						↓	↓	↓	Moist	~~P=~~ BG	~~F~~=BG
		/		EOB							

TYPE OF DRILLING RIG:	Geoprobe 6620 DT
METHOD OF ADVANCING BORING:	Direct Push Technology
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve
METHOD OF ROCK CORING:	N/A
GROUNDWATER LEVELS:	
OTHER OBSERVATIONS:	

Tetra Tech NUS, Inc.

BORING NO.: NASB-ONFF-PZ-FF

TINUS Form 0018

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP01
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	6/28/11
LOGGED BY:	B.Geringer	COMPLETION: DATE:	6/28/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	DP01
GRD. SURFACE ELEVATION:		CHECKED BY:	CDR
TRANSCRIBED BY:		ELEVATION FROM:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
		1.4/2.0	0838			Black/Gray	(0.0-0.4) Asphalt & Road base (Sand & Gravel) Peat like		Dry	P=0.7 P=2.0	F=1.0 F=7.6
2						Dk Brown	(0.4-1.1) Sand(F-M) Asphalt Chunk (1.1-1.4) Silt & Sand(F)	SP SM/PT	Moist	P=0.3 P=2.0	F=59.2 F=167.3
		1.8/2.0	0842			Dk. Brown	Sand(F), Some Silt, roots - Peat like		Moist	P=1.0 P=0.7	F=181.0 F=176.4
4						↓	↓	↓	↓	P=0.6 P=0.7	F=117.7 F=178.8
		1.4/2.0	0848			Dk Brown	(0.0-0.4) SAA	↓	wet at 0.4'	P=0.7 P=0.5	F=122.8 F=202.4
6				SAND		Brown	(0.4-1.4) Sand(F-M)	SP	wet	P=0.4	F=102.1
		/				↓	(0.0-4.0) SAA	↓	↓	P=0.4	F=128.1
8							↓			P=0.4	F=98.5
		4.0/4.0	0853			↓	↓		↓	P=0.5	F=9.3
10						Gray	↓			P=0.7	F=15.0
		/				↓	(0.0-0.4)-SAA	↓	wet	P=0.3	F=11.8
12				CLAY			(0.4-4.0) - Clay - T. Silt	CL	moist	P=0.1	F=5.6
		4.0/4.0	0900				↓	↓	↓	P=0.0	F=4.3
14						↓	↓	↓		P=0.2	F=4.0
		/		EOB							

TYPE OF DRILLING RIG:	Geoprobe 6620 DT	Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	Direct Push Technology	
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve	
METHOD OF ROCK CORING:	N/A	
GROUNDWATER LEVELS:		
OTHER OBSERVATIONS:	BORING NO.: NASB-ONFF-DP01	PAGE: 1 OF 1

TINUS Form 0018

Collected Soil Sample at 3-4' bgs- NASB-ONFF-DP01-0304 @ 0905

Installed temp. well- Screened 2-10' bgs

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP02
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	6/28/11
LOGGED BY:	B.Geringer	COMPLETION: DATE:	6/28/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	N/A
GRD. SURFACE ELEVATION:		CHECKED BY:	CDR
TRANSCRIBED BY:		ELEVATION FROM:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
							(0.0-0.4)				
		1.0/2.0	0717			Dk Brown	Sand(f-m), Some silt, T-Gravel - organic	SM	moist	P= 0.4 P= 0.6	F= 0.7 F= 0.7
2						Dark Brown	(0.4-1.0) Sand(f-m) & Gravel	GP	Dry	P= 1.3 P= 1.0	F= 6.1 F= 1.6
		1.6/2.0	0724			Gray	(0.0-0.6) Sand(f-m)-T-Silt	SP	moist	P= 0.3 P= 3.4	F= 50.1 F= 57.4
4						Dk Brown	(0.6-1.4) Silt & Sand(f)-Peat like (1.4-1.6) Sand(f-m)	SM/PT SP	Moist	P= 0.5 P= 0.6	F= 149.3 F= 117.0
		2.0/2.0	0728	SAND		Brown	(0.0-2.0) Sand(f-m), T-Silt, Wood Fragments	SP	slight organic odor	P= 0.9 ~~P=~~ 0.6	F= 436 ~~F=~~ 178.9
6						↓	↓	↓	Wet at 0.7'	P= 0.6 ~~P=~~ 0.5	~~F= 178.9~~ ~~F=~~ 45.3
		/				Brown	(0.0-1.0) Sand(f-m)	↓	Wet	P= 0.5	F= 12.9
8						Gray	(1.0-3.0) SAA	↓	↓	P= 0.5	F= 178
		4.0/4.0	0733			↓	(3.0-4.0) - Clay, T-Silt	CL	Moist	P= 0.2	F= 9.1 16
10				CLAY		↓	↓	↓	↓	P= 0.1	F= 7.2
		/		EOB							
		/									
		/									

TYPE OF DRILLING RIG:	Geoprobe 6620 DT	Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	Direct Push Technology	
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve	
METHOD OF ROCK CORING:	N/A	
GROUNDWATER LEVELS:		
OTHER OBSERVATIONS:	BORING NO.: NASB-ONFF-DP02	PAGE: 1 OF 1

TtNUS Form 0018

Collected Sample at 3-4' bgs - NASB-ONFF-DP02-0304 @ 745

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP03
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	06/28/11
LOGGED BY:	B.Geringer	COMPLETION: DATE:	06/28/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	N/A
GRD. SURFACE ELEVATION:		CHECKED BY:	COR
TRANSCRIBED BY:		ELEVATION FROM:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
		1.3/2.0	0800	SAND		Dk Brown	(0.0-0.2) Sand(F); Silt, organic - Topsoil	SM	moist	P=0.3	F=0.7
2										P=0.4	F=0.6
						Brown	(0.2-1.1) Sand(F-m), Some Gravel, (1.1-1.3) Sand(F-m)	GP SP		P=0.4	F=0.7
										P=0.7	F=36.6
		1.7/2.0	0805			Dk. Brown	(0.0-0.9) Silt + Sand(F), roots - Peat like	SM/PT	moist	P=2.3	F=194.7
4										P=1.1	F=88.9
						Brown	(0.9-1.7) Sand(F-m)	SP		P=2.4	F=65.8
										P=2.8	F=26.7
		2.0/2.0	0810				(0.0-2.0) SAA		wet	P=0.7	F=143.6
6										P=0.7	F=109.7
										P=0.5	F=136.2
										P=0.7	F=184.4
		/				Brown	(0.0-4.0) SAA		wet	P=0.7	F=55.3
8										P=0.8	F=52.2
		4.0/4.0	0815							P=0.7	F=45.3
10						Gray				P=0.6	F=40.1
		/		CLAY			(0.0-4.0) Clay - T.Silt	CL	moist	P=0.2	F=20.2
12										P=0.3	F=18.6
		4.0/4.0	0820							P=0.1	F=14.1
14										P=0.0	F=10.1
		/		EOB							

TYPE OF DRILLING RIG:	Geoprobe 6620 DT		Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	Direct Push Technology		
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: NASB-ONFF-DP03	PAGE: 1 OF 1

TINUS Form 0018

Collected Sample at 3-4' bgs NASB-ONFF-DP03-0304 @ 0825

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP04
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	6/28/11
LOGGED BY:	B.Geringer	COMPLETION: DATE:	6/28/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	N/A
GRD. SURFACE ELEVATION:		CHECKED BY:	CR
TRANSCRIBED BY:		ELEVATION FROM:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
		1.6/2.0	0955	SAND		Dk Brown/Brown	(0.0-0.6) Sand(f), T-Silt, roots - Topsoil	SP	Dry	P=0.1	F=0.1
2						Dk Brown/Gray	(0.6-1.0) Sand(f) (1.0-1.4) Sand(f), Some Gravel (gray)	GP	(1.4-1.6) Sand(f-m)	P=0.1 / P=0.7	F=0.1 / F=14.0
		1.9/2.0	1000			Gray	(0.0-1.1) Sand(f-m)	SP	Moist	P=0.9 / P=0.7	F=30.6 / F=58.6
4						Brown	(1.1-1.9) Sand(f-m), Silt lense at 1.5 & 1.7 - roots			P=0.6 / P=0.6	F=27.2 / F=81.0
		2.0/2.0	1005				(0.0-2.0) Sand(f-m), wood Frag 0-0.5		wet at 0.5'	P=0.5 / P=0.7	F=103.6 / F=217.9
6									wet	P=0.5	F=118.5
		/				Brown	(0.0-2.8) SAA			P=0.5	F=103.1
8										P=0.5	F=58.5
		4.0/4.0	1008			Gray				P=0.4	F=15.5
10				CLAY			(2.8-4.0) Clay - T.Silt	CL	Moist	P=0.2	F=9.1
		/		EOB							
		/									
		/									

TYPE OF DRILLING RIG:	Geoprobe 6620 DT		Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	Direct Push Technology		
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: NASB-ONFF-DP04	PAGE: 1 OF 1

TINUS Form 0018

Collect Soil Sample at 4-5' bgs - NASB-ONFF-DP04-0405 @ 1015

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP05
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	6/28/11
LOGGED BY:	B.Geringer	COMPLETION: DATE:	6/28/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	N/A
GRD. SURFACE ELEVATION:		CHECKED BY:	CR
TRANSCRIBED BY:		ELEVATION FROM:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
		1.2/2.0	1030	SAND		Pe Brown/Brown	(0.0-0.3) Sand(F), T-Silt, Organic - Topsoil	SP	Dry	P=0.0 P=0.1	F=0.4 F=0.6
2						Brown	(0.3-1.2) Sand(F-M), T-Gravel, Silt lense at 0.6	↓	Moist	P=0.0 P=0.0	F=0.4 F=4.1
		1.9/2.0	1034			Black/gray	(0.0-1.0) Silt, T-Sand(F) - Sand lense at 0.4-0.6	SM/PT	Moist - Peat live	P=0.1 P=0.7	F=33.4 F=54.3
4						Brown	(1.0-1.5) Silt + Sand(F) (1.5-2.0) Sand(F)	SP	↓	P=5.9 P=9.3	F=84.3 F=58.7
		1.9/2.0	1038			↓	(0.0-1.9) Sand(F-M)	↓	wet at 0.5' *	P=8.1 F=	960.5 ~~*~~
6							↓		↓	P=0.3	F=129
		/				Brown	(0.0-3.2) SAA		wet	P=0.0	F=69.4
8						↓	↓		↓	P=0.1	F=84.8
1		4.0/4.0	1043			Gray	↓	↓	↓	P=0.1	F=12.4
10				CLAY		↓	(3.2-4.0) Clay T-Silt	CL	Moist	P=0.0	F=9.2
		/		EOB							
		/									
		/									

TYPE OF DRILLING RIG:	Geoprobe 6620 DT		Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	Direct Push Technology		
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: NASB-ONFF-DP05	PAGE: 1 OF 1

TINUS Form 0018

Collected Sample at 4.5-5.5 NASB-ONFF-DP05-~~4.5-5.5~~ 3.5-4.5 @ 1055

*: Performed dye test. ~~Slight detection~~ BG No detection

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP06
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	6/28/11
LOGGED BY:	B.Geringer	COMPLETION: DATE:	6/28/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	N/A
GRD. SURFACE ELEVATION:		CHECKED BY:	CAR
TRANSCRIBED BY:		ELEVATION FROM:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
		1.3/2.0	1114	SAND		Brown/LT Brown	(0.0-0.8) Sand(f-m), T-Silt, T-C Sand	SP	Dry	P=0.0 P=0.1	F=0.7 F=0.9
2						Gray	(0.8-1.3) Sand(f-m), T-c-Sand		moist	P=0.9 P=0.0	F=9.8 F=57.9
		1.2/2.0	1117			↓	(0.0-0.8) - SAA		moist	P=0.0 P=2.7	F=55.1 F=101.4
4						↓	(0.8-1.2) Sand(f-m)		↓	P=317 P=4.6	F=350.1 F=64.5
		/				Gray	(0.0-3.0) ~~SAA~~ Sand(f-m), T-C Sand		wet	P=6.0	F=45.8
6						↓	↓		↓	P=5.0	F=41.9
		3.0/4.0	1122			Black/Gray	↓		wet	P=4.0	F=15.0
8						↓	↓ - Staining -		↓ * Petroleum odor	P=599	F=612
		/				Gray	(0.0-0.4) - SAA	↓	wet	P=95.5	F=70.3
10				CLAY		↓	(0.4-4.0) - Clay, T-Silt	CL	Moist	P=6.7	F=4.2
		4.0/4.0	1128			↓	↓	↓	↓	P=0.9	F=2.1
12						↓	↓	↓	↓	P=0.4	F=1.9
		/		EOB							
		/									

TYPE OF DRILLING RIG:	Geoprobe 6620 DT		Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	Direct Push Technology		
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: NASB-ONFF-DP06	PAGE: 1 OF 1

TtNUS Form 0018

Collected Sample at 7-8' bgs. NASB-ONFF-DP06-0708 at 1136

* = Screened Sample for Dye test; Positive result

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP 07
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	6/28/11
LOGGED BY:	B.Geringer	COMPLETION: DATE:	6/28/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	DP-07 Temp. well
GRD. SURFACE ELEVATION:		CHECKED BY:	CMR
TRANSCRIBED BY:		ELEVATION FROM:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
		1.5/2.0	1252			Dk Brown	(0.0-0.3) Sand(F), T-Silt, roots	SP	Dry	P= 0.8 P= 0.2	F= 0.9 F= 0.0
2						Brown / LT Brown	(0.3-1.5) Sand(F-M), T-C, Sand, Some gravel	GP	Asphalt Chunk	P= 0.2 P= 8.6	F= 0.0 F= 6.3
		1.5/2.0	1256			LT Brown / Dk. Brown	(0.0-0.3) SAA (0.3-0.6) Silt & Sand(F) Peat like	SM/PT	Moist	P= 50.7 P= 8.3	F= 223.9 F= 75.7
4						Brown	(0.6-1.5) - Sand (F-M)	SP	- Slight Petro odor	P= 3.8 P= 2.6	F= 109.1 F= 67.2
		1.8/2.0	1302				(0.0-1.8) - SAA		Moist	P= 1.2 P= 1.1	F= 37.5 F= 63.8
6										P= 1.3 P= 6.0	F= 101.3 F= 244.6
		2.0/2.0	1306	SAND		Brown	(0.0-2.0) - SAA		Wet	P= 3.1	F= 419
8						LT Gray				P= 3.7	F= 189.1
		/					(0.0-3.7) SAA		Wet	P= 2.1	F= 88.3
10										P= 0.7	F= 33.5
		4.0/4.0	1311			Gray				P= 0.2	F= 90.8
12							(3.7-4.0) Sand(F), Some Silt	SM		P= 0.1	F= 25.6
		/				Gray	(0.0-2.0) SAA		Wet	P= 0.0	F= 12.9
14										P= 0.1	F= 5.9
		/	1315	CLAY			(2.0-4.0) Clay - ~~T-Silt~~ B/T Some Silt	CL	Moist	P= 0.0	F= 3.1
16		4.0								P= 0.0	F= 2.6

TYPE OF DRILLING RIG:	Geoprobe 6620 DT	Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	Direct Push Technology	
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve	
METHOD OF ROCK CORING:	N/A	
GROUNDWATER LEVELS:		
OTHER OBSERVATIONS:	BORING NO.: NASB-ONFF-DP 07	PAGE: 1 OF 1

TtNUS Form 0018

Collected Sample at 2-3' bgs - NASB-ONFF-DP07-0203 @ 1325

Installed temp. well - Screen 4-14' bgs

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP08
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	6/28/11
LOGGED BY:	B.Geringer	TRANSCRIBED BY:	
		COMPLETION: DATE:	6/28/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	N/A
GRD. SURFACE ELEVATION:		ELEVATION FROM:	
		CHECKED BY:	CDR

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
		1.4/2.0	1402	SAND		Dk Brown	(0.0-0.5) Sand(F), T-Silt, roots	SP	Moist	P=0.4 P=0.2	F=1.6 F=1.1
2						Brown	(0.5-1.4) Sand(F-M), T-C Sand	↓	Wet	P=0.7 P=0.9	F=1.3 F=2.6
		1.2/2.0	1406			Gray	(0.0-1.2) - SAA - Stain @ 0.3 & 0.6?		Wet Slight odor?	P=0.4	F=29.0
4						↓	↓		↓	P=0.6	F=9.0
		/				Gray	(0.0-4.0) SAA		Wet	P=0.5	F=66.5
6						↓	↓		↓	P=0.4	F=6.3
		4.0/4.0	1410			↓	↓ Cobble at 3'		↓	P=0.7	F=4.7
8						↓	↓		↓	P=1.1	F=3.2
		/	3.5			Brown	(0.0-0.8) Sand(F-M) ↗ Silt lense at 1.3		Wet	P=23.9	F=58.2
10						↓	(0.8-1.5) Sand(M-C), T-Gravel, Wood	↓	↓ Petro odor	P=119	F=242.6
		~~3.5~~ 3.5/4.0	1416			↓	(1.5-3.5) Sand(F), Some Silt	SM	Wet	P=89.9	F=77
12						Gray	↓	↓	↓	P=0.9	F=1.6
		/				↓	(0.0-2.5) SAA	↓	Wet	P=0.6	F=4.2
14						↓	↓	↓	↓	P=0.6	F=2.2
		4.0/4.0	1420			↓	(2.5-4.0) Silty Clay	CL	Moist	P=0.3	F=1.3
16				SILT/CLAY		↓	↓	↓	↓	P=0.1	F=0.8

TYPE OF DRILLING RIG:	Geoprobe 6620 DT	Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	Direct Push Technology	
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve	
METHOD OF ROCK CORING:	N/A	
GROUNDWATER LEVELS:		
OTHER OBSERVATIONS:	BORING NO.: NASB-ONFF-DP08	PAGE: 1 OF 1

TtNUS Form 0018

Sample Collected at 9-10' bgs at 1430 NASB-ONFF-DP08-0910

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP09
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	6/28/11
LOGGED BY:	B.Geringer	COMPLETION: DATE:	6/28/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	N/A
GRD. SURFACE ELEVATION:		CHECKED BY:	CDR
TRANSCRIBED BY:		ELEVATION FROM:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
		1.6/2.0	1450	SAND		Dk Brown	(0.0-0.3) Sand(f), Some Silt, roots	SM	Dry	P=0.1	F=0.0
2										P=0.3	F=0.0
						Brown	(0.3-1.6) Sand(f-m), T-Gravel	SP	↓	P=1.0	F=0.4
										P=0.5	F=0.1
		1.6/2.0	1455				(0.0-1.6) Sand(f-c), T-Gravel		Damp	P=0.4	F=1.2
4										P=0.8	F=0.0
										P=0.6	F=0.1
										P=0.2	F=0.0
		1.6/2.0	1505			Gray	(0.0-1.6) - SAA		wet	P=0.6	F=2.8
6										P=0.3	F=2.0
		/				LT Brown	(0.0-1.2) Sand(f-c), Some Gravel	GP	wet	P=0.6	F=0.2
8						Gray	(1.2-3.0) Sand(f-m)	SP	Slight Petro odor	P=43.8	F=2.4
		3.0/4.0	1525							P=1.3	F=39.6
10										P=0.8	F=120.6
		/				Gray	(0.0-3.0) - SAA		wet	P=1.4	F=~~144.1~~ 44.0
12										P=0.9	F=27.5
		4.0/4.0	1535							P=1.1	F=64.9
14				SAND/SILT			(3.0-4.0) - Sand(f) & Silt	SM		P=0.3	F=103.4
		/				Gray	(0.0-4.0) SAA		wet	P=0.6	F=51.2
16										P=0.4	F=43.0

TYPE OF DRILLING RIG:	Geoprobe 6620 DT	Tetra Tech NUS, Inc.	
METHOD OF ADVANCING BORING:	Direct Push Technology		
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	BORING NO.: NASB-ONFF-DP09	PAGE: 1 OF 2	

TtNUS Form 0018

Collected Soil Sample From 7-8' bgs NASB-ONFF-DP09-0708 @ 1345

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment		
PROJECT NO.:	112G02063 / 0000.2530		
LOGGED BY:	B.Geringer	TRANSCRIBED BY:	
DRILLED BY (Company/Driller):	MAI / S.Brown		
GRD. SURFACE ELEVATION:		ELEVATION FROM:	

BORING NO.:	~~NASB-ONFF-PZ-FF~~ NASB-ONFF-DP09
START DATE:	6/28/11
COMPLETION: DATE:	6/28/11
MON. WELL NO.:	N/A
CHECKED BY:	CDR

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
		4.0/4.0	1545				SAA	SM	Wet	P=0.0	F=0.7
18							↓	↓	↓	P=0.1	F=0.8
		/					(0.0-1.0) - SAA	↓		P=0.1	F=0.6
20				SILT/ CLAY			(1.0-3.0) - Silty Clay	CL		P=0.0	F=0.5
		3.0/4.0	1555				↓	↓	↓	P=0.1	F=0.7
22								↓		P=0.0	F=0.4
		/		EOB							
		/									
		/									
		/									
		/									
		/									

TYPE OF DRILLING RIG:	Geoprobe 6620 DT		Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	Direct Push Technology		
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: NASB-ONFF-~~PZ-FF~~ DP09	PAGE: 2 OF 2

TINUS Form 0018

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP 10
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	07/01/11
LOGGED BY:	B.Geringer	COMPLETION: DATE:	07/01/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	N/A
GRD. SURFACE ELEVATION:		CHECKED BY:	CDR
TRANSCRIBED BY:		ELEVATION FROM:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
		1.1/2.0	0850	SAND		Dk Brown	(0.0-0.3) - Sand(F), T-Silt, roots, Topsoil	SP	Dry	P=0.0	F=0.0
2						↓	(0.3-0.8) - Sand(f-m)	↓	↓	P=0.5	F=0.0
						Brown	(0.8-1.1) Sand(f-c) T-Gravel			P=0.0	F=0.0
		0.8/2.0	0855			~~(Brown 0-0.2)~~	(0.0-.2) - Rock -		Moist	P=0.2	F=0.0
4						Brown	(0.2-0.8) Sand(f-c) & Gravel	GP	Wet at bottom	P=0.2	F=0.1
										P=0.0	F=1.0
6		/					(0.0-3.7) Sand(f-m)	SP	Wet	P=2.6	F=9.9
										P=0.0	F=23.4
		3.7/4.0	0903				Wood Frag. at 3.2			P=0.1	F=17.1
8						Gray				P=0.5	F=41.8
							(0.0-4.0) SAA		Wet	P=0.3	F=45.0
10		/								P=0.5	F=14.5
										P=0.3	F=6.5
		4.0/4.0	0908							P=0.4	F=11.5
12										P=0.9	F=7.1
						Gray	(0.0-3.2) - Sand(f) - T-Silt		wet	P=0.5	F=2.3
14		/								P=0.5	F=1.5
		4.0/4.0	0914							P=0.1	F=1.2
16							(3.2-4.0) - Sand(f) & Silt	SM	moist	P=0.4	F=1.7

TYPE OF DRILLING RIG:	Geoprobe 6620 DT	Tetra Tech NUS, Inc.	
METHOD OF ADVANCING BORING:	Direct Push Technology		
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	BORING NO.: NASB-ONFF-DP 10	PAGE: 1 OF 2	

TtNUS Form 0018

Collected Sample at 3.5-4.5' at 0930

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP 10
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	07/01/11
LOGGED BY:	B.Geringer	COMPLETION: DATE:	07/01/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	N/A
GRD. SURFACE ELEVATION:		CHECKED BY:	CR
TRANSCRIBED BY:		ELEVATION FROM:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
		2 /				Gray	(0.0-2.7) - SAA	SM	Wet	P=0.6	F=1.4
18						↓	↓	↓	↓	P=0.7	F=1.6
		3.2 / 4.0	918			↓	(2.7-3.2) Silty Clay	CL	↓	P=0.4	F=1.4
20				SILT/ CLAY		↓	↓	↓	↓	P=0.8	F=1.5
		/		EOB							
		/									
		/									
		/									
		/									
		/									
		/									

TYPE OF DRILLING RIG:	Geoprobe 6620 DT
METHOD OF ADVANCING BORING:	Direct Push Technology
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve
METHOD OF ROCK CORING:	N/A
GROUNDWATER LEVELS:	
OTHER OBSERVATIONS:	

Tetra Tech NUS, Inc.

BORING NO.: NASB-ONFF-DP 10

TtNUS Form 0018

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP11
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	7/06/11
LOGGED BY:	B.Geringer	COMPLETION: DATE:	7/06/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	N/A
GRD. SURFACE ELEVATION:		CHECKED BY:	CM
TRANSCRIBED BY:		ELEVATION FROM:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
		1.3 / 2.0	0822			Dk Brown	(0.0-0.4) - Sand(f), T-Silt, roots	SP	Dry	P=1.7	F=0.0
2						LT Brown	(0.4-1.0) - Sand(f-m)			P=3.2	F=0.0
						Dk Brown	(1.0-1.3) - Sand(f-m), T-Silt, Some Gravel	GP	↓	P=1.8	F=0.0
		0.7 / 2.0	0825			↓	(0.0-0.3) - SAA	↓	Moist	P=0.8	F=0.0
4						Brown	(0.3-0.7) - Sand(f-c), T-Gravel	SP	↓	P=1.9	F=0.0
										P=3.1	F=0.0
		/					(0.0-0.2) - Sand(f-m) & Gravel	~~GP~~ SP	wet Low recovery ~~recovery~~	P=2.1	F=0.0
6							See 2nd Run on Page 2			P=2.2	F=0.0
										P=4.5	F=0.0
		0.2 / 4.0	0828								
8						↓	↓	↓	↓		
		/				Brown	(0.0-4.0) - Sand(f-m)	SP	wet	P=5.0	F=0.0
10						↓				P=1.7	F=0.0
		4.0 / 4.0	0831			Gray				P=3.7	F=0.0
12						↓	↓		↓	P=4.7	F=0.0
		/				Gray	(0.0-2.9) - SAA		wet	P=1.0	F=0.0
14										P=0.6	F=0.0
		4.0 / 4.0	0835					↓	↓	P=1.6	F=0.0
16						↓	(2.9-4.0) - Sand(f), Some Silt - T-med Sand	SM	Moist	P=1.3	F=0.0

TYPE OF DRILLING RIG:	Geoprobe 6620 DT		Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	Direct Push Technology		
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: NASB-ONFF-DP11	PAGE: 1 OF 2

TtNUS Form 0018

Collected Sample from 8-9' bgs at 0915

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP11
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	07/06/11
LOGGED BY:	B.Geringer	COMPLETION: DATE:	07/06/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	N/A
GRD. SURFACE ELEVATION:		CHECKED BY:	CM
TRANSCRIBED BY:		ELEVATION FROM:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
18		/		SAND		Gray	(0.0-4.0) - SAA	SM	Moist	P=3.1	F=0.0
										P=1.8	F=0.0
20		4.0/4.0	0846							P=2.0	F=0.0
										P=3.3	F=0.0
22		/					(0.0-3.2) - SAA		wet	P=1.4	F=0.0
										P=2.3	F=0.0
24		4.0/4.0		CLAY			(3.2-4.0) - Clay - Some Silt	CL	Moist	P=2.3	F=0.0
										P=1.6	F=0.0
4		/		EOB							
2nd run at 4-8' 6		3.4/4.0	0850			Dk Brown	(0.0-1.3) Sand(f) - Some Silt; roots/Very Silty top 0.5'	SM	Moist	P=1.7	F=0.0
									Wet at 0.7	P=1.8	F=0.0
8		/				LT Brown	(1.3-3.4) - Sand(f-m)	SP	wet	P=3.2	F=0.0
										P=4.7	F=0.0
8		/									

TYPE OF DRILLING RIG:	Geoprobe 6620 DT
METHOD OF ADVANCING BORING:	Direct Push Technology
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve
METHOD OF ROCK CORING:	N/A
GROUNDWATER LEVELS:	
OTHER OBSERVATIONS:	

Tetra Tech NUS, Inc.

BORING NO.: NASB-ONFF-DP11

TINUS Form 0018

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP12
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	6/30/11
LOGGED BY:	B.Geringer	COMPLETION: DATE:	6/30/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	DP-12
GRD. SURFACE ELEVATION:		CHECKED BY:	
TRANSCRIBED BY:		ELEVATION FROM:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
2		1.3/2.0	1325	SAND		Dk Brown Lt. Brown	(0.0-0.3) Sand(F), T-Silt, roots (0.3-1.1) - Sand(F-M)	SP	Dry	P=0.7 P=0.7	F=2.4 F=2.5
						Brown	(1.1-1.3) - Sand(F-M) - Asphalt chunks			P=0.5 P=0.4	F=2.4 F=27.0
4		1.1/2.0	1330			Dk Brown	(0.0-1.1) - Sand(F-M), T-Silt - Asphalt chk at 0.1 > T-Gravel		Moist moist	P=0.8 P=1.4 P=1.8 P=2.0	F=25.9 F=34.8 F=165.2 F=49.0
6		0.5/2.0	1334			Brown	(0.0-0.5) - Sand(F-M) & Gravel	GP	wet	P=3.1	F=11.0
8		/				Brown	(0.0-0.4) - Sand(F-M) & Gravel		Wet	P=3.1	F=15.9
							(0.4-2.1) - Sand(F-M)	SP		P=2.2	F=84.7
10		2.1/4.0	1338			Gray				P=2.5 P=1.5	F=26.5 F=14.8
12		/		SAND/SILT			(0.0-2.5) - SAA		wet	P=2.3 P=1.9	F=11.5 F=26.5
14		3.4/4.0	1343				(2.5-3.4) - Sand(F) + Silt	SM		P=1.2 P=0.7	F=39.0 F=19.2
16		/		SILT/CLAY		Gray	(0.0-0.6) - Silt & Sand(F)		wet	P=1.3	F=7.0
							(0.6-4.0) - Silty Clay	CL		P=0.9	F=10.0

TYPE OF DRILLING RIG:	Geoprobe 6620 DT	Tetra Tech NUS, Inc.	
METHOD OF ADVANCING BORING:	Direct Push Technology		
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	BORING NO.: NASB-ONFF-DP12	PAGE: 1	OF 2

TINUS Form 0018

Collected Sample at 4-8' @ 1410 - Collected Sample at 4' interval due to poor recovery

Installed temp well 2-12 bgs (Screen)

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP 12
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	6/30/11
LOGGED BY:	B.Geringer	COMPLETION: DATE:	6/30/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	DP-12
GRD. SURFACE ELEVATION:		CHECKED BY:	UR
TRANSCRIBED BY:		ELEVATION FROM:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
		4.0	1350			Gray	SAA	CL	Wet	P=0.9	F=12.4
18		/4.0				↓	↓	↓	↓	P=1.2	F=16.1
		/									
		/									
		/									
		/									
		/									
		/									
		/									

TYPE OF DRILLING RIG:	Geoprobe 6620 DT	Tetra Tech NUS, Inc.	
METHOD OF ADVANCING BORING:	Direct Push Technology		
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	BORING NO.: NASB-ONFF-DP 12	PAGE: 2 OF 2	

TtNUS Form 0018

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP 13
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	6/30/11
LOGGED BY:	B.Geringer	COMPLETION: DATE:	6/30/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	N/A
GRD. SURFACE ELEVATION:		CHECKED BY:	CM
TRANSCRIBED BY:		ELEVATION FROM:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
		1.6/2.0	1137	SAND		Dk. Brown	~~0.0-0.3~~ (0.0-0.3) Sand(F), T-Soil, roots	SP	Dry	P=0.6 P=0.8	F=0.0 F=0.0
2						Lt Brown Brown	(0.3-1.6) - Sand (F-m) · Silt lense at 1.5	↓	↓	P=1.4 P=1.0	F=0.0 F=8.6
		2.0/2.0	1141			Brown Dk Brown	(0.0-0.3) - SAA (0.3-1.3) - Sand(F) + Silt, wood, roots	SM	moist	P=0.9 P=6.1	F=6.2 F=511
4						Brown	(1.3-2.0) Sand(F-m) -	SP	Slight Petro odor	P=34.6 P=7.8	F=431.1 F=120.5
		1.6/2.0	1146			Brown/orange	(0.0-0.5) - SAA (0.5-1.1) - Sand(F), Some silt, wood, roots	SM	moist	P=8.5 P=31.3	F=312.7 F=854.9
6						Brown	(1.1-1.6) - Sand(F-m)	SP	wet at 1.1	P=24.0 P=18.6	F=608.7 F=807.5
		/					(0.0-0.4) - Sand(F-m), T-C Sand, T-Gravel		wet Slight Petro odor	P=13.6	F=12.0
8						Brown/orange	(0.4-3.0) - Sand(F-m)			P=15.8	F=140.6
		3.0/4.0	1151							P=20.4	F=314.8
10										P=16.0	F=466.5
		/				Brown/orange	(0.0-3.0) - SAA		wet	P=4.8	F=57.3
12						Brown				P=3.4	F=109.6
		4.0/4.0	1157			Gray	(3.0-3.5) - Sand(F-m), T-C Sand (Mica)			P=5.7	F=148
14				SAND/SILT			(3.5-4.0) - Sand(F) + Silt - root at 3.5	SM		P=7.2	F=69.1
		/				Gray	(0.0-4.0) - ~~SA~~ Silt + Sand(F)		wet	P=2.6	F=13.2
16										P=2.1	F=8.0

TYPE OF DRILLING RIG:	Geoprobe 6620 DT
METHOD OF ADVANCING BORING:	Direct Push Technology
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve
METHOD OF ROCK CORING:	N/A
GROUNDWATER LEVELS:	
OTHER OBSERVATIONS:	

Tetra Tech NUS, Inc.

BORING NO.: NASB-ONFF-DP13

TINUS Form 0018

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP 13
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	6/30/14
LOGGED BY:	B.Geringer	COMPLETION: DATE:	6/30/14
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	N/A
GRD. SURFACE ELEVATION:		CHECKED BY:	GR
TRANSCRIBED BY:		ELEVATION FROM:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
		4.0/4.0	1203				SAA - Clay lense at 3.0	SM	wet	P=1.6	F=55.0
18							↓	↓	↓	P=1.7	F=85.6
		/		SILT/ SAND			(0.0-3.4) - SAA		wet	P=1.3	F=7.0
20							↓	↓	↓	P=2.0	F=4.5
		4.0/4.0	1206	SILT/CLAY			↓	↓	↓	P=1.2	F=3.3
22				↓			(3.4-4.0) - Silty Clay	CL	↓	P=1.2	F=1.9
		/		EOB							
		/									
		/									
		/									
		/									
		/									

TYPE OF DRILLING RIG:	Geoprobe 6620 DT	Tetra Tech NUS, Inc.	
METHOD OF ADVANCING BORING:	Direct Push Technology		
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	BORING NO.: NASB-ONFF-DP13	PAGE: 2 OF 2	

TtNUS Form 0018

Collected Soil Sample from 5-6' bgs at 1220

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP 14
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	6/30/14
LOGGED BY:	B.Geringer	COMPLETION: DATE:	6/30/14
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	N/A
GRD. SURFACE ELEVATION:		CHECKED BY:	CR
TRANSCRIBED BY:		ELEVATION FROM:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
		1.6/2.0	1235	Fill		Dk Brown Lt Brown	(0.0-0.3) Sand(f) T-Silt, roots (0.3-1.6) - Sand(f-m)	SP	Dry	P=0.8 P=0.9	F=0.0 F=0.0
2						Brown	↓	↓	↓	P=1.3 P=0.7	F=0.0 F=0.0
		1.5/2.0	1238			Brown	(0.0-0.6) SAA	↓	Dry	P=1.5 P=46.5	F=1.8 F=13.1
4						Dk Brown	(0.6-1.5) - Sand(f), Some Silt, roots - rock at 1.2	SM	Slight Moist - Petro odor	P=11.9 P=50.4	F=53.6 F=73.4
		1.5/2.0	1242			↓	(0.0-1.6) - SAA	↓	Moist	P=35.9 P=27.0	F=355 F=1,224
6						↓	↓	↓	↓	P=36.4 P=64.7	F=425.2 F=1188
		1.6/2.0	1245			Dk Brown	(0.0-1.1) - Sand(f) T-Silt, root at 0.2	SP	Wet	P=209	F=1821
8						Brown	(1.1-1.6) - Sand(f-m)	↓	↓ Petro odor *	P=1142	F=3144
		/				↓	(0.0-2.7) - SAA	↓	wet ↓	P=33.8	F=814.6
10						Gray	(2.7-3.3) - Concrete - Wood at 2.7			P=346	F=392.4
		4.0/4.0	1251			↓	(3.3-4.0) - Sand(f-m) - Gravel at 3.4	SP	wet	P=4.1	F=31.8
12						↓	↓	↓	↓	P=0.6	F=47.4
		/		Sand		Gray	(0.0-3.5) - SAA	↓	Wet	P=6.6	F=51.5
14						↓	↓	↓	↓	P=18.6	F=44.2
		4.0/4.0	1257			↓	↓	↓	↓	P=8.2	F=28.5
16						↓	(3.5-4.0) - Sand(f) - Some Silt - wood at 3.6	SM	↓	P=1.2	F=50.5

TYPE OF DRILLING RIG:	Geoprobe 6620 DT		Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	Direct Push Technology		
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: NASB-ONFF-DP 14	PAGE: 1 OF 2

TtNUS Form 0018

* = Performed dye Test, Positive result

Collected Soil Sample 7-8' at 1315

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP 14
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	6/30/11
LOGGED BY:	B.Geringer	COMPLETION: DATE:	6/30/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	N/A
GRD. SURFACE ELEVATION:		CHECKED BY:	CM
TRANSCRIBED BY:		ELEVATION FROM:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
						Gray	(0.0-3.0) - Silty Sand(F)	SM	Wet	P=0.2	F=25.6
18				SILT/						P=0.2	F=16.4
		4.0/4.0	1304	CLAY						P=0.2	F=12.8
20							(3.0-4.0) - Silty Clay	CL		P=0.4	F=6.8
				EOB							

TYPE OF DRILLING RIG:	Geoprobe 6620 DT	Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	Direct Push Technology	
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve	
METHOD OF ROCK CORING:	N/A	
GROUNDWATER LEVELS:		
OTHER OBSERVATIONS:	BORING NO.: NASB-ONFF-DP14	PAGE: 2 OF 2

TtNUS Form 0018

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP 15
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	6/30/11
LOGGED BY:	B.Geringer	COMPLETION: DATE:	6/30/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	N/A
GRD. SURFACE ELEVATION:		CHECKED BY:	GM
TRANSCRIBED BY:		ELEVATION FROM:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
		1.5/2.0	1453			Dk Brown	(0.0-0.6) Sand(f-m) T-Silt, roots, Top Soil	SP	Dry	P=0.2 P=0.2	F=1.8 F=1.7
2						LT Brown	(0.6-1.5) - Sand(f-m)	↓	↓	P=0.0 P=0.2	F=1.6 F=1.5
		1.6/2.0	1456			Brown	(0.0-0.8) - SAA	↓	Dry	P=0.1 P=0.3	F=1.3 F=10.1
~~4~~						LT Gray/ Black	(0.8-1.6) - Sand (f-m), T-Silt & Gravel - interbedded Silt	SM	Moist	P=1.0 P=2.1	F=39.0 F=60.0
		/~~2.0~~				↓	(0.0-1.6) - Sand(f-m) - interbedded silt lenses	SM	Wet at 1'	P=1.1 P=0.6	F=68.0 F=223.4
6						Brown	(1.6-4.0) SAnd (f-m)	SP	Wet	P=4.1	F=218.8
		4.0/4.0	1500	SAND		↓	↓	↓	↓	P=0.9	F=238.7
8						↓	↓			P=0.9	F=476.9
		/				Brown	(0.0-4.0) - SAA		Wet	P=0.1	F=541.9
10						↓	↓		↓	P=0.8	F=290.3
		4.0/4.0	1508			Gray			↓	P=1.7	F=356.8
12						↓	↓ Brown organics			P=5.2	F=407.5
		/				Gray	(0.0-1.2) SAA		Wet	P=4.0	F=98.8
14						↑	↓	↓	↓	P=5.0	F=153.2
		4.0/4.0	1515			↓	(1.2-4.0) - Sand(f) & Silt, T-med Sand	SM		P=1.6	F=94.3
16							↓		↓	P=1.1	F=12.7

TYPE OF DRILLING RIG:	Geoprobe 6620 DT	Tetra Tech NUS, Inc.	
METHOD OF ADVANCING BORING:	Direct Push Technology		
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	BORING NO.: NASB-ONFF-DP 15	PAGE: 1 OF 2	

TtNUS Form 0018

Collected Smpl at 12-13' bgs at 1530

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP15
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	6/30/11
LOGGED BY:	B.Geringer	COMPLETION: DATE:	6/30/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	N/A
GRD. SURFACE ELEVATION:		CHECKED BY:	CL
TRANSCRIBED BY:		ELEVATION FROM:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
		/		SAND/ SILT		Gray	(0.0-3.0) - SAA	SM		P=1.8	F=4.1
18										P=0.9	F=3.5
		4.0/	1520							P=1.1	F=1.2
20		4.0		Clay/silt			(3.0-4.0) Silty Clay	CL		P=1.7	F=0.0
		/		EOB							
		/									
		/									
		/									
		/									
		/									

TYPE OF DRILLING RIG:	Geoprobe 6620 DT		Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	Direct Push Technology		
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: NASB-ONFF-DP 15	PAGE: 2 OF 2

TtNUS Form 0018

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP 16
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	6/29/11
LOGGED BY:	B.Geringer	COMPLETION: DATE:	6/29/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	n/a
GRD. SURFACE ELEVATION:		CHECKED BY:	CM
TRANSCRIBED BY:		ELEVATION FROM:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
		1.2/2.0	0737	SAND		Dk Brown	(0.0-0.3) Sand(F), T-Silt, roots	SP	Dry	P=0.3 P=0.3	F=3.2 F=3.4
2						Brown	(0.3-1.2) Sand(F-m) - Silt lense at 1.2	↓	↓	P=0.3 P=0.3	F=3.2 F=3.2
		1.9/2.0	0740			Brown	(0.0-0.6) - Sand(F-m), T-C Sand		Dry	P=0.3 P=8.8	F=3.4 F=217.6
4						Dk Brown	(0.6-1.9) Sand(F), T-Silt & Gravel, roots		Moist	P=18.9 P=55.6	F=308.4 F=224.1
		1.5/2.0	0745			↓	(0.0-1.5) - SAA		Moist	P=29.9 P=28	F=716 F=677.1
6						↓	↓		↓	P=23.4 P=18.8	F=702.2 F=660.8
		1.5/2.0	0750			Dk Brown	(0.0-1.0) - SAA		Moist	P=7.1 P=6.9	F=180.9 F=430.1
8						Gray	(1.0-1.5) Sand(F-m)		Wet at 1.0	P=2.5 P=2.9	F=1107 F=1428
		1.6/2.0	0756			Dk Brown	(0.0-0.3) Sand(F), T-Silt, roots		wet	P=4.9	F=1380
10						Gray	(0.0-1.6) Sand(F-m), T-C Sand & Gravel		↓	P=1.8	F=390.2
		/				Gray	(0.0-1.8) - SAA		wet	P=1.2	F=120.7
12						↓	↓ ↓		slight ← Peto odor	P=6.3	F=167
		4.0/4.0	0800			Brown	(1.8-3.0) - Sand(F) - T-Silt		↓	P=12.7	F=26.0
14						Gray	(3.0-4.0) Sand(F-m)			P=2.3	F=207.2
		/				Gray	(0.0-1.8) - SAA		wet	P=2.2	F=60.3
16						Brown	(1.8-2.1) Sand(F) - T-Silt, roots	↓	↓	P=2.7	F=75.8

TYPE OF DRILLING RIG:	Geoprobe 6620 DT	Tetra Tech NUS, Inc.	
METHOD OF ADVANCING BORING:	Direct Push Technology		
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	BORING NO.: NASB-ONFF-DP16	PAGE: 1 OF 2	

TtNUS Form 0018

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP 16
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	6/29/11
LOGGED BY:	B.Geringer	COMPLETION: DATE:	6/29/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	NA
GRD. SURFACE ELEVATION:		CHECKED BY:	CSR
TRANSCRIBED BY:		ELEVATION FROM:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
		4.0/4.0	0812			Gray	(2.1-4.0) - Sand(f) & Silt	SM	Wet	P=1.2	F=12.7
18				SAND		↓	↓	↓	↓	P=1.1	F=6.1
		/					(0.0-2.5) - SAA		Wet	P=1.1	F=1.8
							↓		↓	P=1.3	F=3.8
		4.0/4.0	0819				↓	↓	↓	P=1.1	F=1.1
22				SILT/CLAY		↓	(2.5-4.0) - Silty Clay	CL	Moist	P=1.1	F=1.0
		/		EOB							
		/									
		/									
		/									
		/									

TYPE OF DRILLING RIG:	Geoprobe 6620 DT		Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	Direct Push Technology		
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: NASB-ONFF-DP 16	PAGE: 2 OF 2

TINUS Form 0018

Collected Sample at 4-5' bgs @ 825

Collected Dup Sample

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP 17
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	07/01/11
LOGGED BY:	B.Geringer	COMPLETION: DATE:	07/01/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	DP-17 - Temp Well
GRD. SURFACE ELEVATION:		CHECKED BY:	CM
TRANSCRIBED BY:		ELEVATION FROM:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
		1.2/2.0	716	SAND		Brown	(0.0-0.3) - Sand(f-m), T-Silt	SP	Dry	P=0.4 P=0.4	F=1.7 F=1.8
2						↓	(0.3-1.2) - Sand(f-m)	↓	↓	P=0.4 P=0.4	F=1.5 F=1.7
		1.5/2.0	0721			Brown	(0.0-0.2) - SAA - (0.2-0.4) - Concrete		Dry	P=0.4 P=0.4	F=2.2 F=24.4
4						Dk Brown	(0.4-1.5) - Sand(f-m), T-Silt rock at 1.0		moist	P=0.4 P=0.4	F=100.8 F=36.1
		1.7/2.0	0726			Dk. Brown ↓	(0.0-0.2) - SAA (0.2-0.5) - Silt - T-Sand(f) - wood - Peat line	SM/PT	moist	P=0.4 P=1.4	F=232.5 F=1750
6						Dk. Brown/ Brown	(0.5-1.7) Sand(f) & Silt	↓	↓	P=0.4 P=1.8	F=500.8 F=970.1
		/				Brown	Sand(f-m) - (0.0-3.4)	SP	Wet at 1'	P=2.8 P=2.7	F=130.7 F=329.6
8						↓	↓	↓	Wet	P=1.7	F=687.5
		3.4/4.0	0730			LT Brown	↓	↓	↓	P=1.1	F=688
10						↓	↓	↓	↓	P=0.5	F=306
		/				LT. Brown	(0.0-4.0) - SAA		Wet	P=0.8	F=449.6
12						↓	↓	↓	↓	P=1.2	F=281.6
		4.0/4.0	0735			↓	Organic Layer at 2.2	↓	↓	P=1.1	F=807.4
14						Gray	↓	↓	↓	P=1.1	F=926.5
		/				↓	(0.0-3.0) - SAA	↓	Wet	P=1.9	F=333.7
16						↓	↓	↓	↓	P=2.8	F=131.1

TYPE OF DRILLING RIG:	Geoprobe 6620 DT		Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	Direct Push Technology		
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: NASB-ONFF-DP17	PAGE: 1 OF 2

TINUS Form 0018

Collected Soil Sample from 6-7' bgs at 0755

Installed temp MW. Screen 4-14' bgs

BORING LOG FOR: NASB-Old Navy Fuel Farm Site Asesment
PROJECT NO.: 112G02063 / 0000.2530
LOGGED BY: B.Geringer
DRILLED BY (Company/Driller): MAI / S.Brown
GRD. SURFACE ELEVATION:

TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: NASB-ONFF-DP 17
START DATE: 07/01/11
COMPLETION: DATE: 07/01/11
MON. WELL NO.: DP-17
CHECKED BY: GR

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
		4.0 / 4.0	0741			Gray	SAA	SP	wet	P=1.4 F=129.8
18				SILT/ CLAY		↓	(3.0-4.0) - Silty Clay	CL	↓	P=0.6 F=37.2
		/		EOB						
		/								
		/								
		/								
		/								
		/								
		/								

TYPE OF DRILLING RIG: Geoprobe 6620 DT
METHOD OF ADVANCING BORING: Direct Push Technology
METHOD OF SOIL SAMPLING: Dual Tube - Acetate Sleeve
METHOD OF ROCK CORING: N/A
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

BORING NO.: NASB-ONFF-DP17

Tetra Tech NUS, Inc.

TtNUS Form 0018

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP18
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	6/29/11
LOGGED BY:	B.Geringer	COMPLETION: DATE:	6/29/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	N/A
GRD. SURFACE ELEVATION:		CHECKED BY:	CR
	TRANSCRIBED BY:		
	ELEVATION FROM:		

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
		1.3/2.0	0847	SAND		Brown	(0.0-0.5) Sand(f), T-Silt, T-Gravel, roots	SP	Dry	P=2.3	F=0.6
2										P=1.6	F=0.3
						LT Brown	(0.5-1.3) Sand(f-m)			P=2.1	F=0.2
										P=0.2	F=0.2
		1.5/2.0	0851				(0.0-0.3) - SAA		Dry	P=0.3	F=0.3
4										P=0.8	F=3.0
						Dk. Brown Brown	(0.3-0.8) - Sand(f), T-Silt (0.8-1.5) Sand(f-c) & gravel	GP	Slight odor Concrete Chunk	P=31.5	F=31.4
										P=41.1	F=25.5
		~~2.0~~ 1.4/2.0	0855			Brown	(0.0-0.6) - Sand(f-c) & Gravel		Moist	P=17.3	F=7.2
6									Slight odor	P=33.7	F=20.9
						Brown/Orange	(0.6-1.4) - Sand(f-m) - Fe Staining	SP	Wet at 0.7	P=45.9	F=42.7
										P=1.8	F=47.6
		1.8/2.0	0903				(0.0-1.8) - SAA		Wet	P=1.9	F=144.2
8										P=17.5	F=320.1
		/				Brown/Orange	(0.0-4.0) - SAA		Wet - Petro * odor	P=615	F=668.4
10										P=1150	F=2075
		4.0/4.0	908			LT Brown				P=4.1	F=215.9
12										P=1.8	F=438.1
		/					(0.0-2.0) - SAA		Wet	P=14.0	F=294.4
14						Gray	(2.0-4.0) - Clay - T-Silt	CL	Moist	P=3.6	F=214
		4.0/4.0	912	CLAY						P=0.9	F=31.2
16										P=0.6	F=12.5

TYPE OF DRILLING RIG:	Geoprobe 6620 DT
METHOD OF ADVANCING BORING:	Direct Push Technology
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve
METHOD OF ROCK CORING:	N/A
GROUNDWATER LEVELS:	
OTHER OBSERVATIONS:	

Tetra Tech NUS, Inc.

BORING NO.: NASB-ONFF-DP18

TtNUS Form 0018

Collected Sample at 9-10' bgs at 0925

*: Screened via dye test - Positive detection

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP 19
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	6/29/11
LOGGED BY:	B.Geringer	COMPLETION: DATE:	6/29/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	N/A
GRD. SURFACE ELEVATION:		CHECKED BY:	CAR
TRANSCRIBED BY:		ELEVATION FROM:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
		1.7/2.0	1108			Dk Brown	(0.0-0.4) Sand (F), T-Silt, roots	SP	Dry	P=1.6 P=1.5	F=4.1 F=4.1
2						↓	(0.4-1.7) - Sand (F-M), T-C Sand & Gravel		↓	P=1.0 P=1.4	F=4.1 F=4.1
		1.7/2.0	1112			Dk Brown	(0.0-0.9) SAA		Dry	P=1.2 P=1.2	F=4.2 F=4.3
4						Brown	(0.9-1.7) - Sand (F-M) - Silt lense 1.6-1.7		Moist	P=1.4 P=1.3	F=4.2 F=4.0
		1.9/2.0	1120		Dense	Brown/orange	(0.0-1.9) Sand (F-M), T-Silt		Moist	P=1.2 P=1.5	F=4.1 F=3.8
6					↓	↓	↓		~~Wet at 1' BG~~ ↓	P=1.5 P=1.8	F=3.8 F=3.6
		/				Brown/orange	(0.0-1.7) - SAA		wet	P=1.1	F=1.9
8						↓	↓		↓	P=1.8	F=4.2
		3.7/4.0	1126	SAND		Brown	(1.7-3.7) - Sand (F-M)		↓	P=1.6	F=12.1
10						↓	↓		↓	P=2.4	F=87.6
		/				Brown	(0.0-4.0) - SAA		wet	P=2.2	F=58.3
12						↓	↓		↓	P=2.3	F=119.5
		4.0/4.0	1130			↓	↓		↓	P=5.1	F=292.3
14						↓	↓		↓	P=1.6	F=180.7
		/				Gray	(0.0-~~1.1~~ 0.9) - SAA	↓	wet	P=0.8	F=3.1
16				SILT/CLAY		↓	(0.9-1.1) ~~Silty Clay~~ Silt & Sand (F)	SM	↓	P=1.1	F=6.3

TYPE OF DRILLING RIG:	Geoprobe 6620 DT	Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	Direct Push Technology	
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve	
METHOD OF ROCK CORING:	N/A	
GROUNDWATER LEVELS:		
OTHER OBSERVATIONS:	BORING NO.: NASB-ONFF-DP19	PAGE: 1 OF 2

TtNUS Form 0018

Collected Soil Sample at 12-13 bgs at 1210

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP 19
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	6/29/11
LOGGED BY:	B.Geringer	COMPLETION: DATE:	6/29/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	N/A
GRD. SURFACE ELEVATION:		CHECKED BY:	COR
TRANSCRIBED BY:		ELEVATION FROM:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
		4.0 / 4.0	1139	SILT/ CLAY		Gray	(1.1-1.3) Sand (f-m)	SP	Wet	P=1.2	F=10.2
18						↓	(1.3-2.6) - Silt, T-Clay	MH	↓	P=0.9	F=7.8
		/		EOB		↓	(2.6-4.0) - Clay - T-Silt	CL	Moist		
		/									
		/									
		/									
		/									
		/									
		/									
		/									

TYPE OF DRILLING RIG:	Geoprobe 6620 DT		Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	Direct Push Technology		
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: NASB-ONFF-DP19	PAGE: 2 OF 2

TtNUS Form 0018

Collected Soil Sample at 12-13' bgs at 1210

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP 20
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	6/29/11
LOGGED BY:	B.Geringer	COMPLETION: DATE:	6/29/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	DP-20 (Temp Well)
GRD. SURFACE ELEVATION:		CHECKED BY:	CM
TRANSCRIBED BY:		ELEVATION FROM:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
2		1.6/2.0	0943	SAND		Brown	(0.0-1.6) Sand(f-m), T-C Sil & Gravel, roots	SP	Dry	P=1.2 P=0.4 P=0.3 P=0.5	F=0.0 F=0.0 F=0.0 F=0.0
4		1.1/2.0	0948			Dk Brown	(0.0-0.6) SAA		Dry	P=0.4 P=0.3	F=0.0 F=0.0
							(0.6-1.1) - Sand(f-m), T-Silt		Moist	P=0.3 P=0.5	F=0.0 F=0.0
6		1.4/2.0	0951			Dk Brown	(0.0-0.4) - Sand(f-m) T-C Sil		Wet	P=0.3	F=15.9
						Brown/orange	(0.4-1.4) - Sand(f-m)			P=0.3	F=15.2
8		/					(0.0-2.8) - SAA Silt lense 2.8-3.0		Wet	P=0.3 P=0.3	F=5.4 F=14.7
10		3.6/4.0	0956			LT Brown	(2.8-3.6) - SAA - ~~Silt lense~~			P=2.2 P=0.4	F=15.2 F=26.8
12		/				LT Brown	(0.0-1.8) - SAA		Wet	P=0.9 P=1.2	F=72.6 F=54.4
14		4.0/4.0	1000	CLAY		Gray	(1.8-4.0) - Clay - T Silt	CL	Moist	P=0.3 P=0.3	F=4.1 F=8.5
		/		EOB							

TYPE OF DRILLING RIG:	Geoprobe 6620 DT		Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	Direct Push Technology		
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: NASB-ONFF-DP 20	PAGE: 1 OF 1

TINUS Form 0018

Collected Sample from 3-4' bgs at 1015

Installed temp MW - Screen 2-12' bgs

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP 21
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	~~07/07~~ 07/06/11
LOGGED BY:	B.Geringer	COMPLETION: DATE:	07/06/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	N/A
GRD. SURFACE ELEVATION:		CHECKED BY:	
TRANSCRIBED BY:		ELEVATION FROM:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
		1.0/2.0	0947	SAND		Dk Brown	(0.0-0.3) - Sand(f), T-Silt, roots	SP	Dry	P=2.3	F=0.0
2										P=1.5	F=0.0
						LT Brown	(0.3-1.0) - Sand(f-m)			P=3.3	F=0.0
										P=2.0	F=0.0
		1.4/2.0	0950			Dk Brown	(0.0-0.2) - SAA		Moist	P=1.7	F=0.0
							(0.2-0.8) - Sand(f)-T Silt			P=3.4	F=0.0
4						Brown	(0.8-1.4) - Sand(f-m)-T Gravel		wet	P=2.4	F=0.0
										P=1.3	F=0.0
		/					(0.0-2.0) - Sand(f-m), T-Gravel			P=2.4	F=0.0
6										P=2.7	F=0.0
		2.4/4.0	0953							P=7.7	F=0.0
8						Gray	(2.0-2.4) - Sand(f-m) : Gravel - Pulverized rock	GP	Dry	P=12.8	F=0.0
		/				Brown	(0.0-3.0) - Sand(f-m), T-Gravel		wet	P=168	F=8.1
10										P=764	F=184.0
		3.0/4.0	0957						Petro odor	P=1,357	F=398.4
12										P=1240	F=2407
		/				Brown	(0.0-3.0) - Sand(f-m)		wet	P=31.5	F=11.7
14										P=2.4	F=0.0
		4.0/4.0	1001			Gray	(3.0-3.2) - Sand(f), Some Silt - organic	SM		P=10.1	F=12.1
16				CLAY			(3.2-4.0) - Clay, T-Silt	CL	moist	P=3.8	F=30.2

TYPE OF DRILLING RIG:	Geoprobe 6620 DT	Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	Direct Push Technology	
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve	
METHOD OF ROCK CORING:	N/A	
GROUNDWATER LEVELS:		
OTHER OBSERVATIONS:	BORING NO.: NASB-ONFF-DP 21	PAGE: 1 OF 1

TtNUS Form 0018

Collected Sample from 10-12' bgs at 1015 (~~Dup05~~ S)

Performed dye test on 10-11' w/ 11-12 interval - positive results

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP 22
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	6/30/11
LOGGED BY:	B.Geringer	COMPLETION: DATE:	6/30/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	DP-22
GRD. SURFACE ELEVATION:		CHECKED BY:	CR
TRANSCRIBED BY:		ELEVATION FROM:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
2		1.0/2.0	0740	SAND		Dk Brown	(0.0-1.0) - Sand(f-m), T-Silt, rock 0.9-1.0	SP	Dry	P=0.1	F=3.3
						↓	↓	↓	↓	P=1.0	F=4.0
4		2.0/2.0	0745			LT Brown	(0.0-0.7) - Sand(f-m)	↓	Moist	P=0.9	F=4.2
						Dk Brown	(0.7-1.1) - Silt, T-Sand(f) - Peat line, roots	SM/PT		P=1.8	F=9.3
						Brown/orange	(1.1-2.0) - Sand(f-m)	SP	Wet at 1.5'	P=0.9	F=17.6
										P=0.7	F=5.4
6		/				Brown/orange	(0.0-4.0) - SAA	↓	wet	P=0.9	F=8.7
						LT. Brown	Silt line at 2.0 & 2.7			P=0.8	F=49.7
8		3.5/4.0	0750			↓	↓		↓	P=0.9	F=128.1
										P=0.7	F=63.2
10		/				LT. Brown	(0.0-4.0) - SAA		Wet	P=1.3	F=15.7
						↓	↓		↓	P=0.8	F=20.4
12		4.0/4.0	0755			↓	↓		↓	P=0.7	F=66.8
										P=1.7	F=127.0
14		/				LT. Brown	(0.0-3.2) - SAA - roots at 2.2-2.4		wet	P=1.7	F=29.9
						Gray	↓		↓	P=1.6	F=13.3
16		4.0/4.0	0800	SILT/SAND		↓	~~2.2~~ (3.2- 4.0) - Silt & Sand(f)	↓ SM	↓ Moist	P=0.9	F=35.4
										P=0.3	F=37.4

TYPE OF DRILLING RIG:	Geoprobe 6620 DT	Tetra Tech NUS, Inc.	
METHOD OF ADVANCING BORING:	Direct Push Technology		
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	BORING NO.: NASB-ONFF-DP 22	PAGE: 1	OF 2

TtNUS Form 0018

Collected Sample from 2.5-3.5' bgs at 820

Installed temp mw. Screen 2-12' bgs

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP 22
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	6/30/11
LOGGED BY:	B.Geringer	COMPLETION: DATE:	6/30/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	DP-22
GRD. SURFACE ELEVATION:		CHECKED BY:	CR
TRANSCRIBED BY:		ELEVATION FROM:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
				SANDY SILT		Gray	(0.0-3.0) SAA	SM	Wet	P=0.3	F=8.2
18										P=0.9	F=10.2
		4.0/4.0	0808							P=0.4	F=7.5
20				SILT/CLAY			(3.0-4.0) - Silty Clay	CL	Moist	P=0.9	F=4.5
				EOB							

TYPE OF DRILLING RIG:	Geoprobe 6620 DT		Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	Direct Push Technology		
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: NASB-ONFF-DP22	PAGE: 2 OF 2

TtNUS Form 0018

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP 23
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	07/06/11
LOGGED BY:	B.Geringer	COMPLETION: DATE:	07/06/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	N/A
GRD. SURFACE ELEVATION:		CHECKED BY:	CDR
TRANSCRIBED BY:		ELEVATION FROM:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
		1.4/2.0	0735	SAND		Dk Brown	Sand(F) T-Silt, roots (0.0-0.3)	SP	Dry	P=1.1	F=0.0
						Brown	(0.3-0.6) - Sand(F-m)			P=2.7	F=0.0
2						Dk Brown	(0.6-0.9) - SAA			P=2.3	F=0.0
						Brown	(0.9-1.4) - ↓			P=1.7	F=0.0
		1.1/2.0	0738			↓	(0.0-0.8) - SAA		wet	P=3.1	F=0.0
4										P=2.7	F=0.0
						LT Gray	(0.8-1.1) - Sand(F-m) - T Gravel			P=2.0	F=0.0
										P=2.0	F=0.0
		/				LT Gray/	(0.0-2.4) - Sand(F-m)		wet	P=2.1	F=0.0
6						Brown	- C-Sand lense at 0.7-0.8			P=2.7	F=0.0
		2.4/4.0	0742				- Silt lense at 0.9, 1.4 & 1.9			P=23.8	F=0.0
8										P=24.8	F=0.0
		/				Brown	(0.0-1.3) - Sand(F-m) - T - C Sand		wet	P=2.9	F=0.0
10						Dk Brown	(1.3-2.2) - Sand(F), Some Silt	SM	moist	P=24.0	F=0.0
		3.0/4.0	0747			Brown/Gray	(2.2-3.0) - Sand(F-m)	SP	wet	P=322	F=108.7
12									Slight Petro odor	P=555	F=70.7
		/				Gray	(0.0-1.6) - SAA - Some Organics at 1.3-1.6		wet	P=6.1	F=0.0
14										P=7.7	F=0.0
		4.0/4.0	0752	Clay			(1.6-4.0) - Clay - Some Silt	CL	moist	P=3.1	F=0.0
16										P=1.6	F=0.0

TYPE OF DRILLING RIG:	Geoprobe 6620 DT	Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	Direct Push Technology	
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve	
METHOD OF ROCK CORING:	N/A	
GROUNDWATER LEVELS:		
OTHER OBSERVATIONS:	BORING NO.: NASB-ONFF-DP23	PAGE: 1 OF 1

TINUS Form 0018

Collected Sample from 11-12' bgs at 805, performed che test 11-12' - negative result

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP 24
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	07/06/11
LOGGED BY:	B.Geringer	COMPLETION: DATE:	07/06/14
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	DP-24 (Temp Well)
GRD. SURFACE ELEVATION:		CHECKED BY:	CDR
TRANSCRIBED BY:		ELEVATION FROM:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
2		1.1/2.0	1102	SAND		Dk Brown	(0.0-0.3) - Sand(f-m), T-Silt, roots	SP	Dry	P=1.7 P=1.9	F=0.0 F=0.0
						LT Brown	(0.3-1.1) - Sand(f-m)			P=1.4 P=1.5	F=0.0 F=0.0
4		1.4/2.0	1104				(0.0-0.7) - SAA		Moist	P=2.5 P=3.4	F=0.0 F=0.0
						Dk Brown	(0.7-1.4) - Sand(f-m), T-Silt & Gravel			P=3.6 P=2.6	F=0.0 F=0.0
6		/					(0.0-0.8) - SAA		Wet	P=3.1	F=0.0
						Brown	(0.8-2.7) - Sand(f-m)			P=1.1	F=0.0
8		2.7/4.0	1107							P=2.3	F=2.0
										P=1.6	F=0.0
10		/				Brown	(0.0-2.4) - SAA		Wet	P=2.1	F=0.0
										P=4.9	F=0.0
12		4.0/4.0	1112	CLAY			(2.4-2.7) - Silt & Sand(f), roots, organic	SM		P=4.6	F=0.0
						Gray	(2.7-4.0) - Clay - T-Silt	CL	Moist	P=1.5	F=0.0
		/		EOB							
		/									

TYPE OF DRILLING RIG:	Geoprobe 6620 DT
METHOD OF ADVANCING BORING:	Direct Push Technology
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve
METHOD OF ROCK CORING:	N/A
GROUNDWATER LEVELS:	
OTHER OBSERVATIONS:	

Tetra Tech NUS, Inc.

BORING NO.: NASB-ONFF-DP 24

TINUS Form 0018

Collected Sample at 3-4' @ 1120 (LAB QC)

Installed temp mw, Screened 2-11' bgs

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP 25
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	7/5/11
LOGGED BY:	B.Geringer	COMPLETION: DATE:	7/5/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	N/A
GRD. SURFACE ELEVATION:		CHECKED BY:	CR
TRANSCRIBED BY:		ELEVATION FROM:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
		1.4/2.0	1435			Dk Brown Brown	(0.0-0.3) - Sand(f) T-Silt, roots (0.3-0.6) - Sand(f-m)	SP	Dry	P=1.3 P=1.3	F=0.0 F=0.0
2						Dk Brown/ Gray	(0.6-1.4) Sand(f-m), Some Silt, T-gravel			P=1.1 P=2.3	F=0.0 F=0.0
		1.6/2.0	1441				(0.0-1.0) - Sand(f-m) T-Silt - wood at 1.0		moist	P=4.7 P=4.5	F=0.0 F=0.0
4						Brown	(1.0-1.6) - Sand(f-m)		wet at 1.4	P=10.7 P=8.1	F=0.0 F=0.0
		/		SAND			(2.0-2.8) - SAA		wet	P=21.4	F=0.0
6									Petroleum odor	P=612	F=53.7
		2.8/4.0	1446			Lt Gray				P=130	F=0.0
8										P=7.7	F=0.0
		/				Gray	(0.0-1.5) SAA		wet	P=12.5	F=4.2
10										P=9.0	F=4.1
		4.0/4.0	1450	CLAY			(1.5-4.0) - Clay - T-Silt	CL	Moist	P=2.2	F=0.0
12										P=2.4	F=0.0
		/		EOB							
		/									

TYPE OF DRILLING RIG:	Geoprobe 6620 DT	Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	Direct Push Technology	
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve	
METHOD OF ROCK CORING:	N/A	
GROUNDWATER LEVELS:		
OTHER OBSERVATIONS:	BORING NO.: NASB-ONFF-DP 25	PAGE: 1 OF 1

TINUS Form 0018

Collected Sample 5-6' bgs at 1500 (LAB QC)

Performed dye test - slightly positive result

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP 26
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	7/5/11
LOGGED BY:	B.Geringer	COMPLETION: DATE:	7/5/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	NA
GRD. SURFACE ELEVATION:		CHECKED BY:	CDR
TRANSCRIBED BY:		ELEVATION FROM:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
		1.7/2.0	1400	SAND		Dk Brown	(0.0-1.7) Sand(f-m), T-Silt, roots at top	SP	Dm	P=1.4	F=0.0
2						↓	↓	↓	↓	P=0.6	F=0.0
										P=1.6	F=0.0
										P=1.1	F=0.0
		1.5/2.0	1404			Brown	(0.0-1.0) - Sand(f-m), T-Silt & Gravel	✓	moist	P=2.0	F=0.0
4										P=312	F=959.6
						Gray/	(1.0-1.5) - Sand(f-m), Some Silt	SM	wet at 1.3	P=148	F=111.6
						Brown				P=9.5	F=12.0
		/					(0.0-0.5) - SAA, roots	↓	wet - Petro odor	P=119	F=242.1
6							(0.5-3.0) - Sand(f-m)	SP	↓	P=863	F=1306
		3.0/4.0	1409				↓	↓	wet	P=1385	F=4123
8						↓			↓	P=29.4	F=118.4
		/				Gray	(0.0-0.5) - SAA	✓	wet ✓	P=3.4	F=37.5
10				CLAY			(0.5-4.0) - Clay - T-Silt	CL	Moist	P=3.3	F=42.7
		4.0/4.0	1413				↓	↓	↓	P=5.6	F=33.2
12						↓				P=35.8	F=67.0
		/		EOB							
		/									

TYPE OF DRILLING RIG:	Geoprobe 6620 DT	Tetra Tech NUS, Inc.	
METHOD OF ADVANCING BORING:	Direct Push Technology		
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	BORING NO.: NASB-ONFF-DP26	PAGE: 1 OF 1	

TtNUS Form 0018

Collected Sample at 6-7' bgs at 1420 DUP04

Performed dye test - Positive detection

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP 27
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	07/01/11
LOGGED BY:	B.Geringer	COMPLETION: DATE:	07/01/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	N/A
GRD. SURFACE ELEVATION:		CHECKED BY:	CDR
TRANSCRIBED BY:		ELEVATION FROM:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
		1.7/2.0	1155	SAND		Dk Brown	(0.0-0.4) Sand(f), Some Silt, roots, Topsoil	Sm/SP	Dry	P=0.1 P=0.0	F=0.0 F=0.0
2						Brown/ LT Brown	(0.4-1.7) - Sand(f-m), Silt lense at 1.1	SP	↓	P=0.4 P=0.3	F=0.0 F=0.0
		1.5/2.0	1200			Brown	(0.0-1.2) - Sand(f-m), T-c Sand & Gravel	↓	moist wet at 0.7	P=0.5 P=0.3	F=0.0 F=0.0
4						Dk Brown	(1.2-1.5) - Sand(f-m), Silt layer		↓	P=0.1 P=0.3	F=0.0 F=0.0
		/				Brown	(0.0-2.0) - Sand(f-c), T-Gravel		wet	P=0.7	F=0.0
6						↓	↓		↓	P=6.2	F=0.0
		2.5/4.0	1206			↓	↓		↓	P=3.1	F=0.0
8						Dk Brown	(2.0-2.5) - Sand(f-m), T-Silt			P=3.8	F=0.0
		/				↓	(0.0-0.5) - SAA		wet	P=16.6	F=0.0
10							(0.5-1.6) - Sand(f-m)	↓	↓	P=4.2	F=0.0
		2.3/4.0	1210	Interbedded		↓	(1.6-1.8) - Rock - (Weathered)	GP	Dry	P=6.0	F=0.0
12						Gray/ Brown	(1.8-2.3) - Interbedded Clay/Sand(f)	SC	wet	P=5.1	F=0.0
		/				Brown/ Orange	(0.0-0.5) - SAA	↓	wet Sheen	P=13.2	F=0.0
14						↓	(0.5-1.2) - Sand(f)	SP	↓	P=3.1	F=0.0
		4.0/4.0	1215			Gray	(1.2-2.1) - Clay - Some Silt	CL	moist	P=0.6	F=0.0
16						↓	(2.1-4.0) - Sand(f)	SP	wet	P=0.8	F=0.0

TYPE OF DRILLING RIG:	Geoprobe 6620 DT
METHOD OF ADVANCING BORING:	Direct Push Technology
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve
METHOD OF ROCK CORING:	N/A
GROUNDWATER LEVELS:	
OTHER OBSERVATIONS:	

Tetra Tech NUS, Inc.

BORING NO.: NASB-ONFF-DP27

TINUS Form 0018

Collected Soil Sample 8-9' at 1245

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP 27
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	7/1/11
LOGGED BY:	B.Geringer	COMPLETION: DATE:	7/1/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	N/A
GRD. SURFACE ELEVATION:		CHECKED BY:	CPR
TRANSCRIBED BY:		ELEVATION FROM:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
							SAA	SPGC		—
18							Schist in Shoe. line Jamed in Casing—			—
				EOB			Refusal at 18'			

TYPE OF DRILLING RIG:	Geoprobe 6620 DT	Tetra Tech NUS, Inc.	
METHOD OF ADVANCING BORING:	Direct Push Technology		
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: NASB-ONFF-DP27	PAGE: 2 OF 2

TtNUS Form 0018

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP 28
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	07/01/11
LOGGED BY:	B.Geringer	COMPLETION: DATE:	07/01/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	DP-28 Temp Well
GRD. SURFACE ELEVATION:		CHECKED BY:	CPR
TRANSCRIBED BY:		ELEVATION FROM:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
		1.0/2.0	1020	SAND		Dk Brown	(0.0-0.4) - Sand(F), some silt, roots	SM/SP	Dry	P= 0.4	F= 0.0
2										P= 0.5	F= 0.0
						Brown	(0.4-1.0) - Sand(F-m)	SP	↓	P= 0.1	F= 0.0
										P= 0.1	F= 0.0
		1.4/2.0	1025			↓	(0.0-1.4) - SAA - Gravel seam at 0.1	↓	moist	P= 0.4	F= 0.0
4									wet at 0.4'	P= 0.4	F= 0.0
									↓	P= 0.4	F= 0.0
										P= 0.6	F= 0.0
		/				Brown	(0.0-2.8) - SAA		wet	P=0.1	F=0.0
6						↓	↓		↓	P=0.3	F=0.0
		2.8/4.0	1030				- Wood/roots at 2.6			P=0.3	F=0.0
8						↓	↓			P=0.1	F=0.0
		/				Brown	(0.0-3.3) - SAA		wet	P=0.3	F=0.0
10						LT Brown	↓		↓	P=0.2	F=0.0
		4.0/4.0	1034			Gray	↓ Mica seam at 3.2	↓		P=0.5	F=0.0
12						↓	(3.3-4.0) - Sand(F) & Silt, Some Clay	SC		P=0.3	F=0.0
		/		SILT/ SAND		Gray	(0.0-3.0) Silt & Sand(F), Some clay		Moist	P=0.6	F=0.0
14							↓		↓	P=0.2	F=0.0
		4.0/4.0	1039				↓	↓		P=0.2	F=0.0
16				CLAY		↓	(3.0-4.0) - Clay, T. Silt	CL		P=0.1	F=0.0

TYPE OF DRILLING RIG:	Geoprobe 6620 DT	Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	Direct Push Technology	
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve	
METHOD OF ROCK CORING:	N/A	
GROUNDWATER LEVELS:		
OTHER OBSERVATIONS:	BORING NO.: NASB-ONFF-DP	PAGE: 1 OF 1

TtNUS Form 0018

FID not Starting - will Screen Samples when it Starts

Collected Sample ~~[illegible]~~ bag at 1050
1.5-2.5

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP 29
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	7/1/11
LOGGED BY:	B.Geringer	COMPLETION: DATE:	7/1/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	N/A
GRD. SURFACE ELEVATION:		CHECKED BY:	CAR
TRANSCRIBED BY:		ELEVATION FROM:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
		1.7/2.0	1123			Dk Brown	(0.0-0.5) Sand(F), Some Silt, roots, Topsoil	Sm/SP	Dry	P=0.2	F=0.0
2										P=0.4	F=0.0
						Brown	(0.5-1.7) Sand(f-m), Gravel/rock Seam (1.2-1.4)	SP / GP		P=0.3	F=0.0
										P=0.3	F=0.0
		1.6/2.0	1129			Brown	(0.0-0.2) - Sand(F) & Silt	SM	Dry	P=0.3	F=0.0
						Gray	(0.2-0.7) - Clay, Some Silt	SC		P=0.5	F=0.0
4						Brown	(0.7-1.1) - Sand(F), Some Silt & clay			P=2.1	F=0.0
						Dk Brown	(1.1-1.6) - Sand(F) & Silt, roots	Sm	wet at bottom	P=27.9	F=0.0
		/				Dk Brown/ Orange	(0.0-2.7) - Sand(f-m)	SP	Wet	P=15.1	F=0.0
6				SAND						P=3.4	F=0.0
		2.7/4.0	1133							P=6.5	F=0.0
8						LT Brown				P=2.0	F=0.0
		/					(0.0-1.6) - SAA roots at 1.4-1.6		Wet	P=0.9	F=0.0
10				CLAY		Gray	(1.6-4.0) - Clay	CL	Moist	P=0.9	F=0.0
		4.0/4.0	1136							P=0.1	F=0.0
12										P=0.1	F=0.0
		/		EOB							
		/									

TYPE OF DRILLING RIG:	Geoprobe 6620 DT		Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	Direct Push Technology		
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: NASB-ONFF-DP	PAGE: 1 OF 1

TtNUS Form 0018

Collected Sample 3.5-4.5' @ 1145

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP30
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	7/1/11
LOGGED BY:	B.Geringer	COMPLETION: DATE:	7/1/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	DP-30 Temp well
GRD. SURFACE ELEVATION:		CHECKED BY:	CPR
TRANSCRIBED BY:		ELEVATION FROM:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
		1.4/2.0	1300	Inter-bedded		Dk Brown	(0.0-0.4) Sand(F-m), T-Silt, roots	SP	Dry	P=0.5 P=0.5	F=0.0 F=0.0
2						Brown	(0.4-1.4) Sand(F-m), few silt/clay chunks	↓	↓	P=0.4 P=0.5	F=0.0 F=0.0
		1.4/2.0	1303			↓	(0.0-1.4) - SAA - Interbedded Silt layers	SM	moist	P=0.4 P=0.2	F=0.0 F=0.0
4						↓	↓	↓	wet at 1.2	P=0.4 P=2.2	F=0.0 F=0.0
		/				Brown Dk Brown	(0.0-0.3) - SAA (0.3-0.6) - Silt & Sand(F) - roots	↓	wet	P=4.4	F=0.0
6						Brown/orange	(0.6-1.1) - Sand(F-m)	SP	↓	P=0.6	F=0.0
		3.0/4.0	1305			Tan	(1.1-2.0) - Silt & Some clay	SC	moist	P=0.4	F=0.0
8						LT Brown	(2.0-3.0) - Sand(F-m)	SP	wet	P=0.4	F=0.0
		/		Refusal at 8.2							
		/									
		/									
		/									

TYPE OF DRILLING RIG:	Geoprobe 6620 DT	Tetra Tech NUS, Inc.	
METHOD OF ADVANCING BORING:	Direct Push Technology		
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	BORING NO.: NASB-ONFF-DP	PAGE: 1 OF 1	

TINUS Form 0018

Refusal at 8.2 - Shoot in shoe, move a few feet, refusal at 8.2 again - rock in tip

Collected Sample at 4-5' at 1320 (DP03); Installed MW, Screen 2-8'

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP31
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	07/05/11
LOGGED BY:	B.Geringer	COMPLETION: DATE:	07/05/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	N/A
GRD. SURFACE ELEVATION:		CHECKED BY:	CDR
TRANSCRIBED BY:		ELEVATION FROM:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
		1.3/2.0	1228	SAND		Dk Brown	8(0.0-0.3) - Sand(f), T Silt, roots	SP	Dry	P=1.3 P=1.4	F=0.0 F=0.0
2						Brown	(0.3-1.3) - Sand(f-m), rock at 1.3	↓	↓	P=1.4 P=1.5	F=0.0 F=0.0
		1.7/2.0	1231			Dk Brown	(0.0-0.8) - Sand(f-m)		Dry	P=2.1 P=2.5	F=0.0 F=0.0
4						Brown	(0.8-1.7) - Sand(f-m), T-Gravel		moist	P=2.0 P=1.5	F=0.0 F=0.0
		1.1/2.0	1234			Gray	(0.0-0.9) - Sand(f-m), rock at 0.3	↓	wet Slight Petro odor	P=2.4 P=24.8	F=16.7 F=14.0
6						↓	(0.9-1.1) - Silt & Sand(f)	SM	↓	P=294 P=10.9	F=77.4 F=6.1
		/		SILT CLAY		Gray	(0.0-2.7) - Clay, T-Silt	CL	moist	P=1.5	F=0.0
8						↓	↓	↓	↓	P=2.9	F=0.0
		4.0/4.0	1239				(2.7-2.9) - Silt & Clay		wet	P=2.5	F=0.0
10.						↓	(2.9-4.0) - Silt & clay, T-Sand(f)	↓	↓	P=3.4	F=0.0
		/		EOB							
		/									
		/									

TYPE OF DRILLING RIG:	Geoprobe 6620 DT	Tetra Tech NUS, Inc.	
METHOD OF ADVANCING BORING:	Direct Push Technology		
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	BORING NO.: NASB-ONFF-DP31	PAGE: 1 OF 1	

TINUS Form 0018

Collected Sample from 5-6 bgs at 1250

Performed dye test on 5-5.5' bgs - Negative result

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP 32
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	7/5/11
LOGGED BY:	B.Geringer	COMPLETION: DATE:	7/5/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	N/A
GRD. SURFACE ELEVATION:		CHECKED BY:	CDR
	TRANSCRIBED BY:		
	ELEVATION FROM:		

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
		1.4/2.0	1257			Dk Brown	(0.0-1.4) Sand(f-m), T-Silt, roots at top	SP	Dry	P=1.8	F=0.0
2						Brown	↓	↓	↓	P=2.0	F=0.0
										P=2.3	F=0.0
		1.4/2.0	1302			↓	(0.0-1.4) - Sand(f-m), Some Silt, Gravel at 0.1-0.4	GP / SM	Dry	P=1.4	F=0.0
4						↓	↓	↓	↓ - moist	P=2.4	F=0.0
										P=2.1	F=0.0
		0.8/2.0	1305			Brown	(0.0-0.8) - Sand(f-m), T-Silt & Gravel	SP	Moist	P=1.7	F=0.0
6						↓	↓	↓	↓ wet @ 0.5	P=1.8	F=0.0
										P=1.4	F=0.0
		/		SAND	Very loose	Brown	(0.0-3.3) - SAA	↓	Wet	P=2.1	F=0.0
8						↓	↓	↓	↓ Petro odor	P=2.9	F=0.0
										P=12.1	F=38.9
		3.3/4.0	1316							P=173	F=152.4
10					↓	↓	↓	↓	↓	P=623	F=3009
		/				Gray	(0.0-4.0) - Clay T-Silt	CL	Moist	P=9.1	F=5.4
12				CLAY		↓	↓	↓	↓	P=13.0	F=41.4
		4.0/4.0	1321							P=12.3	F=44.8
14						↓	↓	↓	↓	P=2.5	F=4.0
		/		EOB							

TYPE OF DRILLING RIG:	Geoprobe 6620 DT	Tetra Tech NUS, Inc.	
METHOD OF ADVANCING BORING:	Direct Push Technology		
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	BORING NO.: NASB-ONFF-DP	PAGE: 1 OF 1	

TtNUS Form 0018

Collected sample 9-10' bgs at 1330
Performed dye test, slightly positive

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP33
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	07/05/11
LOGGED BY:	B.Geringer	COMPLETION: DATE:	07/05/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	N/A
GRD. SURFACE ELEVATION:		CHECKED BY:	CDZ
TRANSCRIBED BY:		ELEVATION FROM:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
		1.3/2.0	0816	SAND		Dk Brown/Brown	(0.0-0.4)- Sand(f-m), T-Silt, roots	SP	Dry	P=0.4 P=0.4	F=2.3 F=2.0
2						Dk Brown	(0.4-1.3)- Sand (F), Some Silt, roots- Peat like	SM/PT	↓	P=1.2 P=6.3	F=2.0 F=3.3
		2.0/2.0	0820			↓	(0.0-0.9)- Sand(f-m), T-Silt	SP	Dry	P=0.7 P=2.0	F=3.4 F=14.5
4						Brown	(0.9-2.0)- Sand(f-m) - few roots		Moist Petro odor	P=1447 P=1134	F=4123 F=1576
		1.3/1.5	0825			↓	(0.0-1.3) - SAA		Wet at 0.3	P=1481	F=2954
6						↓	↓	↓	Wet ↓	P=1061	F=2918
		/		EOB			Refusal - bedrock in tip				
8											
		/									
		/									
		/									
		/									

TYPE OF DRILLING RIG:	Geoprobe 6620 DT		Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	Direct Push Technology		
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: NASB-ONFF-DP	PAGE: 1 OF 1

TtNUS Form 0018

* Refusal at 5.5', moved a few feet received refusal again at 5.5'

- Collected Sample from 4.5' bgs at 0840

- Performed Dye test on 4.5 interval Positive see it

BORING LOG FOR: NASB-Old Navy Fuel Farm Site Asesment
PROJECT NO.: 112G02063 / 0000.2530
LOGGED BY: B.Geringer
DRILLED BY (Company/Driller): MAI / S.Brown
GRD. SURFACE ELEVATION:

TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: NASB-ONFF-DP34
START DATE: 7/5/11
COMPLETION: DATE: 7/5/11
MON. WELL NO.: N/A
CHECKED BY: CM

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
		1.5/2.0	0924	SAND		Brown	(0.0-0.3) - Sand(f), T-Silt, roots	SP	Dry	P=2.1 P=2.1	F=0.0 F=0.0
2						↓	(0.3-1.5) - Sand(f-m), T-gravel, silt lenses	↓	↓	P=2.1 P=1.5	F=0.0 F=0.0
		1.5/2.0	0930			Brown/Gray	(0.0-1.1) - Sand(f-m), some silt	SM	Dry	P=1.7 P=1.9	F=0.0 F=0.0
4						Brown	(1.1-1.5) - Sand(f-c) & Gravel	GP	↓	P=2.4 P=2.3	F=0.0 F=0.0
		1.5/2.0	0935			↓	(0.0-1.0) - Sand(f-m), T-C Sand	SP	moist	P=1.4 P=21.2	F=0.0 F=13.9
6						Gray	Sand(f), T-Silt (1.0-1.5) - Stain	↓	wet at 1.0 Petro odor	P=287 P=1472	F=191.8 F=4048
		/		6.6 SILT/CLAY		↓	(0.0-0.6) - SAA	↓	wet ↓	P=1330	F=3221
8						Brown	(0.6-2.7) - Clay - T-Silt - fe Staining	CL	moist	P=161	F=331
		3.2/4.0	0942			↓	↓	↓	↓	P=200	F=112.2
10						↓	(2.7-3.2) - ~~Sand(f), Some Silt & Clay~~ BS Silt & Clay, T-Sand(f)	↓	wet	P=5.6	F=36.0
		/		EOB							
		/									
		/									

TYPE OF DRILLING RIG: Geoprobe 6620 DT
METHOD OF ADVANCING BORING: Direct Push Technology
METHOD OF SOIL SAMPLING: Dual Tube - Acetate Sleeve
METHOD OF ROCK CORING: N/A
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.: NASB-ONFF-DP

PAGE: 1 OF 1

TtNUS Form 0018

Collected Sample 5.5-6.5' at 950 Performed dye test on 5-6' - Positive result

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP 35
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	7/5/11
LOGGED BY:	B.Geringer	COMPLETION: DATE:	7/5/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	N/A
GRD. SURFACE ELEVATION:		CHECKED BY:	COR
TRANSCRIBED BY:		ELEVATION FROM:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
		1.5/2.0	846	SAND		Dk Brown	(0.0-0.3) Sand(f-m), T-Silt, roots	SP	Dry	P=0.6 P=0.5	F=0.0 F=0.0
2						LT Brown	(0.3-1.5) - Sand(f-m)	↓	↓	P=0.5 P=0.6	F=0.0 F=0.0
		1.6/2.0	0850			↓	(0.0-1.6) - SAA		Dry	P=0.5 P=0.4	F=0.0 F=0.0
4							↓		↓	P=0.8 P=0.7	F=0.0 F=0.0
		1.4/2.0	0854			LT Brown	(0.0-1.2) - SAA		Dry	P=1.3 P=1.3	F=0.0 F=0.0
6						↓ Brown	↓ (1.2-1.4) Sand(f-m), T-Silt		↓ Moist	P=2.4 P=1.9	F=0.0 F=0.0
		/				↓	(0.0-1.5) - SAA		wet @ 0.7	P=1.9	F=1.2
8							↓	↓	wet	P=4.8	F=4.1
		2.5/4.0	0858	TRANSITION		↓	(1.5-2.3) - Clay - T-Silt	CL	moist	P=13.9	F=39.7
10							(2.3-2.5) - Sand(f) - T-Silt	SP	wet - Petro odor*	P=1410	F=4123
11		1.0/1.0	0906			Brown/ Gry	(0.0-1.0) - SAA - rock in shoe	↓	↓	P=1456	F=2544
				EOB			refusal				
		/									
		/									

TYPE OF DRILLING RIG:	Geoprobe 6620 DT	Tetra Tech NUS, Inc.	
METHOD OF ADVANCING BORING:	Direct Push Technology		
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	BORING NO.: NASB-ONFF-DP	PAGE: 1 OF 1	

TtNUS Form 0018

Collected Sample from 10-11' at 910; Performed dye test; positive result

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP 36
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	7/5/11
LOGGED BY:	B.Geringer	COMPLETION: DATE:	7/5/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	N/A
GRD. SURFACE ELEVATION:		CHECKED BY:	CDR
TRANSCRIBED BY:		ELEVATION FROM:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
		1.6 / 2.0	1008			Dk Brown	~~Sand~~ (0.0-0.4) - Sand (f-m), Some Silt, roots	SP/SM	Dry	P=2.1 P=1.9	F=5.1 F=5.0
2						↓	(0.4-1.6) - Sand (f-m), T-Silt & Gravel	SP	↓	P=2.1 P=2.9	F=4.0 F=4.5
		1.4 / 2.0	1012	SAND		Brown	(0.0-1.4) - Sand (f-m), T-Gravel, rock at 0.8	↓	Dry	P=2.0 P=2.3	F=3.6 F=3.4
4						↓	↓		↓	P=2.4 P=2.9	F=3.8 F=3.3
		1.2 / 2.0	1015	1.6		Brown /	(0.0-0.6) - Sand (f-m) - rock 0.6-0.7	↓	Wet	P=2.3	F=20.7
6						Gray	(0.7-1.0) - SAA - (1.0-1.2) - Silt & Clay	CL	moist	P=2.5	F=62.5
		/		TRANS-ITION		↓	(0.0-0.3) - Silt & Clay	↓	moist	P=48.6	F=423.5
8							(0.3-1.9) - Sand (f-m)	SP	Wet. Petro odor	P=1233	F=4123
		3.2 / 4.0	1020				1.9-3.2 - Clay - T-Silt	CL	moist	P=47.7	F=20.1
10				CLAY		↓	↓	↓	↓	P=5.9	F=5.2
		/		EOB							
		/									
		/									

TYPE OF DRILLING RIG:	Geoprobe 6620 DT	Tetra Tech NUS, Inc.	
METHOD OF ADVANCING BORING:	Direct Push Technology		
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	BORING NO.: NASB-ONFF-DP36	PAGE: 1 OF 1	

TtNUS Form 0018

Collected Sample from 7-8' at 1035, Performed dye test; positive result

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP 37
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	7/5/11
LOGGED BY:	B.Geringer	COMPLETION: DATE:	7/5/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	DP-37
GRD. SURFACE ELEVATION:		CHECKED BY:	CDR
TRANSCRIBED BY:		ELEVATION FROM:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
		1.6/2.0	1045	SAND		Dk Brown	(0.0-0.5) Sand(f), T-Silt, roots	SP	Dry	P=2.4	F=1.9
2						↓	(0.5-1.6) - Sand(f-m), T-Silt & Gravel Silt lense 1.4-1.6	↓	↓	P=1.6	F=1.1
										P=0.8	F=1.1
										P=0.9	F=1.0
		1.5/2.0	1048			Dk. Brown	(0.0-1.5) SAA		Dry	P=2.0	F=1.5
4						↓	↓		↓	P=3.1	F=1.4
										P=2.4	F=1.9
										P=1.6	F=1.3
		1.8/2.0	1052			Dk Brown	(0.0-1.2) - SAA		moist	P=1.6	F=0.3
6						Brown	(1.2-1.8) - Sand(f-m)		wet at 1.3	P=1.6	F=0.2
										P=1.3	F=7.7
										P=4.2	F=70.2
		/					(0.0-2.4) - SAA		wet	P=3.5	F=78.1
8						↓	↓	↓		P=1.3	F=19.4
		3.2/4.0	1055			Brown/Gray	(2.4-2.8) - Silt & Sand(f), organic, wood	SM	↓	P=2.1	F=68.7
10						Gray	(2.8-3.2) - Silty Clay	CL	moist	P=0.9	F=2.3
		/		SILT CLAY			(0.0-0.9) - SAA			P=1.5	F=0.9
12							(0.9-3.3) - Clay			P=1.7	F=0.0
		3.3/4.0	1100							P=1.8	F=0.6
14						↓	↓	↓	↓	P=1.0	F=0.4
		/		EOB							

TYPE OF DRILLING RIG:	Geoprobe 6620 DT		Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	Direct Push Technology		
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: NASB-ONFF-DP	PAGE: 1 OF 1

TtNUS Form 0018

Collected Sample From 6-7' bgs at 1110

Installed temp MW - Screen 3.5-9.5

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP38
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	6/29/11
LOGGED BY:	B.Geringer	COMPLETION: DATE:	6/29/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	N/A
GRD. SURFACE ELEVATION:		CHECKED BY:	JR
TRANSCRIBED BY:		ELEVATION FROM:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
		1.7/2.0	1320			DK Brown	(0.0-0.5) - Sand (F-m), T-Silt, roots	SP	Dry	P=0.9	F=4.2
2						LT Brown	(0.5-1.7) - Sand (F-m)		↓	P=1.4	F=5.3
		1.8/2.0	1326			↑	(0.6-1.8) SAA - Orange Fe Staining at 0.2-0.6 & 1.7		Dry	P=1.4	F=4.8
4						↓	↓		Moist	P=1.4	F=4.3
		1.5/2.0	1330			LT Brown	(0.0-1.5) - SAA		wet	P=1.1	F=4.1
6						LT Gray/Brown	↓ - Wood Fragments		↓	P=2.0	F=4.2
		/		SAND		LT Brown	(0.0-~~4.0~~ 3.4) SAA		wet	P=1.5	F=4.6
8						↓	↓		↓	P=1.5	F=4.4
~~10~~		3.4/4.0	1336							P=1.8	F=4.0
10						↓	↓			P=4.4	F=NO FID*
~~12~~		/				LT Brown	(0.0-1.0) - SAA	↓	wet	P=12.4	F=11.4
12						Gray	(1.0-4.0) - Clay - T-Silt	CL	Moist	P=3.8	F=35.1
~~14~~		4.0/4.0	1340	CLAY		↓	↓	↓	↓	P=3.0	F=15.6
14										P=2.8	F=18.0
		/		EOB						P=0.8	F=6.1
16										P=1.0	F=3.0
										P=0.7	F=4.6
										P=1.0	F=4.5

TYPE OF DRILLING RIG:	Geoprobe 6620 DT	Tetra Tech NUS, Inc.	
METHOD OF ADVANCING BORING:	Direct Push Technology		
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	BORING NO.: NASB-ONFF-DP	PAGE: 1 OF 1	

TtNUS Form 0018

Collected Sample at 6-7' bgs at 1350

* sample lost btw field & trailer

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP 39
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	6/29/11
LOGGED BY:	B.Geringer	COMPLETION: DATE:	6/29/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	DP-39 Temp Well
GRD. SURFACE ELEVATION:		CHECKED BY:	CDR
TRANSCRIBED BY:		ELEVATION FROM:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
		0.8 / 2.0	1400			Dk Brown	(0.0-0.4) Sand(f), T-Silt, roots	SP	Dry	P=0.9	F=0.9
2						Brown	(0.4-0.8) Sand(f-m), T-Gravel	↓	↓	P=1.2	F=1.1
		1.5 / 2.0	1404			↓	(0.0-0.5) SAA - few roots	↓	Dry	P=0.6 P=0.9	F=1.5 F=2.2
4						Black Gray	~~0.0~~(0.5-0.7) Silt-wood-Peat like (0.7-1.5) Sand(f-m)	Sa/PT SP	Moist	P=0.4 P=1.2	F=2.3 F=2.4
		/ 2.0	~~1411~~			LT Brown	(0.0-3.7) Sand(f-m)	SP	Wet	P=1.3	F=8.7
6						↓	↓	↓	↓	P=1.2	F=15.6
		3.7 / 4.0	1411			↓	↓	↓	↓	P=1.2	F=4.7
8				SAND		↓	↓	↓	↓	P=0.6	F=37.8
		/				LT Brown	(0.0-3.3) SAA	↓	Wet	P=1.8	F=7.3
10						↓	↓	↓	↓	P=1.8	F=15.0
		4.0 / 4.0	1416			Gray	↓	↓	↓	P=0.9	F=37.0
12						↓	(3.3-4.0) Silt & Sand(f)	SM	Moist	P=0.9	F=4.4
		/				Gray	(0.0-0.7) SAA	↓	↓	P=0.9	F=5.7
14				SILT/ CLAY		↓	(0.7-1.0) Silt & Sand(f)	↓	↓	P=1.0	F=4.7
		3.2 / 4.0	1424			↓	(1.0-3.2) Clay T-Silt	CL	↓	P=1.0	F=17.3
16				EOB		↓	↓	↓	↓	P=0.7	F=5.5

TYPE OF DRILLING RIG:	Geoprobe 6620 DT
METHOD OF ADVANCING BORING:	Direct Push Technology
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve
METHOD OF ROCK CORING:	N/A
GROUNDWATER LEVELS:	
OTHER OBSERVATIONS:	

Tetra Tech NUS, Inc.

BORING NO.: NASB-ONFF-DP

PAGE: 1 OF 1

TINUS Form 0018

Collected Soil Sample at 3-4' bgs at 1435 (LAB QC)

Installed temp. mw - Screen 2-12' bgs

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP 40
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	6/29/11
LOGGED BY:	B.Geringer	COMPLETION: DATE:	6/29/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	N/A
GRD. SURFACE ELEVATION:		CHECKED BY:	CDR
TRANSCRIBED BY:		ELEVATION FROM:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
		1.9/2.0	1228	SAND		DK Brown	(0.0-0.5) Sand(F), T-Silt, roots	SP	Dry	P=0.8	F=0.3
2										P=1.1	F=0.6
						Brown	(0.5-1.9) Sand(F-m), Silt lens 1.3-1.5 & 1.7	SM	↓ Silt lenses	P=1.0	F=0.7
										P=1.7	F=0.6
		1.8/2.0	1232			Brown	(0.0-0.8) SAA - Interbedd Silt 0.4-0.8	↓	Dry are black - organic	P=1.3	F=0.7
4										P=1.5	F=0.7
						Brown/ Grayish	(0.8-1.8) - Sand(F-m)	SP	Moist	P=1.8	F=0.7
										P=1.3	F=0.5
		1.6/2.0	1236			↓	(0.0-1.6) - SAA	↓	↓	P=1.7	F=0.6
6										P=1.4	F=0.6
						↓	↓		Wet @ 1'	P=1.7	F=1.3
										P=4.5	F=179.3
		1.8/2.0	1240			Brown	(0.0-1.8) SAA		Wet	P=8.1	F=114.3
8						↓	↓		↓	P=1.6	F=44.3
		/				Brown	(0.0-4.0) SAA		Wet Slight odor	P=5.9	F=146.3
10						↓	↓		↓	P=~~16.8~~ 8.1	F=~~221.4~~ 160.3
		4.0/4.0	1245							P=16.8	F=221.4
12						↓	↓		↓	P=11.1	F=97.6
		/				Brown	(0.0-2.0) - SAA. Wood Frag at 1.8		Wet	P=4.3	F=112.9
14						↓	↓	↓	↓	P=2.5	F=121.3
		4.0/4.0	1250	SILT/ CLAY		Gray	(2.0-2.7) - Silt, Some Sand(F)	SM	Wet	P=0.7	F=5.3
16				EOB		↓	(2.7-4.0) - Clay - T. Silt	CL	Moist	P=1.0	F=3.1

TYPE OF DRILLING RIG:	Geoprobe 6620 DT	Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	Direct Push Technology	
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve	
METHOD OF ROCK CORING:	N/A	
GROUNDWATER LEVELS:		
OTHER OBSERVATIONS:	BORING NO.: NASB-ONFF-DP	PAGE: 1 OF 1

TtNUS Form 0018

Collected Sample 11-12' bgs at 1300

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP 41
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	6/30/11
LOGGED BY:	B.Geringer	COMPLETION: DATE:	6/30/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	N/A
GRD. SURFACE ELEVATION:		CHECKED BY:	CPR
TRANSCRIBED BY:		ELEVATION FROM:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
											0.0
		1.6/2.0	1008	SAND		Dk Brown	(0.0-0.5) - Sand(F), Some Silt, roots, Topsoil	SP/SM	Moist	P= ~~4.8~~ 1.6	F= ~~145.8~~
2						Brown	(0.5-1.6) - Sand(F-M), Silt lens at 1.3 & 1.6	SP	Dry	P= 0.2	F=0.0
										P= 0.2	F=0.0
										P= 0.4	F=0.0
		1.9/2.0	1013				(0.0-1.9) - SAA - T-Fe Stain		Moist	P=1.2	F=0.0
4										P=1.1	F=0.7
										P=0.8	F=0.6
										P=0.7	F=3.0
		1.2/2.0	1017			Brown	(0.0-1.2) - SAA - Silt nodule at 0.3		Wet at 0.4	P=2.8	F=4.0
6									Wet	P=1.9	F=23.6
		/		Inter-bedded		Brown/Gray	(0.0-2.6) - SAA - Silt nodules and	SM/SP		P=2.3	F=55.8
8						orange	interbedded Silt lenses			P=2.0	F=22.4
		2.6/4.0	1024				throughout run			P=1.9	F=88.3
10										P=2.1	F=74
		/		SAND		Brown	(0.0-3.0) - Sand(F-M)	SP		P 2.6	F=103.5
12										P= 2.2	F=127.4
		4.0/4.0	1027							P= 4.8	F=145.2
14				SILT/SAND		Gray	(3.0-4.0) Silt & Sand(F)	SM	Moist	P=1.5	F=74.2
		/					(0.0-4.0) - SAA		Wet	P=1.3	F=3.2
16										P=1.5	F=0.9

TYPE OF DRILLING RIG:	Geoprobe 6620 DT		Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	Direct Push Technology		
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: NASB-ONFF-DP	PAGE: 1 OF 2

TtNUS Form 0018

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP41
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	6/30/11
LOGGED BY:	B.Geringer	COMPLETION: DATE:	6/30/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	N/A
GRD. SURFACE ELEVATION:		CHECKED BY:	CON
TRANSCRIBED BY:		ELEVATION FROM:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
		4.0/4.0	1030			Gray	SAA	SM	wet	P=0.8	F=1.2
18							↓	↓	↓	P=1.1	F=0.0
		/		SILTY SAND			(0.0-4.0) - SAA			P=6.9	F=0.1
20							↓			P=0.7	F=0.3
		4.0/4.0	1033							P=0.9	F=0.0
22							↓		↓	P=0.8	F=0.0
		/					(0.0-2.2) - SAA		wet	P=0.5	F=0.8
24							↓	↓	↓	P=1.0	F=0.0
		4.0/4.0	1040	SILTY CLAY			(2.2-4.0) Silty Clay	CL		P=0.5	F=0.0
26							↓	↓	↓	P=0.8	F=0.0
		/		EOB							
		/									
		/									

TYPE OF DRILLING RIG:	Geoprobe 6620 DT		Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	Direct Push Technology		
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: NASB-ONFF-DP	PAGE: 2 OF 2

TINUS Form 0018

Collected Sample at 12-13' bgs at 1050 (DUP'02)

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP42
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	6/30/11
LOGGED BY:	B.Geringer	COMPLETION: DATE:	6/30/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	DP-42 (Temp well)
GRD. SURFACE ELEVATION:		CHECKED BY:	CMR
TRANSCRIBED BY:		ELEVATION FROM:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
		1.6/2.0	0900	SAND		Dk Brown	(0.0-0.4) Sand(F), Some Silt, roots, Topsoil	SP/SM	Moist	P=1.2 P=1.5	F=1.0 F=1.0
2						Brown	(0.4-1.6) Sand(f-m), Silt lense at 0.6 & 0.8	SP	Dry	P=1.0 P=0.9	F=0.9 F=0.7
		1.7/2.0 ~~4.0~~	0903			↓	(0.0-0.4) SAA	↓	Moist	P=0.4 P=0.2	F=27.5 F=459.1
4						Dk Brown	(0.4-1.7) - Silt, T-Sand(F), roots, wood, Peat like	SM/PT	wet	P=0.5 P=0.7	F=269.5 F=205.4
		/				Dk Brown	(0.0-0.8) - Sand(F), Some Silt, roots	SM	wet	P=0.8	F=163.4
6						Brown	(0.8-2.8) - Sand(F-m)	SP	↓	P=0.7	F=434.5
		2.8/4.0	0909			↓	↓	↓	↓	P=0.8	F=1,463
8						↓	↓			P=1.0	F=377
		/				Brown	(0.0-4.0) - SAA		wet	P=0.6	F=273.5
10						↓	↓		↓	P=0.8	F=273.2
		4.0/4.0	0913			↓	↓	↓	↓	P=0.8	F=104.9
12						↓	↓ - Some mica Flakes			P=0.5	F=207.1
		/				Brown	(0.0-1.0) - SAA	↓	wet	P=1.5	F=2.7
14				SLT/ SAND		Gray	(1.0-4.0) - Silt & Sand(F)	SM	↓	P=1.0	F=1.7
		4.0/4.0	0919			↓	↓	↓	↓	P=1.2	F=12.0
16						↓	↓	↓	↓	P=1.1	F=10.2

TYPE OF DRILLING RIG:	Geoprobe 6620 DT
METHOD OF ADVANCING BORING:	Direct Push Technology
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve
METHOD OF ROCK CORING:	N/A
GROUNDWATER LEVELS:	
OTHER OBSERVATIONS:	

Tetra Tech NUS, Inc.

BORING NO.: NASB-ONFF-DP42

TINUS Form 0018

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP 42
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	6/30/11
LOGGED BY:	B.Geringer	COMPLETION: DATE:	6/30/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	DP-42
GRD. SURFACE ELEVATION:		CHECKED BY:	CDR
TRANSCRIBED BY:		ELEVATION FROM:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
						Gray	(0.0-4.0) SAA	SM	wet	P=1.0	F=11.4
18				SILT/ SAND						P=0.6	F=5.7
		4.0/4.0	0927							P=1.4	F=21.6
20										P=0.7	F=9.1
						Gray	(0.0-3.0) SAA		wet	P=1.1	F=2.4
22										P=0.8	F=12.2
		4.0/4.0	0932							P=1.1	F=12.9
24				SILT/CLAY			(3.0-4.0) - Silty Clay	CL		P=1.6	F=3.0
				EOB							

TYPE OF DRILLING RIG:	Geoprobe 6620 DT		Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	Direct Push Technology		
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: NASB-ONFF-DP	PAGE: 2 OF 2

TtNUS Form 0018

Collected Sample at 6-7' bgs at 0940

Installed temp mw 2-12' Screen

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP 43
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	07/06/11
LOGGED BY:	B.Geringer	COMPLETION: DATE:	07/06/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	DP-43
GRD. SURFACE ELEVATION:		CHECKED BY:	CDR
TRANSCRIBED BY:		ELEVATION FROM:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
		1.6/2.0	1225	SAND		Brown	(0.0-1.6) Sand (f-m), roots at top 0.2	SP	Dry	P=1.9	F=0.0
2						↓	↓ - Silt lense at 0.9	↓	↓	P=1.9	F=0.0
										P=2.2	F=0.0
										P=1.5	F=0.0
		1.8/2.0	1227			Brown	(0.0-1.8) - SAA		Dry	P=3.6	F=0.0
4						↓	↓			P=2.1	F=0.0
									moist	P=2.1	F=0.0
										P=3.1	F=0.0
		1.8/2.0	1230			Brown	(0.0-1.8) SAA		wet at 1'	P=1.9	F=0.0
6						↓	↓			P=2.1	F=0.0
									wet	P=1.9	F=0.0
										P=2.0	F=0.0
		/				Brown	(0.0-3.4) - SAA			P=1.9	F=0.0
8							Fe Stain at 0.8			P=1.8	F=0.0
						↓				P=3.2	F=0.0
10		3.4/4.0	1233			orange/ Brown	↓		↓	P=2.7	F=0.0
		/				Brown	(0.0-4.0) - SAA		wet	P=2.6	F=0.0
12										P=1.8	F=0.0
						↓	↓		↓	P=2.8	F=0.0
14		4.0/4.0	1237			LT Gray	↓			P=2.4	F=6.3
		/					(0.0-2.3) - SAA		wet	P=2.2	F=0.0
16						↓	↓	↓	↓	P=3.1	F=0.0

TYPE OF DRILLING RIG:	Geoprobe 6620 DT
METHOD OF ADVANCING BORING:	Direct Push Technology
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve
METHOD OF ROCK CORING:	N/A
GROUNDWATER LEVELS:	
OTHER OBSERVATIONS:	

Tetra Tech NUS, Inc.

BORING NO.: NASB-ONFF-DP43

TtNUS Form 0018

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP 43
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	07/06/11
LOGGED BY:	B.Geringer	COMPLETION: DATE:	07/06/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	DP-43
GRD. SURFACE ELEVATION:		CHECKED BY:	CDR
TRANSCRIBED BY:		ELEVATION FROM:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
		4.0	1242	WAT			(2.3-3.5)- Silt & Sand(F), Some Clay	SC	Wet	P=3.2	F=0.0
18		/4.0					(3.5-4.0) - Clay, T-Silt	CL	moist	P=2.4	F=0.0
		/		EOB							
		/									
		/									
		/									
		/									
		/									
		/									
		/									

TYPE OF DRILLING RIG:	Geoprobe 6620 DT		Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	Direct Push Technology		
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: NASB-ONFF-DP 43	PAGE: 2 OF 2

TtNUS Form 0018

Collected Sample from 4-5' bgs at 1250 (DVP05)

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP 44
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	07/06/11
LOGGED BY:	B.Geringer	COMPLETION: DATE:	07/06/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	DP-44 (Temp Well)
GRD. SURFACE ELEVATION:		CHECKED BY:	CDR
TRANSCRIBED BY:		ELEVATION FROM:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
		1.7/2.0	1400			Dk Brown	(0.0-0.3) - Sand(f-m), T-Silt	SP	Dry	P=1.0	F=0.0
2										P=1.7	F=0.0
						LT Brown	(0.3-1.7) - Sand(f-m) (Some silt 1.5-1.7)			P=3.1	F=0.0
										P=2.4	F=0.0
		1.7/2.0	1405				(0.0-0.2) - Sand(f-m)			P=1.6	F=0.0
						Brown	(0.2-1.1) - SAA		Moist	P=1.2	F=0.0
4						Dk Brown	(1.1-1.7) - Sand(f-m), T-Gravel		wet	P=0.6	F=0.0
										P=1.1	F=17.6
		/				Gray	(0.0-0.4) - Gravel & Some Sand(f-m)	GP	wet	P=1.4	F=178.4
6						Dk Brown	(0.4-0.7) - Silt & Some Sand(f) . Peat like	SM/PT		P=2.0	F=605.9
		1.8/4.0	1409			Brown	(0.7-1.8) - Sand(f-m)	SP		P=1.5	F=475.6
8										P=2.7	F=543.6
		/				Brown	(0.0-4.0) - SAA		wet	P=1.3	F=167.5
10										P=2.9	F=305.1
		4.0/4.0	1414							P=1.7	F=152.4
12						LT Brown				P=1.8	F=29.7
		/					0.0-3.3) SAA		wet	P=2.8	F=0.0
14										P=2.1	F=0.0
		4.0/4.0	1420				(3.3-4.0) - Sand(f), some silt	SM	moist	P=2.0	F=0.0
16						Gray				P=2.8	F=0.0

TYPE OF DRILLING RIG:	Geoprobe 6620 DT		Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	Direct Push Technology		
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: NASB-ONFF-DP	PAGE: 1 OF 2

TtNUS Form 0018

Collected Sample 5-6' bgs at 1430

Installed temp mw. Screen 2-12' bgs

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP 44
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	7/6/11
LOGGED BY:	B.Geringer	COMPLETION: DATE:	7/6/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	N/A
GRD. SURFACE ELEVATION:		CHECKED BY:	CDR
TRANSCRIBED BY:		ELEVATION FROM:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
				SAND		Gray	(0.0-1.0) - SAA	Sm	wet	P=1.9	F=0.0
18				SILT/ CLAY			(1.0-4.0) - Silt & Clay, T-F Sand	CL		P=2.1	F=0.0
		4.0/4.0	1425							P=1.2	F=0.0
20										P=1.7	F=0.0
				EOB							

TYPE OF DRILLING RIG:	Geoprobe 6620 DT		Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	Direct Push Technology		
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: NASB-ONFF-DP	PAGE: 2 OF 2

TINUS Form 0018

BORING LOG FOR:	NASB-Old Navy Fuel Farm Site Asesment	BORING NO.:	NASB-ONFF-DP45
PROJECT NO.:	112G02063 / 0000.2530	START DATE:	07/06/11
LOGGED BY:	B.Geringer	COMPLETION: DATE:	07/06/11
DRILLED BY (Company/Driller):	MAI / S.Brown	MON. WELL NO.:	DP-45
GRD. SURFACE ELEVATION:		CHECKED BY:	CDR
TRANSCRIBED BY:		ELEVATION FROM:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
		1.4/2.0	1516	SAND		Dk Brown	(0.0-0.4) - Sand(f-m), T-Silt, roots	SP	Dry	P= 0.7 P= 0.5	F= 0.0 F=0.0
2						Brown/orange	(0.4-1.4) - Sand(f-m)	↓	↓	P= 0.3 P= 0.4	F=0.0 F=0.0
		1.6/2.0	1520			LT Brown	(0.0-1.6) - SAA		Dry	P= 0.2 P= 0.3	F=0.0 F=0.0
4						↓	↓		moist	P= 0.2 P= 0.4	F=0.0 F=0.0
		1.5/2.0	1524			Brown	(0.0-1.5) SAA		↓	P= 0.3 P= 0.4	F=0.0 F=0.0
6						↓	↓		Wet at 1.2	P= 0.5 P= 0.4	F=0.0 F=0.0
		/				Brown	(0.0-2.9) - SAA		Wet	P= 0.6	F=0.0
8						↓	↓ Some Fe Staining		↓	P= 0.3	F=0.0
		2.9 ~~1527~~/4.0	1527			LT Brown	root at 1.7		↓	P= 0.3	F=0.0
10						↓	↓		↓	P= 0.2	F=0.0
		/				LT Brown	(0.0-4.0) - SAA		Wet	P= 0.3	F=0.0
12						↓	↓		↓	P= 0.3	F=0.0
		4.0/4.0	1534			↓	↓		↓	P= 0.3	F=0.0
14						↓	↓		↓	P= 0.4	F=0.0
		/				LT Brown	(0.0-3.5) - SAA		Wet	P= 0.5	F=0.0
16						↓	↓	↓	↓	P= 0.4	F=0.0

TYPE OF DRILLING RIG:	Geoprobe 6620 DT	Tetra Tech NUS, Inc.	
METHOD OF ADVANCING BORING:	Direct Push Technology		
METHOD OF SOIL SAMPLING:	Dual Tube - Acetate Sleeve		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	BORING NO.: NASB-ONFF-DP45	PAGE: 1 OF 2	

TINUS Form 0018

Collected Sample 4-5' bgs at 1545

Installed temp MW- Screed 3-13' bgs

BORING LOG FOR: NASB-Old Navy Fuel Farm Site Asesment
PROJECT NO.: 112G02063 / 0000.2530
LOGGED BY: B.Geringer
DRILLED BY (Company/Driller): MAI / S.Brown
GRD. SURFACE ELEVATION:

TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: NASB-ONFF-DP #5
START DATE: 07/06/11
COMPLETION: DATE: 07/06/11
MON. WELL NO.: DP-45
CHECKED BY: CDR

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
		4.0 / 4.0	1537	SAND		Gray	SAA	SP	~~moist~~ wet	P=0.4 F=0.0
18				CLAY		↓	(3.5-4.0) - Clay, T-Silt	CL	moist	P=0.4 F=0.0
				EOB						

TYPE OF DRILLING RIG: Geoprobe 6620 DT
METHOD OF ADVANCING BORING: Direct Push Technology
METHOD OF SOIL SAMPLING: Dual Tube - Acetate Sleeve
METHOD OF ROCK CORING: N/A
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

BORING NO.: NASB-ONFF-DP

Tetra Tech NUS, Inc.

TtNUS Form 0018

A-2 WELL CONSTRUCTION LOGS

OVERBURDEN MONITORING WELL CONSTRUCTION LOG — **TETRA TECH NUS, INC.**

PROJECT NAME: NASB- ONFF- Site Assesment
PROJECT NO: 112G02063
PROJECT LOCATION: Brunswick Maine
WELL NO: NASB-ONFF-PZ-FF01
CLIENT: Navy
BORING NO: ↓
CONTRACTOR: MAI
DRILLER: S. Brown
BORING LOCATION:
LOGGED BY: B. Geringer
DATE: 06/27/11
389506.98
CHECKED BY: C. Rack
DATE: 07/08/11
3015909.66
PAGE: 1 OF 1

ELEVATION TOP OF PROTECTIVE CASING 78.16

ELEVATION TOP OF RISER PIPE 77.75

GROUND ELEVATION 75.21

LENGTH OF PROTECTIVE CASING ABOVE GROUND SURFACE (Ft.)	BG ~~2.8'~~ 2.95'
LENGTH OF RISER PIPE ABOVE GROUND SURFACE (Ft.)	BG ~~2.44'~~ 2.54'
TYPE OF SURFACE SEAL	Concrete
DIA. SURFACE SEAL BGS (In.)	6"
DEPTH TO BOTTOM OF SURFACE SEAL (Ft.)	~~6"~~ 0.5
I.D. OF PROTECTIVE CASING (In.)	4.0
TYPE OF PROTECTIVE CASING	Steel
DEPTH BOTTOM OF PROTECTIVE CASING (Ft.)	2.05
DEPTH BOTTOM OF DRAIN LAYER (Ft.)	3.0
RISER PIPE (In.) I.D.: 1	O.D.: 1 1/4
TYPE OF RISER PIPE	Sch. 40 PVC
TYPE OF BACKFILL AROUND RISER PIPE	Sand (20-40)
DEPTH TOP OF SEAL (Ft.)	3.0
TYPE OF SEAL	Bentonite
DEPTH BOTTOM OF SEAL (Ft.)	5.0
DEPTH TOP OF PERVIOUS SECTION (Ft.)	6.0
DIAMETER OF BOREHOLE (In.)	4.0
TYPE OF PERVIOUS SECTION	Machin Slotted
TYPE OF OPENINGS	10 Slot
PERVIOUS SECTION (In.) I.D.: 1.0	O.D.: 1 1/4"
TYPE OF FILTER PACK AROUND PERVIOUS SECTION	Pre-Pack
DEPTH BOTTOM OF PERVIOUS SECTION (Ft.)	11.0
DEPTH BOTTOM OF FILTER PACK (Ft.)	11.0
TYPE OF BACKFILL BELOW FILTER PACK	BG ~~Bentonite~~ Natural Collapse
END OF BORING (Ft.)	12.0

GENERAL NOTE:

1. Entry of 0.00 for Ground Elevation, Elev. Top of Riser Pipe & Elev. Top of Protective Casing Indicates that Surveyed Ground Elevation Not Available.

OVERBURDEN MONITORING WELL CONSTRUCTION LOG — **TETRA TECH NUS, INC.**

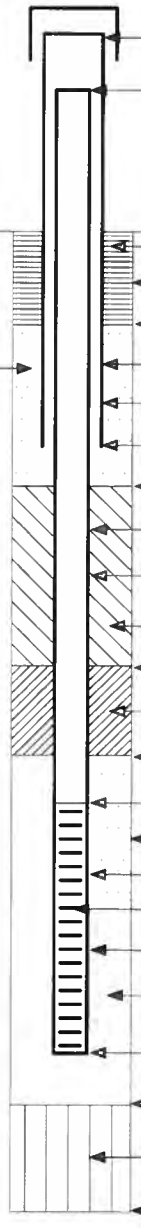
PROJECT NAME: NASB -ONFF- Site Assessment		PROJECT NO: 112G02063	
PROJECT LOCATION: Former NAS Brunswick, Maine		WELL NO: PZ-FF0~~8~~2	
CLIENT: NAVFAC		BORING NO: ↓	
CONTRACTOR: MAI	DRILLER: S. Brown	BORING LOCATION:	
LOGGED BY: B. Geringer	DATE: 6/27/11	389381.12	
CHECKED BY: C. Rae	DATE: 07/08/11	3015881.66	

PAGE: 1 OF 1

ELEVATION TOP OF PROTECTIVE CASING: 79.48

ELEVATION TOP OF RISER PIPE: 79.34

GROUND ELEVATION: 76.24



LENGTH OF PROTECTIVE CASING ABOVE GROUND SURFACE (Ft.)	BG 3.24' ~~3.60~~ ~~3.15~~
LENGTH OF RISER PIPE ABOVE GROUND SURFACE (Ft.)	BG ~~2.94'~~ 3.1
TYPE OF SURFACE SEAL	Concrete
DIA. SURFACE SEAL BGS (In.)	6"
DEPTH TO BOTTOM OF SURFACE SEAL (Ft.)	0.5
I.D. OF PROTECTIVE CASING (In.)	4.0
TYPE OF PROTECTIVE CASING	Steel
DEPTH BOTTOM OF PROTECTIVE CASING (Ft.)	1.76 ~~2.5~~
DEPTH BOTTOM OF DRAIN LAYER (Ft.)	3.0
RISER PIPE (In.) I.D.: 1.0	O.D.: 1 1/4"
TYPE OF RISER PIPE	Sch 40 PVC
TYPE OF BACKFILL AROUND RISER PIPE	Bentonite
DEPTH TOP OF SEAL (Ft.)	3.0
TYPE OF SEAL	Bentonite
DEPTH BOTTOM OF SEAL (Ft.)	6.0
DEPTH TOP OF PERVIOUS SECTION (Ft.)	8.0
DIAMETER OF BOREHOLE (In.)	4.0
TYPE OF PERVIOUS SECTION	machine slotted
TYPE OF OPENINGS	~ 10 slot
PERVIOUS SECTION (In.) I.D.: 1	O.D.: 1 1/4"
TYPE OF FILTER PACK AROUND PERVIOUS SECTION	Pre-Pack
DEPTH BOTTOM OF PERVIOUS SECTION (Ft.)	13.0
DEPTH BOTTOM OF FILTER PACK (Ft.)	13.5
TYPE OF BACKFILL BELOW FILTER PACK	Natural Collapse
END OF BORING (Ft.)	13.5

GENERAL NOTE:

1. Entry of 0.00 for Ground Elevation, Elev. Top of Riser Pipe & Elev. Top of Protective Casing Indicates that Surveyed Ground Elevation Not Available.

112G02063

OVERBURDEN MONITORING WELL CONSTRUCTION LOG — **TETRA TECH NUS, INC.**

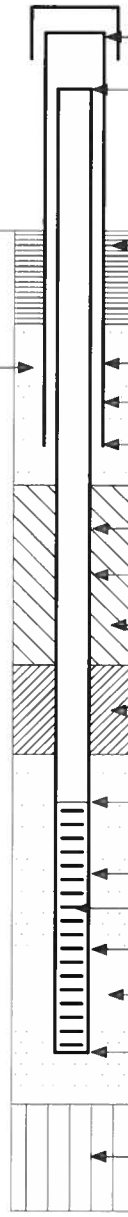
PROJECT NAME: NASB-ONFF Site Assessmt
PROJECT NO: NASB-ONFF-PZ-FF03
PROJECT LOCATION: Former Naval Air Station Brunswick
WELL NO: PZ-FF03
CLIENT: Navy
BORING NO:
CONTRACTOR: MAI
DRILLER: S. Brown
BORING LOCATION:
LOGGED BY: B. Geringer
DATE: 6/27/11
389613.53
CHECKED BY: C. Pace
DATE: 07/08/11
3016347.93

PAGE: 1 OF 1

ELEVATION TOP OF PROTECTIVE CASING: 75.57

ELEVATION TOP OF RISER PIPE: 75.51

GROUND ELEVATION: 72.57



LENGTH OF PROTECTIVE CASING ABOVE GROUND SURFACE (Ft.)	BG ~~2.91'~~ 3.00
LENGTH OF RISER PIPE ABOVE GROUND SURFACE (Ft.)	BG ~~2.82'~~ 2.94
TYPE OF SURFACE SEAL	Concrete
DIA. SURFACE SEAL BGS (In.)	6"
DEPTH TO BOTTOM OF SURFACE SEAL (Ft.)	0.5
I.D. OF PROTECTIVE CASING (In.)	4.0
TYPE OF PROTECTIVE CASING	Steel
DEPTH BOTTOM OF PROTECTIVE CASING (Ft.)	2.0
DEPTH BOTTOM OF DRAIN LAYER (Ft.)	3.0
RISER PIPE (In.) I.D.: 1.0	O.D.: 1 1/4"
TYPE OF RISER PIPE	Sch. 40 PVC
TYPE OF BACKFILL AROUND RISER PIPE	Sand (20-40)
DEPTH TOP OF SEAL (Ft.)	3.0
TYPE OF SEAL	Bentonite
DEPTH BOTTOM OF SEAL (Ft.)	5.0
DEPTH TOP OF PERVIOUS SECTION (Ft.)	7.0
DIAMETER OF BOREHOLE (In.)	4.0
TYPE OF PERVIOUS SECTION	Machine Slotted
TYPE OF OPENINGS	10 Slot
PERVIOUS SECTION (In.) I.D.: 1.0	O.D.: 1 1/4"
TYPE OF FILTER PACK AROUND PERVIOUS SECTION	Pre-Pack
DEPTH BOTTOM OF PERVIOUS SECTION (Ft.)	12.0
DEPTH BOTTOM OF FILTER PACK (Ft.)	12.0
TYPE OF BACKFILL BELOW FILTER PACK	Natural Collapse
END OF BORING (Ft.)	14.0

GENERAL NOTE:

1. Entry of 0.00 for Ground Elevation, Elev. Top of Riser Pipe & Elev. Top of Protective Casing Indicates that Surveyed Ground Elevation Not Available.

OVERBURDEN MONITORING WELL CONSTRUCTION LOG **TETRA TECH NUS, INC.**

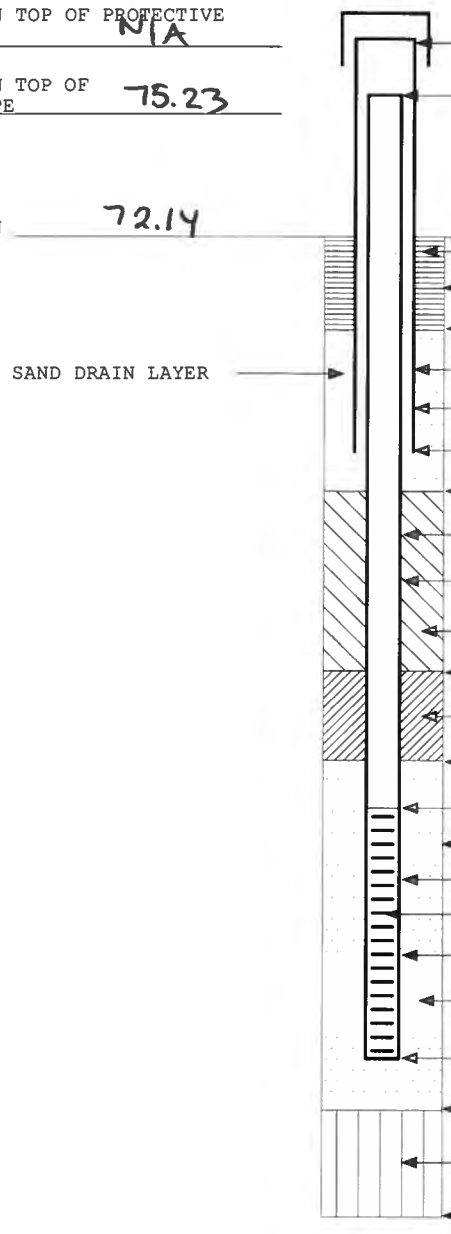
PROJECT NAME: NASB-ONFF-Site Assesment
PROJECT NO: 112G02063
PROJECT LOCATION: Former Naval Air Station Brunswick
WELL NO: DP-01 (Temp Well)
CLIENT: Navy
BORING NO: DP-01
CONTRACTOR: MAI
DRILLER: S. Brown
BORING LOCATION:
LOGGED BY: B. Geringer
DATE: 6/28/11
389099.91
CHECKED BY: C. Rocco
DATE: 07/08/11
3015928.64

PAGE: 1 OF 1

ELEVATION TOP OF PROTECTIVE CASING: N/A

ELEVATION TOP OF RISER PIPE: 75.23

GROUND ELEVATION: 72.14



LENGTH OF PROTECTIVE CASING ABOVE GROUND SURFACE (Ft.)	N/A
LENGTH OF RISER PIPE ABOVE GROUND SURFACE (Ft.)	3.09
TYPE OF SURFACE SEAL	N/A
DIA. SURFACE SEAL BGS (In.)	
DEPTH TO BOTTOM OF SURFACE SEAL (Ft.)	
I.D. OF PROTECTIVE CASING (In.)	
TYPE OF PROTECTIVE CASING	
DEPTH BOTTOM OF PROTECTIVE CASING (Ft.)	N/A
DEPTH BOTTOM OF DRAIN LAYER (Ft.)	—
RISER PIPE (In.) I.D.: 1.0	O.D.: 1 1/4"
TYPE OF RISER PIPE	Sch 40 PVC
TYPE OF BACKFILL AROUND RISER PIPE	Sand (20-40)
DEPTH TOP OF SEAL (Ft.)	0.5
TYPE OF SEAL	Bentonite
DEPTH BOTTOM OF SEAL (Ft.)	1.0
DEPTH TOP OF PERVIOUS SECTION (Ft.)	2.0
DIAMETER OF BOREHOLE (In.)	4"
TYPE OF PERVIOUS SECTION	Machine Slotted
TYPE OF OPENINGS	10 Slot
PERVIOUS SECTION (In.) I.D.: 1.0	O.D.: 1 1/4"
TYPE OF FILTER PACK AROUND PERVIOUS SECTION	Sand (20-40)
DEPTH BOTTOM OF PERVIOUS SECTION (Ft.)	10.0
DEPTH BOTTOM OF FILTER PACK (Ft.)	11.0
TYPE OF BACKFILL BELOW FILTER PACK	Natural Collapse
END OF BORING (Ft.)	14.0

GENERAL NOTE:

1. Entry of 0.00 for Ground Elevation, Elev. Top of Riser Pipe & Elev. Top of Protective Casing Indicates that Surveyed Ground Elevation Not Available.

OVERBURDEN MONITORING WELL CONSTRUCTION LOG **TETRA TECH NUS, INC.**

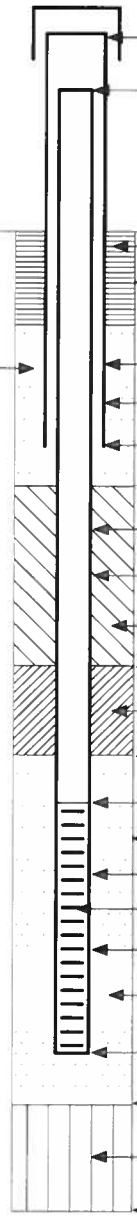
PROJECT NAME: NASB- ONFF - Site Assesment
PROJECT NO: 112G02063
PROJECT LOCATION: Former Naval Air Station Brunswick
WELL NO: DP-07 (Temp Well)
CLIENT: Navy
BORING NO: DP-07
CONTRACTOR: MAI
DRILLER: S. Brown
BORING LOCATION:
LOGGED BY: B. Geringer
DATE: 6/28/11
389236.14
CHECKED BY: C. Race
DATE: 07/08/11
3016189.07

PAGE: 1 OF 1

ELEVATION TOP OF PROTECTIVE CASING: N/A

ELEVATION TOP OF RISER PIPE: 74.56

GROUND ELEVATION: 71.71



LENGTH OF PROTECTIVE CASING ABOVE GROUND SURFACE (Ft.)	N/A
LENGTH OF RISER PIPE ABOVE GROUND SURFACE (Ft.)	2.85
TYPE OF SURFACE SEAL	N/A
DIA. SURFACE SEAL BGS (In.)	
DEPTH TO BOTTOM OF SURFACE SEAL (Ft.)	
I.D. OF PROTECTIVE CASING (In.)	
TYPE OF PROTECTIVE CASING	
DEPTH BOTTOM OF PROTECTIVE CASING (Ft.)	
DEPTH BOTTOM OF DRAIN LAYER (Ft.)	N/A
RISER PIPE (In.) I.D.: 1.0	O.D.: 1 1/4"
TYPE OF RISER PIPE	Sch 40 PVC
TYPE OF BACKFILL AROUND RISER PIPE	Sand (20-40)
DEPTH TOP OF SEAL (Ft.)	1.0
TYPE OF SEAL	Bentonite
DEPTH BOTTOM OF SEAL (Ft.)	2.0
DEPTH TOP OF PERVIOUS SECTION (Ft.)	4.0
DIAMETER OF BOREHOLE (In.)	4.0
TYPE OF PERVIOUS SECTION	Machine Slotted
TYPE OF OPENINGS	10 Slot
PERVIOUS SECTION (In.) I.D.: 1.0	O.D.: 1 1/4"
TYPE OF FILTER PACK AROUND PERVIOUS SECTION	Sand (20-40)
DEPTH BOTTOM OF PERVIOUS SECTION (Ft.)	14.0
DEPTH BOTTOM OF FILTER PACK (Ft.)	15.0
TYPE OF BACKFILL BELOW FILTER PACK	Natural Collapse
END OF BORING (Ft.)	16.0

GENERAL NOTE:

1. Entry of 0.00 for Ground Elevation, Elev. Top of Riser Pipe & Elev. Top of Protective Casing Indicates that Surveyed Ground Elevation Not Available.

OVERBURDEN MONITORING WELL CONSTRUCTION LOG — **TETRA TECH NUS, INC.**

PROJECT NAME:	NASB- ONFF. Site Assesmnt	PROJECT NO:	112G02258
PROJECT LOCATION:	Former Naml Air Station Brunswick	WELL NO:	DP-12 (Temp Well)
CLIENT:	Navy	BORING NO:	DP-12
CONTRACTOR:	MAI	DRILLER:	S. Brown
LOGGED BY:	B. Geringer	DATE:	6/30/11
CHECKED BY:	C. Rice	DATE:	07/08/11

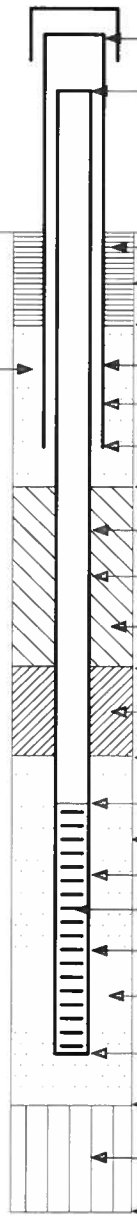
BORING LOCATION: 389144.37 / 3016157.94

PAGE: 1 OF 1

ELEVATION TOP OF PROTECTIVE CASING: N/A

ELEVATION TOP OF RISER PIPE: 75.07

GROUND ELEVATION: 71.92



LENGTH OF PROTECTIVE CASING ABOVE GROUND SURFACE (Ft.)	N/A
LENGTH OF RISER PIPE ABOVE GROUND SURFACE (Ft.)	3.15
TYPE OF SURFACE SEAL	N/A
DIA. SURFACE SEAL BGS (In.)	
DEPTH TO BOTTOM OF SURFACE SEAL (Ft.)	
I.D. OF PROTECTIVE CASING (In.)	
TYPE OF PROTECTIVE CASING	~~Sch. 40 P~~ N/A
DEPTH BOTTOM OF PROTECTIVE CASING (Ft.)	N/A
DEPTH BOTTOM OF DRAIN LAYER (Ft.)	
RISER PIPE (In.) I.D.: 1.0 O.D.: to 1 1/4"	
TYPE OF RISER PIPE	Sch. 40 PVC
TYPE OF BACKFILL AROUND RISER PIPE	Bentonite
DEPTH TOP OF SEAL (Ft.)	0.0
TYPE OF SEAL	Bentonite
DEPTH BOTTOM OF SEAL (Ft.)	1.0
DEPTH TOP OF PERVIOUS SECTION (Ft.)	2.0
DIAMETER OF BOREHOLE (In.)	4.0
TYPE OF PERVIOUS SECTION	Machine Slotted
TYPE OF OPENINGS	10 slot
PERVIOUS SECTION (In.) I.D.: 1.0 O.D.: 1 1/4	
TYPE OF FILTER PACK AROUND PERVIOUS SECTION	Sand (20-40)
DEPTH BOTTOM OF PERVIOUS SECTION (Ft.)	12.0
DEPTH BOTTOM OF FILTER PACK (Ft.)	13.0
TYPE OF BACKFILL BELOW FILTER PACK	Natural Collapse
END OF BORING (Ft.)	18.0

GENERAL NOTE:

1. Entry of 0.00 for Ground Elevation, Elev. Top of Riser Pipe & Elev. Top of Protective Casing Indicates that Surveyed Ground Elevation Not Available.

OVERBURDEN MONITORING WELL CONSTRUCTION LOG **TETRA TECH NUS, INC.**

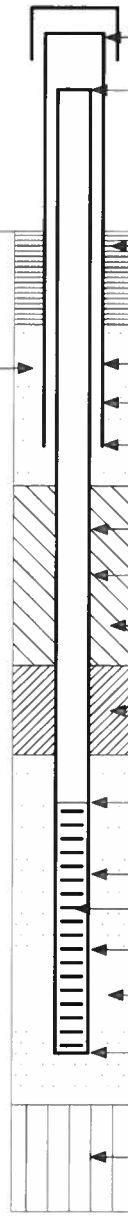
PROJECT NAME: NASB- ONff-Site Assesment
PROJECT NO: 112G02063
PROJECT LOCATION: Former Naval Air Station Brunswick
WELL NO: DP-17 (Temp Well)
CLIENT: Navy
BORING NO: DP-17
CONTRACTOR: MAI
DRILLER: S. Brown
BORING LOCATION:
LOGGED BY: B. Geringer
DATE: 07/01/11
389028.88
CHECKED BY: C. Race
DATE: 07/08/11
3016333.47

PAGE: 1 OF 1

ELEVATION TOP OF PROTECTIVE CASING: N/A

ELEVATION TOP OF RISER PIPE: 77.32

GROUND ELEVATION: 73.50



LENGTH OF PROTECTIVE CASING ABOVE GROUND SURFACE (Ft.)	N/A
LENGTH OF RISER PIPE ABOVE GROUND SURFACE (Ft.)	3.82
TYPE OF SURFACE SEAL	Bentonite
DIA. SURFACE SEAL BGS (In.)	N/A
DEPTH TO BOTTOM OF SURFACE SEAL (Ft.)	
I.D. OF PROTECTIVE CASING (In.)	
TYPE OF PROTECTIVE CASING	
DEPTH BOTTOM OF PROTECTIVE CASING (Ft.)	
DEPTH BOTTOM OF DRAIN LAYER (Ft.)	
RISER PIPE (In.) I.D.: 1.0	O.D.: 1¼"
TYPE OF RISER PIPE	Sch 40 PVC
TYPE OF BACKFILL AROUND RISER PIPE	Bentonite
DEPTH TOP OF SEAL (Ft.)	0.0
TYPE OF SEAL	Bentonite
DEPTH BOTTOM OF SEAL (Ft.)	2.0
DEPTH TOP OF PERVIOUS SECTION (Ft.)	4.0
DIAMETER OF BOREHOLE (In.)	4.0
TYPE OF PERVIOUS SECTION	Machine Slotted
TYPE OF OPENINGS	10 Slot
PERVIOUS SECTION (In.) I.D.: 1.0	O.D.: 1¼"
TYPE OF FILTER PACK AROUND PERVIOUS SECTION	Sand (20-40)
DEPTH BOTTOM OF PERVIOUS SECTION (Ft.)	14.0
DEPTH BOTTOM OF FILTER PACK (Ft.)	15.00
TYPE OF BACKFILL BELOW FILTER PACK	Natural Collapse
END OF BORING (Ft.)	18.0

GENERAL NOTE:

1. Entry of 0.00 for Ground Elevation, Elev. Top of Riser Pipe & Elev. Top of Protective Casing Indicates that Surveyed Ground Elevation Not Available.

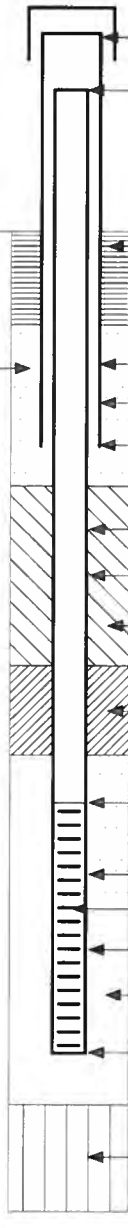
OVERBURDEN MONITORING WELL CONSTRUCTION LOG **TETRA TECH NUS, INC.**

PROJECT NAME: NASB-ONFF- Site Assesment
PROJECT NO: 112G02063
PROJECT LOCATION: Former Naval Air Station Brunswick
WELL NO: DP-20 (Temp Well)
CLIENT: Navy
BORING NO: DP-20
CONTRACTOR: MAI
DRILLER: S. Brown
BORING LOCATION:
LOGGED BY: B. Geringer
DATE: 6/29/11
388945.20
CHECKED BY: L Race
DATE: 07/08/11
3016425.78

ELEVATION TOP OF PROTECTIVE CASING: N/A

ELEVATION TOP OF RISER PIPE: 74.83

GROUND ELEVATION: 71.86



LENGTH OF PROTECTIVE CASING ABOVE GROUND SURFACE (Ft.)	N/A
LENGTH OF RISER PIPE ABOVE GROUND SURFACE (Ft.)	2.97
TYPE OF SURFACE SEAL	N/A
DIA. SURFACE SEAL BGS (In.)	
DEPTH TO BOTTOM OF SURFACE SEAL (Ft.)	
I.D. OF PROTECTIVE CASING (In.)	
TYPE OF PROTECTIVE CASING	
DEPTH BOTTOM OF PROTECTIVE CASING (Ft.)	
DEPTH BOTTOM OF DRAIN LAYER (Ft.)	~~0.5~~ N/A
RISER PIPE (In.) I.D.: 1	O.D.: 1 1/4"
TYPE OF RISER PIPE	Sch. 40 PVC
TYPE OF BACKFILL AROUND RISER PIPE	Bentonite
DEPTH TOP OF SEAL (Ft.)	0.0
TYPE OF SEAL	Bentonite
DEPTH BOTTOM OF SEAL (Ft.)	1.0
DEPTH TOP OF PERVIOUS SECTION (Ft.)	2.0
DIAMETER OF BOREHOLE (In.)	4"
TYPE OF PERVIOUS SECTION	Machine Slotted
TYPE OF OPENINGS	10 Slot
PERVIOUS SECTION (In.) I.D.: 1.0	O.D.: 1 1/4"
TYPE OF FILTER PACK AROUND PERVIOUS SECTION	Sand (20-40)
DEPTH BOTTOM OF PERVIOUS SECTION (Ft.)	12.0
DEPTH BOTTOM OF FILTER PACK (Ft.)	13.0
TYPE OF BACKFILL BELOW FILTER PACK	Natural Collapse
END OF BORING (Ft.)	14.0

GENERAL NOTE:

1. Entry of 0.00 for Ground Elevation, Elev. Top of Riser Pipe & Elev. Top of Protective Casing Indicates that Surveyed Ground Elevation Not Available.

OVERBURDEN MONITORING WELL CONSTRUCTION LOG — **TETRA TECH NUS, INC.**

PROJECT NAME:	NASB- ONff- Site Assesment	PROJECT NO:	112G02063
PROJECT LOCATION:	Former Naval Air Station Brunswick	WELL NO:	DP-22 (Temp Well)
CLIENT:	Navy	BORING NO:	DP-22
CONTRACTOR:	MAI	DRILLER:	S. Brown
LOGGED BY:	B. Geringer	DATE:	6/30/11
CHECKED BY:	C. Race	DATE:	07/08/11

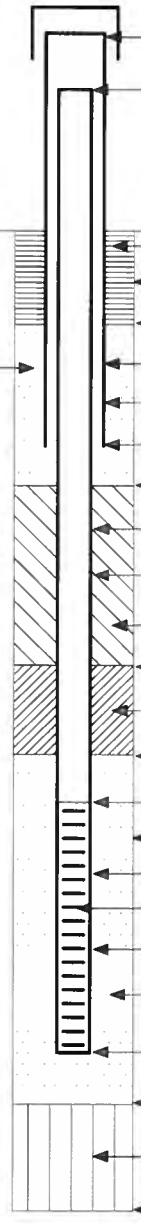
BORING LOCATION: 388856.08 / 3016178.22

PAGE: 1 OF 1

ELEVATION TOP OF PROTECTIVE CASING: N/A

ELEVATION TOP OF RISER PIPE: 75.50

GROUND ELEVATION: 72.29



LENGTH OF PROTECTIVE CASING ABOVE GROUND SURFACE (Ft.)	N/A
LENGTH OF RISER PIPE ABOVE GROUND SURFACE (Ft.)	3.21
TYPE OF SURFACE SEAL	N/A
DIA. SURFACE SEAL BGS (In.)	
DEPTH TO BOTTOM OF SURFACE SEAL (Ft.)	
I.D. OF PROTECTIVE CASING (In.)	
TYPE OF PROTECTIVE CASING	
DEPTH BOTTOM OF PROTECTIVE CASING (Ft.)	
DEPTH BOTTOM OF DRAIN LAYER (Ft.)	
RISER PIPE (In.) I.D.: 1.0	O.D.: 1 1/4"
TYPE OF RISER PIPE	Schd 40 PVC
TYPE OF BACKFILL AROUND RISER PIPE	Bentonite
DEPTH TOP OF SEAL (Ft.)	0.0
TYPE OF SEAL	Bentonite
DEPTH BOTTOM OF SEAL (Ft.)	1.0
DEPTH TOP OF PERVIOUS SECTION (Ft.)	2.0
DIAMETER OF BOREHOLE (In.)	4.0
TYPE OF PERVIOUS SECTION	Machine Slotted
TYPE OF OPENINGS	10 Slot
PERVIOUS SECTION (In.) I.D.: 1"	O.D.: 1 1/4
TYPE OF FILTER PACK AROUND PERVIOUS SECTION	Sand (20-40)
DEPTH BOTTOM OF PERVIOUS SECTION (Ft.)	12.0
DEPTH BOTTOM OF FILTER PACK (Ft.)	13.0
TYPE OF BACKFILL BELOW FILTER PACK	Natural Collapse
END OF BORING (Ft.)	20.0

GENERAL NOTE:

1. Entry of 0.00 for Ground Elevation, Elev. Top of Riser Pipe & Elev. Top of Protective Casing Indicates that Surveyed Ground Elevation Not Available.

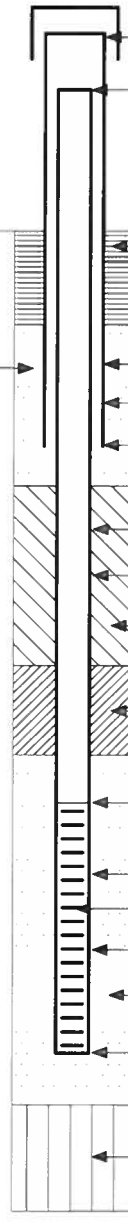
OVERBURDEN MONITORING WELL CONSTRUCTION LOG — **TETRA TECH NUS, INC.**

PROJECT NAME: NASB- ONEF- Site Assessment	PROJECT NO: 112G02063
PROJECT LOCATION: Former Naval Air Station Brunswick	WELL NO: DP-24 (Temp Well)
CLIENT: Navy	BORING NO: DP-24
CONTRACTOR: MAI / DRILLER: S. Brown	BORING LOCATION:
LOGGED BY: B. Geringer / DATE: 07/06/11	389090.01
CHECKED BY: C. Race / DATE: 07/08/11	3016529.94
	PAGE: 1 OF 1

ELEVATION TOP OF PROTECTIVE CASING: N/A

ELEVATION TOP OF RISER PIPE: 76.25

GROUND ELEVATION: 73.36



LENGTH OF PROTECTIVE CASING ABOVE GROUND SURFACE (Ft.)	N/A
LENGTH OF RISER PIPE ABOVE GROUND SURFACE (Ft.)	2.89
TYPE OF SURFACE SEAL	Bentonite
DIA. SURFACE SEAL BGS (In.)	N/A
DEPTH TO BOTTOM OF SURFACE SEAL (Ft.)	
I.D. OF PROTECTIVE CASING (In.)	
TYPE OF PROTECTIVE CASING	
DEPTH BOTTOM OF PROTECTIVE CASING (Ft.)	
DEPTH BOTTOM OF DRAIN LAYER (Ft.)	
RISER PIPE (In.) I.D.: 1	O.D.: 1 1/4"
TYPE OF RISER PIPE	Sch. 40 PVC
TYPE OF BACKFILL AROUND RISER PIPE	Bentonite
DEPTH TOP OF SEAL (Ft.)	~~1.0~~ 0.0
TYPE OF SEAL	Bentonite
DEPTH BOTTOM OF SEAL (Ft.)	1.0
DEPTH TOP OF PERVIOUS SECTION (Ft.)	2.0
DIAMETER OF BOREHOLE (In.)	4.0
TYPE OF PERVIOUS SECTION	Machine Slotted
TYPE OF OPENINGS	10 Slot
PERVIOUS SECTION (In.) I.D.: 1	O.D.: 1 1/4"
TYPE OF FILTER PACK AROUND PERVIOUS SECTION	Sand (20-40)
DEPTH BOTTOM OF PERVIOUS SECTION (Ft.)	11.0
DEPTH BOTTOM OF FILTER PACK (Ft.)	11.5
TYPE OF BACKFILL BELOW FILTER PACK	Natural Collapse
END OF BORING (Ft.)	12.0

GENERAL NOTE:

1. Entry of 0.00 for Ground Elevation, Elev. Top of Riser Pipe & Elev. Top of Protective Casing Indicates that Surveyed Ground Elevation Not Available.

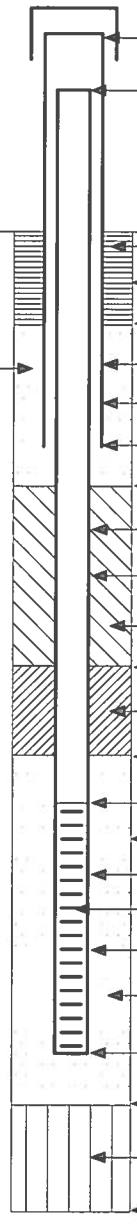
OVERBURDEN MONITORING WELL CONSTRUCTION LOG **TETRA TECH NUS, INC.**

PROJECT NAME: NASB-ONFF Site Assesment
PROJECT NO: 112G02063
PROJECT LOCATION: Form Naval Air Station Brunswick
WELL NO: DP-28 (Temp Well)
CLIENT: Navy
BORING NO: DP-28
CONTRACTOR: MAI
DRILLER: S. Brown
BORING LOCATION:
LOGGED BY: B. Geringer
DATE: 07/01/11
389411.31
CHECKED BY: C. Ruce
DATE: 07/08/11
3016497.08

ELEVATION TOP OF PROTECTIVE CASING: N/A

ELEVATION TOP OF RISER PIPE: 76.33

GROUND ELEVATION: 72.87



SAND DRAIN LAYER

LENGTH OF PROTECTIVE CASING ABOVE GROUND SURFACE (Ft.)	N/A
LENGTH OF RISER PIPE ABOVE GROUND SURFACE (Ft.)	3.46
TYPE OF SURFACE SEAL	Bentonite
DIA. SURFACE SEAL BGS (In.)	N/A
DEPTH TO BOTTOM OF SURFACE SEAL (Ft.)	
I.D. OF PROTECTIVE CASING (In.)	
TYPE OF PROTECTIVE CASING	
DEPTH BOTTOM OF PROTECTIVE CASING (Ft.)	
DEPTH BOTTOM OF DRAIN LAYER (Ft.)	
RISER PIPE (In.) I.D.: 1	O.D.: 1 1/4"
TYPE OF RISER PIPE	Sch 40 PVC
TYPE OF BACKFILL AROUND RISER PIPE	Bentonite
DEPTH TOP OF SEAL (Ft.)	~~0.5~~ 0.0
TYPE OF SEAL	Bentonite
DEPTH BOTTOM OF SEAL (Ft.)	0.5'
DEPTH TOP OF PERVIOUS SECTION (Ft.)	1.5
DIAMETER OF BOREHOLE (In.)	4.0
TYPE OF PERVIOUS SECTION	Machine Slotted
TYPE OF OPENINGS	10 Slot
PERVIOUS SECTION (In.) I.D.: 1	O.D.: 1 1/4"
TYPE OF FILTER PACK AROUND PERVIOUS SECTION	Sand (20-40)
DEPTH BOTTOM OF PERVIOUS SECTION (Ft.)	11.5
DEPTH BOTTOM OF FILTER PACK (Ft.)	12.5
TYPE OF BACKFILL BELOW FILTER PACK	Natural Collapse
END OF BORING (Ft.)	16.0

GENERAL NOTE:

1. Entry of 0.00 for Ground Elevation, Elev. Top of Riser Pipe & Elev. Top of Protective Casing Indicates that Surveyed Ground Elevation Not Available.

OVERBURDEN MONITORING WELL CONSTRUCTION LOG — **TETRA TECH NUS, INC.**

PROJECT NAME:	NASB- ONFF- Site Assessment	PROJECT NO:	112G02063
PROJECT LOCATION:	Former Naval Air Station Brunswick	WELL NO:	DP-30 (Temp well)
CLIENT:	Navy	BORING NO:	DP-30
CONTRACTOR:	MAI	DRILLER:	S. Brown
LOGGED BY:	B Geringer	DATE:	07/01/11
CHECKED BY:	C. Race	DATE:	07/08/11

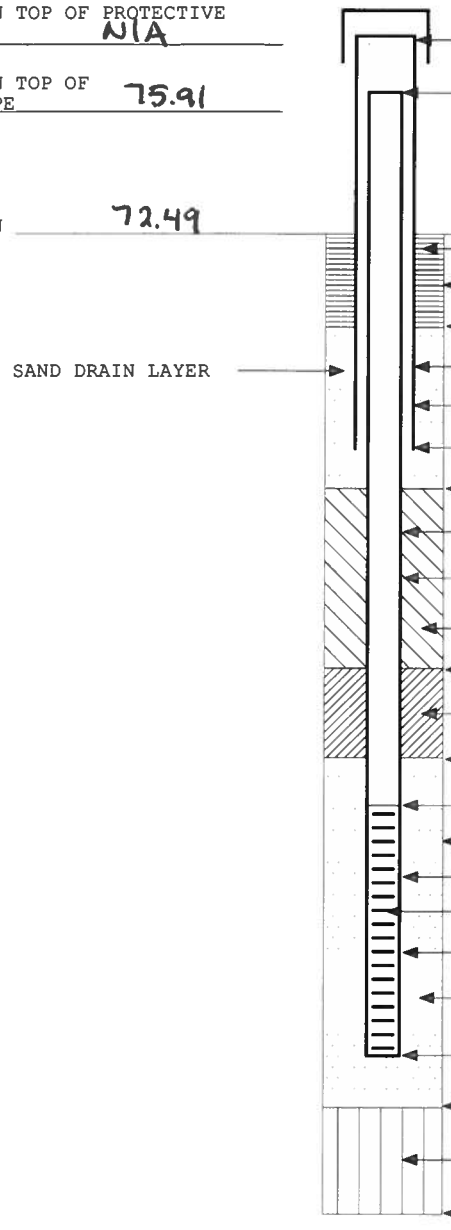
BORING LOCATION: 389302.48 / 3016644.48

PAGE: 1 OF 1

ELEVATION TOP OF PROTECTIVE CASING: N/A

ELEVATION TOP OF RISER PIPE: 75.91

GROUND ELEVATION: 72.49



LENGTH OF PROTECTIVE CASING ABOVE GROUND SURFACE (Ft.)	N/A
LENGTH OF RISER PIPE ABOVE GROUND SURFACE (Ft.)	3.42
TYPE OF SURFACE SEAL	Bentonite
DIA. SURFACE SEAL BGS (In.)	N/A
DEPTH TO BOTTOM OF SURFACE SEAL (Ft.)	
I.D. OF PROTECTIVE CASING (In.)	
TYPE OF PROTECTIVE CASING	
DEPTH BOTTOM OF PROTECTIVE CASING (Ft.)	
DEPTH BOTTOM OF DRAIN LAYER (Ft.)	
RISER PIPE (In.) I.D.: 1	O.D.: 1 1/4
TYPE OF RISER PIPE	Sch. 40 PVC
TYPE OF BACKFILL AROUND RISER PIPE	Bentonite
DEPTH TOP OF SEAL (Ft.)	0.0
TYPE OF SEAL	Bentonite
DEPTH BOTTOM OF SEAL (Ft.)	1.0
DEPTH TOP OF PERVIOUS SECTION (Ft.)	2.0
DIAMETER OF BOREHOLE (In.)	4.0
TYPE OF PERVIOUS SECTION	Machine Slotted
TYPE OF OPENINGS	10 Slot
PERVIOUS SECTION (In.) I.D.: 1	O.D.: 1 1/4"
TYPE OF FILTER PACK AROUND PERVIOUS SECTION	Sand (20-40)
DEPTH BOTTOM OF PERVIOUS SECTION (Ft.)	8.0
DEPTH BOTTOM OF FILTER PACK (Ft.)	8.0
TYPE OF BACKFILL BELOW FILTER PACK	N/A
END OF BORING (Ft.)	8.2

GENERAL NOTE:

1. Entry of 0.00 for Ground Elevation, Elev. Top of Riser Pipe & Elev. Top of Protective Casing Indicates that Surveyed Ground Elevation Not Available.

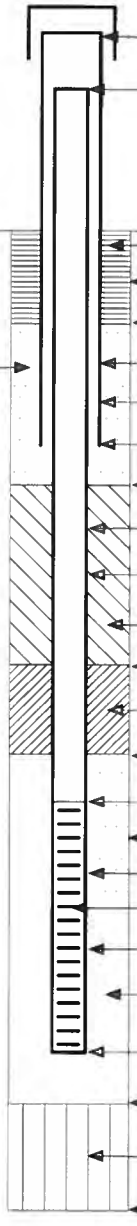
OVERBURDEN MONITORING WELL CONSTRUCTION LOG **TETRA TECH NUS, INC.**

PROJECT NAME: NASB-ONFF-Site Assessment
PROJECT NO: 112G02063
PROJECT LOCATION: Former Naval Air Station Brunswick
WELL NO: DP-37 (Temp well)
CLIENT: Navy
BORING NO: DP-37
CONTRACTOR: MAI
DRILLER: S. Brown
BORING LOCATION:
LOGGED BY: B. Geringer
DATE: 07/05/11
389221.67
CHECKED BY: C. Race
DATE: 07/08/11
3016822.70
PAGE: 1 OF 1

ELEVATION TOP OF PROTECTIVE CASING: N/A

ELEVATION TOP OF RISER PIPE: 74.98

GROUND ELEVATION: 72.14



LENGTH OF PROTECTIVE CASING ABOVE GROUND SURFACE (Ft.)	N/A
LENGTH OF RISER PIPE ABOVE GROUND SURFACE (Ft.)	2.84
TYPE OF SURFACE SEAL	Bentonite
DIA. SURFACE SEAL BGS (In.)	N/A
DEPTH TO BOTTOM OF SURFACE SEAL (Ft.)	
I.D. OF PROTECTIVE CASING (In.)	
TYPE OF PROTECTIVE CASING	
DEPTH BOTTOM OF PROTECTIVE CASING (Ft.)	
DEPTH BOTTOM OF DRAIN LAYER (Ft.)	
RISER PIPE (In.) I.D.: 1	O.D.: 1 1/4"
TYPE OF RISER PIPE	Sch. 40 PVC
TYPE OF BACKFILL AROUND RISER PIPE	Bentonite
DEPTH TOP OF SEAL (Ft.)	0.0
TYPE OF SEAL	Bentonite
DEPTH BOTTOM OF SEAL (Ft.)	2.5
DEPTH TOP OF PERVIOUS SECTION (Ft.)	3.5
DIAMETER OF BOREHOLE (In.)	4.0
TYPE OF PERVIOUS SECTION	Machine Slotted
TYPE OF OPENINGS	10 slot
PERVIOUS SECTION (In.) I.D.: 1	O.D.: 1 1/4"
TYPE OF FILTER PACK AROUND PERVIOUS SECTION	Sand (20-40)
DEPTH BOTTOM OF PERVIOUS SECTION (Ft.)	~~13.5~~ 9.5
DEPTH BOTTOM OF FILTER PACK (Ft.)	10.0
TYPE OF BACKFILL BELOW FILTER PACK	Natural Collapse
END OF BORING (Ft.)	14.0

GENERAL NOTE:

1. Entry of 0.00 for Ground Elevation, Elev. Top of Riser Pipe & Elev. Top of Protective Casing Indicates that Surveyed Ground Elevation Not Available.

OVERBURDEN MONITORING WELL CONSTRUCTION LOG — **TETRA TECH NUS, INC.**

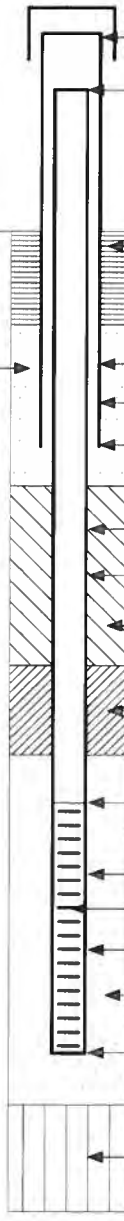
PROJECT NAME: NASB-ONFF- Site Assesment
PROJECT NO: 112G02063
PROJECT LOCATION: Former Naval Air Station Brunswick
WELL NO: DP-39 (Temp Well)
CLIENT: Navy
BORING NO: DP-39
CONTRACTOR: MAI
DRILLER: S. Brown
BORING LOCATION:
LOGGED BY: B. Geiinger
DATE: 6/29/11
388766.08
CHECKED BY: C. Race
DATE: 07/08/11
30/6258.44

PAGE: 1 OF 1

ELEVATION TOP OF ~~PROTECTIVE~~ OUTER CASING 71.34

ELEVATION TOP OF RISER PIPE 71.10

GROUND ELEVATION 71.27



SAND DRAIN LAYER

LENGTH OF PROTECTIVE CASING ABOVE GROUND SURFACE (Ft.)	N/A
~~LENGTH OF RISER PIPE ABOVE GROUND SURFACE (Ft.)~~ ~~BG~~ Depth of Riser below ground (Ft)	0.17
TYPE OF SURFACE SEAL	N/A
DIA. SURFACE SEAL BGS (In.)	
DEPTH TO BOTTOM OF SURFACE SEAL (Ft.)	
I.D. OF PROTECTIVE CASING (In.)	
TYPE OF PROTECTIVE CASING	
DEPTH BOTTOM OF PROTECTIVE CASING (Ft.)	
DEPTH BOTTOM OF DRAIN LAYER (Ft.)	
RISER PIPE (In.) I.D.: 1.0	O.D.: 1 1/4"
TYPE OF RISER PIPE	Schd 40 PVC
TYPE OF BACKFILL AROUND RISER PIPE	Bentonite
DEPTH TOP OF SEAL (Ft.)	Surface
TYPE OF SEAL	Bentonite
DEPTH BOTTOM OF SEAL (Ft.)	1.0
DEPTH TOP OF PERVIOUS SECTION (Ft.)	2.0
DIAMETER OF BOREHOLE (In.)	4.0
TYPE OF PERVIOUS SECTION	Machine Slotted
TYPE OF OPENINGS	10 Slot
PERVIOUS SECTION (In.) I.D.: 1.0	O.D.: 1 1/4"
TYPE OF FILTER PACK AROUND PERVIOUS SECTION	Sand
DEPTH BOTTOM OF PERVIOUS SECTION (Ft.)	12.0
DEPTH BOTTOM OF FILTER PACK (Ft.)	13.0
TYPE OF BACKFILL BELOW FILTER PACK	Natural Collapse
END OF BORING (Ft.)	16.0

GENERAL NOTE:

1. Entry of 0.00 for Ground Elevation, Elev. Top of Riser Pipe & Elev. Top of Protective Casing Indicates that Surveyed Ground Elevation Not Available.

OVERBURDEN MONITORING WELL CONSTRUCTION LOG — **TETRA TECH NUS, INC.**

PROJECT NAME:	NASB-ONFF Site Assessment	PROJECT NO:	112G02063
PROJECT LOCATION:	Former Naval Air Station Brunswick	WELL NO:	DP-42 (Temp Well)
CLIENT:	Navy	BORING NO:	DP-42
CONTRACTOR:	MAI	DRILLER:	S. Brown
LOGGED BY:	B. Geringer	DATE:	6/30/11
CHECKED BY:	C. Rice	DATE:	07/08/11

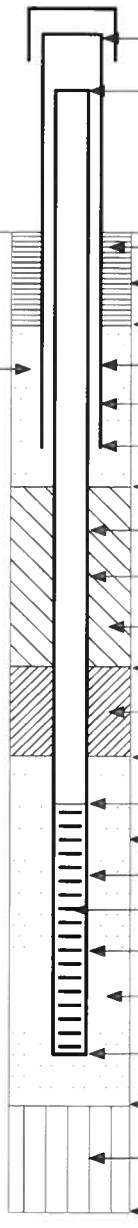
BORING LOCATION: 388933.92 / 3016097.67

PAGE: 1 OF 1

ELEVATION TOP OF PROTECTIVE CASING: N/A

ELEVATION TOP OF RISER PIPE: 75.12

GROUND ELEVATION: 72.10



LENGTH OF PROTECTIVE CASING ABOVE GROUND SURFACE (Ft.)	N/A
LENGTH OF RISER PIPE ABOVE GROUND SURFACE (Ft.)	3.02
TYPE OF SURFACE SEAL	N/A
DIA. SURFACE SEAL BGS (In.)	
DEPTH TO BOTTOM OF SURFACE SEAL (Ft.)	
I.D. OF PROTECTIVE CASING (In.)	
TYPE OF PROTECTIVE CASING	
DEPTH BOTTOM OF PROTECTIVE CASING (Ft.)	
DEPTH BOTTOM OF DRAIN LAYER (Ft.)	
RISER PIPE (In.) I.D.: 1	O.D.: 1 1/4"
TYPE OF RISER PIPE	Sch 40 PVC
TYPE OF BACKFILL AROUND RISER PIPE	Bentonite
DEPTH TOP OF SEAL (Ft.)	0.0
TYPE OF SEAL	Bentonite
DEPTH BOTTOM OF SEAL (Ft.)	1.0
DEPTH TOP OF PERVIOUS SECTION (Ft.)	2.0
DIAMETER OF BOREHOLE (In.)	4.0
TYPE OF PERVIOUS SECTION	Machine Slotted
TYPE OF OPENINGS	10 Slot
PERVIOUS SECTION (In.) I.D.: 1"	O.D.: 1 1/4"
TYPE OF FILTER PACK AROUND PERVIOUS SECTION	Sand (20-40)
DEPTH BOTTOM OF PERVIOUS SECTION (Ft.)	12.0
DEPTH BOTTOM OF FILTER PACK (Ft.)	13.0
TYPE OF BACKFILL BELOW FILTER PACK	Natural Collapse
END OF BORING (Ft.)	240

GENERAL NOTE:

1. Entry of 0.00 for Ground Elevation, Elev. Top of Riser Pipe & Elev. Top of Protective Casing Indicates that Surveyed Ground Elevation Not Available.

OVERBURDEN MONITORING WELL CONSTRUCTION LOG — **TETRA TECH NUS, INC.**

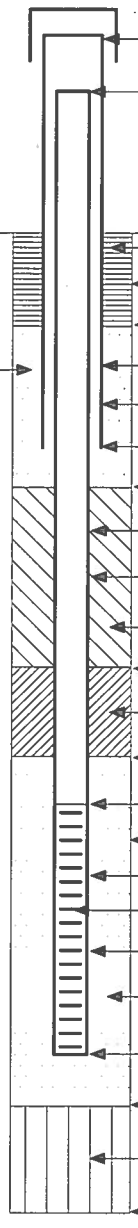
PROJECT NAME: NASB-ONFF- Site Assessment
PROJECT NO: 112G02063
PROJECT LOCATION: Former Naval Air Station Brunswick
WELL NO: DP-43 (Temp Well)
CLIENT: Navy
BORING NO: DP-43
CONTRACTOR: MAI
DRILLER: S. Brown
BORING LOCATION:
LOGGED BY: B. Geringer
DATE: 07/06/11
388938.57
CHECKED BY: C. Rocco
DATE: 07/08/11
3015869.92

PAGE: 1 OF 1

ELEVATION TOP OF PROTECTIVE CASING

ELEVATION TOP OF RISER PIPE 74.93

GROUND ELEVATION 75.24



SAND DRAIN LAYER

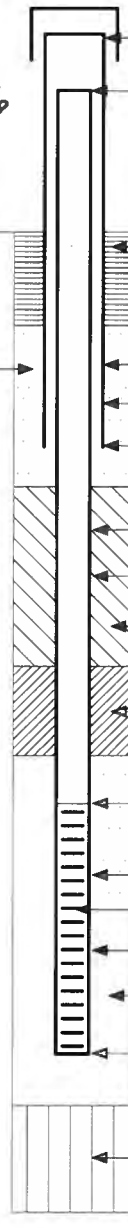
LENGTH OF PROTECTIVE CASING ABOVE GROUND SURFACE (Ft.)	N/A
LENGTH OF RISER PIPE ~~ABOVE~~ Below GROUND SURFACE (Ft.) (measured)	0.31
TYPE OF SURFACE SEAL	N/A
DIA. SURFACE SEAL BGS (In.)	
DEPTH TO BOTTOM OF SURFACE SEAL (Ft.)	
I.D. OF PROTECTIVE CASING (In.)	
TYPE OF PROTECTIVE CASING	
DEPTH BOTTOM OF PROTECTIVE CASING (Ft.)	
DEPTH BOTTOM OF DRAIN LAYER (Ft.)	1.0
RISER PIPE (In.) I.D.: 1" O.D.: 1 1/4"	
TYPE OF RISER PIPE	Sch 40 PVC
TYPE OF BACKFILL AROUND RISER PIPE	Sand / Bentonite
DEPTH TOP OF SEAL (Ft.)	1.0
TYPE OF SEAL	Bentonite
DEPTH BOTTOM OF SEAL (Ft.)	2.0
DEPTH TOP OF PERVIOUS SECTION (Ft.)	3.0
DIAMETER OF BOREHOLE (In.)	4.0
TYPE OF PERVIOUS SECTION	Machine slotted
TYPE OF OPENINGS	10 slot
PERVIOUS SECTION (In.) I.D.: 1 O.D.: 1 1/4"	
TYPE OF FILTER PACK AROUND PERVIOUS SECTION	Sand (20-40)
DEPTH BOTTOM OF PERVIOUS SECTION (Ft.)	13.0
DEPTH BOTTOM OF FILTER PACK (Ft.)	14.0
TYPE OF BACKFILL BELOW FILTER PACK	Natural Collapse
END OF BORING (Ft.)	18.0

GENERAL NOTE:

1. Entry of 0.00 for Ground Elevation, Elev. Top of Riser Pipe & Elev. Top of Protective Casing Indicates that Surveyed Ground Elevation Not Available.

OVERBURDEN MONITORING WELL CONSTRUCTION LOG — **TETRA TECH NUS, INC.**

PROJECT NAME: NASB-ONFF Site Assessment
PROJECT NO: 112G02063
PROJECT LOCATION: Former Naval Air Station Brunswick
WELL NO: DP-44 (Temp Well)
CLIENT: Navy
BORING NO: DP-44
CONTRACTOR: MAI
DRILLER: S. Brown
BORING LOCATION:
LOGGED BY: B. Geringer
DATE: 07/06/11
BG ~~388784.70~~ 388812.72
CHECKED BY: C. Race
DATE: 07/08/11
~~3015856.~~ 3015922.97
PAGE: 1 OF 1



ELEVATION TOP OF PROTECTIVE CASING	
ELEVATION TOP OF RISER PIPE	73.76
GROUND ELEVATION	74.09
LENGTH OF PROTECTIVE CASING ABOVE GROUND SURFACE (Ft.)	N/A
LENGTH OF RISER PIPE ~~ABOVE~~ Below GROUND SURFACE (Ft.)	0.33 (Measured)
TYPE OF SURFACE SEAL	N/A
DIA. SURFACE SEAL BGS (In.)	
DEPTH TO BOTTOM OF SURFACE SEAL (Ft.)	
I.D. OF PROTECTIVE CASING (In.)	
TYPE OF PROTECTIVE CASING	
DEPTH BOTTOM OF PROTECTIVE CASING (Ft.)	
DEPTH BOTTOM OF DRAIN LAYER (Ft.)	
RISER PIPE (In.) I.D.: 1" O.D.:	1 1/4"
TYPE OF RISER PIPE	Sch 40 PVC
TYPE OF BACKFILL AROUND RISER PIPE	Bentonite
DEPTH TOP OF SEAL (Ft.)	0.5
TYPE OF SEAL	Bentonite
DEPTH BOTTOM OF SEAL (Ft.)	1.0
DEPTH TOP OF PERVIOUS SECTION (Ft.)	2.0
DIAMETER OF BOREHOLE (In.)	4.0
TYPE OF PERVIOUS SECTION	Machine Slotted
TYPE OF OPENINGS	10 Slot
PERVIOUS SECTION (In.) I.D.: 1 O.D.:	1 1/4"
TYPE OF FILTER PACK AROUND PERVIOUS SECTION	Sand (20-40)
DEPTH BOTTOM OF PERVIOUS SECTION (Ft.)	12.0
DEPTH BOTTOM OF FILTER PACK (Ft.)	13.0
TYPE OF BACKFILL BELOW FILTER PACK	Natural Collapse
END OF BORING (Ft.)	20.0

GENERAL NOTE:

1. Entry of 0.00 for Ground Elevation, Elev. Top of Riser Pipe & Elev. Top of Protective Casing Indicates that Surveyed Ground Elevation Not Available.

OVERBURDEN MONITORING WELL CONSTRUCTION LOG — **TETRA TECH NUS, INC.**

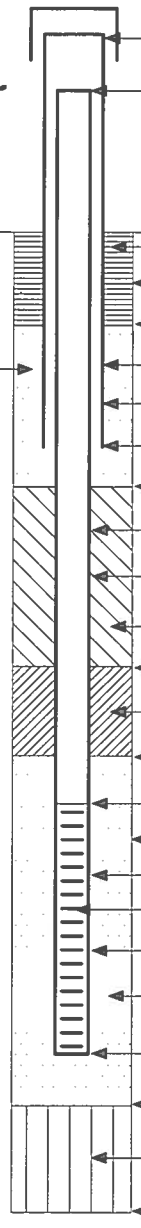
PROJECT NAME: NASB - ONFF. Site Assessment
PROJECT NO: 112G02063
PROJECT LOCATION: Former Naval Air Station Brunswick
WELL NO: DP-45 (Temp well)
CLIENT: Navy
BORING NO: DP-45
CONTRACTOR: MAI
DRILLER: S. Brown
BORING LOCATION:
LOGGED BY: B. Geringer
DATE: 07/06/11
388784.70
CHECKED BY: C. Race
DATE: 07/08/11
3015856.71

PAGE: 1 OF 1

ELEVATION TOP OF PROTECTIVE CASING _____

ELEVATION TOP OF RISER PIPE 75.67

GROUND ELEVATION 75.98



LENGTH OF PROTECTIVE CASING ABOVE GROUND SURFACE (Ft.)	N/A
LENGTH OF RISER PIPE ~~ABOVE~~ Below GROUND SURFACE (Ft.) (measured)	0.31
TYPE OF SURFACE SEAL	N/A
DIA. SURFACE SEAL BGS (In.)	
DEPTH TO BOTTOM OF SURFACE SEAL (Ft.)	
I.D. OF PROTECTIVE CASING (In.)	
TYPE OF PROTECTIVE CASING	
DEPTH BOTTOM OF PROTECTIVE CASING (Ft.)	
DEPTH BOTTOM OF DRAIN LAYER (Ft.)	✓
RISER PIPE (In.) I.D.: 1	O.D.: 1 1/4"
TYPE OF RISER PIPE	Sch. 40 PVC
TYPE OF BACKFILL AROUND RISER PIPE	Bentonite/Sand
DEPTH TOP OF SEAL (Ft.)	1.0
TYPE OF SEAL	Bentonite
DEPTH BOTTOM OF SEAL (Ft.)	2.0
DEPTH TOP OF PERVIOUS SECTION (Ft.)	3.0
DIAMETER OF BOREHOLE (In.)	4.0
TYPE OF PERVIOUS SECTION	Machine Slotted
TYPE OF OPENINGS	10 Slot
PERVIOUS SECTION (In.) I.D.: 1	O.D.: 1 1/4"
TYPE OF FILTER PACK AROUND PERVIOUS SECTION	Sand (20-40)
DEPTH BOTTOM OF PERVIOUS SECTION (Ft.)	13.0
DEPTH BOTTOM OF FILTER PACK (Ft.)	14.0
TYPE OF BACKFILL BELOW FILTER PACK	Natural Collapse
END OF BORING (Ft.)	18.0

GENERAL NOTE:

1. Entry of 0.00 for Ground Elevation, Elev. Top of Riser Pipe & Elev. Top of Protective Casing Indicates that Surveyed Ground Elevation Not Available.

A-3 WELL DEVELOPMENT LOGS

TETRA TECH NUS, INC.

WELL DEVELOPMENT DATA SHEET

Well No.: DP-01

PROJECT: NASB-Old Navy Fuel Farm Site Assesment
PROJECT NO.: 112G02063 / 0000.2530
SAMPLE ID: /

DATE: 6/30/2011
WEATHER: 80 - overcast, breezy
PERSONNEL: A. Carey

Well Screen Depth: 2 / 10 ft. bgs
H&S Monitoring Instrument Reading PID "A"

Pump Type/Material: peristaltic
Pump Intake Depth: varies

Total Purge Volume = _____(gal)
Data Recorded By: A. Carey

Time	Water Level ft below top PVC	Volume mL	Flow Rate mL/min	Temp °C	pH	Sp Cond mS/cm	DO mg/L	Turbidity NTU	Comments
1640	~5.03 aft start of pump								pump on
1645	5.03	<0.5g	400	13.2	6.14	0.164	0.41	796	
1700	5.04	>1g	400	13.2	5.90	0.163	0.33	23.8	
1715	5.04	2.2g	400	12.9	6.12	0.1533	0.29	20.3	sulphur odor
1730	5.04	~3.8g	400	13.0	6.06	0.1653	0.35	11.29	
1735	5.04	4g	400	13.1	6.06	0.1647	0.34	9.18	
1740	5.04	4.5	400	13.1	6.06	0.1646	0.32	9.75	
1745	5.04	~5	400	13.1	6.07	0.1645	0.30	9.50	

TtNUS Form 0013

TETRA TECH NUS, INC.

WELL DEVELOPMENT DATA SHEET

Well No.: DP-07

PROJECT: NASB-Old Navy Fuel Farm Site Assesment
PROJECT NO.: 112G02063 / 0000.2530
SAMPLE ID: Development only

DATE: 7/7/11
WEATHER: sun, few clouds, 80's, breeze
PERSONNEL: A. Carex

Well Screen Depth: 4 / 14 ft. bgs
H&S Monitoring Instrument Reading PID 'A'

Pump Type/Material: peristaltic
Pump Intake Depth: varies

Total Purge Volume = _____ (gal)
Data Recorded By: 7/7/11

Time	Water Level ft below top PVC	Volume mL	Flow Rate mL/min	Temp °C	pH	Sp Cond mS/cm	DO mg/L	Turbidity NTU	Comments
0912	5.65								pump on
0922	5.76	0.59	400	13.2	6.59	239.7	4.3	out of range	soft bottom
0940	5.78	1.5	400	12.7	6.28	205.9	0.22	1869	hard bottom - removed a lot of fine sand
0952	5.78	3	450	12.6	6.38	203.7	0.48	855	
1006	5.78	4.5	450	13.2	6.46	194.0	0.17	97.8	
1018	5.79	5.25	450	12.7	6.46	191.9	0.15	157	
1034	5.79	6.5	450	12.8	6.52	191.8	0.16	105.4	
1051	5.79	8	450	12.6	6.49	185.4	0.15	85.9	
1112	5.79	10.5	450	12.8	6.56	183.6	0.14	81.8	pump off 2 hr limit reached

TtNUS Form 0013

Page 1 of 1

FTD = 5.7 in well

TETRA TECH NUS, INC.

WELL DEVELOPMENT DATA SHEET

Well No.: DP-12

PROJECT: NASB-Old Navy Fuel Farm Site Assesment
PROJECT NO.: 112G02063 / 0000.2530
SAMPLE ID: N/A

Initial WL: 6.07'
TD(initial): 14.14'
TD(Final): 14.49
Stick up height: 3.10'

DATE: 07/07/11
WEATHER: Pt'ly Cloudy / 80
PERSONNEL: B. Geringer / A. Carey

Well Screen Depth: 2 / 12 ft. bgs
H&S Monitoring Instrument Reading 6.0

Pump Type/Material: Peri Pump / Teflon
Pump Intake Depth: Varies

Total Purge Volume = ≈ 4.5 (gal)
Data Recorded By: B. Geringer

Time	Water Level ft below top PVC	Volume mL	Flow Rate mL/min	Temp °C	pH	Sp Cond mS/cm	DO mg/L	Turbidity NTU	Comments
1335	Start Pump	Adj flow							Gray/Silty
1345	6.09	4000	400	14.7	6.20	231.1	1.37	1110	Brown/cloudy
1355	6.09	8000	400	13.9	6.00	212.0	0.28	101.2	Yellowish/Cloudy
1405	6.09	12000	400	14.0	6.00	212.4	0.19	24.3	Sl. yellow/clear
1415	6.09	16000	400	13.9	6.01	211.0	0.17	14.3	↓
1425	6.09	20000	400	14.0	6.00	210.2	0.15	13.5	↓
1435	6.09	24000	4000	14.1	6.00	212.1	0.14	10.30	Sl. yellow/clear
1440	6.09	26000	400	14.0	6.01	212.1	0.14	9.90	↓
	Reached Well Dev	Criteria							

Petroleum odor

TtNUS Form 0013

Page ___ of ___

TETRA TECH NUS, INC.

WELL DEVELOPMENT DATA SHEET

Well No.: ONFF-DP17

PROJECT: NASB-Old Navy Fuel Farm Site Assesment
PROJECT NO.: 112G02063 / 0000.2530
SAMPLE ID: N/A

Initial WL: 9.06'
TD(Initial): 16.67'
TD(Final): 16.83'
Height of PVC: 3.56'

DATE: 07/07/11
WEATHER: Pthly Cloudy / 80
PERSONNEL: B. Geringer / A. Carey

Well Screen Depth: 4 / 14 ft. bgs
H&S Monitoring Instrument Reading 0.3

Pump Type/Material: Per. / Teflon
Pump Intake Depth: Varies

Total Purge Volume = ≈3.5 (gal)
Data Recorded By: B. Geringer

Time	Water Level ft below top PVC	Volume mL	Flow Rate mL/min	Temp °C	pH	Sp Cond mS/cm	DO mg/L	Turbidity NTU	Comments
1200	Start Pump	Adjust	Flow						Orange-Silty
1210	9.14	4000	400	12.9	6.11	340.1	1.31	150	Cloudy Petroleum odor
1220	9.14	8000	400	12.6	6.05	352.4	0.26	34.1	Yellowish color / Clear
1230	9.14	12000	400	12.2	6.15	344.2	0.17	11.08	" "
1240	9.14	16000	400	11.9	6.06	327.0	0.14	5.98	
1250	9.14	20000	400	12.2	6.11	322.2	0.12	6.56	
	Finished Well	Development							

TtNUS Form 0013

Spivey Surm @ Cowash
Nut

TETRA TECH NUS, INC.

WELL DEVELOPMENT DATA SHEET

Well No.: ONFF-DP-20

PROJECT: NASB-Old Navy Fuel Farm Site Assesment
PROJECT NO.: 112G02063 / 0000.2530
SAMPLE ID: N/A

Initial WL: 7.68
TD (Initial): 14.48
TD (Final): 14.55
Stick up height: 2.03

DATE: 07/07/11
WEATHER: Ptly Cloudy / 80
PERSONNEL: B. Geringer / A. Carey

Well Screen Depth: 2 / 12 ft. bgs
H&S Monitoring Instrument Reading 0.5

Pump Type/Material: Peri / Teflon
Pump Intake Depth: Varies

Total Purge Volume = ≥ 3.5 (gal)
Data Recorded By: B. Geringer

Time	Water Level ft below top PVC	Volume mL	Flow Rate mL/min	Temp °C	pH	Sp Cond mS/cm	DO mg/L	Turbidity NTU	Comments
1045	Start Pump - Adj.	Flow rate	400						Orange Silt
1055	7.81	4000	400	12.8	6.26	212.6	0.70	15.4	Clear/Colorless -Slight Petro odor
1105	7.82	8000	400	12.4	6.07	219.8	0.27	8.23	↓
1115	7.82	12000	400	12.5	6.12	224.0	0.21	3.37	↓
1125	7.82	16000	400	12.6	6.22	225.9	0.19	2.20	↓
	Finished well development								

TtNUS Form 0013

Page ___ of ___

TETRA TECH NUS, INC.

WELL DEVELOPMENT DATA SHEET

Well No.: DP-22

PROJECT: NASB-Old Navy Fuel Farm Site Assesment
PROJECT NO.: 112G02063 / 0000.2530
SAMPLE ID: Development only

DATE: 7/7/11
WEATHER: sunny, few clouds, breezy, 80's
PERSONNEL: A. Carey

Well Screen Depth: ? / ? ft. bgs
H&S Monitoring Instrument Reading PID 0 ppm

Pump Type/Material: Peristaltic
Pump Intake Depth: varies

Total Purge Volume = _____ (gal)
Data Recorded By: _____

Time	Water Level ft below top PVC	Volume mL	Flow Rate mL/min	Temp °C	pH	Sp Cond mS/cm	DO mg/L	Turbidity NTU	Comments
1348	7.44								pump on
1358	7.56	~1.5g	500	12.2	6.55	204.7	0.62	63.1	
1408	7.56	~3g	500	12.1	6.55	212.7	0.22	17.6	
1421	7.56	~3.75g	500	12.1	6.58	214.9	0.17	10.13	
1426	7.56	~4.5g	500	12.1	6.61	215.5	0.17	8.21	
1431	7.56	~5	500	12.2	6.55	216.1	0.17	7.88	pump off

TtNUS Form 0013

TETRA TECH NUS, INC.

WELL DEVELOPMENT DATA SHEET

Well No.: ONFF-DP24

PROJECT: NASB-Old Navy Fuel Farm Site Assesment
PROJECT NO.: 112G02063 / 0000.2530
SAMPLE ID: N/A

Initial WL: 9.08
TD (initial): 13.68
TD (Final): 13.71
Stick up height: 2.72

DATE: 07/08/11
WEATHER: Pth cloudy, 70's
PERSONNEL: B. Geringer / A. Carey

Well Screen Depth: 2 / 11 ft. bgs
H&S Monitoring Instrument Reading 0.4

Pump Type/Material: Peri Pump / Teflon
Pump Intake Depth: Varies

Total Purge Volume = ≈3.0 (gal)
Data Recorded By: B. Geringer

Time	Water Level ft below top PVC	Volume mL	Flow Rate mL/min	Temp °C	pH	Sp Cond mS/cm	DO mg/L	Turbidity NTU	Comments
0755	Start Pump-	Adjust	Flow						Brown/Silty
0805	9.22	4000	400	12.2	6.87	402.5	1.75	50.5	Sl. Cloudy
0815	9.22	8000	400	12.0	6.18	406.9	0.39	33.4	↓
0825	9.22	12000	400	11.9	6.22	409.1	0.26	8.72	Clear/Colorless
0835	9.22	16000	400	11.9	6.21	410.5	0.19	5.64	↓
	Reach Development	Criteria							

Slight Petro odor

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TETRA TECH NUS, INC.

WELL DEVELOPMENT DATA SHEET

Well No.: ONFF-DP-28

PROJECT: NASB-Old Navy Fuel Farm Site Assesment
PROJECT NO.: 112G02063 / 0000.2530
SAMPLE ID: N/A

Initial WL: 6.62'
TD(Initial): 14.42'
TD(Final): 14.54'
Stickup ht: 3.27'

DATE: 07/07/11
WEATHER: Ptly Cloudy / 80
PERSONNEL: B. Geringer / A. Carey

Well Screen Depth: 1.5 / 11.5 ft. bgs
H&S Monitoring Instrument Reading 0.1

Pump Type/Material: Peristaltic Pump / Teflon
Pump Intake Depth: Varies

Total Purge Volume = ≈4.5 (gal)
Data Recorded By: B. Geringer

Time	Water Level ft below top PVC	Volume mL	Flow Rate mL/min	Temp °C	pH	Sp Cond mS/cm	DO mg/L	Turbidity NTU	Comments
0925	Start Pump	Adjust flow rate							Very Turbid / Brown
~~0935~~ 940	6.75	7500	500	12.8	6.13	131.9	0.60	766	Blown / cloudy
0950	6.73	15000	400	13.3	6.14	139.7	0.34	648	cloudy
1000	6.73	19000	400	13.1	6.14	129.2	0.26	40.4	Clear / colorless
1010	6.73	23000	400	13.1	6.11	132.1	0.24	20.8	
1020	6.73	27000	400	13.2	6.07	132.7	0.21	11.64	
1025	6.73	31000	400	13.1	6.09	132.2	0.18	9.02	
	Reach Well-Development Criteria								

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Added Approx 6 Gallons of Water to well - Evacuated

TETRA TECH NUS, INC.

WELL DEVELOPMENT DATA SHEET

Well No.: DP-30

PROJECT: NASB-Old Navy Fuel Farm Site Assesment
PROJECT NO.: 112G02063 / 0000.2530
SAMPLE ID: N/A

DATE: 07/08/11
WEATHER: Pth Cloudy / 70s
PERSONNEL: B. Geringer / A. Carey

Well Screen Depth: 2 / 8 ft. bgs
H&S Monitoring Instrument Reading 0.0

Pump Type/Material: Peri Pump / Teflon
Pump Intake Depth: Bottom

Total Purge Volume = _____ (gal)
Data Recorded By: B. Geringer

Time	Water Level ft below top PVC	Volume mL	Flow Rate mL/min	Temp °C	pH	Sp Cond mS/cm	DO mg/L	Turbidity NTU	Comments
1025	—	~~150~~	Start Pump						
1030	— *	150							Brown/Cloudy
1040	Can't Gauge	500	—	21.6	5.94	129.8	6.65	125	Cloudy
1050	" "	800	—	21.7	5.82	181.0	6.62	71.2	Cloudy
1100		930	10-~~15~~ 15	22.2	5.23	184.1	6.47	65.5	~~A~~ Little Cloudy
1110		990	≈ 6	22.7	5.86	176.2	6.12	60.3	
1120		1060	≈ 7	23.1	5.88	152.5	5.83	55.1	
	Stopped during								

TtNUS Form 0013

Page ___ of ___

* = Start Filling Flow through cell; Not Continuous Flow, lots of Air.

TETRA TECH NUS, INC.

WELL DEVELOPMENT DATA SHEET

Well No.: ONFF-DP37

PROJECT: NASB-Old Navy Fuel Farm Site Assesment
PROJECT NO.: 112G02063 / 0000.2530
SAMPLE ID: N/A

Initial WL: 9.21 @1500
ID (initial): 12.09
TD (Final): 12.10
Stickup height:

DATE: 07/07/11
WEATHER: Pthly Cloudy / 80
PERSONNEL: B. Geringer

Well Screen Depth: 3.5 / 9.5 ft. bgs
H&S Monitoring Instrument Reading 0.2

Pump Type/Material: Peri Pump / Teflon
Pump Intake Depth: Varies

Total Purge Volume = ≈ 2.5 (gal)
Data Recorded By: B. Geringer

Time	Water Level ft below top PVC	Volume mL	Flow Rate mL/min	Temp °C	pH	Sp Cond mS/cm	DO mg/L	Turbidity NTU	Comments
1505	Start Pump	Adj. flow							Brown / Silty
1525	9.47	6000	400	13.1	6.67	502.3	0.65	6.06	Clear / colorless ~~[illegible]~~ Petroleum odor
1535	9.47	10000	400	13.0	6.75	502.8	0.18	10.38	↓
1545	9.47	14000	400	13.0	6.69	502.9	0.16	5.30	✓
	Reached well	Development	Criteria						

TtNUS Form 0013

Page ___ of ___

TETRA TECH NUS, INC.

WELL DEVELOPMENT DATA SHEET

Well No.: DP-39

PROJECT: NASB-Old Navy Fuel Farm Site Assesment
PROJECT NO.: 112G02063 / 0000.2530
SAMPLE ID: Development only

DATE: 7/7/11
WEATHER: Sun, few clouds, breeze, ~80°s
PERSONNEL: A. Cary

Well Screen Depth: ? / ? ft. bgs
H&S Monitoring Instrument Reading PID - 0

Pump Type/Material: peristaltic
Pump Intake Depth: varies

Total Purge Volume = _____ (gal)
Data Recorded By: 7/7/11

Time	Water Level ft below top PVC	Volume mL	Flow Rate mL/min	Temp °C	pH	Sp Cond ~~mS~~/cm	DO mg/L	Turbidity NTU	Comments
1133	3.90								pump on
1143	3.99	1 gallon	450	13.5	6.27	161.1	0.76	52.6	
1151	3.99	2 g	450	13.5	6.19	156.8	0.21	13.6	
1202	3.99	3 g	450	13.5	6.30	156.3	0.17	4.81	
1207	3.99	3.5 g	450	13.4	6.22	155.6	0.16	2.64	
12013	3.99	4 g	450	13.3	6.20	155.5	0.17	2.09	
									end purge

TtNUS Form 0013

TETRA TECH NUS, INC.

WELL DEVELOPMENT DATA SHEET

Well No.: DP-42

PROJECT: NASB-Old Navy Fuel Farm Site Assesment
PROJECT NO.: 112G02063 / 0000.2530
SAMPLE ID: Development only

DATE: 7/7/11
WEATHER: sun, few clouds, breeze, 80's
PERSONNEL: A. Carey

Well Screen Depth: 2 / 12 ft. bgs
H&S Monitoring Instrument Reading _____

Pump Type/Material: peristaltic
Pump Intake Depth: varies

Total Purge Volume = _____ (gal)
Data Recorded By: _____

Time	Water Level ft below top PVC	Volume mL	Flow Rate mL/min	Temp °C	pH	Sp Cond ~~m~~S/cm	DO mg/L	Turbidity NTU	Comments
1235	6.15								pump on
1248	6.29	1.5 g	450	11.6	6.95	180.7	0.74	24.1	
1258	6.30	2.75 g	450	11.4	5.91	178.2	0.21	12.4	
1303	6.30	3.75 g	450	11.3	5.85	177.8	0.20	5.78	
1308	6.30	4.25	450	11.5	5.87	176.8	0.20	6.68	

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TETRA TECH NUS, INC.

WELL DEVELOPMENT DATA SHEET

Well No.: ONFF-DP43

PROJECT: NASB-Old Navy Fuel Farm Site Assesment
PROJECT NO.: 112G02063 / 0000.2530
SAMPLE ID: N/A

Initial WL: 4.74
TD(initial): 12.71
TD(Final): 12.73
Depth to PVC: 0.31

DATE: 07/08/11
WEATHER: Ptly Cloudy / 70's
PERSONNEL: B. Geringer / A. Carey

Well Screen Depth: 3 / 13 ft. bgs
H&S Monitoring Instrument Reading 0.4

Pump Type/Material: Peri Pump / Teflon
Pump Intake Depth: Varies

Total Purge Volume = ± 3.0 (gal)
Data Recorded By: B. Geringer

Time	Water Level ft below top PVC	Volume mL	Flow Rate mL/min	Temp °C	pH	Sp Cond mS/cm	DO mg/L	Turbidity NTU	Comments
0900	Start Pump -	Adjust	Flow						Brown / Silty
0915	4.89	6000	400	12.7	6.64	304.0	0.86	158	Cloudy
0925	4.87	10000	400	12.6	6.59	330.5	0.52	8.83	Clear / Colorless
0935	4.83	14000	400	12.7	6.60	331.4	0.57	7.16	↓
0945	4.82	18000	400	12.5	6.62	340.8	0.59	3.36	↓
	Reach development	criteria							

very slight Peto odor

TtNUS Form 0013

TETRA TECH NUS, INC.

WELL DEVELOPMENT DATA SHEET

Well No.: DP-44

PROJECT: NASB-Old Navy Fuel Farm Site Assesment
PROJECT NO.: 112G02063 / 0000.2530
SAMPLE ID: development only

DATE: 7/8/11
WEATHER: partly cloudy/sun, 70's, breeze
PERSONNEL: A. Carey

Well Screen Depth: _____ / _____ ft. bgs
H&S Monitoring Instrument Reading PID 11 AU

Pump Type/Material: Peristaltic
Pump Intake Depth: Vane's

Total Purge Volume = _____ (gal)
Data Recorded By: _____

Time	Water Level ft below top PVC	Volume mL	Flow Rate mL/min	Temp °C	pH	Sp Cond µS/cm	DO mg/L	Turbidity NTU	Comments
0757	3.97								pump on
0807	4.16	<1 gallon	400	12.3	6.69	203.5	1.50	50.6	
0820	4.17	~2 gallon	400	12.2	6.14	184.8	0.36	19.4	
0830	4.17	~3 gallon	400	12.1	6.20	177.0	0.35	15.7	
0840	4.17	~4 g	400	12.1	6.19	173.9	0.29	11.4	
0850	4.17	~5 g	400	12.2	6.25	172.4	0.28	15.8	
0855	4.17	~5.5 g	400	12.2	6.24	168.9	0.25	15.7	
0912	4.17	~7 g	400	12.2	6.25	167.1	0.22	14.6	
0922	4.17	7.75 g	400	12.1	6.26	165.1	0.22	12.4	
0932	4.17	8.5 g	400	12.2	6.26	163.9	0.21	13.3	
0942	4.17	10 g	400	12.2	6.28	162.1	0.21	10.5	
0957	4.17	11 g	400	12.2	6.25	160.7	0.19	11.2	two hour develop limit reached

TtNUS Form 0013

TETRA TECH NUS, INC.

WELL DEVELOPMENT DATA SHEET

Well No.: DP-45

PROJECT: NASB-Old Navy Fuel Farm Site Assesment
PROJECT NO.: 112G02063 / 0000.2530
SAMPLE ID: development only

DATE: 7/8/11
WEATHER: overcast, breezy, 70's
PERSONNEL: A. Carey

Well Screen Depth: _____ / _____ ft. bgs
H&S Monitoring Instrument Reading PID "A"

Pump Type/Material: peristaltic
Pump Intake Depth: varied

Total Purge Volume = _____ (gal)
Data Recorded By: _____

Time	Water Level ft below top PVC	Volume mL	Flow Rate mL/min	Temp °C	pH	Sp Cond ~~m~~S/cm	DO mg/L	Turbidity NTU	Comments
1004	5.64								pump on
1025	5.81	2.5 gall.	450	11.5	6.27	119.3	1.03	105.0	
1035	5.81	3 g	450	11.7	5.83	113.8	1.30	6.66	
1040	5.81	3.5 g	450	11.7	5.79	110.7	1.31	4.01	
1045	5.81	5 g	450	11.7	5.81	109.1	1.35	2.47	pump off

TtNUS Form 0013

Page ___ of ___

TETRA TECH NUS, INC.

WELL DEVELOPMENT DATA SHEET

Well No.: PZ-FF01

PROJECT: NASB-Old Navy Fuel Farm Site Assesment
PROJECT NO.: 112G02063 / 0000.2530
SAMPLE ID: N/A

Initial WL: 6.82
Total Depth: (Post Development)

DATE: 6/29/11
WEATHER: Sunny, 80
PERSONNEL: B. Geringer

Well Screen Depth: 6 / 11 ft. bgs
H&S Monitoring Instrument Reading 0.1

Pump Type/Material: Peristaltic / Teflon
Pump Intake Depth: Bottom

Total Purge Volume = ≈ 9.0 (gal)
Data Recorded By: B. Geringer

Time	Water Level ft below top PVC	Volume mL	Flow Rate mL/min	Temp °C	pH	Sp Cond mS/cm	DO mg/L	Turbidity NTU	Comments
1611	Start Pump -	Adjust	Flow Rate						Brown
1620	7.08	≈ 5000	500	11.9	6.13	188.3	0.46	750	↓
1630	7.13	10,000	500	11.1	5.92	200.4	0.51	145	Yellow
1640	7.11	15,000	500	11.0	5.78	161.2	0.44	116	↓
1650	7.11	20,000	500	11.1	5.75	153.8	0.52	87.5	↓
1700	7.11	25,000	500	11.0	5.73	144.8	0.53	72.4	Yellow
1710	7.11	30,000	500	11.1	5.69	138.6	0.22	64.2	Slight Yellow
1720	7.11	35,000	500	11.0	5.64	136.1	0.17	60.4	↓
1730	7.06	39,000	400	11.6	5.65	135.2	0.18	53.0	↓
1740	7.04	43,000	400	11.5	5.66	133.8	0.17	49.2	↓
1750	7.04	47,000	400	11.7	5.64	133.3	0.14	43.0	↓
1800	7.04	51,000	400	11.4	5.63	131.8	0.16	41.3	↓
1810	7.04	55,000	400	11.5	5.63	130.5	0.15	39.9	↓
	Reach Two hour limit								

TtNUS Form 0013

TETRA TECH NUS, INC.

WELL DEVELOPMENT DATA SHEET

Well No.: PZ-FF-02

PROJECT: NASB-Old Navy Fuel Farm Site Assesment
PROJECT NO.: 112G02063 / 0000.2530
SAMPLE ID: X

DATE: 6/29/11
WEATHER: 85, sunny, breezy
PERSONNEL: A. Carey

Well Screen Depth: _____ / _____ ft. bgs
H&S Monitoring Instrument Reading PID

Pump Type/Material: peristaltic
Pump Intake Depth: varies

Total Purge Volume = _____ (gal)
Data Recorded By: A. Carey

Time	Water Level ft below top PVC	Volume mL	Flow Rate mL/min	Temp °C	pH	Sp Cond mS/cm	DO mg/L	Turbidity NTU	Comments
1613	8.41	0							pump on
1618	8.71	<1/2 gallon	400	9.9	6.93	0.143	0.76	752	
1628	8.67	~1 gallon	400	9.9	6.50	0.0921	0.81	179	
1635	8.66	~1.75 g	400	9.9	6.31	0.0804	0.60	185	
1640	8.63	~2 gallon	320	10.5	6.19	0.0743	0.72	36.1	
1646	8.63	~2.5 gallon	320	10.2	6.21	0.0720	1.92	49.3	YSI turned off
1651	8.57	~2.75 g	250	10.6	6.16	0.0709	2.30	43.2	
1656	8.57	<3 g	250	10.8	6.14	0.0710	0.61	37.9	
1701	8.57	~3.25 g	250	10.6	6.16	0.0721	0.64	36.9	
1707	8.57	~3.5 g	200	10.7	6.11	0.0711	0.60	36.2	
1716	8.73	4	400	9.7	6.01	0.0687	0.51	32.6	
1734	8.73	~5	400	9.7	5.95	0.0637	0.52	27.5	
1756	8.74	~6	400	9.8	5.93	0.0622	0.39	24.2	
1803	8.74	~7	400	9.7	5.89	0.0609	0.36	26.2	
1813	8.74	~8	400	9.7	5.87	0.0606	0.35	29.8	

TtNUS Form 0013

Page ___ of ___

TETRA TECH NUS, INC.

WELL DEVELOPMENT DATA SHEET

Well No.: ~~PF-FF03~~ PZ = FF03

PROJECT: NASB-Old Navy Fuel Farm Site Assesment
PROJECT NO.: 112G02063 / 0000.2530
SAMPLE ID:

TD-Pre Development: 14.54
Initial WL: 4.97
TD-Post: 14.54

DATE: 6/30/11
WEATHER: Cloudy, 70
PERSONNEL: B. Geringer

Well Screen Depth: 7 / 12 ft. bgs
H&S Monitoring Instrument Reading 0.0

Pump Type/Material: Peristaltic / Teflon
Pump Intake Depth: Varies

Total Purge Volume = ≈ 4 (gal)
Data Recorded By: B. Geringer

Time	Water Level ft below top PVC	Volume ~~mL~~ mL	Flow Rate mL/min	Temp °C	pH	Sp Cond mS/cm	DO mg/L	Turbidity NTU	Comments
1625	Turn Pump on -	Adjust	Flow Rate	9.9	6.91	137.1	1.72	~~[illegible]~~	Cloudy/Silty
1635	5.13	4k	400					143	Cloudy
1645	5.13	8k	400	9.5	6.07	120.0	0.40	31.1	Clear
1655	5.13	12k	400	9.5	6.06	118.4	0.26	23.1	Clear
1705	5.13	16k	400	9.5	6.03	115.8	0.21	18.1	Clear
1715	5.13	20k	400	9.5	6.01	115.6	0.19	15.2	Clear
1725	5.13	24k	400	9.5	6.02	115.4	0.19	12.5	Clear
1735	5.13	28k	400	9.5	6.00	115.1	0.20	9.8	Clear
	Reach ~~[illegible]~~	Well dev.	Criteria						

TtNUS Form 0013

A-4 LOW-FLOW PURGE DATA SHEETS AND GROUNDWATER SAMPLE LOGS

DP 41,12,7,61

TETRA TECH NUS, INC.

PURGE DATA SHEET - "LOW STRESS" GROUNDWATER

Site Name: NASB – Old Navy Fuel Farm
Sample ID: NASB-ONFF-GW-DP01 -0711

Initial WL: 5.28'
TD : 12.80'
PID = 0.3 PPM

Tetra Tech NUS Charge No. 112G02063 / 0000.2530 Page 1 of 1
QC: _____ (If applicable)

Sample Method: Low Stress (flow) with Peristaltic or Bladder Pump
Depth Sampled: 6' ft bgs Screen Int. Depth 2-10 ft bgs
Sample Date & Time: 07 / 11 /2011 1405 hours — (Dup Time)
Sampler(s): B. Geringer

Field Instrument Group A / B / C / D (refer to site logbook for details)

Sample Analyses:
1. VPH 2. EPH (Also refer to separate sample log sheet)
3. Methane

Clock Time 24hr	Water Depth below MP ft	Pump Dial 1	Purge Rate ml/min	Cum. Volume Purged Gals.	Temp °C	Spec. Cond. 2 uS/cm	pH (S.U.)	ORP/Eh3 mv	DO mg/L	Turbidity NTU	Comments
1310	5.34	40 PSI*	200	Initiate purge; check drawdown; adjust flow rate							Cloudy / Grey
1315	5.34	" "	" "	Fill flow-through cell / monitor parameter readings							" "
1325	5.34			2500	17.3	140.8	5.75	-46.0	0.43	26.5	Clear / Colorless
1330	5.34			3500	17.1	140.4	5.76	-52.7	0.36	13.0	" "
1335	5.34			4500	17.0	140.5	5.79	-57.8	0.32	9.27	
1340	5.34			5500	17.1	140.2	5.84	-63.0	0.29	8.34	
1345	5.34			6500	17.0	139.9	5.87	-66.8	0.27	6.91	
1350	5.34			7500	17.1	139.9	5.89	-70.3	0.25	5.91	
1355	5.34			8500	16.9	139.8	5.90	-72.3	0.25	5.79	
1400	5.34			9500	17.0	139.4	5.90	-74.1	0.24	5.98	
	Reached	Stabilization	- Collected	Sample (2 Gal)							
Acceptance Criteria: <0.3 ft (drawdown)					3%	3%	+/- 0.5 S.U.	+/- 10mV	**	10%	

TtNUS Form 0009 (modified for NASB ONFF)

Saturated Screen Volume (gallons)_____ (2" screen = 0.163 gals./ft of depth; 4" =0.653 gals/ft; 6"=1.469gals/ft)

1. Pump dial setting (for example: hertz, cycle/min, etc.)
2. microSiemens per cm (same as micromhos/cm) at 25 °C.
3. Oxidation reduction potential (stand in for Eh).

** Criteria for DO is 10% for values greater than 2 mg/L or +/- 0.5 mg/L for values less than 2 mg/L

* = 10 CPM (4 sec Refill / 2 sec discharge)

TETRA TECH NUS, INC.

PURGE DATA SHEET - "LOW STRESS" GROUNDWATER

Site Name: NASB – Old Navy Fuel Farm
Sample ID: NASB-ONFF-GW-DP07 -0711

Initial WL: 5.84
TD : 16.55
PID : 0.9 ppm

Tetra Tech NUS Charge No. 112G02063 / 0000.2530 Page 1 of 1
QC: _____ (If applicable)

Sample Method: Low Stress (flow) with Peristaltic or Bladder Pump
Depth Sampled: ≈ 11 ft bgs Screen Int. Depth ~~4-14~~ ft bgs
Sample Date & Time: 07 / 12 /2011 ~~1005~~ 0905 hours — (Dup Time)
Sampler(s): B. Geringer

Field Instrument Group A / B / C / D (refer to site logbook for details)

Sample Analyses:
1. VPH 2. EPH (Also refer to separate sample log sheet) Collected Lab QC
3. Methane

Clock Time 24hr	Water Depth below MP ft	Pump Dial 1 *	Purge Rate ml/min	Cum. Volume Purged ~~Gals.~~ (mL)	Temp °C	Spec. Cond. 2 uS/cm	pH (S.U.)	ORP/Eh3 mv	DO mg/L	Turbidity NTU	Comments
0815	5.87	40 ~~PSI~~	200	Initiate purge; check drawdown; adjust flow rate							Gray/Cloudy
0820	5.87	" "	" "	Fill flow-through cell / monitor parameter readings							" "
0825	5.87			2000	15.2	215.4	6.51	-57.7	0.65	68.8	little cloudy
0830	5.87			3000	15.3	211.6	6.42	-61.6	0.57	76.5	" "
0835	5.87			4000	15.3	209.3	6.40	-65.9	0.49	84.1	" "
0840	5.87			5000	15.3	206.6	6.41	-69.5	0.46	78.6	
0845	5.87			6000	15.2	205.4	6.41	-71.2	0.42	81.0	
0850	5.87			7000	15.1	203.6	6.38	-72.0	0.41	71.6	
0855	5.87	30 PSI	180	7900	15.5	202.1	6.38	-73.3	0.37	69.3	
~~1000~~	5.87	" "	" "	8800	15.3	200.4	6.37	-74.2	0.36	71.7	
0900				(2 Gallons)							
	Reached	Stabilization	Criteria-	Collected	Samples						
Acceptance Criteria: <0.3 ft (drawdown)					3%	3%	+/- 0.5 S.U.	+/- 10mV	**	10%	

TtNUS Form 0009 (modified for NASB ONFF)

Saturated Screen Volume (gallons)_____ (2" screen = 0.163 gals./ft of depth; 4" =0.653 gals/ft; 6"=1.469gals/ft)

1. Pump dial setting (for example: hertz, cycle/min, etc.)
2. microSiemens per cm (same as micromhos/cm) at 25 °C.
3. Oxidation reduction potential (stand in for Eh).

** Criteria for DO is 10% for values greater than 2 mg/L or +/- 0.5 mg/L for values less than 2 mg/L

*= 10 CPM (4 sec refill / 2 sec discharge)

Methane=6.01 TPVC
Depth to water=14.74 TPVC

DP-12

TETRA TECH NUS, INC.

PURGE DATA SHEET - "LOW STRESS" GROUNDWATER

Site Name: NASB – Old Navy Fuel Farm
Sample ID: NASB-ONFF-GW- DP12 -~~0711~~

Tetra Tech NUS Charge No. 112G02063 / 0000.2530 Page 1 of ___
QC: _____ (If applicable)

Sample Method: Low Stress (flow) with Peristaltic or Bladder Pump
Depth Sampled: ~28 ft bgs Screen Int. Depth 2-12 ft bgs
Sample Date & Time: 7 / 12 /2011 ~~1347~~ 1547 hours ____ (Dup Time)
Sampler(s): NDC

Field Instrument Group A / B / C / D (refer to site logbook for details)

Sample Analyses:
1.VPH 2.EPH (Also refer to separate sample log sheet)
methane

Clock Time 24hr	Water Depth below MP ft	Pump Dial 1	Purge Rate ml/min	Cum. Volume Purged Gals.	Temp °C	Spec. Cond. 2 uS/cm	pH (S.U.)	ORP/Eh3 mv	DO mg/L	Turbidity NTU	Comments
~~1307~~ 1502	6.29	30PSI/4/2		Initiate purge; check drawdown; adjust flow rate							
				Fill flow-through cell / monitor parameter readings							
1512	6.31	"	180	<0.5	15.8	208.8	6.09	-81.0	0.32	7.25	Potter eggs
1517	"	"	"	~0.75	15.4	215.0	6.07	-86.9	0.26	5.71	
1522				~1	15.2	215.6	6.12	-95.0	0.21	4.40	
1527				~1.25	15.1	216.0	6.14	-98.8	0.21	5.42	
1532				~1.5	15.2	216.8	6.15	-102.6	0.21	3.93	
1537				~1.75	15.1	217.3	6.17	-106.0	0.18	4.26	
1542				~2	15.0	217.5	6.20	-106.8	0.20	4.18	
1547				~2	15.0	217.8	6.21	-108.9	0.19	3.69	Sample time
Acceptance Criteria: <0.3 ft (drawdown)					3%	3%	+/- 0.5 S.U.	+/- 10mV	**	10%	

TtNUS Form 0009 (modified for NASB ONFF)

Saturated Screen Volume (gallons)_____ (2" screen = 0.163 gals./ft of depth; 4" =0.653 gals/ft; 6"=1.469gals/ft)

1. Pump dial setting (for example: hertz, cycle/min, etc.)
2. microSiemens per cm (same as micromhos/cm) at 25 °C.
3. Oxidation reduction potential (stand in for Eh).

** Criteria for DO is 10% for values greater than 2 mg/L or +/- 0.5 mg/L for values less than 2 mg/L

TETRA TECH NUS, INC.

PURGE DATA SHEET - "LOW STRESS" GROUNDWATER

Site Name: NASB – Old Navy Fuel Farm
Sample ID: NASB-ONFF-GW-DP17 -0711

Initial WL: 9.14
Total Depth: 16.84
PID: 1.0 PPM

Tetra Tech NUS Charge No. 112G02063 / 0000.2530 Page 1 of 1
QC: _____ (If applicable)

Sample Method: Low Stress (flow) with Peristaltic or Bladder Pump
Depth Sampled: ≈ 12.5 ft bgs Screen Int. Depth 4-14 ft bgs
Sample Date & Time: 07 / 12 /2011 1410 hours — (Dup Time)
Sampler(s): B. Geringer

Field Instrument Group A / B / C / D (refer to site logbook for details)

Sample Analyses:
1.VPH 2.EPH (Also refer to separate sample log sheet)

Clock Time 24hr	Water Depth below MP ft	Pump Dial 1 *	Purge Rate ml/min	Cum. Volume Purged Gals.	Temp °C	Spec. Cond. 2 uS/cm	pH (S.U.)	ORP/Eh3 mv	DO mg/L	Turbidity NTU	Comments
1237	9.17	40 PSI	200	Initiate purge; check drawdown; adjust flow rate							Cloudy
1240	9.17	" "	" "	Fill flow-through cell / monitor parameter readings							" "
1245	9.17			1600	18.0	330.1	5.94	-5.7	0.77	20.6	Clear / Yellowish
1250	9.17			2600	17.7	346.3	5.88	-4.5	0.50	19.6	" "
1255	9.17			3600	17.2	348.6	5.88	-7.7	0.43	14.6	
1300	9.17		✓	4600	18.9	353.6	5.88	-9.9	0.39	14.2	
1305	9.17		100	5600	21.3	352.8	5.88	-9.6	0.51	11.92	
1310	9.17			~~6600~~ 5600	22.1	346.2	5.93	-11.4	0.60	9.66	▲
1320	9.17	✓	✓	~~7600~~ 6100	25.4	345.8	5.93	-15.1	0.69	10.20	■
~~1325~~	~~9.17~~										✓
1335	9.17	40 PSI	200	7100	16.1	385.2	5.88	10.8	0.41	19.6	Clear / Yellowish
1340	9.17	" "	" "	8100	15.5	376.6	5.91	5.4	0.27	23.3	" "
1345	9.17			9100	15.2	370.4	5.90	-1.2	0.24	19.3	
1350	9.17			10100	15.2	367.9	5.88	-5.8	0.22	15.3	
1355	9.17			11100	15.2	363.8	5.88	-10.0	0.21	10.76	
1400	9.17			12100	15.0	364.5	5.89	-12.5	0.19	9.87	
1405	9.17	✓	✓	13100	14.8	365.4	5.91	-14.2	0.19	10.03	✓
	Reach Stabilization			≈ 2.7 Gal							
Acceptance Criteria: <0.3 ft (drawdown)					3%	3%	+/- 0.5 S.U.	+/- 10mV	**	10%	

TtNUS Form 0009 (modified for NASB ONFF)

1. Pump dial setting (for example: hertz, cycle/min, etc.)
2. microSiemens per cm (same as micromhos/cm) at 25 °C.
3. Oxidation reduction potential (stand in for Eh).

Saturated Screen Volume (gallons)_____ (2" screen = 0.163 gals./ft of depth; 4" =0.653 gals/ft; 6"=1.469gals/ft)

** Criteria for DO is 10% for values greater than 2 mg/L or +/- 0.5 mg/L for values less than 2 mg/L

▲: Charged tank out ■ Not pumping fast - Pull pump to inspect. - replace bladder

*: 10 CPM

TETRA TECH NUS, INC.

PURGE DATA SHEET - "LOW STRESS" GROUNDWATER

Site Name: NASB – Old Navy Fuel Farm
Sample ID: NASB-ONFF-GW-DP20 -0711

Initial WL: 7.76
PID: 9.4 ppm

Tetra Tech NUS Charge No. 112G02063 / 0000.2530 Page 1 of 1
QC: _____ (If applicable)

Sample Method: Low Stress (flow) with Peristaltic or Bladder Pump
Depth Sampled: ≈7.5 ft bgs Screen Int. Depth 2-12 ft bgs
Sample Date & Time: 07 / 12 /2011 1600 hours — (Dup Time)
Sampler(s): B. Geringer

Field Instrument Group A / B C / D (refer to site logbook for details)

Sample Analyses:
1.VPH 2.EPH (Also refer to separate sample log sheet)

Clock Time 24hr	Water Depth below MP ft	Pump Dial 1 *	Purge Rate ml/min	Cum. Volume Purged Gals.	Temp °C	Spec. Cond. 2 uS/cm	pH (S.U.)	ORP/Eh3 mv	DO mg/L	Turbidity NTU	Comments
1555	7.85	40 PSI	200	Initiate purge; check drawdown; adjust flow rate							Cloudy
1600	7.85	" "	" "	Fill flow-through cell / monitor parameter readings							Little Cloudy
1605	7.85			2000	14.9	192.0	5.94	-5.4	0.33	38.1	" "
1610	7.85			3000	14.8	193.3	5.97	-11.9	0.27	25.9	
1615	7.85			4000	14.9	193.7	5.98	-16.0	0.25	15.0	Clear/Colorless
1620	7.85			5000	14.5	195.5	6.00	-18.5	0.24	11.3	" "
1625	7.85			6000	14.5	196.8	6.01	-21.1	0.22	9.95	
1630	7.85			7000	14.5	198.2	6.02	-22.7	0.21	10.15	
1635	7.85			8000	14.5	198.3	6.01	-23.6	0.20	6.99	
1640	7.85			9000	14.4	198.7	6.01	-24.8	0.20	8.23	
1545	7.85			10000	14.6	199.6	6.01	-25.6	0.20	6.24	
1550	7.85			11000	14.4	200.4	6.01	-26.7	0.19	6.60	
1555	7.85			12000 (25 gal)	14.2	201.1	6.01	-27.2	0.19	6.70	
		Reached	Stabilization -	Collected	Sample						
Acceptance Criteria: <0.3 ft (drawdown)					3%	3%	+/- 0.5 S.U.	+/- 10mV	**	10%	

TtNUS Form 0009 (modified for NASB ONFF)

Saturated Screen Volume (gallons)_____ (2" screen = 0.163 gals./ft of depth; 4" =0.653 gals/ft; 6"=1.469gals/ft)

1. Pump dial setting (for example: hertz, cycle/min, etc.)
2. microSiemens per cm (same as micromhos/cm) at 25 °C.
3. Oxidation reduction potential (stand in for Eh).

** Criteria for DO is 10% for values greater than 2 mg/L or +/- 0.5 mg/L for values less than 2 mg/L

*= 10 CPM

Initial WL — 7.57 TPVC 4.5
Depth to bottom — 14.75 TPVC 12

DP-22

TETRA TECH NUS, INC.

PURGE DATA SHEET - "LOW STRESS" GROUNDWATER

Site Name: NASB – Old Navy Fuel Farm
Sample ID: NASB-ONFF-GW- DP22 0711

Tetra Tech NUS Charge No. 112G02063 / 0000.2530 Page ___ of ___
QC: _____ (If applicable)

Sample Method: Low Stress (flow) with Peristaltic or Bladder Pump
Depth Sampled: 8 ft bgs Screen Int. Depth ~2-12 ft bgs
Sample Date & Time: 7/12/2011 1124 hours ____ (Dup Time)
Sampler(s): ADC

Field Instrument Group A / B / C / D (refer to site logbook for details)

Sample Analyses:
1.VPH **2.**EPH (Also refer to separate sample log sheet)

Clock Time 24hr	Water Depth below MP ft	Pump Dial 1	Purge Rate ml/min	Cum. Volume Purged Gals.	Temp °C	Spec. Cond. 2 uS/cm	pH (S.U.)	ORP/Eh3 mv	DO mg/L	Turbidity NTU	Comments
1004	7.57	30 PSI/4/2	175	Initiate purge; check drawdown; adjust flow rate							orange tinge to water
				Fill flow-through cell / monitor parameter readings							petroleum odor
1009	7.59	"	"	<0.25	12.8	247.2	6.38	-36.4	0.57	154	
1019	"	"	"	20.5	12.6	244.4	6.44	-44.7	0.34	32.7	
1029	"	"	"	~1	12.6	237.2	6.54	-50.5	0.27	21.4	
1039	"	"	"	~1.5	12.5	235.4	6.57	-56.5	0.26	10.51	
1049	"	"	"	~1.75	12.5	233.9	6.61	-61.2	0.24	7.03	
1059	"	"	"	~2	12.5	232.6	6.64	-65.0	0.21	5.66	
1104	"	"	"	~2.25	12.6	232.2	6.63	-65.7	0.24	5.34	
1109	"	"	"	~2.5	12.7	230.4	6.64	-67.2	0.21	5.09	
1114	"	"	"	~2.75	12.5	230.3	6.66	-68.8	0.14	5.14	
1119	"	"	"	~2.75	12.6	230.4	6.62	-67.5	0.22	5.04	
1124	"	"	"	~3	12.5	230.3	6.63	-69.4	0.22	4.92	Sample time
Acceptance Criteria: <0.3 ft (drawdown)					3%	3%	+/- 0.5 S.U.	+/- 10mV	**	10%	

TtNUS Form 0009 (modified for NASB ONFF)

Saturated Screen Volume (gallons)_____ (2" screen = 0.163 gals./ft of depth; 4" =0.653 gals/ft; 6"=1.469gals/ft)

1. Pump dial setting (for example: hertz, cycle/min, etc.)
2. microSiemens per cm (same as micromhos/cm) at 25 °C.
3. Oxidation reduction potential (stand in for Eh).

** Criteria for DO is 10% for values greater than 2 mg/L or +/- 0.5 mg/L for values less than 2 mg/L

TETRA TECH NUS, INC.

PURGE DATA SHEET - "LOW STRESS" GROUNDWATER

Site Name: NASB – Old Navy Fuel Farm
Sample ID: NASB-ONFF-GW-DP24 -0711

Initial WL: 9.19
TD: 13.50
PID: 0.9 ppm

Tetra Tech NUS Charge No. 112G02063 / 0000.2530 Page 1 of 1
QC: _____ (If applicable)

Sample Method: Low Stress (flow) with Peristaltic or Bladder Pump
Depth Sampled: ≈ 9 ft bgs Screen Int. Depth 2-11 ft bgs
Sample Date & Time: 07 / 13 /2011 0935 hours — (Dup Time)
Sampler(s): B. Geringer

Field Instrument Group A / B / C / D (refer to site logbook for details)

Sample Analyses:
1.VPH 2.EPH (Also refer to separate sample log sheet)

Clock Time 24hr	Water Depth below MP ft	Pump Dial 1 *	Purge Rate ml/min	Cum. Volume Purged Gals.	Temp °C	Spec. Cond. 2 uS/cm	pH (S.U.)	ORP/Eh3 mv	DO mg/L	Turbidity NTU	Comments
0810	9.20	40 PSI	100	Initiate purge; check drawdown; adjust flow rate							Changed bladder -
0815	9.20	" "	200	Fill flow-through cell / monitor parameter readings							Cloudy/Brown
0820	9.20		" "	2000	13.7	393.5	6.10	-32.2	0.64	144	Cloudy/Brown
0830	9.20			3000	13.5	391.2	6.19	-35.5	0.40	56.0	Slightly Cloudy
0835	—			—	—	—	—	—	—	—	—
0840	9.20			5000	13.5	393.3	6.21	-38.6	0.33	33.5	Slightly Cloudy
0845	9.20			6000	13.6	392.7	6.21	-39.0	0.30	19.8	Clear/Colorless
0850	9.20			7000	13.6	393.6	6.21	-39.7	0.29	16.8	" "
0855	9.20			8000	13.6	393.7	6.21	-40.2	0.28	14.5	
0900	9.20			9000	13.6	393.9	6.21	-40.6	0.27	11.1	
0905	9.20			10000	13.7	394.6	6.21	-41.0	0.26	12.0	■
0910	9.20			11000	14.9	394.5	6.21	-41.9	0.30	8.06	
0915	9.20			12000	13.7	394.4	6.21	-41.6	0.24	8.80	
0920	9.20			13000	13.7	394.4	6.21	-40.7	0.23	6.55	
0925	9.20			14000	13.8	394.4	6.20	-40.0	0.23	6.94	
0930	9.20			15000	13.7	395.4	6.20	-39.7	0.22	7.06	
		Achieved	Stabilization -	Collected Sample							
Acceptance Criteria: <0.3 ft (drawdown)					3%	3%	+/- 0.5 S.U.	+/- 10mV	**	10%	

TtNUS Form 0009 (modified for NASB ONFF)

1. Pump dial setting (for example: hertz, cycle/min, etc.)
2. microSiemens per cm (same as micromhos/cm) at 25 °C.
3. Oxidation reduction potential (stand in for Eh).

Saturated Screen Volume (gallons)_____ (2" screen = 0.163 gals./ft of depth; 4" =0.653 gals/ft; 6"=1.469gals/ft)

** Criteria for DO is 10% for values greater than 2 mg/L or +/- 0.5 mg/L for values less than 2 mg/L

■ = Changed Nitrogen Cylinder out (907)
* = 10 CPM

TETRA TECH NUS, INC.

PURGE DATA SHEET - "LOW STRESS" GROUNDWATER

Initial wc: 6.83

Site Name: NASB – Old Navy Fuel Farm
Sample ID: NASB-ONFF-GW-0028 -0711 PID = 0.1

Tetra Tech NUS Charge No. 112G02063 / 0000.2530 Page 1 of 1
QC: _____ (If applicable)

Sample Method: Low Stress (flow) with Peristaltic or Bladder Pump
Depth Sampled: ≈ 9 ft bgs Screen Int. Depth 1.5 - 11.5 ft bgs
Sample Date & Time: 07 / 12 /2011 1110 hours — (Dup Time)
Sampler(s): B. Geringer

Field Instrument Group A / B / C / D (refer to site logbook for details)

Sample Analyses:
1. VPH 2. EPH (Also refer to separate sample log sheet)

Clock Time 24hr	Water Depth below MP ft	Pump Dial 1 *	Purge Rate ml/min	Cum. Volume Purged Gals.	Temp °C	Spec. Cond. 2 uS/cm	pH (S.U.)	ORP/Eh3 mv	DO mg/L	Turbidity NTU	Comments
1020	6.85	40 PSI	200	Initiate purge; check drawdown; adjust flow rate							Cloudy
1025	6.85	" "	" "	Fill flow-through cell / monitor parameter readings							
1030	6.85			2000	14.8	99.0	5.73	46.4	0.40	36.2	Slightly Cloudy
1035	6.85			3000	15.2	97.5	5.68	43.1	0.34	21.0	Clear / Colorless
1040	6.85			4000	14.7	98.8	5.76	32.3	0.29	13.0	" "
1045	6.85			5000	14.9	99.4	5.77	27.0	0.26	9.29	
1050	6.85			6000	14.8	100.3	5.80	22.6	0.25	8.71	
1055	6.85			7000	14.8	99.6	5.82	18.7	0.25	7.15	
1100	6.85			8000	14.7	100.9	5.83	14.9	0.24	6.96	
1105	6.85			9000	14.4	101.9	5.83	12.2	0.22	6.52	
	Reached	Stabilization,	Collected	Sample							
Acceptance Criteria: <0.3 ft (drawdown)					3%	3%	+/- 0.5 S.U.	+/- 10mV	**	10%	

TtNUS Form 0009 (modified for NASB ONFF)

1. Pump dial setting (for example: hertz, cycle/min, etc.)
2. microSiemens per cm (same as micromhos/cm) at 25 °C.
3. Oxidation reduction potential (stand in for Eh).

Saturated Screen Volume (gallons)_____ (2" screen = 0.163 gals./ft of depth; 4" =0.653 gals/ft; 6"=1.469gals/ft)

** Criteria for DO is 10% for values greater than 2 mg/L or +/- 0.5 mg/L for values less than 2 mg/L

* = 10 CPM (4 sec refill / 2 sec discharge)

~~DP-3~~ DP30

TETRA TECH NUS, INC.

PURGE DATA SHEET - "LOW STRESS" GROUNDWATER

Site Name: NASB – Old Navy Fuel Farm
Sample ID: NASB-ONFF-GW-DP30 - 11

Tetra Tech NUS Charge No. 112G02063 / 0000.2530 Page 1 of 1
QC: _____ (If applicable)

Sample Method: Low Stress (flow) with Peristaltic or Bladder Pump
Depth Sampled: _____ ft bgs Screen Int. Depth _____ ft bgs
Sample Date & Time: ___ /___ /2011 _____hours _____(Dup Time)
Sampler(s): B. Geringer

Field Instrument Group A / B / C / D (refer to site logbook for details)

Sample Analyses:
1.VPH **2.**EPH (Also refer to separate sample log sheet)

Clock Time 24hr	Water Depth below MP ft	Pump Dial 1	Purge Rate ml/min	Cum. Volume Purged Gals.	Temp °C	Spec. Cond. 2 uS/cm	pH (S.U.)	ORP/Eh3 mv	DO mg/L	Turbidity NTU	Comments
1030	N/A			Initiate purge; check drawdown; adjust flow rate							
				Fill flow-through cell / monitor parameter readings							
-	Could not	gauge Well	- less than	6" of Water	in well.						
-	Attempted	to collect	Sample with	bailer; Was	unsuccessful						
Acceptance Criteria: <0.3 ft (drawdown)					3%	3%	+/- 0.5 S.U.	+/- 10mV	**	10%	

TtNUS Form 0009 (modified for NASB ONFF)

Saturated Screen Volume (gallons)_____ (2" screen = 0.163 gals./ft of depth; 4" =0.653 gals/ft; 6"=1.469gals/ft)

1. Pump dial setting (for example: hertz, cycle/min, etc.)
2. microSiemens per cm (same as micromhos/cm) at 25 °C.
3. Oxidation reduction potential (stand in for Eh).

** Criteria for DO is 10% for values greater than 2 mg/L or +/- 0.5 mg/L for values less than 2 mg/L

Initial WL - 9.71 TPVC   sample depth = ~8.5' GS (~11.3 TPVC)
depth to bottom = 12.33 TPVC

DP-37
screen 3.5-9.5

TETRA TECH NUS, INC.   7/13/2011

PURGE DATA SHEET - "LOW STRESS" GROUNDWATER

Site Name: NASB – Old Navy Fuel Farm
Sample ID: NASB-ONFF-GW- DP37 -0711

Tetra Tech NUS Charge No. 112G02063 / 0000.2530   Page ___ of ___
QC: ______________________________ (If applicable)

Clock Time 24hr	Water Depth below MP ft	Pump Dial 1	Purge Rate ml/min	Cum. Volume Purged Gals.	Temp °C	Spec. Cond. 2 uS/cm	pH (S.U.)	ORP/Eh3 mv	DO mg/L	Turbidity NTU	Comments
0840	9.41	30psi/4/2	140								pump on
0845	9.48	"	140	<0.25	14.6	485.7	6.68	-96.4	0.64	43.7	petro. odor
0855	"	"	"	<0.5	14.4	484.6	6.63	-98.5	0.34	6.04	
0900	"	"	"	<0.5	14.4	485.8	6.66	-100.6	0.31	4.02	
0905	"	"	"	<1	14.6	486.2	6.68	-101.7	0.31	4.39	
0910	"	"	"	<1.25	15.0	486.7	6.72	-103.0	0.27	6.07	
0915	"	"	"	<1.5	15.1	487.1	6.77	-105.6	0.21	3.66	
0920	"	"	"	<1.75	15.1	487.9	6.78	-105.7	0.25	4.37	
0925	"	"	"	<2	15.2	489.0	6.80	-105.7	0.24	2.24	sample time

Acceptance Criteria: <0.3 ft (drawdown)   3%   3%   +/- 0.5 S.U.   +/- 10mV   **   10%

TtNUS Form 0009 (modified for NASB ONFF)

Saturated Screen Volume (gallons)______________ (2" screen = 0.163 gals./ft of depth; 4" =0.653 gals/ft; 6"=1.469gals/ft)

** Criteria for DO is 10% for values greater than 2 mg/L or +/- 0.5 mg/L for values less than 2 mg/L

1 Pump dial setting (for example: hertz, cycle/min, etc.)
2 microSiemens per cm (same as micromhos/cm) at 25 °C.
3 Oxidation reduction potential (stand in for Eh).

initial WL = 4.05' TPVC
depth to bottom = 11.92
intake depth = 28'

DP-39

TETRA TECH NUS, INC.

PURGE DATA SHEET - "LOW STRESS" GROUNDWATER

Site Name: NASB – Old Navy Fuel Farm
Sample ID: NASB-ONFF-GW- DP39 -0711

7/12/11 @ 0901 ADC

Tetra Tech NUS Charge No. 112G02063 / 0000.2530 Page ___ of ___
QC: _____ (If applicable)

Clock Time 24hr	Water Depth below MP ft	Pump Dial 1	Purge Rate ml/min	Cum. Volume Purged Gals.	Temp °C	Spec. Cond. 2 uS/cm	pH (S.U.)	ORP/Eh3 mv	DO mg/L	Turbidity NTU	Comments
0816	4.03'	25PSI/4/2	160								pump on
0821	4.05'	"	"	<0.25	15.2	163.4	5.94	-36.6	0.56	40.7	
0831	4.05'	"	"	<0.5	14.7	161.9	9.87	-45.6	0.49	17.7	
0841	4.05'	"	"	<0.75	14.6	155.8	5.94	-54.0	0.49	8.13	
0851	"	"	"	<1	15.0	155.8	6.06	-65.2	0.26	5.11	
0856	"	"	"	<1.25	14.9	155.6	6.07	-67.5	0.27	4.97	
0901	"	"	"	<1.5	14.8	153.0	6.04	-67.1	0.23	4.24	sample time
Acceptance Criteria: <0.3 ft (drawdown)					3%	3%	+/- 0.5 S.U.	+/- 10mV	**	10%	

TtNUS Form 0009 (modified for NASB ONFF)

Saturated Screen Volume (gallons)_____ (2" screen = 0.163 gals./ft of depth; 4" =0.653 gals/ft; 6"=1.469gals/ft)

1. Pump dial setting (for example: hertz, cycle/min, etc.)
2. microSiemens per cm (same as micromhos/cm) at 25 °C.
3. Oxidation reduction potential (stand in for Eh).

** Criteria for DO is 10% for values greater than 2 mg/L or +/- 0.5 mg/L for values less than 2 mg/L

Initial WL = 6.34' TPVC -3.5
depth to bottom = 14.77 11.77

DP-42

TETRA TECH NUS, INC.

PURGE DATA SHEET - "LOW STRESS" GROUNDWATER

Site Name: NASB – Old Navy Fuel Farm
Sample ID: NASB-ONFF-GW-DP42 0711

Tetra Tech NUS Charge No. 112G02063 / 0000.2530 Page 1 of 1
QC: _____ (If applicable)

Sample Method: Low Stress (flow) with Peristaltic or Bladder Pump
Depth Sampled: ~~10.5~~ 9.5 ft bgs Screen Int. Depth 2-12 ft bgs
Sample Date & Time: 7 / 12 /2011 1336 hours DUP01 (Dup ~~Time~~)
Sampler(s): KDC DUP01

Field Instrument Group (A) / B / C / D (refer to site logbook for details)

Sample Analyses:
1.VPH 2.EPH (Also refer to separate sample log sheet)
methane

Clock Time 24hr	Water Depth below MP ft	Pump Dial 1	Purge Rate ml/min	Cum. Volume Purged Gals.	Temp °C	Spec. Cond. 2 uS/cm	pH (S.U.)	ORP/Eh3 mv	DO mg/L	Turbidity NTU	Comments
1254	6.34	30PSI/4/2	170	Initiate purge; check drawdown; adjust flow rate							~~Sat~~ rotten eggs odor
1300	6.37	"	170	Fill flow-through cell / monitor parameter readings							
↓	↓	↓	↓	<0.25	14.1	169.0	5.77	-37.6	0.34	15.6	
1311	6.37	"	"	~0.75	13.8	171.1	5.92	-53.6	0.28	6.46	
1321	"	"	"	~1.25	14.2	171.8	6.03	-65.8	0.17	4.49	
1326	"	"	"	~1.5	14.4	172.3	6.17	-72.8	0.18	3.71	
1331	"	"	"	~1.75	14.2	172.7	6.19	-74.8	0.20	3.54	
1336	"	"	"	~2	14.1	172.1	6.19	-75.3	0.19	3.65	Sample time
Acceptance Criteria: <0.3 ft (drawdown)					3%	3%	+/- 0.5 S.U.	+/- 10mV	**	10%	

TtNUS Form 0009 (modified for NASB ONFF)

Saturated Screen Volume (gallons)_____ (2" screen = 0.163 gals./ft of depth; 4" =0.653 gals/ft; 6"=1.469gals/ft)

1. Pump dial setting (for example: hertz, cycle/min, etc.)
2. microSiemens per cm (same as micromhos/cm) at 25 °C.
3. Oxidation reduction potential (stand in for Eh).

** Criteria for DO is 10% for values greater than 2 mg/L or +/- 0.5 mg/L for values less than 2 mg/L

Initial WL = 4.85' TOC
Depth to bottom = 13' below GS

DP-43

TETRA TECH NUS, INC.

intake ~9' below GS

PURGE DATA SHEET - "LOW STRESS" GROUNDWATER

Site Name: NASB – Old Navy Fuel Farm
Sample ID: NASB-ONFF-GW-DP43-0711

A. Carey
7/11/11 @1408

Tetra Tech NUS Charge No. 112G02063 / 0000.2530 Page ___ of ___
QC: ______________________ (If applicable)

Clock Time 24hr	Water Depth below MP ft	Pump Dial 1	Purge Rate ml/min	Cum. Volume Purged Gals.	Temp °C	Spec. Cond. 2 uS/cm	pH (S.U.)	ORP/Eh3 mv	DO mg/L	Turbidity NTU	Comments
1313	4.85'	30PSI 4/2	135	0							pump on
1318	4.90'	"	135	~0.25	16.1	210.7	6.15	18.3	2.15	47.4	
1328	4.90'	"	135	0.75	15.4	229.5	6.21	2.1	1.45	20.9	
1338	4.90	"	135	1.25	15.5	237.4	6.32	-10.4	1.12	10.55	
1343	4.90	"	"	2	15.4	236.9	6.36	-13.1	1.07	7.34	
1348	4.90	"	"	2.25	15.3	242.2	6.39	-16.5	1.02	5.90	
1353	"	"	"	2.5	15.3	242.3	6.41	-19.6	1.03	3.95	
1358	"	"	"	2.75	15.4	247.6	6.44	-23.8	1.00	3.71	
1403	"	"	"	3	15.4	247.4	6.43	-23.9	0.99	2.86	
1408	"	"	"	3.5	15.4	251.2	6.48	-28.8	1.00	2.72	sample time

Acceptance Criteria: <0.3 ft (drawdown) 3% 3% +/- 0.5 S.U. +/- 10mV ** 10%

TtNUS Form 0009 (modified for NASB ONFF)

Saturated Screen Volume (gallons)______________ (2" screen = 0.163 gals./ft of depth; 4" =0.653 gals/ft; 6"=1.469gals/ft)

1. Pump dial setting (for example: hertz, cycle/min, etc.)
2. microSiemens per cm (same as micromhos/cm) at 25 °C.
3. Oxidation reduction potential (stand in for Eh).

** Criteria for DO is 10% for values greater than 2 mg/L or +/- 0.5 mg/L for values less than 2 mg/L

TETRA TECH NUS, INC.

PURGE DATA SHEET - "LOW STRESS" GROUNDWATER

Site Name: NASB – Old Navy Fuel Farm
Sample ID: NASB-ONFF-GW-DP44 -0711

Initial WL: 4.12'
TD: 12.21
PID: 0.0

Tetra Tech NUS Charge No. 112G02063 / 0000.2530 Page 1 of 1
QC: _____ (If applicable)

Sample Method: Low Stress (flow) with Peristaltic or Bladder Pump
Depth Sampled: ≈ 8 ft bgs Screen Int. Depth 2-12 ft bgs
Sample Date & Time: 07 / 11 /2011 1620 hours — (Dup Time)
Sampler(s): B. Geringer

Field Instrument Group A / B / C / D (refer to site logbook for details)

Sample Analyses:
1.VPH 2.EPH (Also refer to separate sample log sheet)

Clock Time 24hr	Water Depth below MP ft	Pump Dial 1	Purge Rate ml/min	Cum. Volume Purged ~~Gals.~~ (mL)	Temp °C	Spec. Cond. 2 uS/cm	pH (S.U.)	ORP/Eh3 mv	DO mg/L	Turbidity NTU	Comments
1455	4.21	40 PSI *	200	Initiate purge; check drawdown; adjust flow rate							Cloudy / Brown
1500	4.21	" "	" "	Fill flow-through cell / monitor parameter readings							
1505	4.21			2000	15.3	220.6	6.63	-84.6	0.56	104.2	Cloudy
1510	4.21			3000	15.2	221.8	6.66	-89.8	0.47	86.7	" "
1515	4.21			4000	15.0	221.5	6.71	-95.5	0.40	38.5	Slightly Cloudy
1520	4.21			5000	15.1	221.3	6.72	-96.5	0.36	27.2	" "
1525	4.21			6000	15.0	221.4	6.69	-95.3	0.34	17.6	Clear / Colorless
1530	4.21			7000	14.9	220.0	6.67	-93.5	0.33	15.0	" "
1535	4.21			8000	15.0	219.2	6.63	-92.0	0.31	15.4	
1540	4.21			9000	14.9	219.7	6.59	-90.1	0.29	11.5	
1545	4.21			10000	14.9	218.5	6.57	-89.1	0.29	9.33	
1550	4.21			11000	15.0	217.3	6.56	-88.7	0.28	10.13	
1555	4.21			12000	14.9	216.8	6.53	-88.4	0.28	7.87	
1600	4.21			13000	14.9	215.0	6.50	-87.2	0.28	9.32	
1605	4.21			14000	15.0	213.1	6.49	-86.1	0.27	7.90	
1610	4.21			15000	14.6	211.2	6.46	-85.1	0.26	7.82	
1615	4.21			16000	14.8	208.9	6.43	-84.0	0.27	7.35	
	Achieve	Stability -	collect Sample	≈ 3.5 Gallons							
Acceptance Criteria: <0.3 ft (drawdown)					3%	3%	+/- 0.5 S.U.	+/- 10mV	**	10%	

TtNUS Form 0009 (modified for NASB ONFF)

1. Pump dial setting (for example: hertz, cycle/min, etc.)
2. microSiemens per cm (same as micromhos/cm) at 25 °C.
3. Oxidation reduction potential (stand in for Eh).

Saturated Screen Volume (gallons)_____ (2" screen = 0.163 gals./ft of depth; 4" =0.653 gals/ft; 6"=1.469gals/ft)

** Criteria for DO is 10% for values greater than 2 mg/L or +/- 0.5 mg/L for values less than 2 mg/L

*: 10 CPM (4 sec Fill / 2 sec discharge)

Initial WL = 5.72
Depth to bottom = 13.031

DP-45

TETRA TECH NUS, INC.

PURGE DATA SHEET - "LOW STRESS" GROUNDWATER

Site Name: NASB – Old Navy Fuel Farm
Sample ID: NASB-ONFF-GW- DP45 -0711 @ 1610

Tetra Tech NUS Charge No. 112G02063 / 0000.2530 Page ___ of ___
QC: _____ (If applicable)

Sample Method: Low Stress (flow) with Peristaltic or Bladder Pump
Depth Sampled: 13 ft bgs Screen Int. Depth 3-13' ft bgs
Sample Date & Time: 7 / 11 /2011 1610 hours ___X___ (Dup Time)
Sampler(s): ADC

Field Instrument Group (A) / B / C / D (refer to site logbook for details)

Sample Analyses:
1.VPH 2.EPH (Also refer to separate sample log sheet)

Clock Time 24hr	Water Depth below MP ft	Pump Dial 1	Purge Rate ml/min	Cum. Volume Purged Gals.	Temp °C	Spec. Cond. 2 uS/cm	pH (S.U.)	ORP/Eh3 mv	DO mg/L	Turbidity NTU	Comments
1503	5.71	30PSI / 4/2	130	Initiate purge; check drawdown; adjust flow rate							
				Fill flow-through cell / monitor parameter readings							
1508	5.77	"	"	0.25	14.1	104.1	5.97	11.0	1.60	56.8	
1518	5.78	"	"	0.5	13.8	107.7	5.93	-8.9	1.22	36.5	
1528	5.78	"	"	0.75	13.9	109.7	6.04	-27.2	1.35	22.7	
1540	"	"	"	1	13.8	109.3	6.06	-33.6	1.40	9.69	
1545	"	"	"	1.25	13.7	108.8	6.07	-36.2	1.36	7.53	
1550	"	"	"	1.5	13.7	108.8	6.08	-38.1	1.40	6.97	
1600	"	"	"	1.75	13.7	108.1	6.09	-39.4	1.40	5.20	
1605	"	"	"	2.00	13.8	107.6	6.04	-41.1	1.41	4.80	
1610	"	"	"	2.15	13.7	106.9	6.04	-43.1	1.41	2.75	sample time
Acceptance Criteria: <0.3 ft (drawdown)					3%	3%	+/- 0.5 S.U.	+/- 10mV	**	10%	

TtNUS Form 0009 (modified for NASB ONFF)

Saturated Screen Volume (gallons)_____ (2" screen = 0.163 gals./ft of depth; 4" =0.653 gals/ft; 6"=1.469gals/ft)

1. Pump dial setting (for example: hertz, cycle/min, etc.)
2. microSiemens per cm (same as micromhos/cm) at 25 °C.
3. Oxidation reduction potential (stand in for Eh).

** Criteria for DO is 10% for values greater than 2 mg/L or +/- 0.5 mg/L for values less than 2 mg/L

initial WL = 7.55' TPVC Sample depth: 10.5' TPVC screen 6-11'
depth to bottom = 13.41 PZ-01

TETRA TECH NUS, INC. peristaltic pump

PURGE DATA SHEET - "LOW STRESS" GROUNDWATER

Site Name: NASB – Old Navy Fuel Farm
Sample ID: NASB-ONFF-GW-PZ01-0711

Tetra Tech NUS Charge No. 112G02063 / 0000.2530 Page ___ of ___
QC: _____ (If applicable)

Clock Time 24hr	Water Depth below MP ft	Pump Dial 1	Purge Rate ml/min	Cum. Volume Purged Gals.	Temp °C	Spec. Cond. 2 uS/cm	pH (S.U.)	ORP/Eh3 mv	DO mg/L	Turbidity NTU	Comments
1030	7.55	—	180								pump on
1035	7.65	—	180	<0.25	14.3	347.5	7.07	-88.9	0.43	45.6	yellow tinge to water
1040	"	—	185	<0.5	13.9	333.8	6.73	-71.5	0.34	40.0	/ rotten egg smell
1045	7.68	—	250	<1	12.9	324.2	6.64	-69.3	0.29	41.3	increased pump speed
1050	7.69	—	250	<1	13.1	316.8	6.53	-65.1	0.23	51.6	
1055	7.69	—	"	<1.25	12.8	309.4	6.47	-63.2	0.23	55.5	
1100	7.69	—	"	<1.5	12.8	299.9	6.43	-63.4	0.24	58.1	
1105	7.65	—	180	<1.5	13.8	230.9	6.36	-63.6	0.30	61.7	
1111	7.65	—	180	<1.75	13.9	285.7	6.49	-71.4	0.29	62.4	
1116	7.65	—	180	<2	13.8	278.2	6.41	-69.8	0.27	65.6	
1121	↓	↓	↓	<2.25	13.9	271.1	6.37	-68.3	0.25	62.1	
1126				<2.25	13.7	265.6	6.34	-68.6	0.25	66.2	
1131				<2.5	13.4	258.8	6.27	-67.8	0.25	66.4	
1136				<2.5	14.1	252.7	6.26	-67.6	0.39	73.0	
1142				<2.75	13.7	241.5	6.18	-65.9	0.25	68.7	
1158				<3	13.8	234.2	6.34	-74.0	0.22	70.4	
1215				<3.25	13.4	219.1	6.20	-75.3	0.25	66.4	
1220				<3.5	13.3	216.2	6.15	-74.2	0.24	66.7	
1225				<3.5	13.2	211.5	6.08	-71.9	0.22	65.7	
1230	↓	↓	↓	<3.75	13.2	207.6	6.01	-71.2	0.23	71.2	sampling
											2-hr purge limit reached
Acceptance Criteria: <0.3 ft (drawdown)					3%	3%	+/- 0.5 S.U.	+/- 10mV	**	10%	

TtNUS Form 0009 (modified for NASB ONFF)

Saturated Screen Volume (gallons)_____ (2" screen = 0.163 gals./ft of depth; 4" =0.653 gals/ft; 6"=1.469gals/ft)

1. Pump dial setting (for example: hertz, cycle/min, etc.)
2. microSiemens per cm (same as micromhos/cm) at 25 °C.
3. Oxidation reduction potential (stand in for Eh).

** Criteria for DO is 10% for values greater than 2 mg/L or +/- 0.5 mg/L for values less than 2 mg/L

TETRA TECH NUS, INC.

PURGE DATA SHEET - "LOW STRESS" GROUNDWATER

Site Name: NASB – Old Navy Fuel Farm Initial WL: 8.93
Sample ID: NASB-ONFF-GW-~~PZ-FF02~~-0711

Tetra Tech NUS Charge No. 112G02063 / 0000.2530 Page 1 of 1
QC: N/A (If applicable)

Sample Method: Low Stress (flow) with Peristaltic or Bladder Pump
Depth Sampled: 10.5 ft bgs Screen Int. Depth 8-13 ft bgs
Sample Date & Time: 07 / 11 /2011 1105 hours _____(Dup Time)
Sampler(s): B. Geringer

Field Instrument Group A / B / C / D (refer to site logbook for details)

Sample Analyses: PID = 0.0
1.VPH 2.EPH (Also refer to separate sample log sheet)

Clock Time 24hr	Water Depth below MP ft	Pump Dial 1	Purge Rate ml/min	Cum. Volume Purged ~~Gals.~~ ML	Temp °C	Spec. Cond. 2 uS/cm	pH (S.U.)	ORP/Eh3 mv	DO mg/L	Turbidity NTU	Comments
0950	8.95	≈ 40 PSI	100	Initiate purge; check drawdown; adjust flow rate							Cloudy
1000	" "	" "	100	Fill flow-through cell / monitor parameter readings							
1005	8.95		100	2500	14.1	74.1	5.33	25.1	1.11	188	Cloudy
1015	8.95		" "	3500	13.5	78.0	5.53	-12.2	0.77	91.1	" "
1025	8.93			4500	13.8	77.8	5.65	-31.4	0.65	46.7	Little Cloudy
1030	8.93			5000	13.7	77.7	5.73	-40.9	0.62	34.4	Slightly Cloudy
1035	8.93			5500	13.4	77.7	5.73	-44.1	0.61	30.5	" "
1040	8.93			6000	13.2	77.4	5.74	-47.6	0.57	23.2	
1045	8.93			6500	13.8	76.5	5.73	-50.4	0.55	21.1	Clear/Colorless
1050	8.93			7000	13.5	76.1	5.79	-55.8	0.53	15.2	" "
1055	8.93			7500	14.0	76.6	5.79	-57.8	0.54	15.5	
1100	8.93			8000	14.2	76.2	5.81	-60.8	0.52	14.7	
				≈1.5 Gal							
	Reached	Stabilization	Collected	Sample							
Acceptance Criteria: <0.3 ft (drawdown)					3%	3%	+/- 0.5 S.U.	+/- 10mV	**	10%	

TtNUS Form 0009 (modified for NASB ONFF)

Saturated Screen Volume (gallons)_____ (2" screen = 0.163 gals./ft of depth; 4" =0.653 gals/ft; 6"=1.469gals/ft)

1. Pump dial setting (for example: hertz, cycle/min, etc.)
2. microSiemens per cm (same as micromhos/cm) at 25 °C.
3. Oxidation reduction potential (stand in for Eh).

** Criteria for DO is 10% for values greater than 2 mg/L or +/- 0.5 mg/L for values less than 2 mg/L

pump ~2" off bottom of well

TETRA TECH NUS, INC.

PURGE DATA SHEET - "LOW STRESS" GROUNDWATER

7.55
2.75

Site Name: NASB – Old Navy Fuel Farm
Sample ID: NASB-ONFF-GW-PZ03 -0711

Tetra Tech NUS Charge No. 112G02063 / 0000.2530 Page ___ of ___
QC: _____ (If applicable)

Sample Method: Low Stress (flow) with Peristaltic or Bladder Pump
Depth Sampled: _____ ft bgs Screen Int. Depth _____ ft bgs
Sample Date & Time: 7 / 11 /2011 1143 hours ~~_____~~ (Dup Time)
Sampler(s): A. Carey

Field Instrument Group A / B / C / D (refer to site logbook for details)

Sample Analyses:
1.VPH 2.EPH (Also refer to separate sample log sheet)

Clock Time 24hr	Water Depth below MP ft	Pump Dial 1	Purge Rate ml/min	Cum. Volume Purged Gals.	Temp °C	Spec. Cond. 2 uS/cm	pH (S.U.)	ORP/Eh3 mv	DO mg/L	Turbidity NTU	Comments
1010	5.48	20PSI/12/3		Initiate purge; check drawdown; adjust flow rate							
				Fill flow-through cell / monitor parameter readings							
1018	5.52	20PSI/7/3	100	<0.25	12.9	234.9	6.40	-61.6	0.78	38.6	
1023	5.52	"	110	<0.25	12.4	216.3	6.30	-63.3	0.50	53.2	
1028	5.54	30PSI; 4/2	200	~0.5	12.0	217.8	6.28	-63.9	0.25	40.6	
1033	5.54	"	200	~0.75	11.1	208.7	6.33	-68.2	0.30	22.5	
1038	5.54	"	200	~0.75	11.2	202.7	6.29	-69.8	0.30	19.9	
1043	5.54	"	200	~1	11.1	192.3	6.28	-73.4	0.30	~~[illegible]~~ 16.2	ADC
1053	5.54	"	200	~1.5	11.2	177.1	6.32	-81.1	0.29	13.9	
1103	5.54	"	200	~2	11.3	166.7	6.36	-87.0	0.26	12.2	
1108	5.54	"	200	~2.5	11.3	160.6	6.39	-90.3	0.18	12.3	
1113	5.54	"	200	~2.75	11.2	158.0	6.39	-90.9	0.20	11.37	
1118	5.54	"	200	~3.5	11.4	155.2	6.37	-91.4	0.27	11.10	
1123	5.54	"	200	~3.75	11.3	152.6	6.41	-94.3	0.24	10.10	
1128	5.54	"	200	~4	11.1	150.9	6.38	-92.4	0.21	9.84	
1133	5.54	"	200	~4.25	11.2	148.8	6.38	-94.0	0.18	10.22	
1138	5.54	"	200	~4.5	11.2	147.3	6.40	-95.8	0.20	9.55	
1143	5.54	"	200	~5	11.4	146.4	6.38	-94.9	0.25	9.74	sample time
Acceptance Criteria: <0.3 ft (drawdown)					3%	3%	+/- 0.5 S.U.	+/- 10mV	**	10%	

TtNUS Form 0009 (modified for NASB ONFF)

Saturated Screen Volume (gallons)_____ (2" screen = 0.163 gals./ft of depth; 4" =0.653 gals/ft; 6"=1.469gals/ft)

1. Pump dial setting (for example: hertz, cycle/min, etc.)
2. microSiemens per cm (same as micromhos/cm) at 25 °C.
3. Oxidation reduction potential (stand in for Eh).

** Criteria for DO is 10% for values greater than 2 mg/L or +/- 0.5 mg/L for values less than 2 mg/L

APPENDIX B

ANALYTICAL RESULTS

B-1 COMPLETE SOIL ANALYTICAL RESULTS
B-2 COMPLETE GROUNDWATER ANALYTICAL RESULTS
B-3 CHAIN OF CUSTODY FORMS
B-4 MAINE ELECTRONIC DATA DELIVERABLE

B-1 COMPLETE SOIL ANALYTICAL RESULTS

TABLE B-1
COMPLETE ANALYTICAL RESULTS - SOIL
FORMER OLD NAVY FUEL FARM
FORMER NAVAL AIR STATION BRUNSWICK
BRUNSWICK, MAINE

SAMPLE ID	NASB-ONFF-DP01-0304	NASB-ONFF-DP02-0304	NASB-ONFF-DP03-0304	NASB-ONFF-DP04-0405	NASB-ONFF-DP05-3.54.5	NASB-ONFF-DP06-0708	NASB-ONFF-DP07-0203	NASB-ONFF-DP08-0910	NASB-ONFF-DP09-0708
LOCATION ID	ONFF-DP01	ONFF-DP02	ONFF-DP03	ONFF-DP04	ONFF-DP05	ONFF-DP06	ONFF-DP07	ONFF-DP08	ONFF-DP09
SAMPLE DATE	06/28/11	06/28/11	06/28/11	06/28/11	06/28/11	06/28/11	06/28/11	06/28/11	06/28/11
DEPTH	3 - 4 FT	3 - 4 FT	3 - 4 FT	4 - 5 FT	3.5 - 4.5 FT	7 - 8 FT	2 - 3 FT	9 - 10 FT	7 - 8 FT
CRITERIA									
VPH MADEP (MG/KG)									
BENZENE	2.9 UJ	3.2 UJ	1.3 U	1.4 U	1.2 U	1.3 U	1.3 U	1.3 U	1.3 U
BTEX	1.06 J	3.6 UJ	1.48 U	1.37 J	1.91 J	1.46 U	1.46 U	1.46 U	1.48 U
C5-C8 ALIPHATICS	58 UJ	64 UJ	27 U	29 U	36	26 U	26 U	54 J	27 U
C5-C8 ALIPHATICS-UNADJ	58 UJ	64 UJ	27 U	29 U	36	26 U	26 U	54 J	27 U
C9-C10 AROMATICS	58 UJ	64 UJ	27 U	29 U	25 U	500 J	26 U	61	27 U
C9-C12 ALIPHATICS	58 UJ	64 UJ	27 U	29 U	51	390	26 U	51 J	44
C9-C12 ALIPHATICS-UNADJ	58 UJ	64 UJ	27 U	29 U	52	890	26 U	110 J	44
ETHYLBENZENE	2.9 UJ	3.2 UJ	1.3 U	0.19 J	0.55 J	1.3 U	1.3 U	1.3 U	1.3 U
LOW MOLECULAR WEIGHT PAHS	2.9 UJ	3.2 UJ	1.3 U	1.4 U	1.2 U	1.3 U	1.3 U	1.3 U	1.3 U
M+P-XYLENES	0.84 J	6.4 UJ	2.7 U	0.67 J	0.75 J	2.6 U	2.6 U	2.6 U	2.7 U
METHYL TERT-BUTYL ETHER	2.9 UJ	3.2 UJ	1.3 U	1.4 U	1.2 U	1.3 U	1.3 U	1.3 U	1.3 U
NAPHTHALENE	2.9 UJ	3.2 UJ	1.3 U	1.4 U	1.2 U	1.3 U	1.3 U	1.3 U	1.3 U
O-XYLENE	0.22 J	3.2 UJ	1.3 U	0.2 J	0.31 J	1.3 U	1.3 U	1.3 U	1.3 U
TOLUENE	2.9 UJ	3.2 UJ	1.3 U	0.31 J	0.3 J	1.3 U	1.3 U	1.3 U	1.3 U
TOTAL PAHS	2.9 UJ	3.2 UJ	1.3 U	1.4 U	1.2 U	1.3 U	1.3 U	1.3 U	1.3 U
TOTAL XYLENES	1.06 J	4.8 UJ	2 U	0.87 J	1.06 J	1.95 U	1.95 U	1.95 U	2 U
POLYCYCLIC AROMATIC HYDROCARBONS (UG/KG)									
2-METHYLNAPHTHALENE	95 UJ	100 UJ	67 UJ	66 UJ	57 UJ	1900 J	23 J	67 UJ	61 UJ
ACENAPHTHENE	95 UJ	100 UJ	67 UJ	66 UJ	57 UJ	1100 J	150 J	16 J	61 UJ
ACENAPHTHYLENE	95 UJ	100 UJ	67 UJ	66 UJ	57 UJ	63 UJ	66 UJ	67 UJ	61 UJ
ANTHRACENE	95 U	100 U	67 U	66 U	57 U	3700	390	35 J	61 U
BENZO(A)ANTHRACENE	23 J	100 U	22 J	66 U	15 J	10000	1600	110 J	61 U
BENZO(A)PYRENE	140 J	100 J	56 J	26 J	57 U	10000	1600	120 J	61 U
BENZO(B)FLUORANTHENE	160 J	97 J	55 J	66 U	57 U	13000	2000	160	16 J

LIGHT SHADING - DETECTED;
U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED

TABLE B-1
COMPLETE ANALYTICAL RESULTS - SOIL
FORMER OLD NAVY FUEL FARM
FORMER NAVAL AIR STATION BRUNSWICK
BRUNSWICK, MAINE

SAMPLE ID	NASB-ONFF-DP01-0304	NASB-ONFF-DP02-0304	NASB-ONFF-DP03-0304	NASB-ONFF-DP04-0405	NASB-ONFF-DP05-3.54.5	NASB-ONFF-DP06-0708	NASB-ONFF-DP07-0203	NASB-ONFF-DP08-0910	NASB-ONFF-DP09-0708
LOCATION ID	ONFF-DP01	ONFF-DP02	ONFF-DP03	ONFF-DP04	ONFF-DP05	ONFF-DP06	ONFF-DP07	ONFF-DP08	ONFF-DP09
SAMPLE DATE	06/28/11	06/28/11	06/28/11	06/28/11	06/28/11	06/28/11	06/28/11	06/28/11	06/28/11
DEPTH	3 - 4 FT	3 - 4 FT	3 - 4 FT	4 - 5 FT	3.5 - 4.5 FT	7 - 8 FT	2 - 3 FT	9 - 10 FT	7 - 8 FT
CRITERIA									
BENZO(G,H,I)PERYLENE	42 J	38 J	34 J	21 J	57 U	6600	950	99 J	20 J
BENZO(K)FLUORANTHENE	64 J	42 J	26 J	66 U	57 U	2100 J	820	59 J	61 U
CHRYSENE	27 J	20 J	30 J	66 U	12 J	9400	1300	100 J	12 J
DIBENZO(A,H)ANTHRACENE	95 U	100 U	67 U	66 U	57 U	2000 J	310	31 J	61 U
FLUORANTHENE	20 J	25 J	36 J	66 U	12 J	21000	2900	240	20 J
FLUORENE	95 U	100 U	67 U	66 U	57 U	1300	180	67 U	61 U
HIGH MOLECULAR WEIGHT PAHS	586 J	422 J	374 J	112 J	78 J	96100 J	14900	1250 J	142 J
INDENO(1,2,3-CD)PYRENE	110 J	100 J	80 J	65 J	39 J	10000	1400	160	59 J
LOW MOLECULAR WEIGHT PAHS	97.1 UJ	100 UJ	67 UJ	66 UJ	57 UJ	18100 J	2180 J	161 J	61 UJ
NAPHTHALENE	110 UJ	100 UJ	67 UJ	66 UJ	57 UJ	680 J	240 J	67 UJ	61 UJ
PHENANTHRENE	95 U	100 U	67 U	66 U	57 U	9400	1200	110 J	61 U
PYRENE	95 U	100 U	35 J	66 U	57 U	12000	2000	170	15 J
TOTAL CARCINOGENIC PAHS-HALFND	572 J	459 J	302 J	256 J	180 J	56500 J	9030	740 J	209 J
TOTAL CARCINOGENIC PAHS-POS	524 J	359 J	269 J	91 J	66 J	56500 J	9030	740 J	87 J
TOTAL PAHS	586 J	422 J	374 J	112 J	78 J	114000 J	17100 J	1410 J	142 J
EPH MADEP (MG/KG)									
C11-C22 AROMATICS	86	130	17 U	16 U	14 U	560	62	14 J	15 U
C11-C22 AROMATICS-UNADJ	86	130	17 U	16 U	14 U	560	62	14 J	15 U
C19-C36 ALIPHATICS	57	89	14 J	16 U	11 J	28	16 U	17 U	15 U
C9-C18 ALIPHATICS	24 U	26 U	17 U	16 U	14 U	1300	16 U	34	12 J

LIGHT SHADING - DETECTED;
U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED

TABLE B-1
COMPLETE ANALYTICAL RESULTS - SOIL
FORMER OLD NAVY FUEL FARM
FORMER NAVAL AIR STATION BRUNSWICK
BRUNSWICK, MAINE

SAMPLE ID	NASB-ONFF-DP10-3.54.5	NASB-ONFF-DP11-0809	NASB-ONFF-DP12-0408	NASB-ONFF-DP13-0506	NASB-ONFF-DP14-0708	NASB-ONFF-DP15-1213	NASB-ONFF-DP16-0405-AVG	NASB-ONFF-DP17-0607	NASB-ONFF-DP18-0910
LOCATION ID	ONFF-DP10	ONFF-DP11	ONFF-DP12	ONFF-DP13	ONFF-DP14	ONFF-DP15	ONFF-DP16	ONFF-DP17	ONFF-DP18
SAMPLE DATE	07/01/11	07/06/11	06/30/11	06/30/11	06/30/11	06/30/11	06/29/11	07/01/11	06/29/11
DEPTH	3.5 - 4.5 FT	8 - 9 FT	4 - 8 FT	5 - 6 FT	7 - 8 FT	12 - 13 FT	4 - 5 FT	6 - 7 FT	9 - 10 FT
CRITERIA									
VPH MADEP (MG/KG)									
BENZENE	1.2 U	1.4 U	1.4 U	1.3 U	1.4 U	1.4 U	1.25 U	1.3 U	1.4 U
BTEX	0.73 J	1.58 U	1.56 U	1.46 U	1.56 U	0.956 J	1.45 J	0.46 J	1.58 U
C5-C8 ALIPHATICS	23 U	28 U	27 U	26 U	550	27 U	37 J	26 U	37 J
C5-C8 ALIPHATICS-UNADJ	23 U	28 U	27 U	26 U	550	27 U	38 J	26 U	37 J
C9-C10 AROMATICS	23 U	28 U	27 U	26 U	170 J	27 U	25.5 U	26 U	56
C9-C12 ALIPHATICS	23 U	28 U	27 U	26 U	170	27 U	26 J	26 U	74
C9-C12 ALIPHATICS-UNADJ	23 U	28 U	27 U	26 U	340	27 U	27 J	26 U	130
ETHYLBENZENE	0.14 J	1.4 U	1.4 U	1.3 U	1.4 U	0.096 J	0.22 J	1.3 U	1.4 U
LOW MOLECULAR WEIGHT PAHS	1.2 U	1.4 UJ	1.4 U	1.3 U	1.4 U	1.4 U	1.25 U	1.3 U	1.4 U
M+P-XYLENES	0.35 J	2.8 U	2.7 U	2.6 U	2.7 U	0.66 J	0.565 J	0.25 J	2.8 U
METHYL TERT-BUTYL ETHER	1.2 U	1.4 U	1.4 U	1.3 U	1.4 U	1.4 U	1.25 U	1.3 U	1.4 U
NAPHTHALENE	1.2 U	1.4 UJ	1.4 U	1.3 U	1.4 U	1.4 U	1.25 U	1.3 U	1.4 U
O-XYLENE	0.11 J	1.4 U	1.4 U	1.3 U	1.4 U	0.2 J	0.25 J	0.1 J	1.4 U
TOLUENE	0.13 J	1.4 U	1.4 U	1.3 U	1.4 U	1.4 U	0.415 J	0.11 J	1.4 U
TOTAL PAHS	1.2 U	1.4 UJ	1.4 U	1.3 U	1.4 U	1.4 U	1.25 U	1.3 U	1.4 U
TOTAL XYLENES	0.46 J	2.1 U	2.05 U	1.95 U	2.05 U	0.86 J	0.815 J	0.35 J	2.1 U
POLYCYCLIC AROMATIC HYDROCARBONS (UG/KG)									
2-METHYLNAPHTHALENE	67 UJ	74 U	64 UJ	58 UJ	190 J	76 UJ	63 U	68 UJ	68 U
ACENAPHTHENE	67 UJ	74 U	64 UJ	58 UJ	14 J	76 UJ	37 J	68 UJ	68 UJ
ACENAPHTHYLENE	67 UJ	74 U	8.6 J	58 UJ	8.5 J	76 UJ	63 UJ	68 UJ	68 UJ
ANTHRACENE	67 U	74 U	36 J	58 U	68 U	76 U	75.5 J	68 U	68 U
BENZO(A)ANTHRACENE	67 U	53 J	220	58 U	68 U	76 U	230	68 U	68 U
BENZO(A)PYRENE	67 U	74 U	200	58 U	68 U	76 U	180	68 U	68 U
BENZO(B)FLUORANTHENE	67 UJ	19 J	300	58 U	68 U	76 UJ	260	68 UJ	68 U

LIGHT SHADING - DETECTED;
U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED

TABLE B-1
COMPLETE ANALYTICAL RESULTS - SOIL
FORMER OLD NAVY FUEL FARM
FORMER NAVAL AIR STATION BRUNSWICK
BRUNSWICK, MAINE

SAMPLE ID	NASB-ONFF-DP10-3.54.5	NASB-ONFF-DP11-0809	NASB-ONFF-DP12-0408	NASB-ONFF-DP13-0506	NASB-ONFF-DP14-0708	NASB-ONFF-DP15-1213	NASB-ONFF-DP16-0405-AVG	NASB-ONFF-DP17-0607	NASB-ONFF-DP18-0910
LOCATION ID	ONFF-DP10	ONFF-DP11	ONFF-DP12	ONFF-DP13	ONFF-DP14	ONFF-DP15	ONFF-DP16	ONFF-DP17	ONFF-DP18
SAMPLE DATE	07/01/11	07/06/11	06/30/11	06/30/11	06/30/11	06/30/11	06/29/11	07/01/11	06/29/11
DEPTH	3.5 - 4.5 FT	8 - 9 FT	4 - 8 FT	5 - 6 FT	7 - 8 FT	12 - 13 FT	4 - 5 FT	6 - 7 FT	9 - 10 FT
CRITERIA									
BENZO(G,H,I)PERYLENE	67 U	19 J	110 J	58 U	68 U	76 U	97 J	68 U	68 U
BENZO(K)FLUORANTHENE	67 U	74 U	100 J	58 U	68 U	76 U	105 J	68 U	68 U
CHRYSENE	67 U	74 U	220	58 U	68 U	76 U	230	68 U	68 U
DIBENZO(A,H)ANTHRACENE	67 U	15 J	32 J	58 U	68 U	76 U	31.5 J	68 U	68 U
FLUORANTHENE	67 U	21 J	460	58 U	20 J	76 U	605	68 U	68 U
FLUORENE	67 UJ	74 U	64 UJ	58 UJ	68 UJ	76 UJ	41 J	68 UJ	68 UJ
HIGH MOLECULAR WEIGHT PAHS	67 UJ	207 J	2130 J	58 U	79 J	76 UJ	2280 J	68 UJ	38 J
INDENO(1,2,3-CD)PYRENE	67 UJ	60 J	180	58 U	43 J	76 UJ	155	68 UJ	38 J
LOW MOLECULAR WEIGHT PAHS	67 UJ	73.6 UJ	185 J	58 UJ	360 J	76 UJ	474 J	68 UJ	68 UJ
NAPHTHALENE	67 UJ	71 UJ	64 UJ	58 UJ	130 J	76 UJ	65 UJ	68 UJ	68 UJ
PHENANTHRENE	67 U	74 U	140	58 U	18 J	76 U	320	68 U	68 U
PYRENE	67 U	20 J	310	58 U	16 J	76 U	390	68 U	68 U
TOTAL CARCINOGENIC PAHS-HALFND	67 UJ	258 J	1250 J	58 U	247 J	76 UJ	1190 J	68 UJ	242 J
TOTAL CARCINOGENIC PAHS-POS	67 UJ	147 J	1250 J	58 U	43 J	76 UJ	1190 J	68 UJ	38 J
TOTAL PAHS	67 UJ	207 J	2320 J	58 UJ	440 J	76 UJ	2760 J	68 UJ	38 J
EPH MADEP (MG/KG)									
C11-C22 AROMATICS	17 U	19 U	16 U	14 U	22 J	19 U	23.5	17 U	17 U
C11-C22 AROMATICS-UNADJ	17 U	19 U	16 U	14 U	22 J	19 U	23.5	17 U	17 U
C19-C36 ALIPHATICS	17 U	19 U	16 U	14 U	17 U	19 U	10 J	17 U	17 U
C9-C18 ALIPHATICS	17 U	19 U	16 U	14 U	30	19 U	16 J	17 U	17 U

LIGHT SHADING - DETECTED;
U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED

TABLE B-1
COMPLETE ANALYTICAL RESULTS - SOIL
FORMER OLD NAVY FUEL FARM
FORMER NAVAL AIR STATION BRUNSWICK
BRUNSWICK, MAINE

SAMPLE ID	NASB-ONFF-DP19-1213	NASB-ONFF-DP20-0304	NASB-ONFF-DP21-1012	NASB-ONFF-DP22-2.53.5	NASB-ONFF-DP23-1112	NASB-ONFF-DP24-0304	NASB-ONFF-DP25-0506	NASB-ONFF-DP26-0607-AVG	NASB-ONFF-DP27-0809
LOCATION ID	ONFF-DP19	ONFF-DP20	ONFF-DP21	ONFF-DP22	ONFF-DP23	ONFF-DP24	ONFF-DP25	ONFF-DP26	ONFF-DP27
SAMPLE DATE	06/29/11	06/29/11	07/06/11	06/30/11	07/06/11	07/06/11	07/05/11	07/05/11	07/01/11
DEPTH	12 - 13 FT	3 - 4 FT	10 - 12 FT	2.5 - 3.5 FT	11 - 12 FT	3 - 4 FT	5 - 6 FT	6 - 7 FT	8 - 9 FT
CRITERIA									
VPH MADEP (MG/KG)									
BENZENE	1.3 U	1.4 U	1.2 U	1.9 U	1.3 U	1.3 U	1.3 U	1.25 U	1.1 U
BTEX	1.45 U	1.58 U	1.35 U	0.75 J	1.46 U	1.46 U	1.2 J	1.46 J	1.25 U
C5-C8 ALIPHATICS	25 U	28 U	22 J	39 U	26 U	26 U	130 J	3500	25 J
C5-C8 ALIPHATICS-UNADJ	25 U	28 U	22 J	39 U	26 U	26 U	130 J	3500	25 J
C9-C10 AROMATICS	25 U	28 U	24 U	39 U	26 U	26 U	42 J	41.5	23 U
C9-C12 ALIPHATICS	25 U	28 U	24 U	39 U	26 U	26 U	53 J	51.5 J	23 U
C9-C12 ALIPHATICS-UNADJ	25 U	28 U	24 U	39 U	26 U	26 U	96 J	94 J	23 U
ETHYLBENZENE	1.3 U	1.4 U	1.2 U	1.9 U	1.3 U	1.3 U	1.3 U	1.25 U	1.1 U
LOW MOLECULAR WEIGHT PAHS	1.3 U	1.4 U	1.2 UJ	1.9 U	1.3 UJ	1.3 UJ	1.3 U	1.25 UJ	1.1 U
M+P-XYLENES	2.5 U	2.8 U	2.4 U	0.55 J	2.6 U	2.6 U	1.2 J	1.72 J	2.3 U
METHYL TERT-BUTYL ETHER	1.3 U	1.4 U	1.2 U	1.9 U	1.3 U	1.3 U	1.3 U	1.25 U	1.1 U
NAPHTHALENE	1.3 U	1.4 U	1.2 UJ	1.9 U	1.3 UJ	1.3 UJ	1.3 U	1.25 UJ	1.1 U
O-XYLENE	1.3 U	1.4 U	1.2 U	0.2 J	1.3 U	1.3 U	1.3 U	1.25 U	1.1 U
TOLUENE	1.3 U	1.4 U	1.2 U	1.9 U	1.3 U	1.3 U	1.3 U	1.25 U	1.1 U
TOTAL PAHS	1.3 U	1.4 U	1.2 UJ	1.9 U	1.3 UJ	1.3 UJ	1.3 U	1.25 UJ	1.1 U
TOTAL XYLENES	1.9 U	2.1 U	1.8 U	0.75 J	1.95 U	1.95 U	1.2 J	1.58 J	1.7 U
POLYCYCLIC AROMATIC HYDROCARBONS (UG/KG)									
2-METHYLNAPHTHALENE	54 U	64 U	69 U	70 UJ	65 U	65 U	68 U	67 U	68 UJ
ACENAPHTHENE	54 UJ	66 J	69 U	70 UJ	65 U	65 U	68 U	67 U	68 UJ
ACENAPHTHYLENE	54 UJ	64 UJ	69 U	70 UJ	65 U	65 U	68 U	67 U	68 UJ
ANTHRACENE	54 U	420	69 U	70 U	65 U	65 U	68 U	67 U	68 U
BENZO(A)ANTHRACENE	54 U	1200	150	32 J	36 J	87 J	68 U	36.5 J	39 J
BENZO(A)PYRENE	54 U	1100	130 J	34 J	65 U	58 J	68 U	67 U	68 U
BENZO(B)FLUORANTHENE	54 U	1400	210	59 J	65 U	96 J	68 U	67 U	68 U

LIGHT SHADING - DETECTED;
U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED

TABLE B-1
COMPLETE ANALYTICAL RESULTS - SOIL
FORMER OLD NAVY FUEL FARM
FORMER NAVAL AIR STATION BRUNSWICK
BRUNSWICK, MAINE

SAMPLE ID	NASB-ONFF-DP19-1213	NASB-ONFF-DP20-0304	NASB-ONFF-DP21-1012	NASB-ONFF-DP22-2.53.5	NASB-ONFF-DP23-1112	NASB-ONFF-DP24-0304	NASB-ONFF-DP25-0506	NASB-ONFF-DP26-0607-AVG	NASB-ONFF-DP27-0809
LOCATION ID	ONFF-DP19	ONFF-DP20	ONFF-DP21	ONFF-DP22	ONFF-DP23	ONFF-DP24	ONFF-DP25	ONFF-DP26	ONFF-DP27
SAMPLE DATE	06/29/11	06/29/11	07/06/11	06/30/11	07/06/11	07/06/11	07/05/11	07/05/11	07/01/11
DEPTH	12 - 13 FT	3 - 4 FT	10 - 12 FT	2.5 - 3.5 FT	11 - 12 FT	3 - 4 FT	5 - 6 FT	6 - 7 FT	8 - 9 FT
CRITERIA									
BENZO(G,H,I)PERYLENE	54 U	670	89 J	25 J	65 U	28 J	68 U	67 U	68 U
BENZO(K)FLUORANTHENE	54 U	500	53 J	70 U	65 U	65 U	68 U	67 U	68 U
CHRYSENE	54 U	1000	120 J	49 J	65 U	28 J	68 U	67 U	68 U
DIBENZO(A,H)ANTHRACENE	54 U	190	13 J	70 U	65 U	65 U	68 U	67 U	68 U
FLUORANTHENE	54 U	2900	270	86 J	65 U	110 J	68 U	67 U	68 U
FLUORENE	54 UJ	93 J	69 U	70 UJ	65 U	65 U	68 U	67 U	68 UJ
HIGH MOLECULAR WEIGHT PAHS	54 U	11700	1440 J	411 J	36 J	567 J	68 U	36.5 J	39 J
INDENO(1,2,3-CD)PYRENE	54 U	830	160	65 J	65 U	74 J	68 U	67 U	68 U
LOW MOLECULAR WEIGHT PAHS	54 UJ	1880 J	89 J	38 J	65 UJ	36 J	68 UJ	67 UJ	68 UJ
NAPHTHALENE	54 UJ	64 UJ	69 UJ	70 UJ	65 UJ	65 UJ	68 UJ	67 UJ	68 UJ
PHENANTHRENE	54 U	1300	89 J	38 J	65 U	36 J	68 U	67 U	68 U
PYRENE	54 U	1900	240	61 J	65 U	86 J	68 U	67 U	68 U
TOTAL CARCINOGENIC PAHS-HALFND	54 U	6220	836 J	309 J	231 J	408 J	68 U	142 J	243 J
TOTAL CARCINOGENIC PAHS-POS	54 U	6220	836 J	239 J	36 J	343 J	68 U	36.5 J	39 J
TOTAL PAHS	54 UJ	13600 J	1520 J	449 J	36 J	603 J	68 UJ	36.5 J	39 J
EPH MADEP (MG/KG)									
C11-C22 AROMATICS	13 U	30	17 U	15 J	16 U	35	17 U	17 U	17 U
C11-C22 AROMATICS-UNADJ	13 U	30	17 U	15 J	16 U	35	17 U	17 U	17 U
C19-C36 ALIPHATICS	13 U	16 U	17 U	18 U	16 U	16 U	17 U	17 U	17 U
C9-C18 ALIPHATICS	13 U	16 U	17 U	18 U	16 U	16 U	17 U	17 U	17 U

LIGHT SHADING - DETECTED;
U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED

TABLE B-1
COMPLETE ANALYTICAL RESULTS - SOIL
FORMER OLD NAVY FUEL FARM
FORMER NAVAL AIR STATION BRUNSWICK
BRUNSWICK, MAINE

SAMPLE ID	NASB-ONFF-DP28-1.52.5	NASB-ONFF-DP29-3.54.5	NASB-ONFF-DP30-0405-AVG	NASB-ONFF-DP31-0506	NASB-ONFF-DP32-0910	NASB-ONFF-DP33-0405	NASB-ONFF-DP34-5.56.5	NASB-ONFF-DP35-1011	NASB-ONFF-DP36-0708
LOCATION ID	ONFF-DP28	ONFF-DP29	ONFF-DP30	ONFF-DP31	ONFF-DP32	ONFF-DP33	ONFF-DP34	ONFF-DP35	ONFF-DP36
SAMPLE DATE	07/01/11	07/01/11	07/01/11	07/05/11	07/05/11	07/05/11	07/05/11	07/05/11	07/05/11
DEPTH	1.5 - 2.5 FT	3.5 - 4.5 FT	4 - 5 FT	5 - 6 FT	9 - 10 FT	4 - 5 FT	5.5 - 6.5 FT	10 - 11 FT	7 - 8 FT
CRITERIA									
VPH MADEP (MG/KG)									
BENZENE	1.1 U	1.2 UJ	1.55 U	1.3 U	1.3 UJ	1.5 U	1.2 U	1.3 U	1.4 U
BTEX	0.598 J	1.34 UJ	1.75 U	1.48 U	1.45 UJ	1.69 U	1.35 U	1.46 U	6.8
C5-C8 ALIPHATICS	22 U	27 J	31.5 UJ	27 U	3900	4500	1800	5300	6400
C5-C8 ALIPHATICS-UNADJ	22 U	27 J	31.5 UJ	27 U	3900	4500	1800	5300	6400
C9-C10 AROMATICS	22 U	23 UJ	31.5 U	27 U	30 J	38 J	330	30 J	54
C9-C12 ALIPHATICS	22 U	23 UJ	31.5 UJ	27 U	39 J	53	300 J	28 J	59
C9-C12 ALIPHATICS-UNADJ	22 U	23 UJ	31.5 UJ	27 U	70 J	91	630	58 J	120
ETHYLBENZENE	0.12 J	1.2 UJ	1.55 U	1.3 U	1.3 UJ	1.5 U	1.2 U	1.3 U	1.9
LOW MOLECULAR WEIGHT PAHS	1.1 U	1.2 UJ	1.55 U	1.3 U	1.3 UJ	1.5 U	1.2 U	1.3 U	1.4 U
M+P-XYLENES	0.27 J	2.3 UJ	3.15 U	2.7 U	2.5 UJ	3 U	2.4 U	2.6 U	4.9
METHYL TERT-BUTYL ETHER	1.1 U	1.2 UJ	1.55 U	1.3 U	1.3 UJ	1.5 U	1.2 U	1.3 U	1.4 U
NAPHTHALENE	1.1 U	1.2 UJ	1.55 U	1.3 U	1.3 UJ	1.5 U	1.2 U	1.3 U	1.4 U
O-XYLENE	0.088 J	1.2 UJ	1.55 U	1.3 U	1.3 UJ	1.5 U	1.2 U	1.3 U	1.4 U
TOLUENE	0.12 J	1.2 UJ	1.55 U	1.3 U	1.3 UJ	1.5 U	1.2 U	1.3 U	1.4 U
TOTAL PAHS	1.1 U	1.2 UJ	1.55 U	1.3 U	1.3 UJ	1.5 U	1.2 U	1.3 U	1.4 U
TOTAL XYLENES	0.358 J	1.75 UJ	2.35 U	2 U	1.9 UJ	2.25 U	1.8 U	1.95 U	4.9
POLYCYCLIC AROMATIC HYDROCARBONS (UG/KG)									
2-METHYLNAPHTHALENE	60 UJ	63 UJ	66.5 UJ	66 UJ	66 UJ	72 UJ	160 J	54 UJ	71 UJ
ACENAPHTHENE	60 UJ	63 UJ	66.5 UJ	66 UJ	66 UJ	72 UJ	18 J	8.6 J	71 UJ
ACENAPHTHYLENE	60 UJ	63 UJ	66.5 UJ	66 UJ	66 UJ	72 UJ	68 UJ	54 UJ	71 UJ
ANTHRACENE	60 U	63 U	66.5 U	66 UJ	66 UJ	72 UJ	68 UJ	54 UJ	71 UJ
BENZO(A)ANTHRACENE	16 J	63 U	38 J	66 UJ	54 J	40 J	45 J	40 J	50 J
BENZO(A)PYRENE	60 U	63 U	66.5 U	66 UJ	66 UJ	72 UJ	68 UJ	54 UJ	71 UJ
BENZO(B)FLUORANTHENE	25 J	63 UJ	66.5 UJ	66 UJ	66 UJ	72 UJ	68 UJ	54 UJ	71 UJ

LIGHT SHADING - DETECTED;
U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED

TABLE B-1
COMPLETE ANALYTICAL RESULTS - SOIL
FORMER OLD NAVY FUEL FARM
FORMER NAVAL AIR STATION BRUNSWICK
BRUNSWICK, MAINE

SAMPLE ID	NASB-ONFF-DP28-1.52.5	NASB-ONFF-DP29-3.54.5	NASB-ONFF-DP30-0405-AVG	NASB-ONFF-DP31-0506	NASB-ONFF-DP32-0910	NASB-ONFF-DP33-0405	NASB-ONFF-DP34-5.56.5	NASB-ONFF-DP35-1011	NASB-ONFF-DP36-0708
LOCATION ID	ONFF-DP28	ONFF-DP29	ONFF-DP30	ONFF-DP31	ONFF-DP32	ONFF-DP33	ONFF-DP34	ONFF-DP35	ONFF-DP36
SAMPLE DATE	07/01/11	07/01/11	07/01/11	07/05/11	07/05/11	07/05/11	07/05/11	07/05/11	07/05/11
DEPTH	1.5 - 2.5 FT	3.5 - 4.5 FT	4 - 5 FT	5 - 6 FT	9 - 10 FT	4 - 5 FT	5.5 - 6.5 FT	10 - 11 FT	7 - 8 FT
CRITERIA									
BENZO(G,H,I)PERYLENE	14 J	63 U	66.5 U	66 UJ	66 UJ	72 UJ	68 UJ	54 UJ	71 UJ
BENZO(K)FLUORANTHENE	60 U	63 U	66.5 U	66 UJ	66 UJ	72 UJ	68 UJ	54 UJ	71 UJ
CHRYSENE	21 J	63 U	66.5 U	66 UJ	66 UJ	72 UJ	68 UJ	54 UJ	71 UJ
DIBENZO(A,H)ANTHRACENE	60 U	63 U	23 J	66 UJ	66 UJ	72 UJ	68 UJ	54 UJ	71 UJ
FLUORANTHENE	30 J	63 U	18 J	66 UJ	50 J	72 UJ	28 J	63 J	44 J
FLUORENE	60 UJ	63 UJ	66.5 UJ	66 UJ	66 UJ	72 UJ	68 UJ	54 UJ	71 UJ
HIGH MOLECULAR WEIGHT PAHS	179 J	63 UJ	64 J	66 UJ	148 J	40 J	110 J	163 J	133 J
INDENO(1,2,3-CD)PYRENE	48 J	63 UJ	66.5 UJ	66 UJ	66 UJ	72 UJ	68 UJ	54 UJ	71 UJ
LOW MOLECULAR WEIGHT PAHS	60 UJ	63 UJ	66.5 UJ	66 UJ	42 J	72 UJ	178 J	8.6 J	25 J
NAPHTHALENE	60 UJ	63 UJ	66.5 UJ	66 UJ	66 UJ	72 UJ	68 UJ	54 UJ	71 UJ
PHENANTHRENE	60 U	63 U	66.5 U	66 UJ	42 J	72 UJ	68 UJ	54 UJ	25 J
PYRENE	25 J	63 U	16 J	66 UJ	44 J	72 UJ	37 J	60 J	39 J
TOTAL CARCINOGENIC PAHS-HALFND	200 J	63 UJ	134 J	66 UJ	252 J	256 J	249 J	202 J	263 J
TOTAL CARCINOGENIC PAHS-POS	110 J	63 UJ	45.5 J	66 UJ	54 J	40 J	45 J	40 J	50 J
TOTAL PAHS	179 J	63 UJ	64 J	66 UJ	190 J	40 J	288 J	172 J	158 J
EPH MADEP (MG/KG)									
C11-C22 AROMATICS	15 U	16 U	11.5 J	16 UJ	16 J	18 UJ	41 J	14 UJ	18 UJ
C11-C22 AROMATICS-UNADJ	15 U	16 U	11.5 J	16 UJ	16 J	18 UJ	41 J	14 UJ	18 UJ
C19-C36 ALIPHATICS	15 U	16 U	17 U	16 UJ	250 J	18 UJ	17 UJ	14 UJ	18 UJ
C9-C18 ALIPHATICS	15 U	16 U	17 U	16 UJ	40 J	16 J	170 J	14 UJ	18 UJ

LIGHT SHADING - DETECTED;
U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED

TABLE B-1
COMPLETE ANALYTICAL RESULTS - SOIL
FORMER OLD NAVY FUEL FARM
FORMER NAVAL AIR STATION BRUNSWICK
BRUNSWICK, MAINE

SAMPLE ID	NASB-ONFF-DP37-0607	NASB-ONFF-DP38-0607	NASB-ONFF-DP39-0304	NASB-ONFF-DP40-1112	NASB-ONFF-DP41-1213-AVG	NASB-ONFF-DP42-0607	NASB-ONFF-DP43-0405-AVG	NASB-ONFF-DP44-0506	NASB-ONFF-DP45-0405
LOCATION ID	ONFF-DP37	ONFF-DP38	ONFF-DP39	ONFF-DP40	ONFF-DP41	ONFF-DP42	ONFF-DP43	ONFF-DP44	ONFF-DP45
SAMPLE DATE	07/05/11	06/29/11	06/29/11	06/29/11	06/30/11	06/30/11	07/06/11	07/06/11	07/06/11
DEPTH	6 - 7 FT	6 - 7 FT	3 - 4 FT	11 - 12 FT	12 - 13 FT	6 - 7 FT	4 - 5 FT	5 - 6 FT	4 - 5 FT
CRITERIA									
VPH MADEP (MG/KG)									
BENZENE	1.2 U	1.3 U	1.5 U	1.3 U	1.2 U	1.2 U	1.25 U	1.9 UJ	1.3 U
BTEX	1.36 U	1.46 U	0.1 J	1.46 U	1.36 U	1.34 U	1 J	0.61 J	1.45 U
C5-C8 ALIPHATICS	25 U	26 U	30 U	26 UJ	25 U	23 U	25 U	38 UJ	25 U
C5-C8 ALIPHATICS-UNADJ	25 U	26 U	30 U	26 UJ	25 U	23 U	25 U	38 UJ	25 U
C9-C10 AROMATICS	25 U	26 U	30 U	26 U	25 U	23 U	25 U	38 UJ	25 U
C9-C12 ALIPHATICS	25 U	26 U	30 U	26 UJ	25 U	23 U	25 U	38 UJ	25 U
C9-C12 ALIPHATICS-UNADJ	25 U	26 U	30 U	26 UJ	25 U	23 U	25 U	38 UJ	25 U
ETHYLBENZENE	1.2 U	1.3 U	1.5 U	1.3 U	1.2 U	1.2 U	0.395 J	1.9 UJ	1.3 U
LOW MOLECULAR WEIGHT PAHS	1.2 U	1.3 U	1.5 U	1.3 U	1.2 U	1.2 U	1.25 UJ	1.9 UJ	1.3 U
M+P-XYLENES	2.5 U	2.6 U	3 U	2.6 U	2.5 U	2.3 U	0.95 J	0.34 J	2.5 U
METHYL TERT-BUTYL ETHER	1.2 U	1.3 U	1.5 U	1.3 U	1.2 U	1.2 U	1.25 U	1.9 UJ	1.3 U
NAPHTHALENE	1.2 U	1.3 U	1.5 U	1.3 U	1.2 U	1.2 U	1.25 UJ	1.9 UJ	1.3 U
O-XYLENE	1.2 U	1.3 U	1.5 U	1.3 U	1.2 U	1.2 U	0.435 J	0.13 J	1.3 U
TOLUENE	1.2 U	1.3 U	0.1 J	1.3 U	1.2 U	1.2 U	0.46 J	0.14 J	1.3 U
TOTAL PAHS	1.2 U	1.3 U	1.5 U	1.3 U	1.2 U	1.2 U	1.25 UJ	1.9 UJ	1.3 U
TOTAL XYLENES	1.85 U	1.95 U	2.25 U	1.95 U	1.85 U	1.75 U	0.91 J	0.47 J	1.9 U
POLYCYCLIC AROMATIC HYDROCARBONS (UG/KG)									
2-METHYLNAPHTHALENE	69 UJ	63 U	76 UJ	69 U	72 UJ	66 UJ	67.5 U	78 U	64 U
ACENAPHTHENE	69 UJ	63 UJ	76 UJ	69 UJ	72 UJ	66 UJ	67.5 U	78 U	64 U
ACENAPHTHYLENE	69 UJ	63 UJ	76 UJ	69 UJ	72 UJ	66 UJ	67.5 U	78 U	64 U
ANTHRACENE	69 UJ	63 U	76 U	69 U	72 U	66 U	67.5 U	11 J	64 U
BENZO(A)ANTHRACENE	69 UJ	63 U	76 U	69 U	72 U	66 U	67.5 U	96 J	34 J
BENZO(A)PYRENE	69 UJ	63 U	76 U	69 U	72 U	66 U	67.5 U	57 J	64 U
BENZO(B)FLUORANTHENE	69 UJ	63 U	76 U	69 U	72 U	66 U	67.5 U	81 J	64 U

LIGHT SHADING - DETECTED;
U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED

TABLE B-1
COMPLETE ANALYTICAL RESULTS - SOIL
FORMER OLD NAVY FUEL FARM
FORMER NAVAL AIR STATION BRUNSWICK
BRUNSWICK, MAINE

SAMPLE ID	NASB-ONFF-DP37-0607	NASB-ONFF-DP38-0607	NASB-ONFF-DP39-0304	NASB-ONFF-DP40-1112	NASB-ONFF-DP41-1213-AVG	NASB-ONFF-DP42-0607	NASB-ONFF-DP43-0405-AVG	NASB-ONFF-DP44-0506	NASB-ONFF-DP45-0405
LOCATION ID	ONFF-DP37	ONFF-DP38	ONFF-DP39	ONFF-DP40	ONFF-DP41	ONFF-DP42	ONFF-DP43	ONFF-DP44	ONFF-DP45
SAMPLE DATE	07/05/11	06/29/11	06/29/11	06/29/11	06/30/11	06/30/11	07/06/11	07/06/11	07/06/11
DEPTH	6 - 7 FT	6 - 7 FT	3 - 4 FT	11 - 12 FT	12 - 13 FT	6 - 7 FT	4 - 5 FT	5 - 6 FT	4 - 5 FT
CRITERIA									
BENZO(G,H,I)PERYLENE	69 UJ	63 U	76 U	69 U	42.5 U	66 U	67.5 U	57 J	64 U
BENZO(K)FLUORANTHENE	69 UJ	63 U	76 U	69 U	72 U	66 U	67.5 U	78 U	64 U
CHRYSENE	69 UJ	63 U	76 U	69 U	24.5 J	66 U	67.5 U	14 J	64 U
DIBENZO(A,H)ANTHRACENE	69 UJ	63 U	76 U	69 U	27 J	66 U	67.5 U	44 J	64 U
FLUORANTHENE	69 UJ	63 U	76 U	69 U	72 U	66 U	67.5 U	48 J	64 U
FLUORENE	69 UJ	63 UJ	76 UJ	69 UJ	72 UJ	66 UJ	67.5 U	78 U	64 U
HIGH MOLECULAR WEIGHT PAHS	69 UJ	37 J	43 J	39 J	62.5 J	66 U	67.5 U	584 J	34 J
INDENO(1,2,3-CD)PYRENE	69 UJ	37 J	43 J	39 J	46 J	66 U	67.5 U	130 J	64 U
LOW MOLECULAR WEIGHT PAHS	69 UJ	63 UJ	76 UJ	69 UJ	72 UJ	66 UJ	67.5 UJ	30 J	64 UJ
NAPHTHALENE	69 UJ	63 UJ	76 UJ	69 UJ	72 UJ	66 UJ	67.5 UJ	78 UJ	64 UJ
PHENANTHRENE	69 UJ	63 U	76 U	69 U	72 U	66 U	67.5 U	19 J	64 U
PYRENE	69 UJ	63 U	76 U	69 U	72 U	66 U	67.5 U	57 J	64 U
TOTAL CARCINOGENIC PAHS-HALFND	69 UJ	226 J	271 J	246 J	136 J	66 U	67.5 U	461 J	226 J
TOTAL CARCINOGENIC PAHS-POS	69 UJ	37 J	43 J	39 J	62.5 J	66 U	67.5 U	422 J	34 J
TOTAL PAHS	69 UJ	37 J	43 J	39 J	62.5 J	66 UJ	67.5 UJ	614 J	34 J
EPH MADEP (MG/KG)									
C11-C22 AROMATICS	17 UJ	16 U	19 U	17 U	17.5 U	16 U	17 U	21 J	16 U
C11-C22 AROMATICS-UNADJ	17 UJ	16 U	19 U	17 U	17.5 U	16 U	17 U	21 J	16 U
C19-C36 ALIPHATICS	17 UJ	16 U	19 UJ	17 U	17.5 U	16 U	17 U	20 U	16 U
C9-C18 ALIPHATICS	17 UJ	16 U	19 UJ	17 U	17.5 U	16 U	17 U	20 U	16 U

LIGHT SHADING - DETECTED;
U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED

B-2 COMPLETE GROUNDWATER ANALYTICAL RESULTS

TABLE B-2
COMPLETE ANALYTICAL RESULTS - GROUNDWATER
FORMER OLD NAVY FUEL FARM
FORMER NAVAL AIR STATION BRUNSWICK
BRUNSWICK, MAINE

SAMPLE ID	NASB-ONFF-GW-DP01-0711	NASB-ONFF-GW-DP07-0711	NASB-ONFF-GW-DP12-0711-AVG	NASB-ONFF-GW-DP17-0711	NASB-ONFF-GW-DP20-0711	NASB-ONFF-GW-DP22-0711	NASB-ONFF-GW-DP24-0711	NASB-ONFF-GW-DP28-0711	NASB-ONFF-GW-DP37-0711
LOCATION ID	ONFF-GW-DP01	ONFF-GW-DP07	ONFF-GW-DP12	ONFF-GW-DP17	ONFF-GW-DP20	ONFF-GW-DP22	ONFF-GW-DP24	ONFF-GW-DP28	ONFF-GW-DP37
SAMPLE DATE	07/11/11	07/12/11	07/12/11	07/12/11	07/12/11	07/12/11	07/13/11	07/12/11	07/13/11
CRITERIA									
VOLATILE GASES (UG/L)									
METHANE	1100	2900	4200	NA	NA	NA	NA	NA	NA
VPH MADEP (UG/L)									
BENZENE	3.8 U	3.8 U	3.8 U	1 J	3.8 U	3.8 U	3.8 U	3.8 U	1.3 J
BTEX	4.26 U	7.9 J	26	1 J	4.26 U	4.26 U	4.26 U	4.26 U	3.7 J
C5-C8 ALIPHATICS	53 J	250	790	75 U	400	190	75 U	75 U	600
C5-C8 ALIPHATICS-UNADJ	53 J	250	790	75 U	400	190	75 U	75 U	600
C9-C10 AROMATICS	75 U	75 U	110	75 U	75 U	75 U	75 U	75 U	75 U
C9-C12 ALIPHATICS	75 U	86 J	75 U	75 U	75 U	64 J	75 U	75 U	75 U
C9-C12 ALIPHATICS-UNADJ	75 U	94 J	160	75 U	75 U	64 J	75 U	75 U	75 U
ETHYLBENZENE	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U
LOW MOLECULAR WEIGHT PAHS	3.8 UJ	3.8 UJ	3.8 UJ	3.8 UJ	3.8 UJ	3.8 UJ	3.8 U	3.8 UJ	3.8 U
M+P-XYLENES	7.5 U	5.8 J	14	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U	2.4 J
METHYL TERT-BUTYL ETHER	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U
NAPHTHALENE	3.8 UJ	3.8 UJ	3.8 UJ	3.8 UJ	3.8 UJ	3.8 UJ	3.8 U	3.8 UJ	3.8 U
O-XYLENE	3.8 U	2.1 J	12	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U
TOLUENE	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U
TOTAL PAHS	3.8 UJ	3.8 UJ	3.8 UJ	3.8 UJ	3.8 UJ	3.8 UJ	3.8 U	3.8 UJ	3.8 U
TOTAL XYLENES	5.65 U	7.9 J	26	5.65 U	5.65 U	5.65 U	5.65 U	5.65 U	2.4 J
POLYCYCLIC AROMATIC HYDROCARBONS (UG/L)									
2-METHYLNAPHTHALENE	0.19 U	0.19 UJ	0.19 UJ	0.19 UJ	0.19 UJ	0.19 UJ	0.19 UJ	0.19 UJ	0.19 UJ
ACENAPHTHENE	0.19 U	0.19 U	0.19 U	0.15 J	0.19 U	0.19 U	0.19 U	0.19 U	0.22 J
ACENAPHTHYLENE	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
ANTHRACENE	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
BENZO(A)ANTHRACENE	0.19 U	0.19 UJ	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U

LIGHT SHADING - DETECTED;
U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED

TABLE B-2
COMPLETE ANALYTICAL RESULTS - GROUNDWATER
FORMER OLD NAVY FUEL FARM
FORMER NAVAL AIR STATION BRUNSWICK
BRUNSWICK, MAINE

SAMPLE ID	NASB-ONFF-GW-DP01-0711	NASB-ONFF-GW-DP07-0711	NASB-ONFF-GW-DP12-0711-AVG	NASB-ONFF-GW-DP17-0711	NASB-ONFF-GW-DP20-0711	NASB-ONFF-GW-DP22-0711	NASB-ONFF-GW-DP24-0711	NASB-ONFF-GW-DP28-0711	NASB-ONFF-GW-DP37-0711
LOCATION ID	ONFF-GW-DP01	ONFF-GW-DP07	ONFF-GW-DP12	ONFF-GW-DP17	ONFF-GW-DP20	ONFF-GW-DP22	ONFF-GW-DP24	ONFF-GW-DP28	ONFF-GW-DP37
SAMPLE DATE	07/11/11	07/12/11	07/12/11	07/12/11	07/12/11	07/12/11	07/13/11	07/12/11	07/13/11
CRITERIA									
BENZO(A)PYRENE	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.15 J	0.19 U
BENZO(B)FLUORANTHENE	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
BENZO(G,H,I)PERYLENE	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
BENZO(K)FLUORANTHENE	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
CHRYSENE	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
DIBENZO(A,H)ANTHRACENE	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
FLUORANTHENE	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
FLUORENE	0.19 U	0.19 U	0.19 U	0.13 J	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
HIGH MOLECULAR WEIGHT PAHS	0.19 U	0.19 UJ	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.15 J	0.19 U
INDENO(1,2,3-CD)PYRENE	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
LOW MOLECULAR WEIGHT PAHS	0.201 UJ	0.237 UJ	0.238 UJ	0.28 J	0.191 UJ	0.209 UJ	0.2 UJ	0.206 UJ	0.22 J
NAPHTHALENE	0.27 UJ	0.52 UJ	0.525 UJ	0.27 UJ	0.2 UJ	0.32 UJ	0.26 UJ	0.3 UJ	0.39 UJ
PHENANTHRENE	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
PYRENE	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
TOTAL CARCINOGENIC PAHS-HALFND	0.19 U	0.19 UJ	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.72 J	0.19 U
TOTAL CARCINOGENIC PAHS-POS	0.19 U	0.19 UJ	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.15 J	0.19 U
TOTAL PAHS	0.195 UJ	0.209 UJ	0.21 UJ	0.28 J	0.191 UJ	0.198 UJ	0.194 UJ	0.15 J	0.22 J
EPH MADEP (UG/L)									
C11-C22 AROMATICS	71 U	71 UJ	71.5 UJ	71 U	71 UJ	72 UJ	71 UJ	77 J	71 UJ
C11-C22 AROMATICS-UNADJ	71 U	71 UJ	71.5 UJ	71 U	71 UJ	72 UJ	71 UJ	77 J	71 UJ
C19-C36 ALIPHATICS	71 UJ	71 U	71.5 U	71 UJ	71 U	72 U	71 U	71 U	71 U
C9-C18 ALIPHATICS	71 U	71 U	71.5 U	71 UJ	71 U	72 U	71 U	71 U	71 U

LIGHT SHADING - DETECTED;
U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED

TABLE B-2
COMPLETE ANALYTICAL RESULTS - GROUNDWATER
FORMER OLD NAVY FUEL FARM
FORMER NAVAL AIR STATION BRUNSWICK
BRUNSWICK, MAINE

SAMPLE ID	NASB-ONFF-GW-DP39-0711	NASB-ONFF-GW-DP42-0711-AVG	NASB-ONFF-GW-DP43-0711	NASB-ONFF-GW-DP44-0711	NASB-ONFF-GW-DP45-0711	NASB-ONFF-GW-PZ-FF01-0711	NASB-ONFF-GW-PZ-FF02-0711	NASB-ONFF-GW-PZ-FF03-0711
LOCATION ID	ONFF-GW-DP39	ONFF-GW-DP42	ONFF-GW-DP43	ONFF-GW-DP44	ONFF-GW-DP45	ONFF-PZ01	ONFF-PZ02	ONFF-PZ03
SAMPLE DATE	07/12/11	07/12/11	07/11/11	07/11/11	07/11/11	07/13/11	07/11/11	07/11/11
CRITERIA								
VOLATILE GASES (UG/L)								
METHANE	NA	6200	NA	NA	NA	NA	NA	NA
VPH MADEP (UG/L)								
BENZENE	3.8 U	7.1	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U
BTEX	4.26 U	22.1 J	4.26 U	4.26 U	4.26 U	4.26 U	4.26 U	4.26 U
C5-C8 ALIPHATICS	75 U	49.2 J	75 U	75 U	75 U	75 U	75 U	75 U
C5-C8 ALIPHATICS-UNADJ	75 U	52.8 J	75 U	75 U	75 U	75 U	75 U	75 U
C9-C10 AROMATICS	75 U	355	75 U	75 U	75 U	75 U	75 U	75 U
C9-C12 ALIPHATICS	75 U	140	75 U	75 U	75 U	75 U	75 U	75 U
C9-C12 ALIPHATICS-UNADJ	75 U	500	75 U	75 U	75 U	75 U	75 U	75 U
ETHYLBENZENE	3.8 U	3.85 J	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U
LOW MOLECULAR WEIGHT PAHS	3.8 UJ	48.5 J	3.8 UJ	3.8 UJ	3.8 UJ	3.8 U	3.8 UJ	3.8 UJ
M+P-XYLENES	7.5 U	3.2 J	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U
METHYL TERT-BUTYL ETHER	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U
NAPHTHALENE	3.8 UJ	48.5 J	3.8 UJ	3.8 UJ	3.8 UJ	3.8 U	3.8 UJ	3.8 UJ
O-XYLENE	3.8 U	7.95	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U
TOLUENE	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U
TOTAL PAHS	3.8 UJ	48.5 J	3.8 UJ	3.8 UJ	3.8 UJ	3.8 U	3.8 UJ	3.8 UJ
TOTAL XYLENES	5.65 U	11.2 J	5.65 U	5.65 U	5.65 U	5.65 U	5.65 U	5.65 U
POLYCYCLIC AROMATIC HYDROCARBONS (UG/L)								
2-METHYLNAPHTHALENE	0.19 UJ	0.97 J	0.2 U	0.19 UJ	0.19 U	0.19 UJ	0.19 U	0.19 U
ACENAPHTHENE	0.19 U	0.205 J	0.2 U	0.19 UJ	0.19 U	0.19 U	0.19 U	0.19 U
ACENAPHTHYLENE	0.19 U	0.19 U	0.2 U	0.28 J	0.19 U	0.19 U	0.19 U	0.19 U
ANTHRACENE	0.19 U	0.19 U	0.2 U	0.19 UJ	0.19 U	0.19 U	0.19 U	0.19 U
BENZO(A)ANTHRACENE	0.19 U	0.19 U	0.2 UJ	0.19 UJ	0.19 UJ	0.19 U	0.19 U	0.19 U

LIGHT SHADING - DETECTED;
U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED

TABLE B-2
COMPLETE ANALYTICAL RESULTS - GROUNDWATER
FORMER OLD NAVY FUEL FARM
FORMER NAVAL AIR STATION BRUNSWICK
BRUNSWICK, MAINE

SAMPLE ID	NASB-ONFF-GW-DP39-0711	NASB-ONFF-GW-DP42-0711-AVG	NASB-ONFF-GW-DP43-0711	NASB-ONFF-GW-DP44-0711	NASB-ONFF-GW-DP45-0711	NASB-ONFF-GW-PZ-FF01-0711	NASB-ONFF-GW-PZ-FF02-0711	NASB-ONFF-GW-PZ-FF03-0711
LOCATION ID	ONFF-GW-DP39	ONFF-GW-DP42	ONFF-GW-DP43	ONFF-GW-DP44	ONFF-GW-DP45	ONFF-PZ01	ONFF-PZ02	ONFF-PZ03
SAMPLE DATE	07/12/11	07/12/11	07/11/11	07/11/11	07/11/11	07/13/11	07/11/11	07/11/11
CRITERIA								
BENZO(A)PYRENE	0.19 U	0.19 U	0.2 U	0.19 UJ	0.19 U	0.19 U	0.19 U	0.19 U
BENZO(B)FLUORANTHENE	0.19 U	0.19 U	0.2 U	0.19 UJ	0.19 U	0.19 U	0.19 U	0.19 U
BENZO(G,H,I)PERYLENE	0.19 U	0.19 U	0.2 U	0.19 UJ	0.19 U	0.19 U	0.19 U	0.19 U
BENZO(K)FLUORANTHENE	0.19 U	0.19 U	0.2 U	0.19 UJ	0.19 U	0.19 U	0.19 U	0.19 U
CHRYSENE	0.19 U	0.19 U	0.2 U	0.19 UJ	0.19 U	0.19 U	0.19 U	0.19 U
DIBENZO(A,H)ANTHRACENE	0.19 U	0.19 U	0.2 U	0.19 UJ	0.19 U	0.19 U	0.19 U	0.19 U
FLUORANTHENE	0.19 U	0.19 U	0.2 U	0.19 UJ	0.19 U	0.19 U	0.19 U	0.19 U
FLUORENE	0.19 U	0.18 J	0.2 U	0.71 J	0.19 U	0.19 U	0.19 U	0.19 U
HIGH MOLECULAR WEIGHT PAHS	0.19 U	0.19 U	0.2 UJ	0.19 UJ	0.19 UJ	0.19 U	0.19 U	0.19 U
INDENO(1,2,3-CD)PYRENE	0.19 U	0.19 U	0.2 U	0.19 UJ	0.19 U	0.19 U	0.19 U	0.19 U
LOW MOLECULAR WEIGHT PAHS	0.201 UJ	26.8 J	0.214 UJ	2.49 J	0.211 UJ	0.196 UJ	0.203 UJ	0.211 UJ
NAPHTHALENE	0.27 UJ	25.5 J	0.3 UJ	0.42 UJ	0.34 UJ	0.23 UJ	0.28 UJ	0.34 UJ
PHENANTHRENE	0.19 U	0.19 U	0.2 U	1.5 J	0.19 U	0.19 U	0.19 U	0.19 U
PYRENE	0.19 U	0.19 U	0.2 U	0.19 UJ	0.19 U	0.19 U	0.19 U	0.19 U
TOTAL CARCINOGENIC PAHS-HALFND	0.19 U	0.19 U	0.2 UJ	0.19 UJ	0.19 UJ	0.19 U	0.19 U	0.19 U
TOTAL CARCINOGENIC PAHS-POS	0.19 U	0.19 U	0.2 UJ	0.19 UJ	0.19 UJ	0.19 U	0.19 U	0.19 U
TOTAL PAHS	0.195 UJ	26.8 J	0.206 UJ	2.49 J	0.199 UJ	0.192 UJ	0.195 UJ	0.199 UJ
EPH MADEP (UG/L)								
C11-C22 AROMATICS	71 UJ	130 J	74 U	71 U	73 U	72 U	71 U	71 U
C11-C22 AROMATICS-UNADJ	71 UJ	130 J	74 U	71 U	73 U	72 U	71 U	71 U
C19-C36 ALIPHATICS	71 U	71.5 U	74 UJ	71 U	73 UJ	72 UJ	71 UJ	71 UJ
C9-C18 ALIPHATICS	71 U	54 J	74 U	71 U	73 U	72 UJ	71 U	71 U

LIGHT SHADING - DETECTED;
U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED

B-3 CHAIN OF CUSTODY FORMS

Katahdin ANALYTICAL SERVICES
600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Client	Contact	Phone #	Fax #
Tetra Tech NUS	Chuck Race	(978) 474-8400	(978) 474-8499

Address	City	State	Zip Code
250 Andover St.	Wilmington	MA	01887

Purchase Order #	Proj. Name / No.	Katahdin Quote #
	NASB-ONFF Site Assesment / 112G02063	

Bill (if different than above) | Address

Sampler (Print / Sign) | Copies To:

LAB USE ONLY WORK ORDER #:

KATAHDIN PROJECT NUMBER _____

REMARKS: _____

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO: _____

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ANALYSIS AND CONTAINER TYPE PRESERVATIVES

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	EPH (Filt. ☐Y ☐N)	VPH (Filt. ☐Y ☐N)	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N
	NASB-ONFF-DP01-0304	6/28/11 / 0905	SOIL	3	X	X								
	-DP02-0304	/ 0745		3	X	X								
	-DP03-0304	/ 0825		3	X	X								
	-DP04-0405	/ 1015		3	X	X								
	-DP05-3,54.5	/ 1055		3	X	X								
	-DP06-0708	/ 1136		3	X	X								
	-DP07-0203	/ 1325		3	X	X								
	-DP08-0910	/ 1430		3	X	X								
	-DP09-0708	/ 1345		3	X	X								
	NASB-ONFF-SB-TB01-062811	6/28/11 / 0700	Aqueous	2		X								
	NASB-ONFF-DP16-0405	6/29/11 / 0825	SOIL	3	X	X	DUPOI							
	NASB-ONFF-SB-DUP01-062911	/ —		3	X	X								
	NASB-ONFF-DP18-0910	/ 0925		3	X	X								
	-DP20-0304	/ 1015		3	X	X								
	-DP19-1213	/ 1210		3	X	X								
	-DP40-1112	/ 1300		3	X	X								

COMMENTS

Standard TAT

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
[signature]	6/30/11 0725	[signature]			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

THE TERMS AND CONDITIONS ON THE REVERSE SIDE HEREOF SHALL GOVERN SERVICES, EXCEPT WHEN A SIGNED CONTRACTUAL AGREEMENT EXISTS.

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Katahdin ANALYTICAL SERVICES
600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

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Client: Refer to Page 1 | Contact | Phone # ( ) | Fax # ( )

Address | City | State | Zip Code

Purchase Order # | Proj. Name / No. | Katahdin Quote #

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ANALYSIS AND CONTAINER TYPE PRESERVATIVES

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	Filt. ❒Y ❒N EPH	Filt. ❒Y ❒N VPH	Filt. ❒Y ❒N	Filt. ❒Y ❒N	Filt. ❒Y ❒N	Filt. ❒Y ❒N	Filt. ❒Y ❒N	Filt. ❒Y ❒N	Filt. ❒Y ❒N	Filt. ❒Y ❒N
	NASB-ONFF-DP38-0607	6/29/11 / 1350	SOIL	3	X	X								
	↓ -DP39-0304	↓ / 1435	↓	6	X	X								
		/												
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COMMENTS

Standard TAT, NASB-ONFF-DP39-0304 is QC

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
[signature]	6/30/11 0725	Deborah Nadeau			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

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600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

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PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Client	Contact	Phone #	Fax #
Tetra Tech NUS	Chuck Race	(978) 474-8400	(978) 474-8499

Address: 250 Andover St. City: Wilmington State: MA Zip Code: 01887

Purchase Order #: Proj. Name / No.: NASB-ONFF-Site Assesment / 112G02063 Katahdin Quote #:

Bill (if different than above): Address:

Sampler (Print / Sign): Brian Geringer / Bi Gi Copies To:

LAB USE ONLY WORK ORDER #:

KATAHDIN PROJECT NUMBER _____

REMARKS: _____

SHIPPING INFO: ❒ FED EX ❒ UPS ❒ CLIENT

AIRBILL NO: _____

TEMP°C _____ ❒ TEMP BLANK ❒ INTACT ❒ NOT INTACT

ANALYSIS AND CONTAINER TYPE PRESERVATIVES

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	EPH (Filt. ❒Y ❒N)	VPH (Filt. ❒Y ❒N)	Filt. ❒Y ❒N	Filt. ❒Y ❒N	Filt. ❒Y ❒N	Filt. ❒Y ❒N	Filt. ❒Y ❒N	Filt. ❒Y ❒N	Filt. ❒Y ❒N	Filt. ❒Y ❒N
	NASB-ONFF-DP22-2.53.5	6/30/11 / 820	SOIL	3	X	X								
	-DP42-0607	/ 0940		3	X	X								
	-DP41-1213	/ 1050		3	X	X	DUP02							
	NASB-ONFF-SB-DUP02-063011	/ —		3	X	X								
	NASB-ONFF-DP13-0506	/ 1220		3	X	X								
	-DP14-0708	/ 1315		3	X	X								
	-DP12-0408	/ 1410		3	X	X								
	-DP15-1213	/ 1530		3	X	X								
	NASB-ONFF-SB-TB02-063011	/ 0700	Aqueous	2		X								
	-RB01-063011	6/30/11 / 1830	Water	4	X	X								
	NASB-ONFF-DP17-0607	7/1/11 / 0755	Soil	3	X	X								
	-DP10-3.54.5	/ 0930		3	X	X								
	-DP28-1.52.5	/ 1050		3	X	X								
	-DP29-3.54.5	/ 1145		3	X	X								
	-DP27-0809	/ 1245		3	X	X								
	-DP30-0405	/ 1320		3	X	X	DUP03							

COMMENTS

Standard TAT

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Bi Gi	7/1/11 1550	[signature]			
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ANALYTICAL SERVICES
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Fax: (207) 775-4029

CHAIN of CUSTODY

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Address | City | State | Zip Code

Purchase Order # | Proj. Name / No. | Katahdin Quote #

Bill (if different than above) | Address

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ANALYSIS AND CONTAINER TYPE PRESERVATIVES

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	Filt. ❒Y ❒N EPH	Filt. ❒Y ❒N VPH	Filt. ❒Y ❒N	Filt. ❒Y ❒N	Filt. ❒Y ❒N	Filt. ❒Y ❒N	Filt. ❒Y ❒N	Filt. ❒Y ❒N	Filt. ❒Y ❒N	Filt. ❒Y ❒N
	NASB-ONFS-SB-DUP03-070111	07/01/11 / —	Soil	3	X	X								
		/												
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COMMENTS

Standard TAT

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[signature]	7/1/11 1550	[signature]			
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Katahdin ANALYTICAL SERVICES
600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

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Client: Tetra Tech NUS	Contact: Chuck Race	Phone #: (978) 474-8400	Fax #: (978) 474-8499
Address: 250 Andover St	City: Wilmington	State: MA	Zip Code: 01887
Purchase Order #	Proj. Name / No.: NASB-ONFF-Site Assessment / 112G02063		Katahdin Quote #
Bill (if different than above)	Address		
Sampler (Print / Sign): Brian Geringer / [signature]			Copies To:

LAB USE ONLY WORK ORDER #:

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REMARKS: _____

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AIRBILL NO: _____

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ANALYSIS AND CONTAINER TYPE PRESERVATIVES

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	EPH (Filt. ☐Y ☐N)	VPH (Filt. ☐Y ☐N)	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N
	NASB-ONFF-SB-TB03-070511	07/05/11 / 0700	Aqueous	2		X								
	NASB-ONFF-DP33-0405	/ 0840	Soil	3	X	X								
	-DP35-1011	/ 0910		3	X	X								
	-DP34-5.56.5	/ 0950		3	X	X								
	-DP36-0708	/ 1635		3	X	X								
	-DP37-0607	/ 1110		3	X	X								
	-DP31-0506	/ 1250		3	X	X								
	-DP32-0910	/ 1330		3	X	X								
	-DP26-0607	/ 1420		3	X	X	DUPO4							
	-DP25-0506	/ 1500		9	X	X								
	NASB-ONFF-SB-DUP04-070511	/ —		3	X	X								
	NASB-ONFF-SB-RB02-070511	/ 1645	Water	4	X	X								
	NASB-ONFF-DP23-1112	7/6/11 / 0805	Soil	3	X	X								
	-DP11-0809	/ 0915		3	X	X								
	-DP21-1012	/ 1015		3	X	X								
	NASB-ONFF-SB-DUP05-070611	/ —		3	X	X								

COMMENTS

Standard TAT, NASB-ONFF-DP25-0506 is QC

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[signature]	7/7/11 710	Deborah J. Maclean			
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AIRBILL NO: ___

TEMP°C ___ ❒ TEMP BLANK ❒ INTACT ❒ NOT INTACT

ANALYSIS AND CONTAINER TYPE PRESERVATIVES

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	Filt. ❒Y ❒N EPH	Filt. ❒Y ❒N VPH	Filt. ❒Y ❒N	Filt. ❒Y ❒N	Filt. ❒Y ❒N	Filt. ❒Y ❒N	Filt. ❒Y ❒N	Filt. ❒Y ❒N	Filt. ❒Y ❒N	Filt. ❒Y ❒N
	NASB-ONFF-DP24-0304	07/06/11 / 1120	Soil	9	X	X								
	-DP43-0405	/ 1250		3	X	X	DUP05							
	-DP44-0506	/ 1430		3	X	X								
	-DP45-0405	/ 1545		3	X	X								
	NASB-ONFF-SB-RB03-070611	/ 1715	Water	3	X	X								
	-SB-FB01-070611	/ 1730		3	X	X								
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COMMENTS

Standard TAT, NASB-ONFF-DP24-0304 is QC

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[signature]	7/7/11 0710	[signature]			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

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B-4 MAINE ELECTRONIC DATA DELIVERABLE

B-4A

MEDD

SAMPLE_POINT_ID	EASTING	NORTHING	COORDINATE_SYSTEM	ELEVATION	VERTICAL_DATUM
ONFF-DP01	3015928.81	389099.73	NAD 1983 SPCS Maine West (Feet)	72.14	NAVD 88
ONFF-DP02	3015951.41	389177.86	NAD 1983 SPCS Maine West (Feet)	72.39	NAVD 88
ONFF-DP03	3016009.68	389149.7	NAD 1983 SPCS Maine West (Feet)	71.57	NAVD 88
ONFF-DP04	3016019.31	389214.43	NAD 1983 SPCS Maine West (Feet)	72.12	NAVD 88
ONFF-DP05	3016062.75	389172.35	NAD 1983 SPCS Maine West (Feet)	71.44	NAVD 88
ONFF-DP06	3016111.91	389253.95	NAD 1983 SPCS Maine West (Feet)	70.87	NAVD 88
ONFF-DP07	3016188.66	389236.06	NAD 1983 SPCS Maine West (Feet)	71.71	NAVD 88
ONFF-DP08	3016232.35	389286.25	NAD 1983 SPCS Maine West (Feet)	70.79	NAVD 88
ONFF-DP09	3016251.41	389217.84	NAD 1983 SPCS Maine West (Feet)	71.6	NAVD 88
ONFF-DP10	3016300.98	389268.89	NAD 1983 SPCS Maine West (Feet)	71.5	NAVD 88
ONFF-DP11	3016339.94	389228.14	NAD 1983 SPCS Maine West (Feet)	72.19	NAVD 88
ONFF-DP12	3016158.12	389144.17	NAD 1983 SPCS Maine West (Feet)	71.92	NAVD 88
ONFF-DP13	3016220.03	389010.21	NAD 1983 SPCS Maine West (Feet)	73.3	NAVD 88
ONFF-DP14	3016218.13	389072.92	NAD 1983 SPCS Maine West (Feet)	73.04	NAVD 88
ONFF-DP15	3016260.51	389082.05	NAD 1983 SPCS Maine West (Feet)	73.17	NAVD 88
ONFF-DP16	3016309.33	389081.72	NAD 1983 SPCS Maine West (Feet)	73.17	NAVD 88
ONFF-DP17	3016333.69	389029.15	NAD 1983 SPCS Maine West (Feet)	73.5	NAVD 88
ONFF-DP18	3016363.71	388990.96	NAD 1983 SPCS Maine West (Feet)	73.59	NAVD 88
ONFF-DP19	3016382.46	388937.68	NAD 1983 SPCS Maine West (Feet)	73.44	NAVD 88
ONFF-DP20	3016425.7	388945.51	NAD 1983 SPCS Maine West (Feet)	71.86	NAVD 88
ONFF-DP21	3016424.44	389141.53	NAD 1983 SPCS Maine West (Feet)	73.01	NAVD 88
ONFF-DP22	3016178.56	388855.92	NAD 1983 SPCS Maine West (Feet)	72.29	NAVD 88
ONFF-DP23	3016442.41	389255.33	NAD 1983 SPCS Maine West (Feet)	71.97	NAVD 88
ONFF-DP24	3016530.22	389090.23	NAD 1983 SPCS Maine West (Feet)	73.36	NAVD 88
ONFF-DP25	3016537.2	389226.7	NAD 1983 SPCS Maine West (Feet)	72.3	NAVD 88
ONFF-DP26	3016564.31	389239.92	NAD 1983 SPCS Maine West (Feet)	72.09	NAVD 88
ONFF-DP27	3016573.46	389304.64	NAD 1983 SPCS Maine West (Feet)	72.29	NAVD 88
ONFF-DP28	3016497.2	389411.02	NAD 1983 SPCS Maine West (Feet)	72.87	NAVD 88
ONFF-DP29	3016564.92	389357.25	NAD 1983 SPCS Maine West (Feet)	72.92	NAVD 88
ONFF-DP30	3016644.69	389302.44	NAD 1983 SPCS Maine West (Feet)	72.49	NAVD 88
ONFF-DP31	3016685.34	389200.14	NAD 1983 SPCS Maine West (Feet)	71.08	NAVD 88
ONFF-DP32	3016724.34	389170.42	NAD 1983 SPCS Maine West (Feet)	71.08	NAVD 88
ONFF-DP33	3016643.94	389345.87	NAD 1983 SPCS Maine West (Feet)	72.53	NAVD 88
ONFF-DP34	3016707.85	389258.43	NAD 1983 SPCS Maine West (Feet)	72.27	NAVD 88
ONFF-DP35	3016691.98	389378.21	NAD 1983 SPCS Maine West (Feet)	72.71	NAVD 88
ONFF-DP36	3016773.17	389252.27	NAD 1983 SPCS Maine West (Feet)	71.71	NAVD 88
ONFF-DP37	3016822.59	389221.23	NAD 1983 SPCS Maine West (Feet)	72.14	NAVD 88
ONFF-DP38	3016300.27	388790.21	NAD 1983 SPCS Maine West (Feet)	71.26	NAVD 88
ONFF-DP39	3016258.44	388766.08	NAD 1983 SPCS Maine West (Feet)	71.1	NAVD 88
ONFF-DP40	3016339.57	388892.04	NAD 1983 SPCS Maine West (Feet)	71.77	NAVD 88
ONFF-DP41	3016145.12	388968.89	NAD 1983 SPCS Maine West (Feet)	72.72	NAVD 88
ONFF-DP42	3016097.43	388934.19	NAD 1983 SPCS Maine West (Feet)	72.1	NAVD 88
ONFF-DP43	3015869.92	388938.57	NAD 1983 SPCS Maine West (Feet)	75.24	NAVD 88
ONFF-DP44	3015922.97	388812.72	NAD 1983 SPCS Maine West (Feet)	74.09	NAVD 88
ONFF-DP45	3015856.71	388784.7	NAD 1983 SPCS Maine West (Feet)	75.98	NAVD 88
ONFF-GW-DP01	3015928.64	389099.91	NAD 1983 SPCS Maine West (Feet)	75.23	NAVD 88
ONFF-GW-DP07	3016189.07	389236.14	NAD 1983 SPCS Maine West (Feet)	74.56	NAVD 88
ONFF-GW-DP12	3016157.94	389144.37	NAD 1983 SPCS Maine West (Feet)	75.07	NAVD 88
ONFF-GW-DP17	3016333.47	389028.88	NAD 1983 SPCS Maine West (Feet)	77.32	NAVD 88
ONFF-GW-DP20	3016425.78	388945.2	NAD 1983 SPCS Maine West (Feet)	74.83	NAVD 88
ONFF-GW-DP22	3016178.22	388856.08	NAD 1983 SPCS Maine West (Feet)	75.5	NAVD 88
ONFF-GW-DP24	3016529.94	389090.01	NAD 1983 SPCS Maine West (Feet)	76.25	NAVD 88
ONFF-GW-DP28	3016497.08	389411.31	NAD 1983 SPCS Maine West (Feet)	76.33	NAVD 88
ONFF-GW-DP37	3016822.7	389221.67	NAD 1983 SPCS Maine West (Feet)	74.98	NAVD 88
ONFF-GW-DP39	3016258.44	388766.08	NAD 1983 SPCS Maine West (Feet)	71.1	NAVD 88
ONFF-GW-DP42	3016097.67	388933.92	NAD 1983 SPCS Maine West (Feet)	75.12	NAVD 88
ONFF-GW-DP43	3015869.92	388938.57	NAD 1983 SPCS Maine West (Feet)	75.24	NAVD 88
ONFF-GW-DP44	3015922.97	388812.72	NAD 1983 SPCS Maine West (Feet)	74.09	NAVD 88
ONFF-GW-DP45	3015856.71	388784.7	NAD 1983 SPCS Maine West (Feet)	75.98	NAVD 88
ONFF-PZ01	3015909.66	389506.98	NAD 1983 SPCS Maine West (Feet)	77.75	NAVD 88
ONFF-PZ02	3015881.66	389381.12	NAD 1983 SPCS Maine West (Feet)	79.34	NAVD 88
ONFF-PZ03	3016347.93	389613.53	NAD 1983 SPCS Maine West (Feet)	75.51	NAVD 88

B-4B

SURVEY DATA

Tetra Tech NUS, Inc.
NASB
Brunswick, ME

Spivey Surveying Services
P. O. Box 901
Brunswick, ME 04011
207-721-0511
spiveysurvey@comcast.net

Old Navy Fuel Farm

July 14, 2011

DPxx	Direct-push boring, at ground elevation
TWxx	Temporary well, at top of PVC pipe
PZxx	Piezometer, at top of PVC pipe
SPOT	Adjacent ground elevation
OCASE	Top of iron outer casing
ONFF	Old Navy Fuel Farm

Horizontal coordinates are MSPCS NAD83 West Zone, U.S. Survey Feet
Elevations are NAVD88, in feet

Point No.	Northing	Easting	Elevation	Description
602	388938.57	3015869.92	75.24	DP43-ONFF
603	388784.70	3015856.71	75.98	DP45-ONFF
604	388812.72	3015922.97	74.09	DP44-ONFF
605	389099.73	3015928.81	72.14	DP01-ONFF
606	389099.91	3015928.64	75.23	TW01-ONFF
607	389177.86	3015951.41	72.39	DP02-ONFF
608	389149.70	3016009.68	71.57	DP03-ONFF
609	389214.43	3016019.31	72.12	DP04-ONFF
610	389172.35	3016062.75	71.44	DP05-ONFF
611	389253.95	3016111.91	70.87	DP06-ONFF
612	389236.06	3016188.66	71.71	DP07-ONFF
613	389236.14	3016189.07	74.56	TW07-ONFF
615	389286.25	3016232.35	70.79	DP08-ONFF
616	389268.89	3016300.98	71.50	DP10-ONFF
617	389217.84	3016251.41	71.60	DP09-ONFF
618	389411.02	3016497.20	72.87	DP28-ONFF
619	389411.31	3016497.08	76.33	TW28-ONFF
620	389357.25	3016564.92	72.92	DP29-ONFF
621	389304.64	3016573.46	72.29	DP27-ONFF
622	389378.21	3016691.98	72.71	DP35-ONFF
623	389345.87	3016643.94	72.53	DP33-ONFF
624	388934.19	3016097.43	72.10	DP42-ONFF
625	388933.92	3016097.67	75.12	TW42-ONFF
626	388968.89	3016145.12	72.72	DP41-ONFF
627	389144.17	3016158.12	71.92	DP12-ONFF
628	389144.37	3016157.94	75.07	TW12-ONFF
629	389082.05	3016260.51	73.17	DP15-ONFF
630	389072.92	3016218.13	73.04	DP14-ONFF
631	389010.21	3016220.03	73.30	DP13-ONFF
632	388855.92	3016178.56	72.29	DP22-ONFF
633	388856.08	3016178.22	75.50	TW22-ONFF

634	388790.21	3016300.27	71.26	DP38-ONFF
635	388892.04	3016339.57	71.77	DP40-ONFF
636	388990.96	3016363.71	73.59	DP18-ONFF
637	389081.72	3016309.33	73.17	DP16-ONFF
638	388945.51	3016425.70	71.86	DP20-ONFF
639	388945.20	3016425.78	74.83	TW20-ONFF
640	389239.92	3016564.31	72.09	DP26-ONFF
641	389226.70	3016537.20	72.30	DP25-ONFF
642	389255.33	3016442.41	71.97	DP23-ONFF
643	389228.14	3016339.94	72.19	DP11-ONFF
644	389141.53	3016424.44	73.01	DP21-ONFF
645	389090.23	3016530.22	73.36	DP24-ONFF
646	389090.01	3016529.94	76.25	TW24-ONFF
647	389613.33	3016347.91	75.57	OCASE
648	389613.53	3016347.93	75.51	PZ03-ONFF
649	389614.58	3016347.83	72.57	SPOT
650	389302.44	3016644.69	72.49	DP30-ONFF
652	389302.48	3016644.48	75.91	TW30-ONFF
653	389200.14	3016685.34	71.08	DP31-ONFF
654	389170.42	3016724.34	71.08	DP32-ONFF
655	389221.23	3016822.59	72.14	DP37-ONFF
656	389221.67	3016822.70	74.98	TW37-ONFF
657	389252.27	3016773.17	71.71	DP36-ONFF
658	389258.43	3016707.85	72.27	DP34-ONFF
659	389029.15	3016333.69	73.50	DP17-ONFF
660	389028.88	3016333.47	77.32	TW17-ONFF
661	388766.30	3016258.20	71.34	OCASE
662	388766.08	3016258.44	71.10	TW39-ONFF
663	388765.64	3016258.79	71.27	SPOT
664	388937.68	3016382.46	73.44	DP19-ONFF
665	389506.96	3015909.43	78.16	OCASE
666	389506.98	3015909.66	77.75	PZ01-ONFF
667	389506.09	3015910.15	75.21	SPOT
668	389381.30	3015881.66	79.48	OCASE
669	389381.12	3015881.66	79.34	PZ02-ONFF
670	389381.61	3015882.32	76.24	SPOT

APPENDIX C

RESPONSES TO COMMENTS

RESPONSE TO MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION COMMENTS SUBMITTED FEBRUARY 16, 2012
OLD FUEL FARM SITE ASSESSMENT- TECHNICAL MEMORANDUM
FORMER NAVAL AIR STATION BRUNSWICK, MAINE
MAY 17, 2012

Note that where the comment response provides revised text, text additions are shown in italics and deleted text is shown as strikethrough.

General Comments:

Maine Department of Environmental Protection (MEDEP) has reviewed the draft "Technical Memorandum, Former Old Navy Fuel Farm, Site Assessment", dated January 12, 2012 prepared by Tetra Tech NUS. Based on that review MEDEP has the following comments and issues.

1. **Comment:** The data collected indicate that although residual petroleum remains at the Old Fuel Farm (OFF) and is leaching to site groundwater, concentrations attenuate to below detection limits near the site boundary. The ongoing degradation of the petroleum in conjunction with the pockets of subsurface organic "peat" zones results groundwater that is low in oxygen and geochemically reducing based upon the low-flow field parameters. The elevated methane detected in groundwater is likely a byproduct of these conditions. (No response required.)

   Response: Comment noted.

2. **Comment:** Please include a spreadsheet file of the direct push locations and an electronic data deliverable in the latest MEDEP format in the appendices of the final report or submit them separately via email to MEDEP.

   Response: A spreadsheet of the direct push locations and electronic data deliverable will be provided in the final report.

3. **Comment:** Recent studies of petroleum hydrocarbons and vapor intrusion indicate that the residual concentrations at the OFF are well below those that typically present a vapor intrusion risk, where site conditions allow degradation of vapor in the unsaturated soils above the water table. However the water table at the OFF is only about 4 feet below grade, which might put a slab in close proximity to impacted soils and groundwater with insufficient distance to degrade the petroleum hydrocarbons. In addition, the levels of methane in the groundwater are high enough that there is some potential for risk if those vapors were collecting in a basement or utility room. This potential risk would only be a factor if the site was developed in the future, and that needs to be accounted for in any institutional controls placed on the site.

   Response: The Navy will discuss these issues with the MEDEP further to determine the best overall management approach for this site.

4. **Comment:** Please reference the investigative work plan that this report covers.

   Response: The final work plan entitled: "Work Plan Site Assessment Former Old Navy Fuel Farm, Naval Air Station, Brunswick, Maine June 17, 2011" will be referenced in the final report.

Specific Comments:

5. **Comment:** Section 2.0, Background:

a.) Para 5 & 6: Please correct the date of the soil investigation to August 1999 rather than April 1999. (Direct Push Investigation at the Old Navy Fuel Farm – Apr 2000). Also please add the reference to bulleted items reviewed in an earlier paragraph.

Response: The date and reference will be updated in the final report.

b.) Para 6: FWEC added test pits to verify and expand on the identified excavation area."

This work was not done as part of the 1999 investigation but as part of the FWEC work performed in 2000. Please revise. It may be necessary to change the order of the paragraphs as the chronology is off.

Response: This revision will be made in the final report.

c.) Para 8: "In July 1999, the Navy performed an evaluation of various remedial alternatives that could be implemented at the ONFF."

MEDEP could find no record of this report. Please provide a reference to the report.

Response: The evaluation of various remedial alternatives was indicated in Section 1.2.1 of the report entitled: "Final Removal Action Report for Old Navy Fuel Farm, Naval Air Station Brunswick, Brunswick, Maine" dated January 2002, prepared by Foster Wheeler Environmental Corporation.

d.) Para 8: "In September-November 1999, 14,677 tons of petroleum impacted…"

The removal occurred in 2000 not 1999. Please correct. (Removal Action Report for Old Navy Fuel Farm – January 2002).

Response: This correction will be made in the final document.

e.) Para 8: Initially the interim action level of 2,5000 ppm total DRO and GRO was proposed. However once the test pitting and additional sampling occurred the Navy made a field decision and dropped the interim action level to 870 ppm total DRO GRO. (Removal Action Report for Old Navy Fuel Farm – FWEC 2002). Please revise.

Response: The following sentence will be inserted at the end of paragraph 8: "*Because preliminary soil analytical data indicated only 4 of 12 hot spot areas exceeded the interim action level of 2,500 ppm for DRO and GRO combined, the Navy reduced the site cleanup level to 870 ppm (FWEC, 2002).*"

f.) Para 14: Although the wells sampled did not detect EPH/VPH compounds downgradient of the fuel farm, there is a gap in the well network in the western area south of Avenue B. MW-NASB-701 had some historic detections of fuel compounds in 2006 prior to being damaged beyond repair, and the well downgradient (MW-NASB-244) is screened very shallow (less than 10 feet below ground surface) so there is only partial confirmation that the flow path intercepted at DP-20 attenuates prior to reaching Avenue B. MEDEP accepts the conclusion based on the fact that residual petroleum plumes typically attenuate over short distances, and that the field data for DP-20 and DP-24 show evidence for ongoing biodegradation (reducing conditions, low dissolved oxygen, odors). Addition of these factors to the text would help support the conclusions regarding the groundwater plume.

Response: The following text will be inserted immediately before the last sentence in paragraph 14: "*Field data for DP-20 and DP-24 show evidence for ongoing biodegradation (reducing conditions, low dissolved oxygen, odors, and elevated PID and OVM jar headspace values).*"

6. **Comment:** Section 8.3, Soil Sampling Results, bullet 4: "It should be noted that these analytes are common constituents of bituminous asphalt. Small asphalt particles can …. Any asphalt particles in soil samples can cause elevated PAH concentrations."

   There is a linkage between asphalt and PAHs, however the only sections of the fuel farm that were paved were the road that bisected the site and the fuel loading area to the northwest. Asphalt was only observed in 3 borings based on the logs, and the locations that had the highest PAHs in the western portion of the site also had visual, olfactory and field screening data to indicate that the PAHs are related to fuel releases at the fuel farm rather than asphalt. Please note the field evidence for site impacts that correspond to intervals with elevated PAHs.

   Response: Bullet 4 summarizes soil sample locations where the PAHs benzo(a)pyrene, benzo(a)anthracene, Benzo(b)fluoranthene, debenzo(a,h)anthracene and/or indeno(1,2,3-cd)pyrene were present, which coincided with the western half of the ONFF. Small asphalt particles may not be identified visually in the field, but may be present in fill and carry-down during borehole advancement. With the exception of DP-06, these PAHs do not coincide with soil sample locations with exceedances of C5-C8 aliphatics, C9-C10 aromatics and/or ethylbenzene (summarized in bullet 3), which show elevated PID readings. As requested, the following text will be added to Bullet 4: "*Field evidence for site impacts that correspond to elevated PAHs follow (PID headspace value in ppm/v): DP-01 (asphalt, organic soil [filled area], 0.6-0.7 ppm), DP-02 (organic soil [filled area], 0.5-0.6 ppm), DP-03 (organic soil [filled area], 2.4-2.8 ppm), DP-06 (petroleum odor, 599 ppm), DP-07 (asphalt , peat-like soil [filled area], petroleum odor, 50.7 ppm), DP-08 (petroleum odor, wood [filled area], 119 ppm), DP-12 (asphalt, sand/gravel [fill], 2.2-3.1 ppm), DP-16 (former soil horizon [fill above], 28-30 ppm), DP-20 (dark-brown [organic soil/filled area], 0.3-0.5 ppm), DP-21 (petroleum odor, 1,240-1,357 ppm), DP-22 (peat-like [filled area], 0.4-1.8 ppm), DP-24 (organic soil [filled area], 2.6-3.6 ppm), DP-41 (4.8 ppm), and DP-44 (peat-like [filled area], 2.0 ppm)."*

7. **Comment:** Section 8.4 Groundwater Sampling Results, para 4: *"The remaining wells with exceedances…"*

   DP-42 is mentioned in both the first and second sentences; please revise the second sentence, perhaps by omitting "remaining" and "other" from the text.

   Response: The second sentence will be revised as follows: The remaining wells with exceedances (DP-012, -20, ~~-42,~~ and -37) are located…".

8. **Comment:** Section 8.4 Groundwater Sampling Results, final paragraph & Table 3: The data from the three locations near Building 103 do indicate that the shallow soils/groundwater in that area are not a continuing source of VPH range compounds at Site 17 or at the DP-42 area at the OFF, or if they were, the source areas have attenuated below detection limits. In the fall 2011 monitoring round for Site 17, MTBE decreased to < 1 µg/L at MW-17-01, but was detected at MW-17-03 further downgradient at 8.9 µg/L, suggesting that whatever the source the plume is small. The source for the DP-42 detections may be impacted soil related to the former ONFF unleaded gas tank. Please add text indicating that there does not appear to be a continuing offsite source for the impacted groundwater at DP-42.

   Response: The following text will be added to the report: "*There does not appear to be a continuing offsite source for the impacted groundwater at DP-42.*"

9. **Comment:** Section 8.5 Recommendations:

a.) Groundwater use needs to be restricted at the site as proposed based upon the petroleum and PAH detections in groundwater detected in this investigation.

With the exception of the PAHs, the soils at the site do not pose a direct contact risk (ICLR of 10^{-5} and HQ=1) even at residential levels, based on calculations using the maximum detections for non-PAH compounds and petroleum carbon ranges and the soil risk workbook that was developed as part of the Remedial Action Guidelines revisions. The soils do exceed the current petroleum guidelines for residential and park user scenarios, however those criteria are set for a generic multiple contaminant scenario (ICLR of 10^{-6} and HQ=0.2).

There are two areas where elevated PAHs are associated with evidence of petroleum in the soil, and those areas would pose a direct contact risk if the soils were present at the surface. The most significant area is the former loading rack area (DP-06 and DP-08), and the second location is DP-20, where the PAHs are elevated and groundwater is impacted. Excavations at these locations would greatly reduce direct contact risks for soil at the site. A third area where excavation may be warranted to reduce groundwater impacts at the site is in the vicinity of the piping that ran to tank 204 and tank 205. The C_5 to C_8 aliphatics detected there and to the southeast at DP-34 and DP-36 are likely the source of the dissolved C_5 to C_8 detected downgradient at DP-37. Removal of the shallow material at DP-33 and DP-34 would reduce the residual petroleum available to leach to groundwater, although deeper soils may continue to leach to groundwater for the foreseeable future.

Response: Soil data (boring logs, jar headspace readings), and soil analytical results support continued recreational use of the ball fields at the ONFF site. The Navy is willing to accomplish additional soil sampling in areas that appear to contain high levels of residual petroleum contamination in an effort to better define the elevated PAHs described by the MEDEP. Once these results are obtained, the Navy and MEDEP can discuss the long term management strategy for this site.

b.) Periodic monitoring to evaluate the attenuation of groundwater at the fuel farm is warranted, however the existing permanent wells are not adequate to meet this objective. Assuming the ball fields remain in place, new locations are needed near the fence line downgradient of DP-20 and DP-42. The lack of available monitoring points in the source areas will require long-term institutional control on groundwater use for the site.

Response: The Navy agrees groundwater use at the ONFF should be restricted based on the results of this investigation.

c.) Decommissioning of the temporary wells is acceptable. There would be some value in retaining locations at DP-37 and DP-20 to assess attenuation within the site boundary over the long term, although addition of a protective casing would likely be needed. In addition, permanent wells located south of Fitch Avenue are candidates for abandonment, unless they have value for other monitoring or gauging purposes.

Response: The Navy will consider retaining DP-20 and DP-37 to assess attenuation within the site boundary; otherwise, all temporary wells will be decommissioned in accordance with MEDEP requirements. The recommendations will be revised accordingly.

10. **Comment:** Appendix A-3 Well Development Logs: These logs were missing from the draft document, please include them in the final report.

Response: Well development logs will be included in the final report.

11. **Comment:** Figure No. 7: MW-NASB-703 has not been sampled since 2006, please remove it from the figure.

    Response: MW-NASB-703 will be removed from Figure No. 7 in the final report.