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NAS CECIL FIELD, FL
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FINAL DIG AND HAUL PACKAGE FOR BUILDING 502 TANK 502 NAS CECIL FIELD FL

9/11/2007

TETRA TECH NUS INC

Document Tracking Number 07JAX0052

September 11, 2007

Project Number 112G00378

Mr. David Grabka
Florida Department of Environmental Protection
Twin Towers Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Reference: CLEAN IV Contract Number N62467-04-D-0055
Contract Task Order 0025

Subject: Final Dig and Haul Package, Building 502, Tank 502
Naval Air Station Cecil Field
Jacksonville, Florida

Dear Mr. Grabka:

Tetra Tech NUS, Inc. (TtNUS) is pleased to submit this Dig and Haul Package for the subject site. This package has been prepared for the United States Navy (Navy), Naval Facilities Engineering Command Southeast (NAVFAC SE) under Contract Task Order (CTO) 0025 for the Comprehensive Long-term Environmental Action Navy (CLEAN) IV Contract Number N62467-04-D-0055.

SITE BACKGROUND

Tank 502, a 1,000-gallon fuel oil tank, was removed in 1997, and a subsequent site assessment was performed by Harding Lawson Associates (HLA) in 1998 that recommended a soil source removal. The source removal was conducted in January 1999, and the following items were noted in the report:

- The contaminated soil associated with Tank 502 was removed.
- No free product was encountered during the excavation.
- Three monitoring wells (CEF-502-1S, CEF-502-2S, and CEF-502-5D) were abandoned because they were within the limits of the excavation.

In April 1999, a follow-up Site Assessment Report (SAR) recommended that No Further Action be conducted with regard to soils at the site. The SAR recommended that groundwater monitoring only for natural attenuation take place because benzene, ethylbenzene, xylenes, naphthalene, and total recoverable petroleum hydrocarbons (TRPH) were previously detected in excess of Florida Department of Environmental Protection (FDEP) Groundwater Cleanup Target Levels (GCTLs). The SAR noted that wells CEF-502-2S and CEF-502-5D had been abandoned, and it recommended that those wells be replaced and monitored along with CEF-502-4S. The FDEP responded in July 1999 with a Monitoring Only Plan (MOP) approval letter that required semi-annual sampling of CEF-502-1S, CEF-502-4S, CEF-502-2S, and CEF-502-5D. HLA replaced abandoned wells CEF-502-2S and CEF-502-5D with CEF-502-6S and CEF-502-7D, respectively, before the first semi-annual event in August 1999. Following the second semi-annual sampling event in March 2000, the FDEP agreed to continue groundwater monitoring. However, the FDEP required a monitoring well in the former location of CEF-502-1S and stipulated that the well should be sampled for benzene, toluene, ethylbenzene, and total xylenes using

United States Environmental Protection Agency (USEPA) Method 602; Polynuclear Aromatic Hydrocarbons (PAHs) using USEPA Method 8310; and TRPH using the Florida Petroleum Range Organics (FL-PRO) method.

During March and April 2001, TtNUS conducted a supplemental site assessment in response to the FDEP recommendations in response to the 1999 SAR. TtNUS personnel supervised the installation of a replacement well for CEF-502-1S (designated CEF-502-1SR), and sampled this well and CEF-502-4S, CEF-502-6S, and CEF-502-7D for volatile organic compounds, PAHs, and TRPH as required in the MOP. The Supplemental SAR recommended several modifications to the monitoring program including the installation and sampling of an additional well (CEF-502-8S) and sampling of an additional existing well (CEF-502-3S). The recommendations were approved by the FDEP on August 3, 2001, and were implemented during the next semi-annual sampling event in December 2001.

Four semi-annual groundwater monitoring events were conducted from June 6, 2002 through January 28, 2004. The Second Semi-Annual, Fourth Year Groundwater Monitoring Report indicated that concentrations of benzene, ethylbenzene, and total xylenes were less than their respective milestone objectives for Year 4. However, the concentrations of naphthalene and TRPH in well CEF-502-1SR were greater than the milestone objectives in Year 4.

Because the concentrations of contaminants of concern at CEF-502-1SR continued to exceed GCTLs (milestones), TtNUS recommended that semi-annual monitoring of existing wells be continued and also recommended additional characterization of the source of contamination contributing to CEF-502-1SR. This recommendation was discussed and approved at the December 2005 Naval Air Station (NAS) Cecil Field Base Realignment and Closure Cleanup Team (BCT) meeting. In November, 2006, TtNUS advanced 10 soil borings in the vicinity of CEF-502-1SR (see Figure 1). Based on field screening results and visual observations, one soil sample was collected from each location for fixed-base laboratory analysis. The samples were analyzed for PAHs including 1-methylnaphthalene and 2-methylnaphthalene using USEPA Method SW-846 8310 and for TRPH using FL-PRO. Concentrations of TRPH exceeded its FDEP Soil Cleanup Target Level (SCTL) for the samples CEF-502-SB06, CEF-502-SB07, CEF-502-SB09, and CEF-502-SB10. The soil analytical results for the remaining soil samples indicated that all target analytes were either not detected or were detected at estimated concentrations less than their respective SCTLs. The SAR Addendum detailed the results of the additional soil sampling and recommended a source removal to address contaminated soil in the vicinity of Building 502.

Based on the direction at the October 2006 BCT meeting, CH2M Hill conducted a site visit in January 2007 to evaluate the Building 502 footer as preparation for the proposed source removal. The Building 502 footer was observed to extend from 3.5 to 4.5 feet below ground surface (bgs). While excavating an access hole at historical sample point SB07 during the site visit, a pipe was observed that appeared to lead from Building 502 to the former Tank 502 location. Building 502 is currently used for police training activities.

GUIDANCE NOTES

This information is provided for general guidance associated with the soil removal action. The area of excavation is shown on Figure 1. The extent of excavation will be defined in the field by TtNUS with white spraydown paint (or equivalent) prior to the execution of the removal action. The monitoring well CEF-502-1SR, with a depth of 12.48 feet bgs, will be destroyed during the excavation activities. This well will be reinstalled and sampled by TtNUS upon completion of the excavation and site restoration.

Prior to the removal action a utility clearance will be conducted to field locate and mark all utilities in the area of and near the proposed soil removal action. The contractor shall coordinate with TtNUS regarding the utility clearance and notification of Sunshine State One Call of Florida and the Jacksonville Aviation Authority. The abandoned fuel line can be removed during the soil removal action.

The area of soil removal is a 15-foot by 18-foot area as shown in Figure 1. The soil will be excavated to a depth of approximately 3.5 feet bgs to the top of the building footer. The remaining soil will be removed in 4-foot wide trenches running 15 feet west to east to the depth of the water table (approximately 9 feet bgs). The contractor will place a polyethylene or other appropriate material liner along the wall of each trench preceding backfill to serve as a visual barrier between clean fill material and contaminated soil to be removed. Each trench will be immediately backfilled with certified clean fill material consisting of fine gravel or sands free of debris, foreign objects, organics, unsuitable soil, and other deleterious material. The backfill will be placed in layers not to exceed 8 inches and compacted to 95 percent of the Standard Proctor maximum density (ASTM D698) and field verified prior to digging the next trench. Density testing will be conducted on every compacted lift and at grade prior to asphalt replacement. The contractor will continue to remove and replace soil in 4-foot trench intervals until the proposed excavation area has been removed. Clean fill material will be added in 8-inch intervals and compacted to 95 percent of the Standard Proctor maximum density for the remaining excavated volume, and the surface will be restored to its original grade and resurfaced. The asphalt replacement will be equal to or better than the existing pavement. It is assumed that 6 to 8 inches of processed gravel and 2 layers of 2½ -inch Class 2 asphalt compacted to final thickness of 2 inches each layer for total of 4 inches will be required.

The building footer will be inspected regularly during excavation activities. If the building footer is observed to be of poor quality or if undermining is observed in the vicinity of the footer during the excavation, shoring of the foundation will be conducted to facilitate the removal of soil without damage to the structure.

The contractor will be responsible for the following:

- The schedule and methods of excavation. Excavation and backfilling activities shall be conducted in accordance with OSHA 1926, Subpart P.

- All aspects of work site health and safety and compliance with OSHA 1910.120 requirements.

- Identification and avoidance of all aboveground and underground utilities or other manmade structures.

- Waste characterization, transport (both on and off site), and disposal of all excavated soil.

- Notification of TtNUS and the Navy if observations indicate that contaminants may extend beyond the planned lateral or vertical limits of the excavation.

- Saw cutting of pavement to the limits of the proposed excavation area prior to excavation. Where bituminous flexible pavement adjoins the limits of excavation, the edges adjacent to the excavation will be trimmed to neat straight lines before resurfacing.

- Depth of excavation is to the water table (approximately 9 feet bgs). Except where necessary for avoidance of structures or utilities or where otherwise specified by TtNUS, the excavation should extend to the depths presented in this Dig and Haul Package.

- Excavated soil will be stockpiled on and covered with heavy-duty polyethylene sheeting at the site. This will be done in a manner to avoid the potential for contaminating surrounding soil or surface water. Alternately, soils may be stockpiled in properly covered roll-off containers or direct loaded for off site disposal.

- Materials used to backfill the excavation will be from an uncontaminated source and be free of organic or other unsuitable material. A Proctor compaction test, ASTM D698, will be performed on fill material preceding delivery to the site and certification of clean material is required.

- Upon completion, the area of excavation will be resurfaced using Florida Department of Transportation approved materials matching existing conditions or better at the site.

If you have any questions regarding the information presented in this document, please contact me by phone at (412) 921-8163, or via e-mail at Robert.Simcik@ttnus.com.

Sincerely,

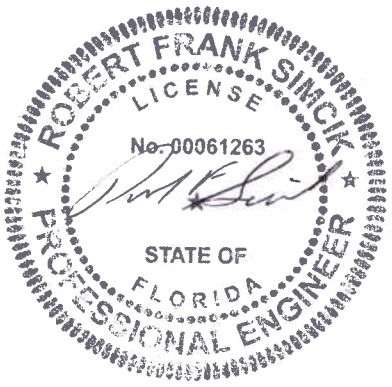
Robert F. Simcik, P.E.
Task Order Manager

c: B. Nwokike, NAVFAC SE
M. Halil, CH2M Hill
K. Wimble, TtNUS
J. Johnson, TtNUS, Information Repository
M. Jonnet, TtNUS, DMS upload.
CTO 0025 Project File

CERTIFICATION

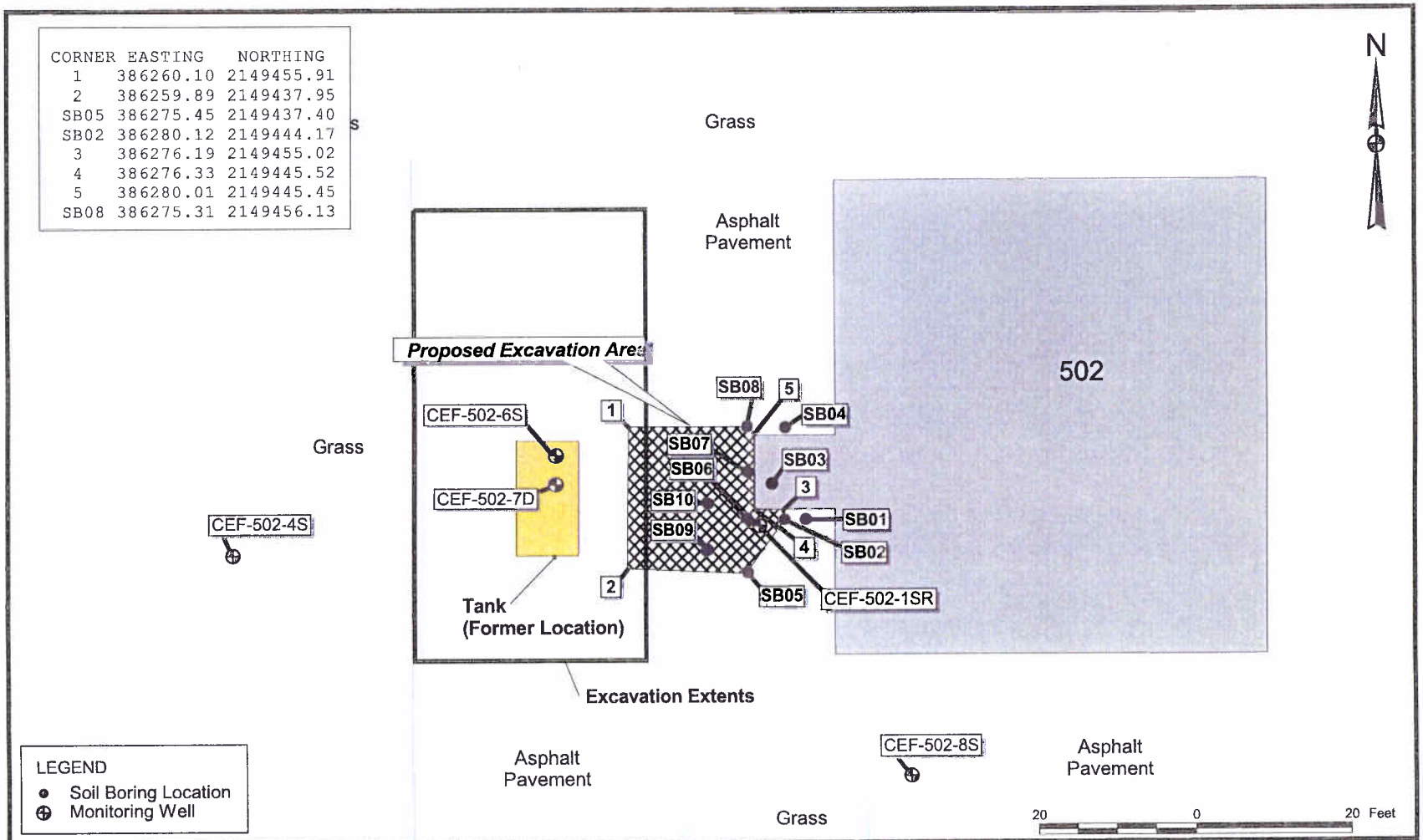
The information herein contained is based on the information provided and associated information detailed in previous reports regarding this Site. If conditions are determined to exist that differ from those described, the undersigned Profession Engineer should be notified to evaluate the affects of any additional information on the information described in this report. This Dig and Haul Package was developed for Building 502, Tank 502 at the Naval Air Station Cecil Field, Jacksonville, Florida, and should not be construed to apply to any other site.

September 7, 2007
Robert F. Simcik, P.E.
PE Number 61263
Florida PE License Number 61263



FIGURE

CORNER	EASTING	NORTHING
1	386260.10	2149455.91
2	386259.89	2149437.95
SB05	386275.45	2149437.40
SB02	386280.12	2149444.17
3	386276.19	2149455.02
4	386276.33	2149445.52
5	386280.01	2149445.45
SB08	386275.31	2149456.13



DRAWN BY: MJJ	DATE: 25Aug05	PROPOSED SOIL REMOVAL AREA BUILDING 502 NAVAL AIR STATION CECIL FIELD JACKSONVILLE, FLORIDA	CONTRACT NUMBER: 248
CHECKED BY	DATE		APPROVED BY / DATE
COST/SCHEDULE-AREA			APPROVED BY / DATE
SCALE: AS NOTED	NAVFAC		DRAWING NO.: FIGURE 1 / REV: 0

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