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SOIL SAMPLING WORK PLAN FOR SOLID WASTE MANAGEMENT UNITS 2, 3, 4, 5 AND 22 (SWMU2) (SWMU3) (SWMU4) (SWMU5) (SWMU22) NS MAYPORT FL

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TETRA TECH

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Reference: CLEAN IV Contract Number N62467-04-D-0055
Contract Task Order Number 0010

Subject: Soil Sampling Work Plan for
Solid Waste Management Units 2, 3, 4, 5, and 22
Naval Station Mayport, Florida

Dear Ms. Wilson:

Tetra Tech NUS, Inc. (TtNUS) is pleased to submit for your review and approval the Soil Sampling Work Plan for Solid Waste Management Units (SWMUs) 2, 3, 4, 5, and 22 at Naval Station (NAVSTA) Mayport, Florida. This report was prepared for the United States Navy, Naval Facilities Engineering Command Southeast (NAVFAC SE) under Contract Task Order (CTO) 0010 for the Comprehensive Long-term Environmental Action Navy (CLEAN) IV Contract Number N62467-04-D-0055.

This Soil Sampling Work Plan describes the impact that recent regulatory revisions have had on the extent of soil contamination delineation at SWMUs 2, 3, 4, 5, and 22 since the draft Corrective Measures Study (CMS) Report was submitted and outlines supplemental soil sampling requirements at SWMUs 2, 3, 4, 5, and 22. SWMUs 2 (Landfill B), 3 (Landfill D), 4 (Landfill E), and 5 (Landfill F) are all former landfills, and SWMU 22 was used as an abrasive blasting area. The objectives of the sampling program detailed in this plan are to completely delineate surface and subsurface soil contamination within and around the SWMUs in excess of the new Florida Department of Environmental Protection (FDEP) Soil Cleanup Target Levels (SCTLs). The resultant data will be used to clearly define the appropriate land use control (LUC) boundaries at the respective SWMUs.

The data collected during field activities outlined in this work plan will be incorporated into the next issue of the CMS Report for SWMUs 2, 3, 4, 5, and 22.

SITE BACKGROUND

SWMUs 2, 3, 4, and 5 are former landfill sites located in the southwestern portion of NAVSTA Mayport that operated from 1960 to 1985 as shown on Figure 1. SWMU 22 is a facility that was used for abrasive blasting and is located approximately 400 feet northeast of SWMU 2 (see Figure 1). Collectively, these SWMUs are referred to as the Landfill Area SWMUs.

Trenches at each of the landfill SWMUs intersected the shallow water table and wastes were placed below the groundwater level. Waste materials above the water level were burned on a daily basis; the date when waste burning was suspended at the SWMUs was not documented. The same types of wastes were

disposed of at each landfill and were reported to include waste oil, transmission fluid, hydraulic fluid, transformer oil, mercury waste from shipboard and onshore activities, paint waste, asbestos, solvents, plating solutions, pesticide cans, batteries, bilge water, magnaflux dye, penetrants, photo-processing waste, sanitary garbage, and construction rubble.

SWMU 22 consists of a prefabricated sheet metal building on a concrete pad located within a fenced area. An abrasive media was used from 1985 until 1992 for cleaning ground support equipment and vehicles. During a visual site inspection conducted in 1989, the blasting residue was observed to have been placed in approximately 100 55-gallon drums.

Groundwater investigation results at SWMUs 2, 3, 4, 5, and 22 are addressed in the draft CMS Report. Regulatory oversight responsibility of the sediments located in the ditches at SWMUs 2, 3, 4, 5, and 22 has been transferred from the Resource Conservation and Recovery Act program to the FDEP stormwater program per an agreement reached at the NAVSTA Mayport Partnering Team Meeting in January 2007 (see Attachment 1).

The following section provides an overview of the surface and subsurface soil at SWMUs 2, 3, 4, 5, and 22 and information regarding the revised chemicals of concern (COCs) for these SWMUs. Additional historical information from previous investigations at the SWMUs is presented in Attachment 2.

Surface and Subsurface Soil

Current Surface and Subsurface Soil Status

In the draft CMS Report for SWMUs 2, 3, 4, 5, and 22, it was deemed appropriate to evaluate soil independently at each of the SWMUs for corrective action due to the physical separation of the SWMUs. As a result of the alternative evaluations conducted in the CMS, it was recommended that LUCs and periodic site inspections be implemented at each SWMU. These recommendations were made to address varying degrees of contaminated surface and subsurface soils located throughout the SWMUs (see Attachment 2).

As a result of comments received from the FDEP after a review of the draft CMS Report (see Attachment 3), it was agreed in the January 2007 NAVSTA Mayport Partnering Team Meeting that investigational data at these SWMUs may not be sufficient to delineate the boundaries of soil contamination under industrial use land conditions. The last surface and subsurface soil samples were collected in 1994 at these SWMUs and were evaluated based upon the appropriate regulatory criteria at that time. Since the draft CMS was issued, new FDEP SCTLs have been promulgated, effective as of April 17, 2005. Comparing the surface and subsurface soil COCs presented in the draft CMS to the new SCTLs, it was determined that it is necessary to better delineate the LUC boundaries recommended in the draft CMS Report for the respective SWMUs. In the following section, the concentrations of COCs detected in the surface and subsurface soil at SWMUs 2, 3, 4, 5, and 22 are compared with the new SCTLs and a determination is made regarding whether additional soil data are needed to sufficiently delineate the LUCs at the SWMUs.

Revised Soil COCs for Surface and Subsurface Soil

In the 2004 draft CMS Report, surface and subsurface soil chemicals of potential concern (COPCs) were evaluated independently for SWMUs 2, 3, 4, 5, and 22 based upon the industrial direct exposure SCTLs in effect at that time. For this exercise, COPCs for each SWMU were independently re-evaluated using the new SCTLs to select the surface and subsurface soil COCs to be carried forward in the corrective action plan. Both industrial and residential direct exposure SCTLs were considered during the re-evaluation to aid in delineating the boundaries of soil contamination at these SWMUs.

No COCs were detected for surface soils at SWMUs 2 and 22 during the CMS evaluation; however, surface soil COCs were found present at SWMUs 3, 4, and 5. Antimony was determined to be a surface soil COC for SWMU 3. Aroclor-1260, chlordane, chromium VI, cyanide, mercury, and silver were found to be surface soil COCs for SWMU 4. It was also established that the surface soil COCs for SWMU 5 were

benzo(a)anthracene; benzo(a)pyrene; benzo(b)fluoranthene; benzo(k)fluoranthene; chrysene; indeno(1,2,3-cd)pyrene; Aroclor-1260; antimony; arsenic; chromium VI; cyanide; and mercury.

An evaluation of subsurface soil COPCs was also performed in the CMS Report. The only subsurface soil COC found at SWMU 22 was arsenic. Subsurface soil COCs for SWMU 2 were 4-methylphenol, antimony, arsenic, and lead. The subsurface soil COCs for SWMU 3 were benzo(a)anthracene; benzo(a)pyrene; benzo(b)fluoranthene; benzo(k)fluoranthene; chrysene; indeno(1,2,3-cd)pyrene; and arsenic. At SWMU 4, 22 contaminants [1,4-dichlorobenzene; methylene chloride; 4-methyphenol; benzo(a)anthracene; benzo(a)pyrene; benzo(b)fluoranthene; benzo(k)fluoranthene; bis(3-ethylhexyl)phthalate; chrysene; fluoranthene; indeno(1,2,3-cd)pyrene; naphthalene; Aroclor-1260; dieldrin; endosulfan I; antimony; arsenic; barium; chromium VI; mercury; selenium; and silver] were established as subsurface soil COCs. 4-Methylphenol; benzo(a)anthracene; benzo(a)pyrene; benzo(b)fluoranthene; benzo(k)fluoranthene; chrysene; dibenzo(a,h)anthracene; indeno(1,2,3-cd)pyrene; Aroclor-1254; arsenic; barium; cadmium; chromium VI; cyanide; mercury; nickel; silver; and vanadium were determined to be subsurface soil COCs for SWMU 5.

Based upon the April 2005 SCTLs updated by the FDEP, the lists of surface and subsurface soil COCs presented in the draft CMS Report for SWMUs 2, 3, 4, 5, and 22 were revised. Also, current FDEP regulations state that site concentrations for carcinogenic polycyclic aromatic hydrocarbons (PAHs) must be converted to benzo(a)pyrene equivalents before comparison with the appropriate direct exposure SCTL for benzo(a)pyrene. When the draft CMS Report was completed, there were no requirements for converting carcinogenic PAHs to benzo(a)pyrene equivalents.

It should be noted that during the re-evaluation of COPCs at these SWMUs based on the new SCTLs, leaching to surface water was not considered for SWMUs 2, 3, and 22 because these three SWMUs are generally greater than 300 feet away from the nearest surface water body. However, leaching to surface water was considered for SWMUs 4 and 5 as there are surface water bodies located near the outer boundaries of these two SWMUs.

Based on the re-evaluation of COPCs, it was determined that there are no surface soil COCs present at SWMUs 2 and 22. However, a re-evaluation of surface soil COPCs at SWMUs 3, 4, and 5 concluded that COCs are present at these SWMUs. At SWMU 3, antimony was concluded to be the lone surface soil COC based upon FDEP leaching criteria. Aroclor-1260, chlordane, chromium, cyanide, mercury, and silver were concluded to be surface soil COCs for SWMUs 4 based on leaching criteria. At SWMU 5, Aroclor-1260, antimony, chromium, cyanide, and mercury are considered surface soil COCs based on FDEP leaching criteria. Benzo(a)anthracene; benzo(a)pyrene; benzo(b)fluoranthene; benzo(k)fluoranthene; chrysene; indeno(1,2,3-cd)pyrene; and arsenic at SWMU 5 are surface soil COCs based upon FDEP direct residential exposure SCTLs.

Information found in Tables 1 through 3 provides detailed information regarding the revised list of surface soil COCs at SWMU 5.

Figure 2 depicts the surface soil exceedances at SWMU 5 based on FDEP residential direct exposure SCTLs. Since additional surface soil sampling is planned at SWMU 5 to aid in delineating soil LUC boundaries and since leaching is not a human health risk under the soil residential land use scenario, only the residential direct exposure SCTLs are considered at this SWMU.

A re-evaluation of subsurface soil COPCs was also performed and several subsurface soil COCs were detected at SWMUs 2, 3, 4, 5, and 22. At SWMU 2, 4-methyphenol and antimony are subsurface soil COCs based upon leaching criteria, and arsenic and lead are subsurface soil COCs based upon FDEP residential direct exposure SCTLs. At SWMU 3, arsenic; benzo(a)anthracene; benzo(a)pyrene; benzo(b)fluoranthene; benzo(k)fluoranthene; chrysene; and indeno(1, 2, 3-cd)pyrene are subsurface soil COCs based upon residential direct exposure SCTLs. Based upon FDEP leaching criteria, the subsurface soil COCs for SWMU 4 are 1,4-dichlorobenzene; methylene chloride; 4-methylphenol; fluoranthene; naphthalene; Aroclor-1260; dieldrin; endosulfan I; antimony; chromium; mercury; selenium; and silver.

Based upon residential direct exposure SCTLs, subsurface soil COCs for SWMU 4 are benzo(a)anthracene; benzo(a)pyrene; benzo(b)fluoranthene; benzo(k)fluoranthene; chrysene; indeno(1,2,3-cd)pyrene; bis(2-ethylhexyl)phthalate; arsenic; and barium. At SWMU 5, subsurface soil COCs based upon FDEP leaching criteria are 4-methylphenol, Aroclor-1254, cadmium, chromium, cyanide, mercury, nickel, and silver. Based upon residential direct exposure SCTLs, benzo(a)anthracene; benzo(a)pyrene; benzo(b)fluoranthene; benzo(k)fluoranthene; chrysene; dibenzo(a,h)anthracene; indeno(1,2,3-cd)pyrene; Aroclor-1254, arsenic, barium; and vanadium are the subsurface soil COCs at SWMU 5. Arsenic, based upon residential direct exposure SCTLs, is the only subsurface soil COC present at SWMU 22.

Tables 4 and 5 provide detailed information regarding the revised list of subsurface soil COCs at SWMU 2. Tables 6 and 7 provide detailed information regarding the revised list of subsurface soil COCs for SWMU 3. Detailed information pertaining to the revised list of subsurface soil COCs at SWMU 4 can be found in Tables 8 and 9. Tables 10 and 11 provide detailed information regarding the revised list of subsurface soil COCs at SWMU 5. Tables 12 and 13 provide detailed information regarding the revised list of subsurface soil COCs at SWMU 22.

Figures 3, 4, 5, 6, and 7 depict the subsurface soil exceedances based on the new residential direct exposure SCTLs at SWMUs 2, 3, 4, 5 and 22, respectively. Since additional subsurface soil sampling is planned at SWMUs 2, 3, 4, 5, and 22 to aid in delineating soil LUC boundaries, only residential direct exposure SCTLs are considered for these SWMUs since leaching is not a human health risk under the soil residential land use scenario.

Sampling Program Objectives

The objectives of the sampling program detailed in this plan are to delineate surface and subsurface soil contamination within and around the SWMUs in excess of the FDEP residential direct exposure SCTLs. The data will be used to clearly define the appropriate LUC boundaries at the respective SWMUs.

To accomplish these objectives, TtNUS will perform the following proposed sampling activities.

PROPOSED SITE ACTIVITIES

TtNUS will collect soil samples at SWMUs 2, 3, 4, 5, and 22 using the techniques and methods discussed below. The collected samples will be submitted to a fixed-base laboratory for select analyses. Subsurface soil samples will be collected with a direct push technology (DPT) rig at approximately 3 locations at SWMU 2, 12 locations at SWMU 3, 9 locations at SWMU 4, 16 locations at SWMU 5, and 5 locations at SWMU 22. In addition, 10 surface soil samples will be collected at SWMU 5. Field activities will be conducted during an approximate 5-day period. If required, a second field sampling event may be conducted to complete the delineation of soil contamination.

Mobilization

Prior to the beginning of field sampling activities, mobilization activities will be conducted. Tasks associated with mobilization include the following:

- Field coordination (i.e., coordinating for site access, obtaining field equipment, consumables, etc.).
- Subcontractor procurement and coordination (DPT subcontractor and fixed-base laboratory).
- Utility clearance.
- Project "kick-off" and initial health and safety meetings.

Health and Safety

All field sampling activities will be completed in accordance with the site-specific Health and Safety Plan (HASP). A copy of the HASP will be kept on site at all times during field activities. Additional copies are available upon request for both TtNUS field personnel and subcontractors.

Surface and Subsurface Soil Sampling

All surface and subsurface soil samples collected at SWMUs 2, 3, 4, 5, and 22 will be collected in accordance with FDEP Standard Operating Procedure (SOP) FDEP-SOP-001/01, FS 3000 Soil and all other appropriate FDEP SOPs.

As soil samples are collected at these SWMUs, a Trimble global positioning system (GPS) unit (or equivalent) that is capable of achieving an accuracy of less than 1 meter (horizontal) will be used to obtain coordinates for each respective surface soil and subsurface soil sample location in order to accurately delineate the boundaries of surface soil and subsurface soil contamination. Using GPS has proven to be an effective method for identifying sample locations since the SWMUs are generally overgrown with vegetation and sample location markers may not be discernable in the field over time. It is anticipated that a Trimble GPS unit or equivalent will be kept on site for the duration of the project. Horizontal datum shall be surveyed in feet relative to the Florida State Plane Coordinate System, Florida State Plane North. Following completion of the field sampling event, the survey data will be transferred to TtNUS Environmental Geographical Information System (EGIS) department and entered into the EGIS database for NAVSTA Mayport.

Surface Soil

Since there were no surface soil exceedances of FDEP residential direct exposure SCTLs at SWMUs 2, 3, 4, and 22, it is not required that any surface soil samples be collected at these SWMUs. As a result of contaminant exceedances of media cleanup standards (MCSs) in surface soil samples previously collected at SWMU 5, surface soil samples will be collected to further delineate contamination at approximately 10 locations. The proposed surface soil sample locations for SWMU 5 are shown in Figure 8. Figure 8 also depicts surface soil FDEP residential direct exposure SCTL exceedance locations, surface soil sample locations with detections less than FDEP residential direct exposure SCTLs, and a preliminary LUC boundary based on surface soil data collected at SWMU 5. Table 3 lists the 11 surface soil sample locations that were found to have contaminant exceedances of MCSs at SWMU 5 and the COCs that exceed current FDEP residential direct exposure SCTLs.

The 10 surface soil samples will be collected at SWMU 5 from the 0 to 1 foot below land surface (bls) interval and submitted to a fixed-base laboratory for arsenic and benzo(a)pyrene equivalents analysis.

Subsurface Soil

At SWMU 2, subsurface soil samples will be collected to delineate extent of contamination at three locations due to contaminant exceedances of MCSs. The proposed subsurface soil sample locations for SWMU 2 are shown in Figure 9. Figure 9 also depicts subsurface soil FDEP residential direct exposure SCTL exceedance locations, subsurface soil sample locations with detections less than FDEP residential direct exposure SCTLs, and a preliminary LUC boundary based on subsurface soil data collected at SWMU 2. Table 14 lists the two subsurface soil sample locations that were found to have contaminant exceedances of MCSs at SWMU 2 and the COCs that exceed current FDEP residential direct exposure SCTLs.

The three subsurface soil samples will be collected at SWMU 2 at 7 feet bls and submitted to a fixed-base laboratory for arsenic and lead analysis.

As a result of contaminant exceedances of MCSs in subsurface soil at SWMU 3, subsurface soil samples will be collected to delineate contamination at 12 locations. The proposed subsurface soil sample locations for SWMU 3 are shown in Figure 10. Figure 10 also depicts subsurface soil FDEP residential direct exposure SCTL exceedance locations, subsurface soil sample locations with detections less than FDEP residential direct exposure SCTLs, and a preliminary LUC boundary based on subsurface soil data collected at SWMU 3. Table 15 lists the six subsurface soil sample locations that were found to have contaminant exceedances of MCSs at SWMU 3 and the COCs that exceed current FDEP residential direct exposure SCTLs.

At SWMU 3, a total of 36 subsurface soil samples will be collected at 12 subsurface soil locations at approximately 8 feet bls, 24 feet bls, and 32 feet bls (3 samples at each location) and submitted to a fixed-ase laboratory for arsenic and benzo(a)pyrene equivalents analysis.

Subsurface soil samples will be collected at SWMU 4 at nine locations to delineate contamination due to contaminant exceedances of MCSs. The proposed subsurface soil sample locations for SWMU 4 are shown in Figure 11. Figure 11 also depicts subsurface soil FDEP residential direct exposure SCTL exceedance locations, subsurface soil sample locations with detections less than FDEP residential direct exposure SCTLs, and a preliminary LUC boundary based on subsurface soil data collected at SWMU 4. Table 16 lists the nine subsurface soil sample locations that were found to have contaminant exceedances of MCSs at SWMU 4 and the COCs that exceed current FDEP residential direct exposure SCTLs.

At SWMU 4, a total of 36 subsurface soil samples will be collected at 9 subsurface soil locations at 2-foot intervals between 5 and 11 feet bls (4 samples at each location) and submitted to a fixed-base laboratory for benzo(a)pyrene equivalents, bis(2-ethylhexyl)phthalate, arsenic, and barium analysis.

Subsurface soil samples will be collected at SWMU 5 at 16 locations to delineate contamination due to contaminant exceedances of MCSs. The proposed subsurface soil sample locations for SWMU 5 are shown in Figure 12. Figure 12 also depicts subsurface soil FDEP residential direct exposure SCTL exceedance locations, subsurface soil sample locations with detections less than FDEP residential direct exposure SCTLs, and a preliminary LUC boundary based on subsurface soil data collected at SWMU 5. Table 17 lists the 18 subsurface soil sample locations that were found to have contaminant exceedances of MCSs at SWMU 5 and the COCs that exceed current FDEP residential direct exposure SCTLs.

At SWMU 5, a total of 64 subsurface soil samples will be collected at 16 subsurface soil locations at 2-foot intervals between 4 and 10 feet bls (4 samples at each location) and submitted to a fixed-base laboratory for benzo(a)pyrene equivalents, Aroclor-1254, arsenic, barium, and vanadium analysis.

Subsurface soil samples will be collected at SWMU 22 at five locations to delineate contamination due to contaminant exceedances of MCSs. The proposed subsurface soil sample locations for SWMU 22 are shown in Figure 13. Figure 13 also depicts subsurface soil FDEP residential direct exposure SCTL exceedance locations, subsurface soil sample locations with detections less than FDEP residential direct exposure SCTLs, and a preliminary LUC boundary based on subsurface soil data collected at SWMU 22. Table 18 lists the two subsurface soil sample locations that were found to have contaminant exceedances of MCSs at SWMU 22 and the COCs that exceed current FDEP residential direct exposure SCTLs.

At SWMU 22, five subsurface soil samples will be collected at approximately 4 feet bls and submitted to a fixed-base laboratory for arsenic analysis.

Additional Soil Delineation

If laboratory results indicate that additional samples are required to complete the delineation of the extent of soil contamination, a second field sampling event will be conducted. The number and locations of samples will be determined after reviewing the results from the first event. Any additional sampling will follow the protocols outlined in this work plan.

Sample Handling

Sample handling includes the selection of sample containers, preservatives, allowable holding times, and the analyses requested. Sample handling procedures will be in accordance with FDEP SOP 001/01 FS1000 and FS2200.

Soil Sampling Identification System

Each sample will be assigned a unique codified sample identification number. The unique nomenclature established for this sampling event is as follows:

1		2		3		4		5
MPTXX	-	SB or SS	-	DPTXX	-	XX	-	MMDDYY

Sample Nomenclature for soil samples:

- MPTXX = NS Mayport, SWMU 2 (MPT02), SWMU 3 (MPT03), SWMU 4 (MPT04), SWMU 5 (MPT05), and SWMU 22 (MPT22)
- SB or SS = SB represents a subsurface soil sample and SS represents a surface soil sample
- DPTXX = DPT location beginning with DPT01 (not required for surface soil samples)
- XX = Depth sample was collected at (feet bls)
- MMDDYY = Month, date, and year of sample collection

A soil sample collected on March 21, 2007, from DPT005 at SWMU 2 at 8 feet bls would be represented by MPT02-SB-DPT05-08-032107.

Sample Custody, Packaging, and Shipping

Custody of samples must be maintained and documented at all times. Chain-of-custody begins with the collection of the samples in the field. FDEP SOP 001/01 FS 1000 and TtNUS SOP SA-6.3 provide a description of the chain-of-custody procedures to be followed.

Samples will be packaged and shipped in accordance with FDEP SOP 001/01 FS1000: General Sampling and applicable sections of FS2200 and FS3000. The Field Operations Leader (FOL) will be responsible for completion of the following forms when samples are collected for shipping:

- Sample labels
- Chain-of-custody labels
- Appropriate labels applied to shipping coolers
- Chain-of -Custody forms
- Express courier air bills

FS1000 also addresses procedures related to containers, holding times, and sample preservations.

Quality Control Samples

Quality control samples will be collected during the soil sampling event in general accordance to FDEP SOP 001/01 FQ1000: Field Quality Control Requirements. In general, rinsate blanks will be collected from the rinse water that is used to clean the sampling equipment (e.g., hand auger, DPT soil sampler, and vacuum trap bottles, etc.) to document that no cross contamination is occurring between samples during sample collection activities. At a minimum, 5 percent of the rinsate blanks will undergo laboratory analysis as specified in FDEP SOP 001/01 FQ1000. In addition, one trip blank will accompany each cooler containing samples to be analyzed for volatile organic compounds (VOCs).

Equipment Calibration

The organic vapor analyzer-flame ionization detector used during sampling activities will be calibrated in accordance with FDEP SOP FT1000: General Field Testing and Measurement. Calibration will be documented on an Equipment Calibration Log. During calibration, an appropriate maintenance check will

be performed on each piece of equipment. If damaged or defective parts are identified during the maintenance check and it is determined that the damage could have an impact on the instrument's performance, the instrument will be removed from service until defective parts are repaired or replaced. A copy of the Equipment Calibration Log is included in Attachment 4.

Record Keeping

In addition to chain-of-custody records associated with sample handling, packaging, and shipping, certain standard forms will be completed for sample description and documentation. These shall include sample log sheets, daily activities record, and logbooks.

The FOL will maintain a bound/weatherproof field notebook. The FOL, or designee, will record pertinent information related to sampling or field activities. This information may include sampling time, weather conditions, unusual events (e.g., well tampering), field measurements, site visitors, descriptions of photographs, etc. At the completion of field activities, the FOL shall submit to the TtNUS Task Order Manager field records, data, field notebooks, logbooks, chain-of-custody receipts, sample log sheets, daily logs, etc.

Investigation Derived Waste (IDW) Management

IDW generated during field activities will be containerized in drums and stored on site until analysis of the media has been reviewed and appropriate decisions for the disposal of the waste can be made by the base environmental coordinator. Decontamination water and soil cuttings will be collected and containerized in Department of Transportation-compliant 55-gallon drums. Each drum will be sealed, labeled, and left at a drum staging area (behind Building 1613) located within NAVSTA Mayport pending analytical results. Soil remaining from DPT borings will be backfilled into the borehole from which it was collected. A temporary waste staging area will be established at the site to temporarily store IDW generated during the sampling activities until it can be transported to Building 1613. IDW generated from field activities at SWMUs 2, 3, 4, 5, and 22 will be managed in accordance with procedures described in the NAVSTA Mayport SOP for IDW Waste (see Attachment 5).

Weekly inspections will occur for IDW temporarily stored on site to ensure that IDW is properly secured and labeled, that IDW drums are not compromised, and that IDW is removed from the site in a timely manner. A Weekly Investigative Derived Waste Checklist for NAVSTA Mayport (see Attachment 5) will be completed during these IDW inspections and submitted to Diane Racine, NAVSTA Mayport Environmental Department. Once the field events are finished and analytical results obtained, the IDW will be transported and disposed of in accordance with procedures described in the current NAVSTA Mayport SOP for IDW Waste.

Decontamination

The equipment involved in field sampling activities will be decontaminated prior to and during sampling activities in accordance to FDEP SOP FC1000: Cleaning/Field Decontamination Procedures. Non-disposable equipment used for collecting samples will be decontaminated prior to beginning field sampling and between sample locations.

Reporting

Information obtained from field activities detailed in this work plan will be incorporated into the CMS for SWMUs 2, 3, 4, 5, and 22.

UPDATING CMS REPORT RECOMMENDATIONS/CORRECTIVE MEASURES

A report summarizing the analytical results for the soil samples collected at and around the SWMUs 2, 3, 5, and 22 will be generated and submitted to members of the NAVSTA Mayport Partnering Team for review.

The report will indicate whether revisions to the draft CMS Report for SWMUs 2, 3, 4, 5, and 22 are warranted and a re-evaluation of remedial options to address surface soil and subsurface soil contamination is required.

SUMMARY

Per recent NAVSTA Mayport Partnering Team discussions regarding SWMUs 2, 3, 4, 5, and 22 and a review of the draft CMS Report (TtNUS, 2004), it was concluded that investigational data at SWMUs 2, 3, 4, 5, and 22 are not sufficient to clearly delineate the boundaries of soil contamination. The NAVSTA Mayport Partnering Team determined that an evaluation of surface and subsurface soil COPCs at each of the respective SWMUs based upon the new FDEP SCTLs (April 2005) was necessary to adequately delineate the extent of soil contamination and clearly define the appropriate land use control (LUC) boundaries at the respective SWMUs. Due to the physical separation of SWMUs 2, 3, 4, 5, and 22, the surface and subsurface soil at each SWMU were evaluated independently.

The following table summarizes the work plan's sampling and analytical requirements for surface and subsurface soil at SWMUs 2, 3, 4, 5, and 22.

SUMMARY OF SOIL SAMPLING AND ANALYSIS REQUIREMENTS
SWMUs 2, 3, 4, 5, and 22

PAGE 1 OF 2

PROPOSED SAMPLES	PARAMETER	USEPA METHOD	DEPTH (BLS)
SWMU 2			
3 Subsurface Soil Samples	ARSENIC LEAD	SW-846 6010B	7 feet
SWMU 3			
36 Subsurface Soil Samples	BENZO(A)ANTHRACENE BENZO(A)PYRENE BENZO(B)FLUORANTHENE BENZO(K)FLUORANTHENE CHRYSENE INDENO(1,2,3-CD)PYRENE	SW-846 8270C	8, 24, and 32 feet
	ARSENIC	SW-846 6010B	
SWMU 4			
36 Subsurface Soil Samples	BENZO(A)ANTHRACENE BENZO(A)PYRENE BENZO(B)FLUORANTHENE BENZO(K)FLUORANTHENE BIS(2-ETHYLHEXYL)PHTHALATE CHRYSENE INDENO(1,2,3-CD)PYRENE	SW-846 8270C	5, 7, 9, and 11 feet
	ARSENIC BARIUM	SW-846 6010B	

SUMMARY OF SOIL SAMPLING AND ANALYSIS REQUIREMENTS
SWMUs 2, 3, 4, 5, and 22

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PROPOSED SAMPLES	PARAMETER	USEPA METHOD	DEPTH (BLS)
SWMU 5			
10 Surface Soil Samples	BENZO(A)ANTHRACENE BENZO(A)PYRENE BENZO(B)FLUORANTHENE BENZO(K)FLUORANTHENE CHRYSENE INDENO(1,2,3-CD)PYRENE	SW-846 8270C	0-1 foot
	ARSENIC	SW-846 6010B	
64 Subsurface Soil Samples	BENZO(A)ANTHRACENE BENZO(A)PYRENE BENZO(B)FLUORANTHENE BENZO(K)FLUORANTHENE CHRYSENE DIBENZO(A,H)ANTHRACENE INDENO(1,2,3-CD)PYRENE	SW-846 8270C	4, 6, 8, and 10 feet
	AROCLOR-1254	SW-846 8081A	
	ARSENIC BARIUM VANADIUM	SW-846 6010B	
SWMU 22			
5 Subsurface Soil Samples	ARSENIC	SW-846 6010B	4 feet

Notes:

[1] Per FDEP SOP FQ 1000, FQ 1230, field duplicates are not required as mandatory field quality controls.

[2] Equipment Rinsate Blank - In accordance with FDEP SOP FQ 1000, FQ 1230, precleaned and field-cleaned rinsate blanks will be collected for any equipment used in the collection of samples that is not certified precleaned.

[3] Trip Blanks - One trip blank per each cooler containing VOCs in accordance with FDEP SOP FQ 1000, FQ1213.

[4] Field Blanks - Per FDEP SOP FQ 1000 FQ 1214, field blanks are not required if equipment blanks (FQ 1211 or FQ 1212) are collected.

It should be noted that this Soil Sampling Work Plan for SWMUs 2, 3, 4, 5, and 22 only directly addresses surface and subsurface soil. Details regarding corrective measures for groundwater and surface water at these SWMUs can be found in the draft CMS Report as well as in the FDEP review comments (see Attachment 3).

If you have any questions with regard to this submittal, please contact me at (904) 730-4669, extension 222, or via e-mail at Shina.Ballard@ttnus.com.

Sincerely,

Shina A. Ballard

Shina Ballard
Task Order Manager

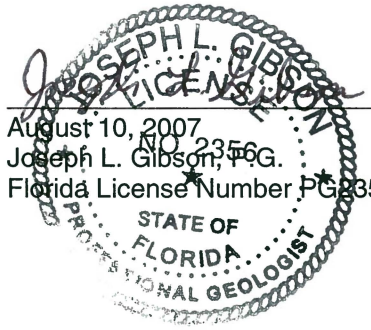
SB/jf

Attachments (36)

c: Jim Cason, P.G., FDEP (2 copies)
Diane Racine, NAVSTA Mayport
Mike Halil, P.E., CH2M Hill (cd only)
Craig Benedikt, USEPA (cd only)
Mark Perry, TtNUS (unbound copy)
Debra Humbert, TtNUS (cover letter only)
CTO 0118 Project File

CERTIFICATION

The information contained is based on the geologic investigation and associated information detailed in the text and appended to this letter report. If conditions are determined to exist that differ from those described, the undersigned geologist should be notified to evaluate the effects of any additional information on the information described in this report. This Soil Sampling Work Plan was developed for SWMUs 2, 3, 4, 5, and 22 at the Naval Station Mayport, Mayport, Florida, and should not be construed to apply to any other site.



August 10, 2007
Joseph L. Gibson, P.G.
Florida License Number PG2356

TABLES

TABLE 1
SWMU 5, SURFACE SOIL FINAL COCs - RESIDENTIAL DIRECT EXPOSURE & LEACHING
NAVSTA MAYPORT - MAYPORT, FLORIDA

CHEMICAL OF CONCERN	CAS NUMBER	MAXIMUM CONCENTRATION (mg/kg)	REPRESENTATIVE CONCENTRATION[1] (mg/kg)	BACKGROUND CONCENTRATION[2] (mg/kg)	SITE-SPECIFIC SCTL - Residential DIRECT EXPOSURE[3] (mg/kg)	SITE-SPECIFIC SCTL - LEACHING[4] (mg/kg)	MEDIA CLEANUP STANDARD[5] (mg/kg)	MEDIA CLEANUP STANDARD BASIS[6]
Semivolatile Organics								
Benzo(a)anthracene	56-55-3	0.22	0.22	-	0.1	0.8	0.1	Direct Contact
Benzo(a)pyrene	50-32-8	0.2	0.2	-	0.1	8	0.1	Direct Contact
Benzo(b)fluoranthene	205-99-2	0.27	0.27	-	0.1	2.4	0.1	Direct Contact
Benzo(k)fluoranthene	207-08-9	0.23	0.23	-	0.1	24	0.1	Direct Contact
Chrysene	218-01-9	0.33	0.33	-	0.1	77	0.1	Direct Contact
Indeno(1,2,3-cd)pyrene	193-39-5	0.099	0.099	-	0.1	6.6	0.1	Direct Contact
Pesticides/PCBs								
Aroclor-1260	11096-82-5	0.1	0.1	-	0.5	0.002	0.002	Leaching
Inorganics[7]								
Antimony	7440-36-0	23.4	6.28	-	27	5.4	5.4	Leaching
Arsenic	7440-38-2	6.9	2.53	-	1.1	No Criteria	1.1	Direct Contact
Chromium VI	18540-29-9	15.5	8.3	-	210	4.2	4.2	Leaching
Cyanide	57-12-5	0.58	0.25	-	34	0.004	0.004	Leaching
Mercury	7439-97-6	0.18	0.1	-	3	0.01	0.01	Leaching

Notes:

[1] The representative concentration is the 95% UCL (where appropriate) or the maximum detected concentration, whichever is less.

[2] Mayport background screening value (Tetra Tech NUS, 2000).

[3] SCTL for residential direct exposure to soil, from F.A.C. Chapter 62-777, Table 2, dated April 2005.

[4] Soil Cleanup Target Level for soil leaching to groundwater - Chapter 62-777 F.A.C., April 2005.

[5] The Media Cleanup Standard (MCS) is the minimum CTL or the background screening value, whichever is greater.

[6] Media Cleaup Standard Basis is either Background, Direct Exposure or Leaching (Leaching to Groundwater or Leaching to Surface Water (if applicable)).

[7] Criteria for hexavalent chromium used.

TABLE 2
SWMU 5, EXCEEDANCES OF COCs IN SURFACE SOIL
NAVSTA MAYPORT - MAYPORT, FLORIDA

Chemical of Concern	Sample ID	Sample Date	Detected Concentration	Media Cleanup Standard
Benzo(a)pyrene Equivalents [1]	05SS00201	8/11/1994	0.255	0.1
	05SS01601	9/7/1994	0.209	
Aroclor-1260	05SS01601	9/7/1994	0.1 J	0.002
Antimony	05SS01701	8/11/1994	23.4 J	5.4
Arsenic	05SS00101	8/11/1994	1.3 J	1.1
	05SS00201	8/11/1994	1.4 J	
	05SS00301	9/7/1994	1.4 J	
	05SS00401	8/11/1994	2.9	
	05SS00701	8/29/1994	2.3 J	
	05SS00901	8/10/1994	2.3	
	05SS01201	8/11/1994	1.9 J	
	05SS01301	8/10/1994	4.2	
	05SS01501	9/7/1994	6.9	
	05SS01601	9/7/1994	1.5 J	
	05SS01701	8/11/1994	1.3 J	
Chromium	02SS00401	8/30/1994	10.8	4.2
	05SS00101	8/11/1994	4.6	
	05SS00201	8/11/1994	5.5	
	05SS00301	9/7/1994	5.6	
	05SS00401	8/11/1994	8.2	
	05SS00601	8/10/1994	9.8	
	05SS00701	8/29/1994	12.7	
	05SS00901	8/10/1994	6.4	
	05SS01101	8/29/1994	10.1	
	05SS01301	8/10/1994	11.9	
	05SS01501	9/7/1994	15.5	
	05SS01601	9/7/1994	9.5	
	05SS01701	8/11/1994	6.2	
	05SS01801	9/7/1994	8.3	
	05SS01901	8/29/1994	7.1	
	05SS02001	8/29/1994	5.4	
	05SS02101	8/29/1994	4.9	
Cyanide	02SS00401	8/30/1994	0.18 J	0.004
	05SS00201	8/11/1994	0.19 J	
	05SS00601	8/10/1994	0.18 J	
	05SS00701	8/29/1994	0.08 J	
	05SS00901	8/10/1994	0.39 J	
	05SS01001	8/10/1994	0.58	
	05SS01101	8/29/1994	0.06 J	
	05SS01201	8/11/1994	0.36 J	
	05SS01401	8/11/1994	0.35 J	
	05SS01501	9/7/1994	0.19 J	
	05SS01701	8/11/1994	0.24 J	
	05SS01901	8/29/1994	0.05 J	
	05SS02001	8/29/1994	0.06 J	
	05SS02101	8/29/1994	0.05 J	
Mercury	05SS00301-D	9/7/1994	0.12	0.01
	05SS01101	8/29/1994	0.18	
	05SS01301	8/10/1994	0.05 J	
	05SS01501	9/7/1994	0.07	
	05SS01601	9/7/1994	0.06	
	05SS01801	9/7/1994	0.09	

Note: [1] Site concentrations for carcinogenic polycyclic aromatic hydrocarbons must be converted to Benzo(a)pyrene equivalents before comparison with the appropriate direct exposure SCTL for Benzo(a)pyrene using the approach described in the February 2005 'Final Technical Report: Development of Cleanup Target Levels for Chapter 62-777, F.A.C.' Contaminants considered for subsurface soil benzo(a)pyrene equivalent calculations at SWMU 5 are benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, and indeno(1,2,3-cd)pyrene.

TABLE 3
SUMMARY OF REVISED SURFACE SOIL COCs, SWMU 5
NAVSTA MAYPORT – MAYPORT, FLORIDA

SURFACE SOIL SAMPLE LOCATION [1]	REVISED SURFACE SOIL COCS
MPT-05-SS/BS01	• Arsenic
MPT-05-SS/BS02	• Benzo(a)pyrene Equivalents [2] • Arsenic
MPT-05-SS/BS03	• Arsenic
MPT-05-SS/BS04	• Arsenic
MPT-05-SS/BS07	• Arsenic
MPT-05-SS/BS09	• Arsenic
MPT-05-SS/BS12	• Arsenic
MPT-05-SS/BS13	• Arsenic
MPT-05-SS/BS15	• Arsenic
MPT-05-SS/BS16	• Benzo(a)pyrene Equivalents [2] • Arsenic
MPT-05-SS/BS17	• Arsenic
MPT-05-SS/BS18	• Arsenic

Notes:
[1] All surface soil samples shall be collected from 0-1 ft bls.
[2] Site concentrations for carcinogenic polycyclic aromatic hydrocarbons must be converted to benzo(a)pyrene equivalents before comparison with the appropriate direct exposure SCTL for benzo(a)pyrene using the approach described in the February 2005 'Final Technical Report: Development of Cleanup Target Levels for Chapter 62-777, F.A.C.' Contaminants considered for subsurface soil benzo(a)pyrene equivalent calculations at SWMU 5 are benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, and indeno(1,2,3-cd)pyrene.

TABLE 4
SWMU 2, SUBSURFACE SOIL FINAL COCs - RESIDENTIAL DIRECT EXPOSURE AND LEACHING
NAVSTA MAYPORT - MAYPORT, FLORIDA

CHEMICAL OF CONCERN	CHEMICAL ABSTRACT NUMBER	MAXIMUM CONCENTRATION (mg/kg)	BACKGROUND CONCENTRATION[1] (mg/kg)	SITE-SPECIFIC SCTL - RESIDENTIAL DIRECT EXPOSURE[2] (mg/kg)	SITE-SPECIFIC SCTL - LEACHING TO Groundwater[3] (mg/kg)	MEDIA CLEANUP STANDARD[4] (mg/kg)	MEDIA CLEANUP STANDARD BASIS[5]
Semivolatile Organics [6]							
4-Methylphenol	106-44-5	0.098	-	300	0.03	0.03	Leaching
Inorganics							
Antimony	7440-36-0	20.4	-	27	5.4	5.4	Leaching
Arsenic	7440-38-2	3.2	0.7	2.1	29	2.1	Direct Contact
Lead	7439-92-1	862	1.66	400	No Criteria	400	Direct Contact

Notes:

[1] Mayport background screening value (Tetra Tech NUS, 2000).

[2] SCTL for residential direct exposure to soil, from F.A.C. Chapter 62-777, Table 2, dated April 2005.

[3] Soil Cleanup Target Level for soil leaching to groundwater - Chapter 62-777 F.A.C., April 2005.

[4] The Media Cleanup Standard (MCS) is the minimum CTL or the background screening value, whichever is greater.

[5] Media Cleaup Standard Basis is either Background, Direct Exposure or Leaching (Leaching to Groundwater or Leaching to Surface Water (if applicable)).

[6] Criteria for 4-Methylphenol used for 3&4-Methylphenol.

TABLE 5
SWMU 2, EXCEEDANCES OF COCs IN SUBSURFACE SOIL
NAVSTA MAYPORT - MAYPORT, FLORIDA

Chemical of Concern	Sample ID	Sample Date	Detected Concentration	Media Cleanup Standard
3&4-Methylphenol	02BS00107	8/30/1994	0.048 J	0.03
	02BS00307	8/30/1994	0.098 J	
Antimony	02BS00107	8/30/1994	20.4 J	5.4
	02BS00307	8/30/1994	11.9 J	
Arsenic	02BS00107	8/30/1994	3.2	2.1
	02BS00307	8/30/1994	2.6	
Lead	02BS00107	8/30/1994	862	400
	02BS00307	8/30/1994	423	

TABLE 6
SWMU 3, SUBSURFACE SOIL COCs - RESIDENTIAL DIRECT EXPOSURE
NAVSTA MAYPORT, FLORIDA

CHEMICAL OF POTENTIAL CONCERN	CAS NUMBER	FREQUENCY OF DETECTION	MAXIMUM CONCENTRATION (mg/kg)	REPRESENTATIVE CONCENTRATION[9] (mg/kg)	SCTL RESIDENTIAL[1] (mg/kg)	BACKGROUND CONCENTRATION[2] (mg/kg)	TARGET ORGAN/SYSTEM OR EFFECT	Cumulative Cancer or Target Organ/System Analysis[3]				ADJUSTMENT DIVISOR[4]	MEDIA CLEANUP STANDARD - DIRECT EXPOSURE[5] (mg/kg)	COC BASED ON RESIDENTIAL DIRECT EXPOSURE[6]
								Carcinogen	Cardiovascular	Respiratory	Skin			
Semivolatile Organics														
Benzo(a)anthracene	56-55-3	2/13	0.078	0.078	0.1[7]	--	Carcinogen	0.78	---	---	---	2	0.1[7]	Yes[7]
Benzo(a)pyrene	50-32-8	1/13	0.11	0.11	0.1[7]	--	Carcinogen	1.1	---	---	---	2	0.1[7]	Yes[7]
Benzo(b)fluoranthene	205-99-2	2/13	0.11	0.11	0.1[7]	--	Carcinogen	1.1	---	---	---	2	0.1[7]	Yes[7]
Benzo(k)fluoranthene	207-08-9	2/13	0.11	0.11	0.1[7]	--	Carcinogen	1.1	---	---	---	2	0.1[7]	Yes[7]
Chrysene	218-01-9	2/13	0.1	0.1	0.1[7]	--	Carcinogen	1	---	---	---	2	0.1[7]	Yes[7]
Indeno(1,2,3-cd)pyrene	193-39-5	1/13	0.042	0.042	0.1[7]	--	Carcinogen	0.42	---	---	---	2	0.1[7]	Yes[7]
Inorganics														
Arsenic	7440-38-2	12/13	15.6	11.03	2.1	0.7	Carcinogen - Cardiovascular -Skin	7.43	7.43	---	7.43	2	1.1	Yes
Chromium VI	18540-29-9	13/13	49.3	36.8	210	2.7	Carcinogen - Respiratory	0.23	---	0.23	---	2	105	No
							Cumulative Sum[8]	13.16	7.43	0.23	7.43			

Notes:

[1] SCTL - Soil Cleanup Target Level for Residential Direct Exposure - Chapter 62-777 F.A.C., April 2005

[2] Mayport background screening value (Tetra Tech NUS, 2000).

[3] The ratio of the maximum detected concentration to the SCTL is shown for each COPC. A ratio or sum of ratios greater than 1 for carcinogens or for any organ/system indicates an exceedance of FDEP guidance (ratios only shown for COPCs that exceed direct contact during initial screen).

[4] The Adjustment Divisor is determined by the number of carcinogens or noncarcinogens that affect the same target organ. Since there is only one primary contaminant that determines the benzo(a)pyrene equivalent at this SWMU, all of the equivalents were a

[5] The Media Cleanup Standard (MCS) Direct Exposure is the residential SCTL divided by Adjustment Divisor or the background concentration, whichever is greater.

[6] A COPC is selected as a COC if the representative concentration exceeds the Media Cleanup Standard - Direct Exposure. (Site specific SCTL)

[7] Refer to the table below for the Total Benzo(a)pyrene Equivalent calculation which shows that the equivalent concentration is above the residential direct exposure SCTL of 0.1.

[8] Cumulative Sum is the summation of the ratios for contaminants that effect the same target organ or that are carcinogens (cumulative effect).

[9] The representative concentration is the 95% UCL (where appropriate) or the maximum detected concentration, whichever is less.

Contaminant	Concentration (mg/kg)	Toxic Equivalency Factor	Benzo(a)pyrene Equivalents
Benzo(a)anthracene	0.078	0.1	0.0078
Benzo(a)pyrene	0.11	1.0	0.1100
Benzo(b)fluoranthene	0.11	0.1	0.0110
Benzo(k)fluoranthene	0.11	0.01	0.0011
Chrysene	0.1	0.001	0.0001
Dibenz(a,h)anthracene	0.000	1.0	0.0000
Indeno(1,2,3-cd)pyrene	0.042	0.1	0.0042

Direct Exposure Industrial SCTL = 0.1 mg/kg; Total Benso(a)pyrene Equivalents = 0.134

TABLE 7
SWMU 3, EXCEEDANCES OF COCs IN SUBSURFACE SOIL
NAVSTA MAYPORT - MAYPORT, FLORIDA

Chemical of Concern	Sample ID	Sample Date	Detected Concentration	Media Cleanup Standard
Benzo(a)pyrene Equivalents [1]	03SS00524	7/23/1994	0.134 J	0.1
Arsenic	03BS00108	7/25/1994	1.7 J	1.1
Arsenic	03BS00208	7/25/1994	1.9 J	
Arsenic	03BS00532	7/23/1994	1.5 J	
Arsenic	03BS00632	7/24/1994	2.2 J	
Arsenic	03BS00732	7/24/1994	2.8 J	
Arsenic	03SS00524	7/23/1994	12.8	
Arsenic	03SS00624	7/24/1994	13.5	
Arsenic	03SS00824	7/25/1994	15.6 J	

Notes:

[1] Site concentrations for carcinogenic polycyclic aromatic hydrocarbons must be converted to Benzo(a)pyrene equivalents before comparison with the appropriate direct exposure SCTL for Benzo(a)pyrene using the approach described in the February 2005 'Final

TABLE 8
SWMU 4, SUBSURFACE SOIL FINAL COCs - RESIDENTIAL DIRECT EXPOSURE AND LEACHING
NAVSTA MAYPORT - MAYPORT, FLORIDA

CHEMICAL OF CONCERN	CAS NUMBER	MAXIMUM CONCENTRATION (mg/kg)	REPRESENTATIVE CONCENTRATION[1] (mg/kg)	BACKGROUND CONCENTRATION[2] (mg/kg)	SITE-SPECIFIC SCTL - RESIDENTIAL DIRECT EXPOSURE[3] (mg/kg)	SITE-SPECIFIC SCTL - LEACHING[4] (mg/kg)	MEDIA CLEANUP STANDARD[5] (mg/kg)	MEDIA CLEANUP STANDARD BASIS[6]
Volatile Organics								
1,4-Dichlorobenzene	106-46-7	0.19	0.19	-	6.4	0.09	0.09	Leaching
Methylene Chloride	75-09-2	0.026	0.020	-	17	0.02	0.02	Leaching
Semivolatile Organics[7]								
4-Methylphenol	106-44-5	0.19	0.19	-	300	0.03	0.03	Leaching
Benzo(a)anthracene	56-55-3	0.56	0.56	-	0.1	0.8	0.1	Direct Contact
Benzo(a)pyrene	50-32-8	0.39	0.39	-	0.1	8	0.1	Direct Contact
Benzo(b)fluoranthene	205-99-2	0.44	0.44	-	0.1	2.4	0.1	Direct Contact
Benzo(k)fluoranthene	207-08-9	0.44	0.44	-	0.1	24	0.1	Direct Contact
Bis(2-Ethylhexyl)phthalate	117-81-7	210	103.2	-	24	1300	24	Direct Contact
Chrysene	218-01-9	0.81	0.81	-	0.1	77	0.1	Direct Contact
Fluoranthene	206-44-0	1.4	1.4	-	246.2	1.3	1.3	Leaching
Indeno(1,2,3-cd)pyrene	193-39-5	0.19	0.19	-	0.1	6.6	0.1	Direct Contact
Naphthalene	91-20-3	5	5	-	55	1.2	1.2	Leaching
Pesticides/PCBs[7]								
Aroclor-1260	11096-82-5	0.28	0.28	-	0.5	0.002	0.002	Leaching
Dieldrin	60-57-1	0.00082	0.00082	-	0.06	0.0001	0.0001	Leaching
Endosulfan I	115-29-7	0.0072	0.0072	-	450	0.0008	0.0008	Leaching
Inorganics[7]								
Antimony	7440-36-0	22.3	12.7	-	27	5.4	5.4	Leaching
Arsenic	7440-38-2	3.4	2.5	0.7	0.7	No Criteria	0.7	Background
Barium	7440-39-3	152	85.6	7.2	60	1600	60	Direct Contact
Chromium VI	18540-29-9	28.2	27.1	2.7	210	4.2	4.2	Leaching
Mercury	7439-97-6	0.22	0.22	0.05	3	0.05	0.05	Leaching
Selenium	7782-49-2	0.94	0.73	-	440	0.5	0.5	Leaching
Silver	7440-22-4	0.61	0.61	-	410	0.01	0.01	Leaching

Notes:
[1] The representative concentration is the 95% UCL (where appropriate) or the maximum detected concentration, whichever is less
[2] Mayport background screening value (Tetra Tech NUS, 2000)
[3] SCTL for residential direct exposure to soil, from F.A.C. Chapter 62-777, Table 2, dated April 2005
[4] Soil Cleanup Target Level for soil leaching to groundwater - Chapter 62-777 F.A.C., April 2005
[5] The Media Cleanup Standard (MCS) is the minimum CTL or the background screening value, whichever is greater
[6] Media Cleaup Standard Basis is either Background, Direct Exposure or Leaching [Leaching to Groundwater or Leaching to Surface Water (if applicable)]
[7] Criteria for Endosulfan I used for Endosulfan II. Criteria for 4-Methylphenol used for 3&4-Methylphenol. Criteria for hexavalent chromium used for chromium

TABLE 9
SWMU 4, EXCEEDANCES OF COCs IN SUBSURFACE SOIL
NAVSTA MAYPORT - MAYPORT, FLORIDA

Chemical of Concern	Sample ID	Sample Date	Detected Concentration	Media Cleanup Standard
1,4-Dichlorobenzene	04BS00405	8/9/1994	0.19 J	0.09
Methylene Chloride	04BS00405	8/9/1994	0.026	0.02
3&4-Methylphenol	04BS00111-D	8/27/1994	0.19 J	0.03
Benzo(a)pyrene Equivalents [1]	04BS00405	8/9/1994	0.514	0.1
Bis(2-Ethylhexyl)phthalate	04BS00405DL	8/9/1994	210	24
Fluoranthene	04BS00405	8/9/1994	1.4 J	1.3
Naphthalene	04BS00905	8/9/1994	5 J	1.2
Aroclor-1260	04BS00405	8/9/1994	0.28	0.002
	04BS00509	8/27/1994	0.14	
Dieldrin	04BS00705	8/24/1994	0.00082	0.0001
Endosulfan II	04BS00705	8/24/1994	0.0072	0.0008
Antimony	04BS00705	8/24/1994	22.3 J	5.4
	MPT-02-16S	1/24/1992	10.5 J	
Arsenic	04BS00111	8/27/1994	3.4 J	0.7
	04BS00209	8/24/1994	1.4 J	
	04BS00310	8/10/1994	1.7 J	
	04BS00405	8/9/1994	1.6 J	
	04BS00509	8/27/1994	1.6 J	
	04BS00611	8/24/1994	0.71 J	
	04BS00705	8/24/1994	1.4 J	
	04BS00905	8/9/1994	1 J	
	04BS01008-D	8/9/1994	0.92 J	
Barium	04BS00310	8/10/1994	152	60
	04BS00705	8/24/1994	117 J	
Chromium	04BS00111-D	8/27/1994	28.2	4.2
	04BS00310	8/10/1994	7	
	04BS00405	8/9/1994	12.9	
	04BS00509	8/27/1994	18.3	
	04BS00705	8/24/1994	20.6	
	04BS00905	8/9/1994	10.4	
Mercury	04BS00310	8/10/1994	0.09 J	0.05
	04BS00405	8/9/1994	0.22	
	04BS00705	8/24/1994	0.13	
Selenium	04BS00111	8/27/1994	0.94 J	0.5
	04BS00310	8/10/1994	0.64 J	
Silver	04BS00310	8/10/1994	0.61 J	0.01

Notes:

[1] Site concentrations for carcinogenic polycyclic aromatic hydrocarbons must be converted to Benzo(a)pyrene equivalents before comparison with the appropriate direct exposure SCTL for Benzo(a)pyrene using the approach described in the February 2005 'Final

TABLE 10
SWMU 5, SUBSURFACE SOIL FINAL COCs - RESIDENTIAL DIRECT EXPOSURE AND LEACHAING DIRECT EXPOSURE & LEACHING
NAVSTA MAYPORT - MAYPORT, FLORIDA

CHEMICAL OF CONCERN	CAS NUMBER	MAXIMUM CONCENTRATION (mg/kg)	REPRESENTATIVE CONCENTRATION[1] (mg/kg)	BACKGROUND CONCENTRATION[2] (mg/kg)	SITE-SPECIFIC SCTL - RESIDENTIAL DIRECT EXPOSURE[3] (mg/kg)	SITE-SPECIFIC SCTL - LEACHING [4] (mg/kg)	MEDIA CLEANUP STANDARD[5] (mg/kg)	MEDIA CLEANUP STANDARD BASIS[6]
Semivolatile Organics [7]								
4-Methylphenol	106-44-5	0.25	0.25	-	300	0.03	0.03	Leaching
Benzo(a)anthracene	56-55-3	0.8	0.8	-	0.1	0.8	0.1	Direct Contact
Benzo(a)pyrene	50-32-8	0.36	0.36	-	0.1	8	0.1	Direct Contact
Benzo(b)fluoranthene	205-99-2	0.54	0.54	-	0.1	2.4	0.1	Direct Contact
Benzo(k)fluoranthene	207-08-9	0.47	0.47	-	0.1	24	0.1	Direct Contact
Chrysene	218-01-9	0.93	0.93	-	0.1	77	0.1	Direct Contact
Dibenzo(a,h)anthracene	53-70-3	0.073	0.073	-	0.1	0.7	0.1	Direct Contact
Indeno(1,2,3-cd)pyrene	193-39-5	0.15	0.15	-	0.1	6.6	0.1	Direct Contact
Pesticides/PCBs [7]								
Aroclor-1254	27373-18-8	1.6	0.36	-	0.5	0.002	0.002	Leaching
Inorganics [7]								
Arsenic	7440-38-2	10.3	4.60	0.7	0.7	No Criteria	0.7	Background
Barium	7440-39-3	299	97.78	7.2	60	1600	60	Direct Contact
Cadmium	7440-43-9	42.5	11.24	-	82	7.5	7.5	Leaching
Chromium VI	18540-29-9	58.1	22.06	2.7	210	4.2	4.2	Leaching
Cyanide	57-12-5	6.8	2.09	0.3	34	0.004	0.3	Background
Mercury	7439-97-6	0.38	0.14	0.05	3	0.01	0.05	Background
Nickel	7440-02-0	341	87.93	-	340	11	11	Leaching
Silver	7440-22-4	0.7	0.5	-	137	0.01	0.01	Leaching
Vanadium	7440-62-2	340	90.2	3.1	67	980	67	Direct Contact

Notes:

[1] The representative concentration is the 95% UCL (where appropriate) or the maximum detected concentration, whichever is less.

[2] Mayport background screening value (Tetra Tech NUS, 2000).

[3] SCTL for residential direct exposure to soil, from F.A.C. Chapter 62-777, Table 2, dated April 2005.

[4] Soil Cleanup Target Level for soil leaching to groundwater - Chapter 62-777 F.A.C., April 2005.

[5] The Media Cleanup Standard (MCS) is the minimum CTL or the background screening value, whichever is greater.

[6] Media Cleaup Standard Basis is either Background, Direct Exposure or Leaching (Leaching to Groundwater or Leaching to Surface Water [if applicable)].

[7] Criteria for Endosulfan I used for Endosulfan II. Criteria for 4-Methylphenol used for 3&4-Methylphenol. Criteria for hexavalent chromium used for chromium.

TABLE 11
SWMU 5, EXCEEDANCES OF COCs IN SUBSURFACE SOIL
NAVSTA MAYPORT - MAYPORT, FLORIDA

Chemical of Concern	Sample ID	Sample Date	Detected Concentration	Media Cleanup Standard
3&4-Methylphenol	05BS00306	8/27/1994	0.087 J	0.03
	05BS00704	8/29/1994	0.25 J	
	05BS01610	8/29/1994	0.12 J	
Benzo(a)pyrene Equivalents [1]	05BS00909	8/28/1994	0.137	0.1
	05BS02009	8/29/1994	0.588	
Aroclor-1254	05BS00704	8/29/1994	1.6 J	0.17
Arsenic	05BS00107	8/27/1994	2.2 J	0.7
	05BS00208	8/27/1994	4.5	
	05BS00306	8/27/1994	1.9 J	
	05BS00409	8/29/1994	10.3	
	05BS00509	8/28/1994	3.8	
	05BS00606	8/27/1994	2.4 J	
	05BS00909-D	8/28/1994	5.7	
	05BS01009	8/28/1994	2 J	
	05BS01307	8/27/1994	4.2	
	05BS01509	8/28/1994	2.3 J	
	05BS01610	8/29/1994	2.8	
	05BS01709	8/28/1994	2.9	
	05BS01807	8/29/1994	1.7 J	
	05BS01909	8/29/1994	2.7 J	
	MPT-02-11S	1/24/1992	0.91 J	
	MPT-02-17S	1/24/1992	0.86 J	
Barium	05BS01509	8/28/1994	166	60
	05BS01610	8/29/1994	96.2	
	05BS01807	8/29/1994	299	
Cadmium	05BS00606	8/27/1994	9.4 J	7.5
	05BS01807	8/29/1994	42.5	
Chromium	05BS00107	8/27/1994	6.8	4.2
	05BS00208	8/27/1994	8.2	
	05BS00306	8/27/1994	20.2	
	05BS00409	8/29/1994	32.6	
	05BS00509	8/28/1994	10.8	
	05BS00606	8/27/1994	9.7	
	05BS00704	8/29/1994	15.4	
	05BS00909	8/28/1994	11	
	05BS01009	8/28/1994	7.6	
	05BS01107	8/29/1994	26.9	
	05BS01307	8/27/1994	8.8	
	05BS01509	8/28/1994	22.6	
	05BS01610	8/29/1994	58.1	
	05BS01709	8/28/1994	8.7	
	05BS01807	8/29/1994	29.8	
	05BS01909	8/29/1994	11.8	
	05BS02009	8/29/1994	6.8	
	MPT-02-17S	1/24/1992	4.3 J	
Cyanide	05BS01509	8/28/1994	6.8	0.3
Mercury	05BS00409	8/29/1994	0.38	0.05
	05BS00509	8/28/1994	0.15 J	
	05BS00606	8/27/1994	0.1	
Nickel	05BS01107	8/29/1994	33.5	11
	05BS01509	8/28/1994	19.4	
	05BS01610	8/29/1994	341	
Silver	05BS00606	8/27/1994	0.63 J	0.01
	05BS00909	8/28/1994	0.57 J	
	05BS01509	8/28/1994	0.61 J	
	05BS01610	8/29/1994	0.70 J	
Vanadium	05BS01107	8/29/1994	340	67

Notes:

[1] Site concentrations for carcinogenice polycyclic aromatic hydrocarbons must be converted to Benzo(a)pyrene equivalents before comparison with the appropriate direct exposure SCTL for Benzo(a)pyrene using the approach described in the February 2005 'Final Technical Report: Development fo Cleanup Target Levels for Chapter 62-777, F.A.C.' Contaminants considered for subsurface soil benzo(a)pyrene equivalent calculations at SWMU 4 are benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene.

TABLE 12
SWMU 22, SUBSURFACE SOIL COCs - RESIDENTIAL DIRECT EXPOSURE
NAVSTA MAYPORT, FLORIDA

CHEMICAL OF POTENTIAL CONCERN	CAS NUMBER	FREQUENCY OF DETECTION	MAXIMUM CONCENTRATION (mg/kg)	SCTL RESIDENTIAL[1] (mg/kg)	BACKGROUND CONCENTRATION[2] (mg/kg)	TARGET ORGAN/SYSTEM OR EFFECT	Cumulative Cancer or Target Organ/System Analysis[3]			MEDIA CLEANUP STANDARD - DIRECT EXPOSURE[4] (mg/kg)	COC BASED ON RESIDENTIAL DIRECT EXPOSURE[5]
							Carcinogen	Cardiovascular	Skin		
Inorganics											
Arsenic	7440-38-2	2/5	3.7	2.1	0.7	Carcinogen -Cardiovascular Skin	1.76	1.76	1.76	2.1	**Yes**
						Cumulative Sum[6]	1.76	1.76	1.76		

Notes:

[1] SCTL - Soil Cleanup Target Level for Residential Direct Exposure - Chapter 62-777 F.A.C., April 2005

[2] Mayport background screening value (Tetra Tech NUS, 2000).

[3] The ratio of the maximum detected concentration to the SCTL is shown for each COPC. A ratio or sum of ratios greater than 1 for carcinogens or for any organ/system indicates an exceedance of FDEP guidance (ratios only shown for COPCs that exceed direc

[4] Per the "Technical Report: Development of Cleanup Target Levels (CTLs) for Chapter 62-777, F.A.C.", when using the maximum concentration approach, potential additive toxicity among chemicals is addressed implicitly by taking the conservative approach o

[5] A COPC is selected as a COC if the representative concentration exceeds the Media Cleanup Standard - Direct Exposure. (Site specific SCTL)

[6] Cumulative Sum is the summation of the ratios for contaminants that effect the same target organ or that are carcinogens (cumulative effect).

TABLE 13
SWMU 22, EXCEEDANCES OF COCs IN SUBSURFACE SOIL
NAVSTA MAYPORT - MAYPORT, FLORIDA

Chemical of Concern	Sample ID	Sample Date	Detected Concentration	Media Cleanup Standard
Arsenic	MPT-22-1S	1/24/1992	3.7 J	2.1
Arsenic	MPT-22-L-1	3/11/1992	3.4	

TABLE 14
SWMU 2, SUMMARY OF REVISED SUBSURFACE SOIL COCs
NAVSTA MAYPORT – MAYPORT, FLORIDA

SUBSURFACE SOIL SAMPLE LOCATION	SAMPLE DEPTH (FT)	REVISED SUBSURFACE SOIL COCS
MPT-02-SS/BS01	7	• Arsenic • Lead
MPT-02-SS/BS03	7	• Arsenic • Lead

TABLE 15
SWMU 3, SUMMARY OF REVISED SUBSURFACE SOIL COCs
NAVSTA MAYPORT – MAYPORT, FLORIDA

SUBSURFACE SOIL SAMPLE LOCATION	SAMPLE DEPTH (FT)	REVISED SUBSURFACE SOIL COCS
MPT-03-SS/SB01	8	• Arsenic
MPT-03-SS/SB02	8	• Arsenic
MPT-03-BS05	32	• Benzo(a)pyrene Equivalents [1] • Arsenic
	24	• Arsenic
MPT-03-BS06	32	• Arsenic
	24	• Arsenic
MPT-03-BS07	32	• Arsenic
MPT-03-BS08	24	• Arsenic

[1] Site concentrations for carcinogenic polycyclic aromatic hydrocarbons must be converted to Benzo(a)pyrene equivalents before comparison with the appropriate direct exposure SCTL for Benzo(a)pyrene using the approach described in the February 2005 'Final Technical Report: Development of Cleanup Target Levels for Chapter 62-777, F.A.C.' Contaminants considered for subsurface soil benzo(a)pyrene equivalent calculations at SWMU 3 are benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, and indeno(1,2,3-cd)pyrene.

TABLE 16
SWMU 4, SUMMARY OF REVISED SUBSURFACE SOIL COCs
NAVSTA MAYPORT – MAYPORT, FLORIDA

SUBSURFACE SOIL SAMPLE LOCATION	SAMPLE DEPTH (FT)	REVISED SUBSURFACE SOIL COCS
MPT-04SS/BS01	11	• Arsenic
MPT-04SS/BS02	9	• Arsenic
MPT-04SS/BS03	10	• Arsenic • Barium
MPT-04SS/BS04	5	• Benzo(a)pyrene Equivalents [1] • Bis(2-Ethylhexyl)phthalate • Arsenic
MPT-04SS/BS05	9	• Arsenic
MPT-04SS/BS06	11	• Arsenic
MPT-04SS/BS07	5	• Arsenic • Barium
MPT-04SS/BS09	5	• Arsenic
MPT-04SS/BS10	8	• Arsenic

Notes:
[1] Site concentrations for carcinogenic polycyclic aromatic hydrocarbons must be converted to Benzo(a)pyrene equivalents before comparison with the appropriate direct exposure SCTL for Benzo(a)pyrene using the approach described in the February 2005 'Final Technical Report: Development of Cleanup Target Levels for Chapter 62-777, F.A.C.' Contaminants considered for subsurface soil benzo(a)pyrene equivalent calculations at SWMU 4 are benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, and indeno(1,2,3-cd)pyrene.

TABLE 17
SWMU 5, SUMMARY OF REVISED SUBSURFACE SOIL COCs
NAVSTA MAYPORT – MAYPORT, FLORIDA

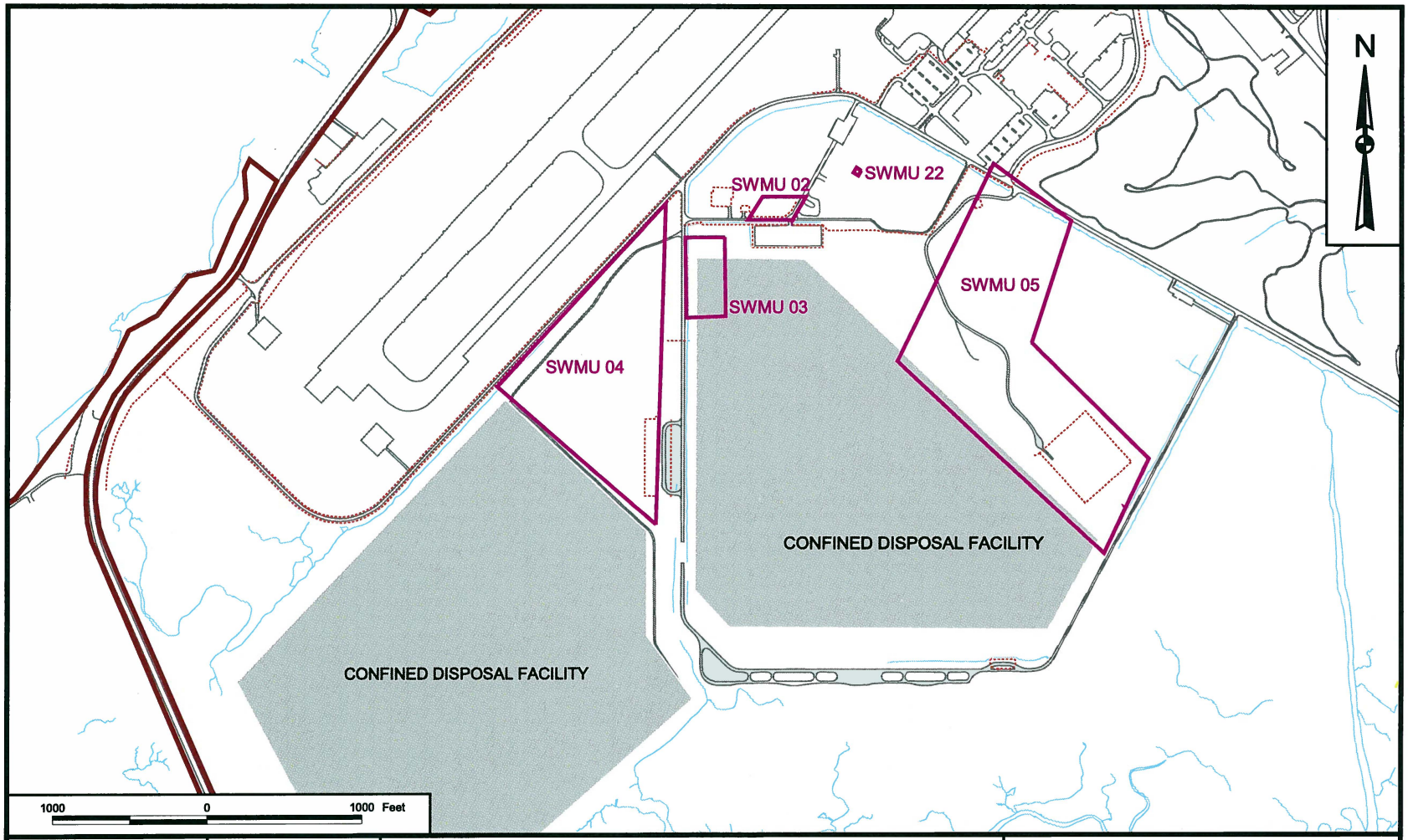
SUBSURFACE SOIL SAMPLE LOCATION	SAMPLE DEPTH (FT)	REVISED SUBSURFACE SOIL COCS
MPT-02-MW11S	6	• Arsenic
MPT-02-MW17S	6	• Arsenic
MPT-05-SS/BS01	7	• Arsenic
MPT-05-SS/BS02	8	• Arsenic
MPT-05-SS/BS03	6	• Arsenic
MPT-05-SS/BS04	9	• Arsenic • Mercury
MPT-05-SS/BS05	9	• Arsenic • Mercury
MPT-05-SS/BS06	6	• Arsenic • Mercury
MPT-05-SS/BS09	9	• Benzo(a)pyrene Equivalents [1] • Arsenic
MPT-05-SS/BS10	9	• Arsenic
MPT-05-SS/BS11	7	• Vanadium
MPT-05-SS/BS13	7	• Arsenic
MPT-05-SS/BS15	9	• Arsenic • Barium • Cyanide
MPT-05-SS/BS16	10	• Arsenic • Barium
MPT-05-SS/BS17	9	• Arsenic
MPT-05-SS/BS18	7	• Arsenic • Barium
MPT-05-SS/BS19	9	• Arsenic
MPT-05-SS/BS20	9	• Benzo(a)pyrene Equivalents [1]

Notes:
[1] Site concentrations for carcinogenic polycyclic aromatic hydrocarbons must be converted to Benzo(a)pyrene equivalents before comparison with the appropriate direct exposure SCTL for Benzo(a)pyrene using the approach described in the February 2005 'Final Technical Report: Development of Cleanup Target Levels for Chapter 62-777, F.A.C.' Contaminants considered for subsurface soil benzo(a)pyrene equivalent calculations at SWMU 4 are benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene.

TABLE 18
SWMU 22, SUMMARY OF REVISED SUBSURFACE SOIL COCs
NAVSTA MAYPORT – MAYPORT, FLORIDA

SUBSURFACE SOIL SAMPLE LOCATION	SAMPLE DEPTH (FT)	REVISED SUBSURFACE SOIL COCS
MPT-22-MW01S	2	• Arsenic
MPT-22-U-1	2	• Arsenic

FIGURES



DRAWN BY: MK BOND — DATE: 5/22/06	NAVFAC	SWMU LOCATION MAP SWMUS 2, 3, 4, 5, & 22 SAMPLING WORK PLAN NAVAL STATION MAYPORT MAYPORT, FLORIDA	CONTRACT NUMBER
CHECKED BY: S. BALLARD — DATE: 8/16/06			APPROVED BY: — DATE: —
COST/SCHEDULE-AREA			APPROVED BY: — DATE: —
SCALE: AS NOTED			DRAWING NO.: FIGURE 1 — REV: 0

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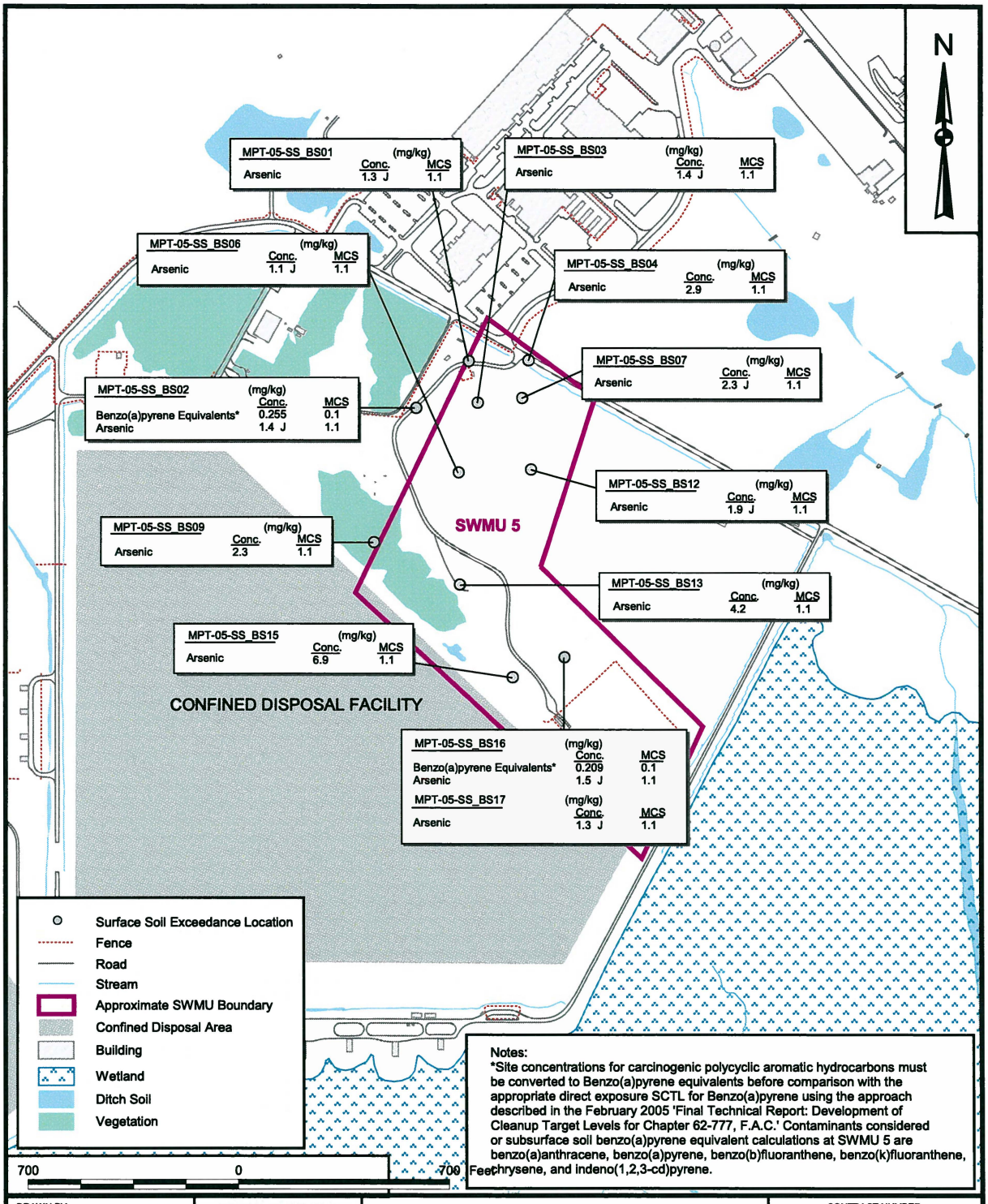

Notes:
*Site concentrations for carcinogenic polycyclic aromatic hydrocarbons must be converted to Benzo(a)pyrene equivalents before comparison with the appropriate direct exposure SCTL for Benzo(a)pyrene using the approach described in the February 2005 'Final Technical Report: Development of Cleanup Target Levels for Chapter 62-777, F.A.C.' Contaminants considered or subsurface soil benzo(a)pyrene equivalent calculations at SWMU 5 are benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, and indeno(1,2,3-cd)pyrene.

DRAWN BY	MK BOND
DATE	5/22/06
CHECKED BY	S. BALLARD
DATE	8/21/06
COST/SCHEDULE-AREA	
SCALE	AS NOTED

NAVFAC

SURFACE SOIL EXCEEDANCES
SOIL SAMPLING WORK PLAN
SWMU 5 - LANDFILL "F"
NAVAL STATION MAYPORT
MAYPORT, FLORIDA

CONTRACT NUMBER	
APPROVED BY	DATE
APPROVED BY	DATE
DRAWING NO.	FIGURE 2
REV	0

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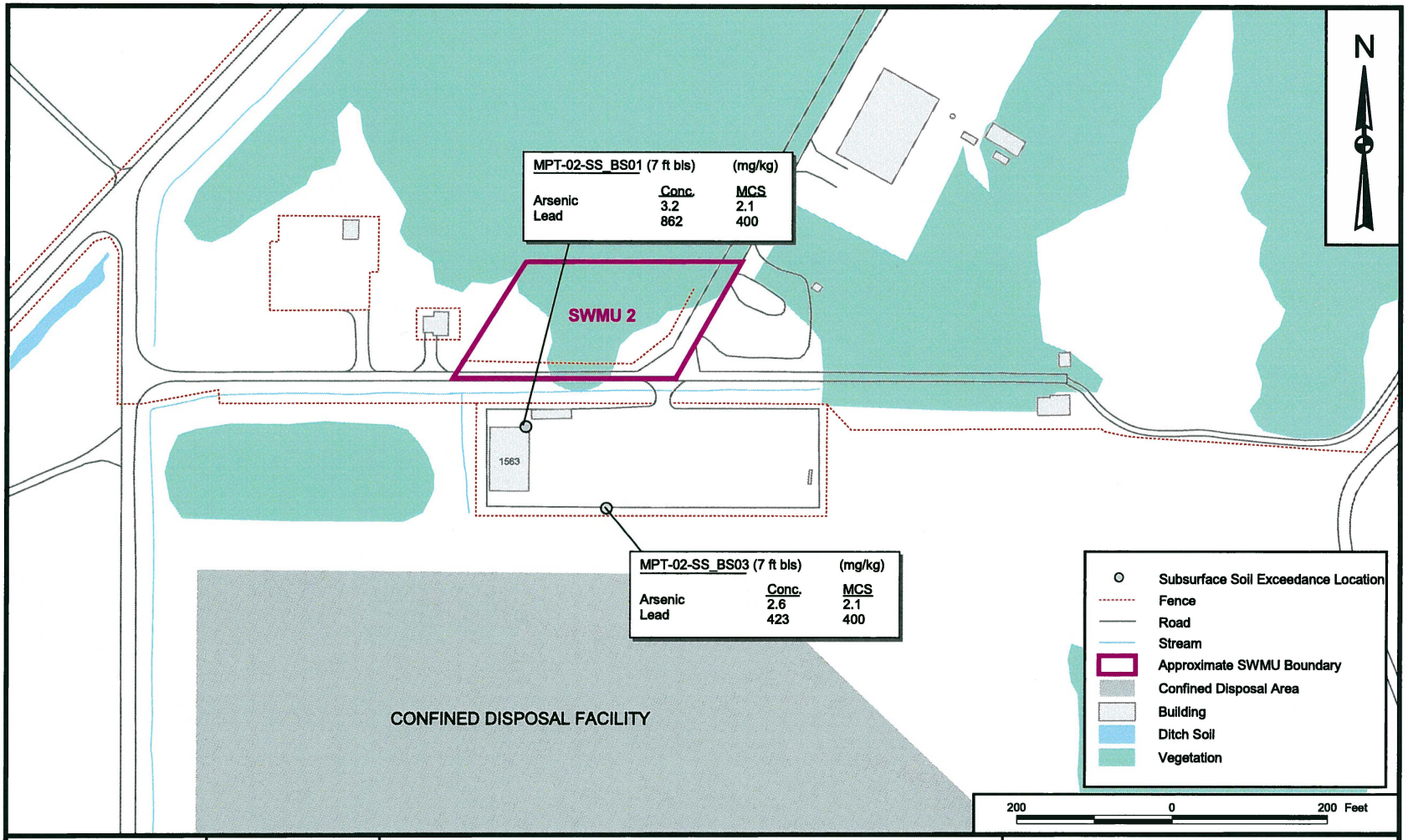

DRAWN BY	DATE
MK BOND	5/22/06
CHECKED BY	DATE
S. BALLARD	8/21/06
COST/SCHEDULE-AREA	
SCALE	AS NOTED

NAVFAC

SUBSURFACE SOIL EXCEEDANCES
SOIL SAMPLING WORK PLAN
SWMU 2 - LANDFILL "B"
NAVAL STATION MAYPORT
MAYPORT, FLORIDA

CONTRACT NUMBER	
APPROVED BY	DATE
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APPROVED BY	DATE
—	—
DRAWING NO. FIGURE 3	REV 0

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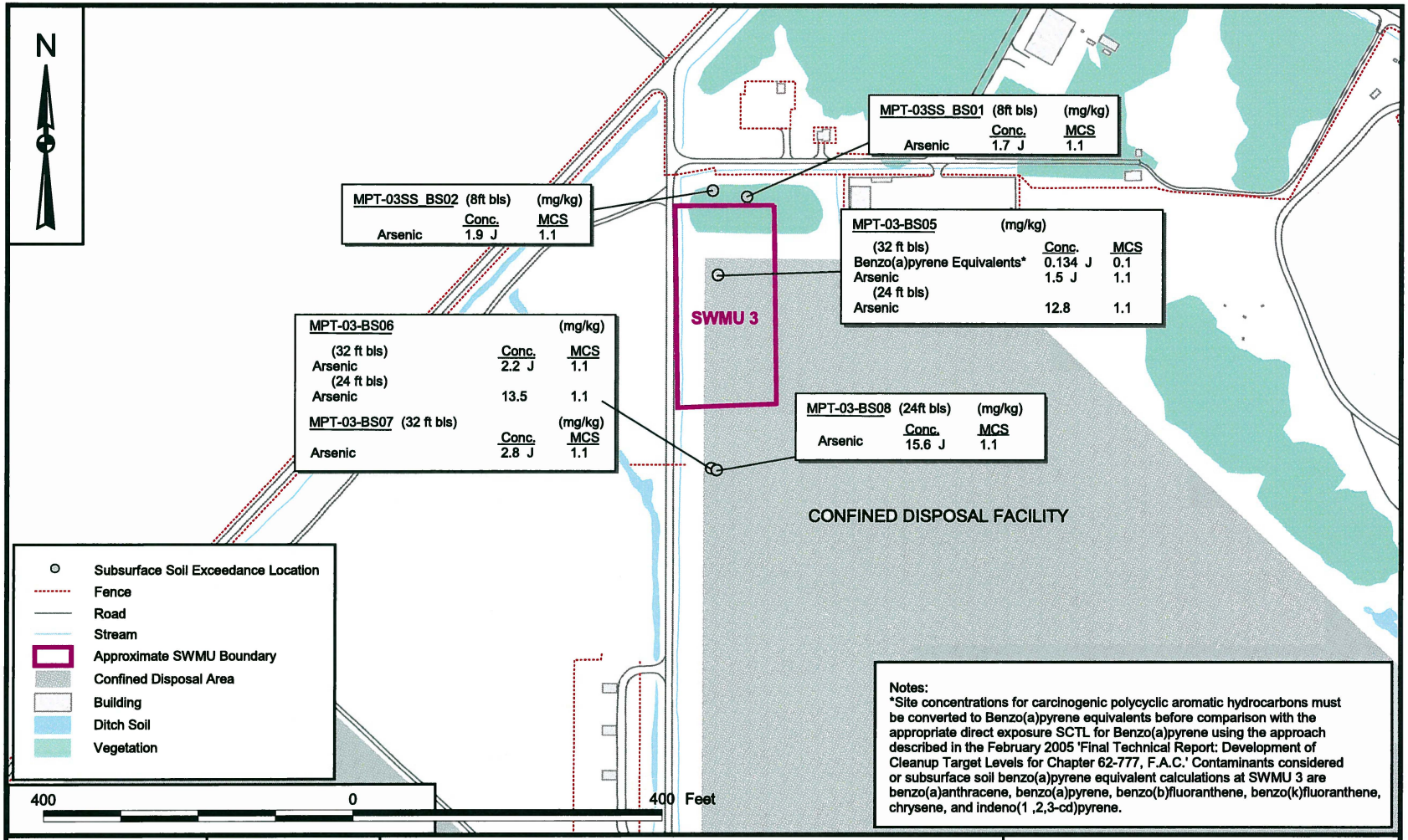

DRAWN BY	DATE
MK BOND	5/22/06
CHECKED BY	DATE
S. BALLARD	8/21/06
COST/SCHEDULE-AREA	
SCALE	AS NOTED

NAVFAC

SUBSURFACE SOIL EXCEEDANCES
SOIL SAMPLING WORK PLAN
SWMU 3 - LANDFILL "D"
NAVAL STATION MAYPORT
MAYPORT, FLORIDA

CONTRACT NUMBER	
APPROVED BY	DATE
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APPROVED BY	DATE
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DRAWING NO. FIGURE 4	REV 0

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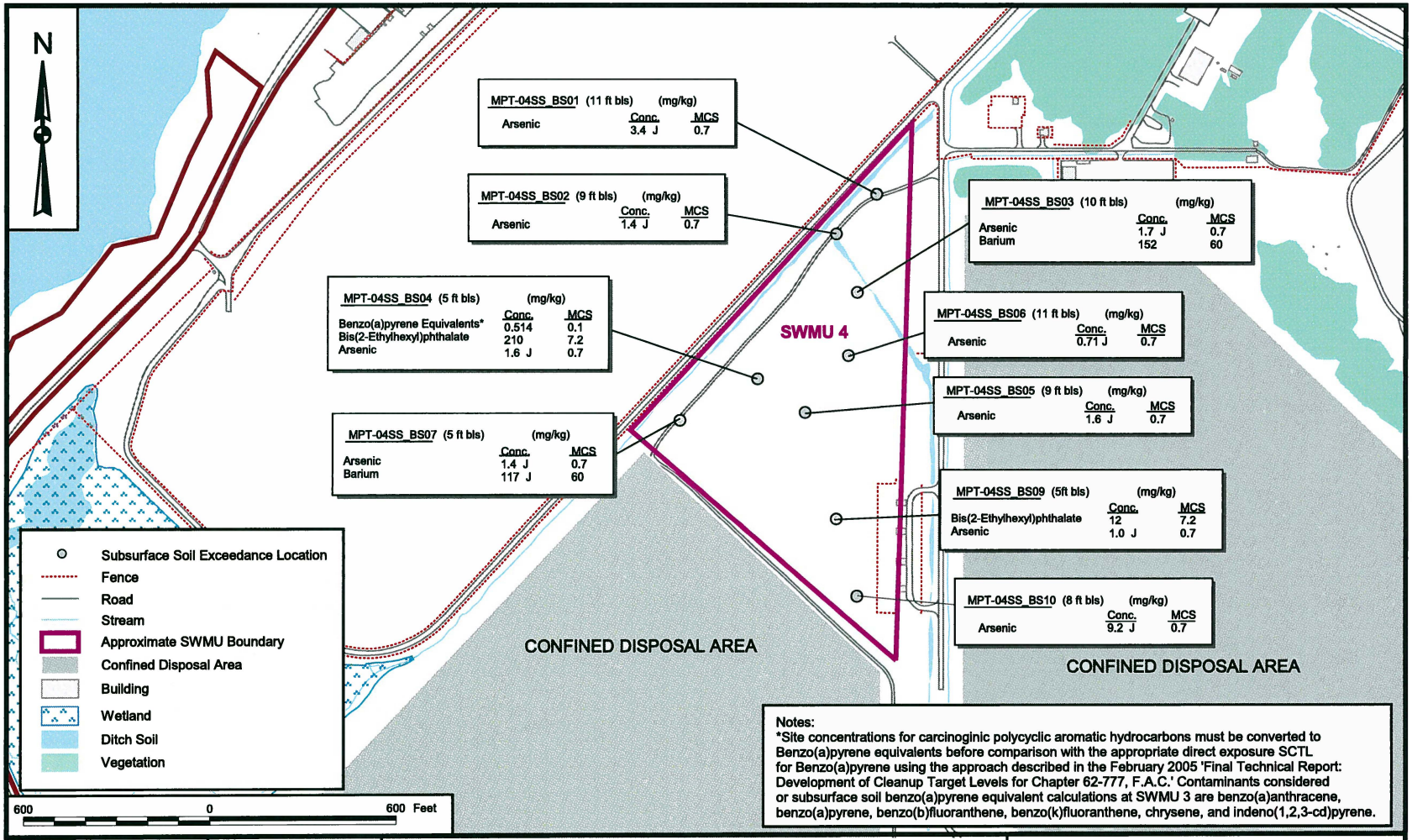

Notes:
*Site concentrations for carcinoginic polycyclic aromatic hydrocarbons must be converted to Benzo(a)pyrene equivalents before comparison with the appropriate direct exposure SCTL for Benzo(a)pyrene using the approach described in the February 2005 'Final Technical Report: Development of Cleanup Target Levels for Chapter 62-777, F.A.C.' Contaminants considered or subsurface soil benzo(a)pyrene equivalent calculations at SWMU 3 are benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, and indeno(1,2,3-cd)pyrene.

DRAWN BY	DATE
MK BOND	5/22/06
CHECKED BY	DATE
S. BALLARD	8/21/06
COST/SCHEDULE-AREA	
SCALE	AS NOTED

NAVFAC

SUBSURFACE SOIL EXCEEDANCES
SOIL SAMPLING WORK PLAN
SWMU 4 - LANDFILL "E"
NAVAL STATION MAYPORT
MAYPORT, FLORIDA

CONTRACT NUMBER	
APPROVED BY	DATE
—	—
APPROVED BY	DATE
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DRAWING NO. FIGURE 5	REV 0

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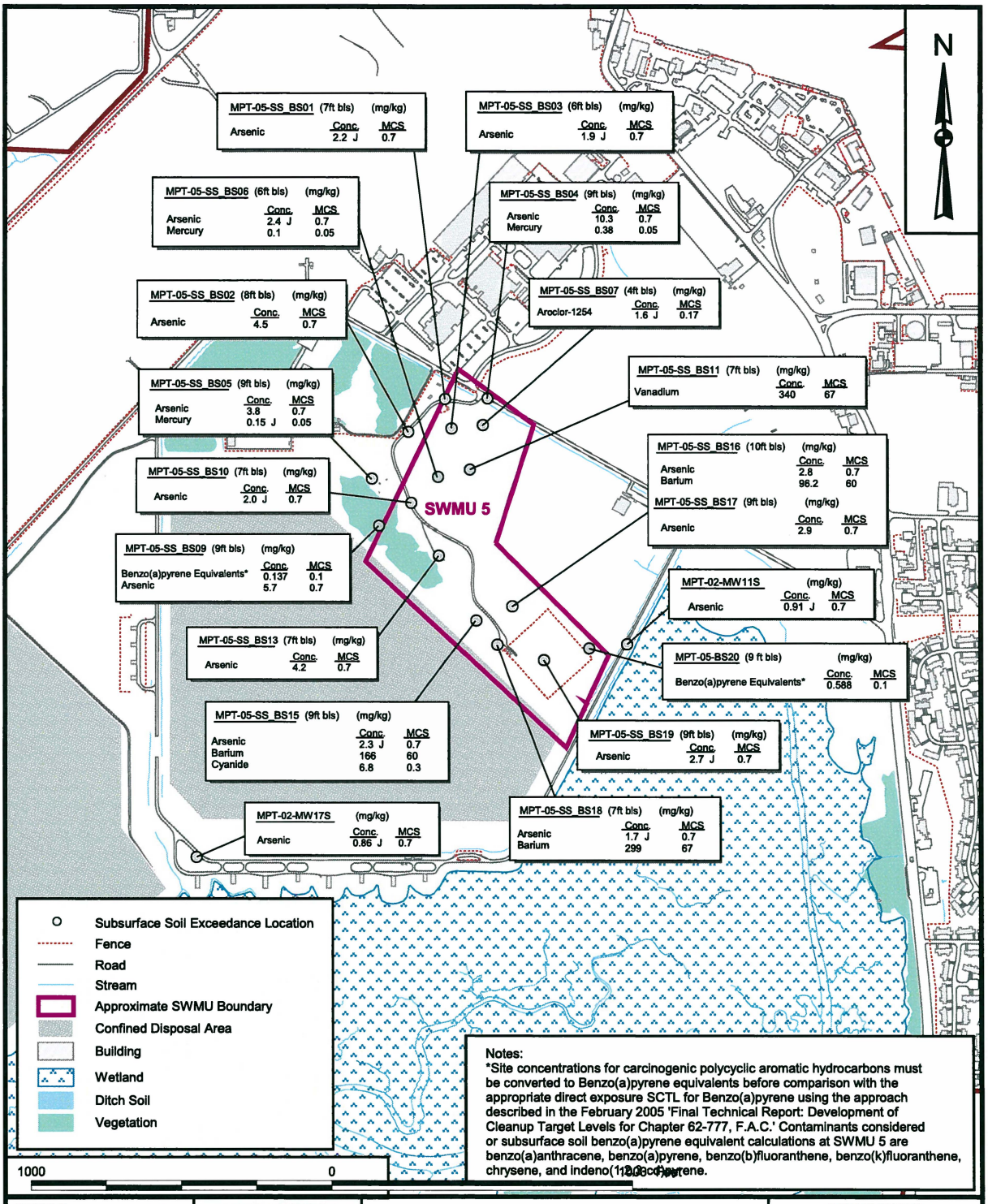

DRAWN BY MK BOND	DATE 5/22/06	SUBSURFACE SOIL EXCEEDANCES SOIL SAMPLING WORK PLAN SWMU 5 - LANDFILL "F" NAVAL STATION MAYPORT MAYPORT, FLORIDA	CONTRACT NUMBER
CHECKED BY S. BALLARD	DATE 8/21/06		APPROVED BY — DATE —
COST/SCHEDULE-AREA			APPROVED BY — DATE —
SCALE AS NOTED		NAVFAC	DRAWING NO. FIGURE 6 REV 0

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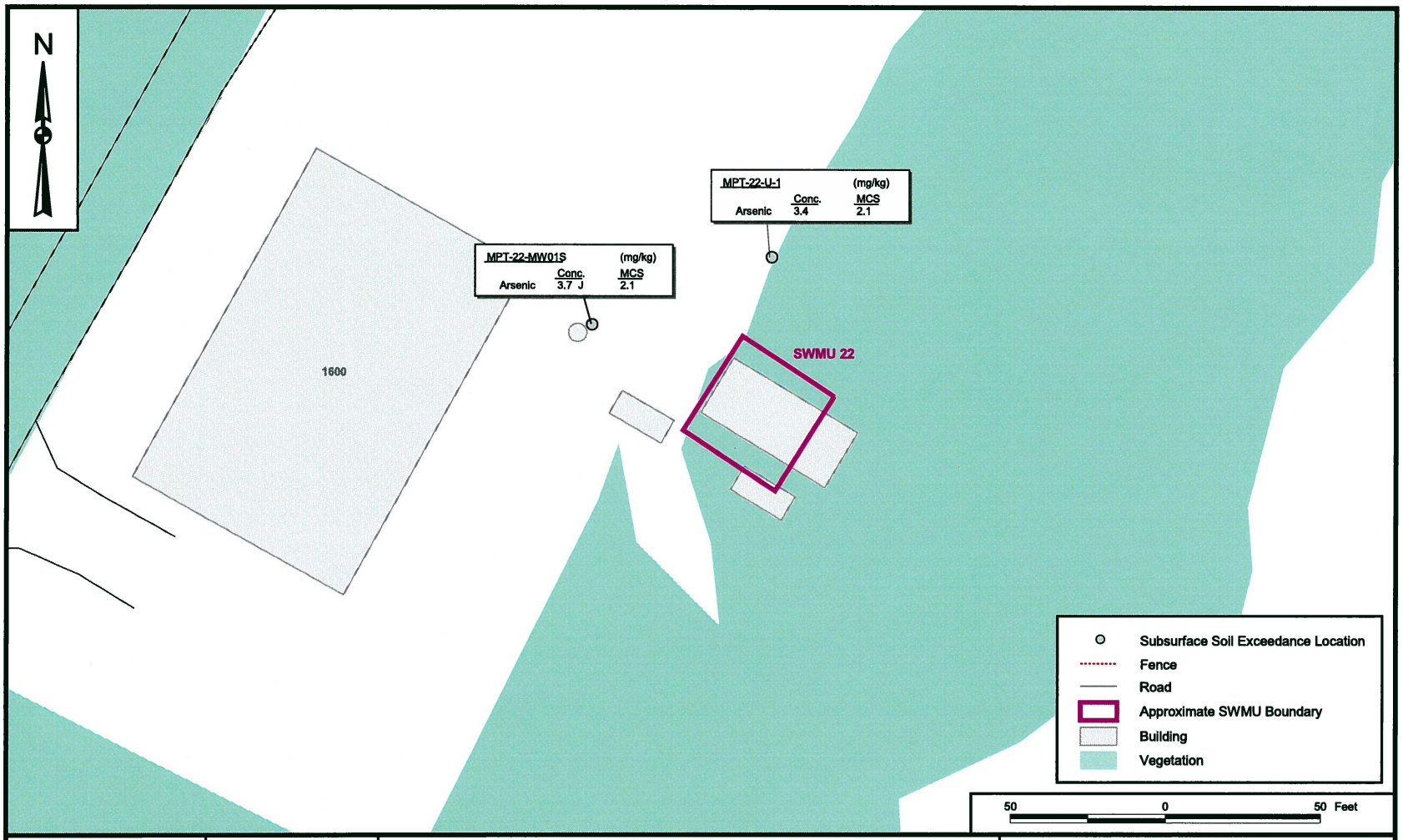

DRAWN BY	DATE
MK BOND	5/22/06
CHECKED BY	DATE
S. BALLARD	8/18/06
COST/SCHEDULE-AREA	
SCALE	AS NOTED

NAVFAC

SUBSURFACE SOIL EXCEEDANCES
SOIL SAMPLING WORK PLAN
SWMU 22 - BUILDING 1600 BLASTING AREA
NAVAL STATION MAYPORT
MAYPORT, FLORIDA

CONTRACT NUMBER	
APPROVED BY	DATE
—	—
APPROVED BY	DATE
—	—
DRAWING NO.	FIGURE 7
REV	0

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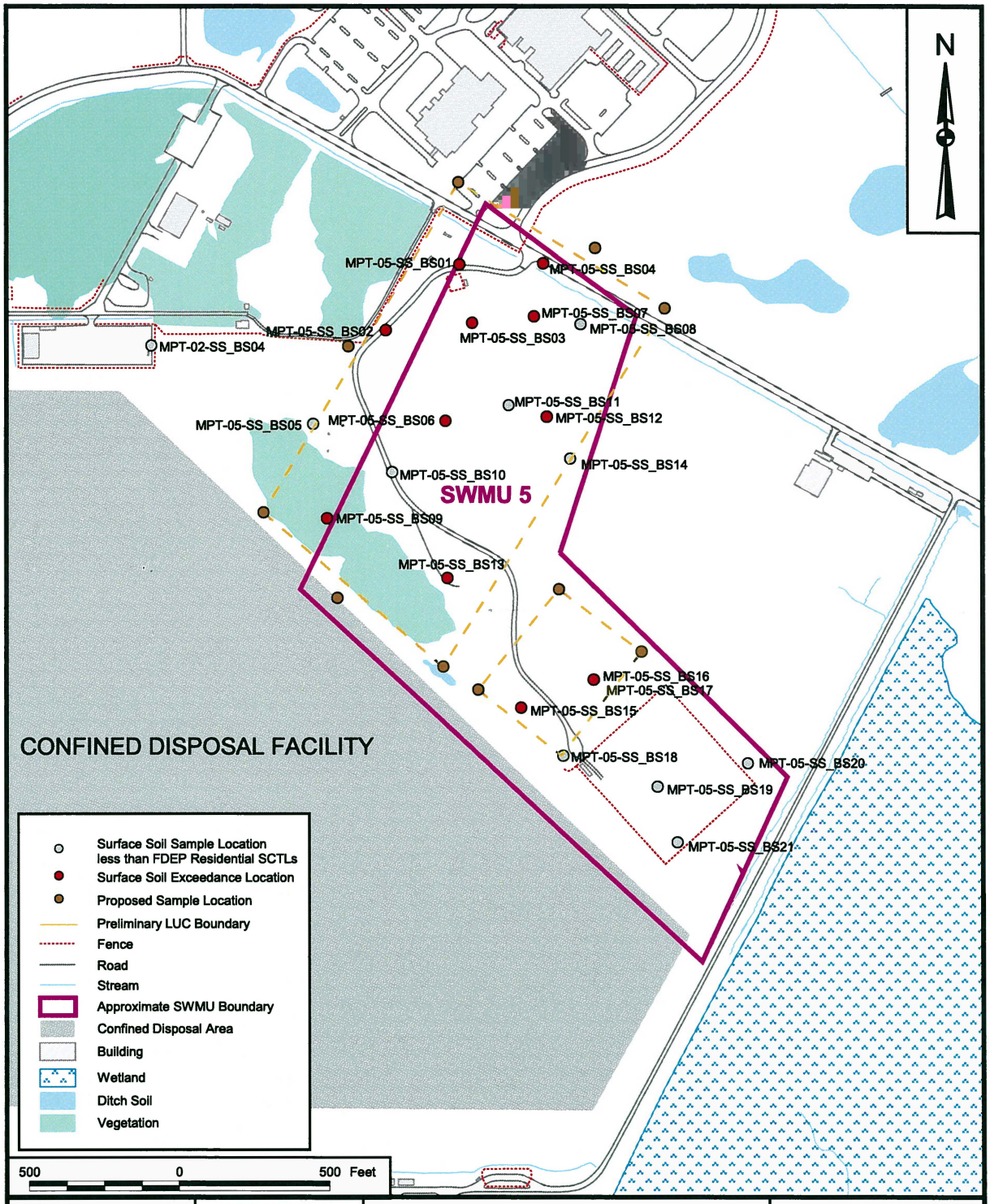

DRAWN BY: S. PAXTON	DATE: 8/22/06	SURFACE SOIL SAMPLE LOCATION MAP SOIL SAMPLING WORK PLAN SWMU 5 - LANDFILL "F" NAVAL STATION MAYPORT MAYPORT, FLORIDA	CONTRACT NUMBER
CHECKED BY: J. JOHNSON	DATE: 4/9/07		APPROVED BY: — DATE: —
COST/SCHEDULE-AREA			APPROVED BY: — DATE: —
SCALE: AS NOTED		NAVFAC	DRAWING NO.: FIGURE 8 REV: 0

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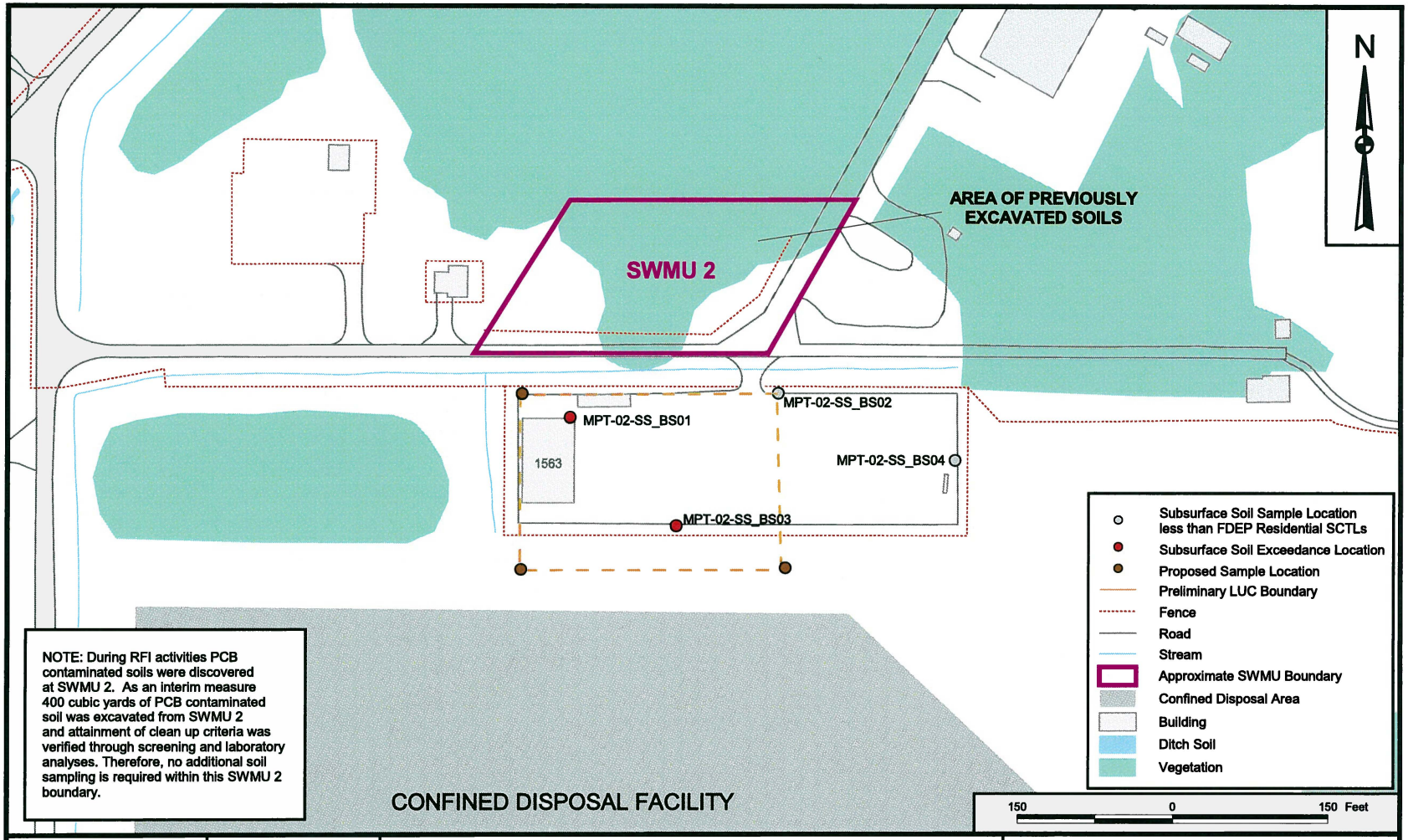

DRAWN BY: S. PAXTON	DATE: 8/22/06	SUBSURFACE SOIL SAMPLE LOCATION MAP SOIL SAMPLING WORK PLAN SWMU 2 - LANDFILL "B" NAVAL STATION MAYPORT MAYPORT, FLORIDA	CONTRACT NUMBER
CHECKED BY: J. FOSTER	DATE: 1/10/07		APPROVED BY: — DATE: —
COST/SCHEDULE-AREA			APPROVED BY: — DATE: —
SCALE: AS NOTED			DRAWING NO.: FIGURE 9 REV: 0

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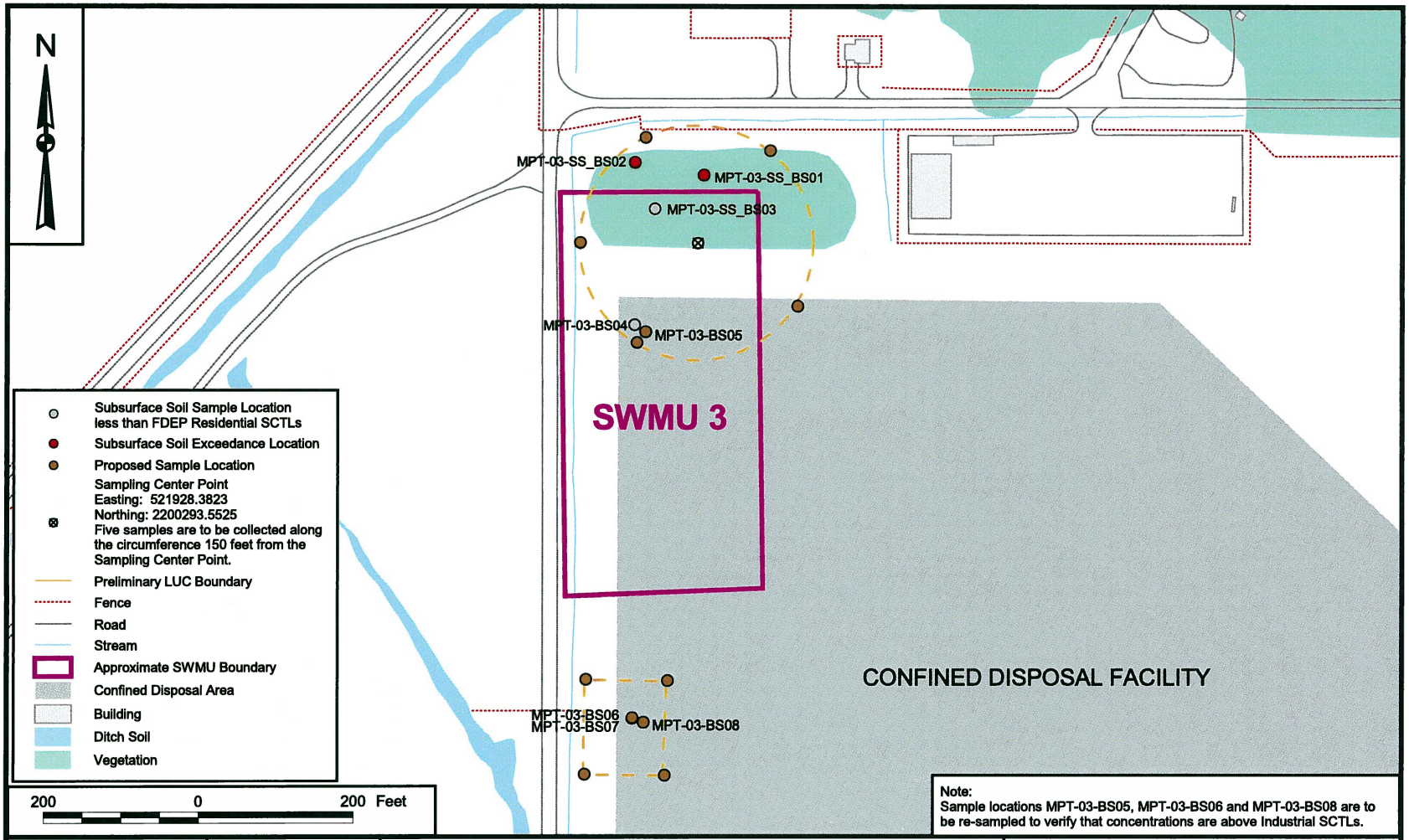

Note:
Sample locations MPT-03-BS05, MPT-03-BS06 and MPT-03-BS08 are to be re-sampled to verify that concentrations are above Industrial SCTLs.

DRAWN BY / DATE	S. PAXTON 8/22/06
CHECKED BY / DATE	J. FOSTER 1/12/07
COST/SCHEDULE-AREA	
SCALE	AS NOTED

NAVFAC

SUBSURFACE SOIL SAMPLE LOCATION MAP
SOIL SAMPLING WORK PLAN
SWMU 3 - LANDFILL "D"
NAVAL STATION MAYPORT
MAYPORT, FLORIDA

CONTRACT NUMBER	
APPROVED BY / DATE	— / —
APPROVED BY / DATE	— / —
DRAWING NO.	FIGURE 10
REV	0

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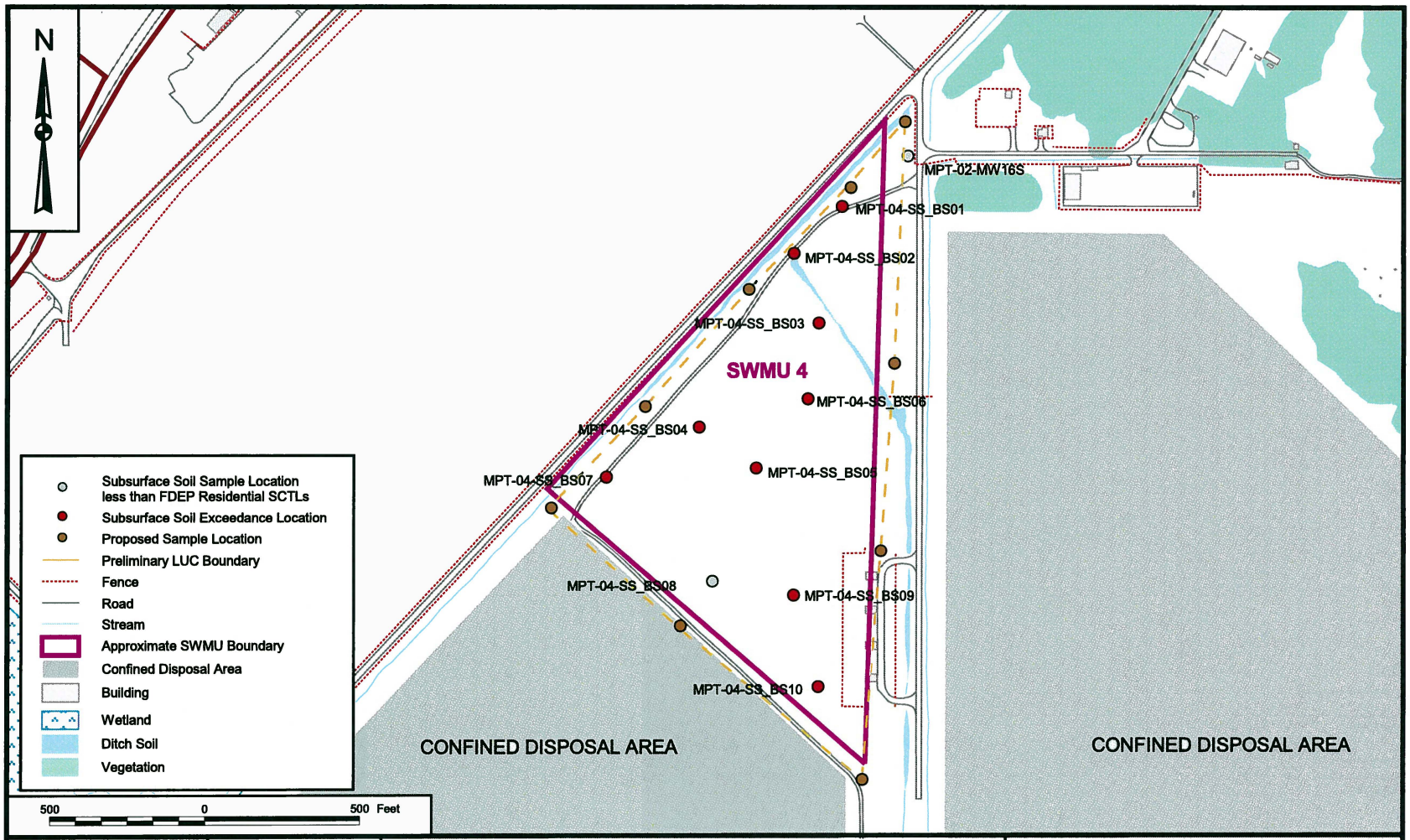

DRAWN BY: S. PAXTON	DATE: 8/22/06	SUBSURFACE SOIL SAMPLE LOCATION MAP SOIL SAMPLING WORK PLAN SWMU 4 - LANDFILL "E" NAVAL STATION MAYPORT MAYPORT, FLORIDA	CONTRACT NUMBER
CHECKED BY: J. FOSTER	DATE: 1/09/07		APPROVED BY: — DATE: —
COST/SCHEDULE-AREA			APPROVED BY: — DATE: —
SCALE: AS NOTED		NAVFAC	DRAWING NO.: FIGURE 11 REV: 0

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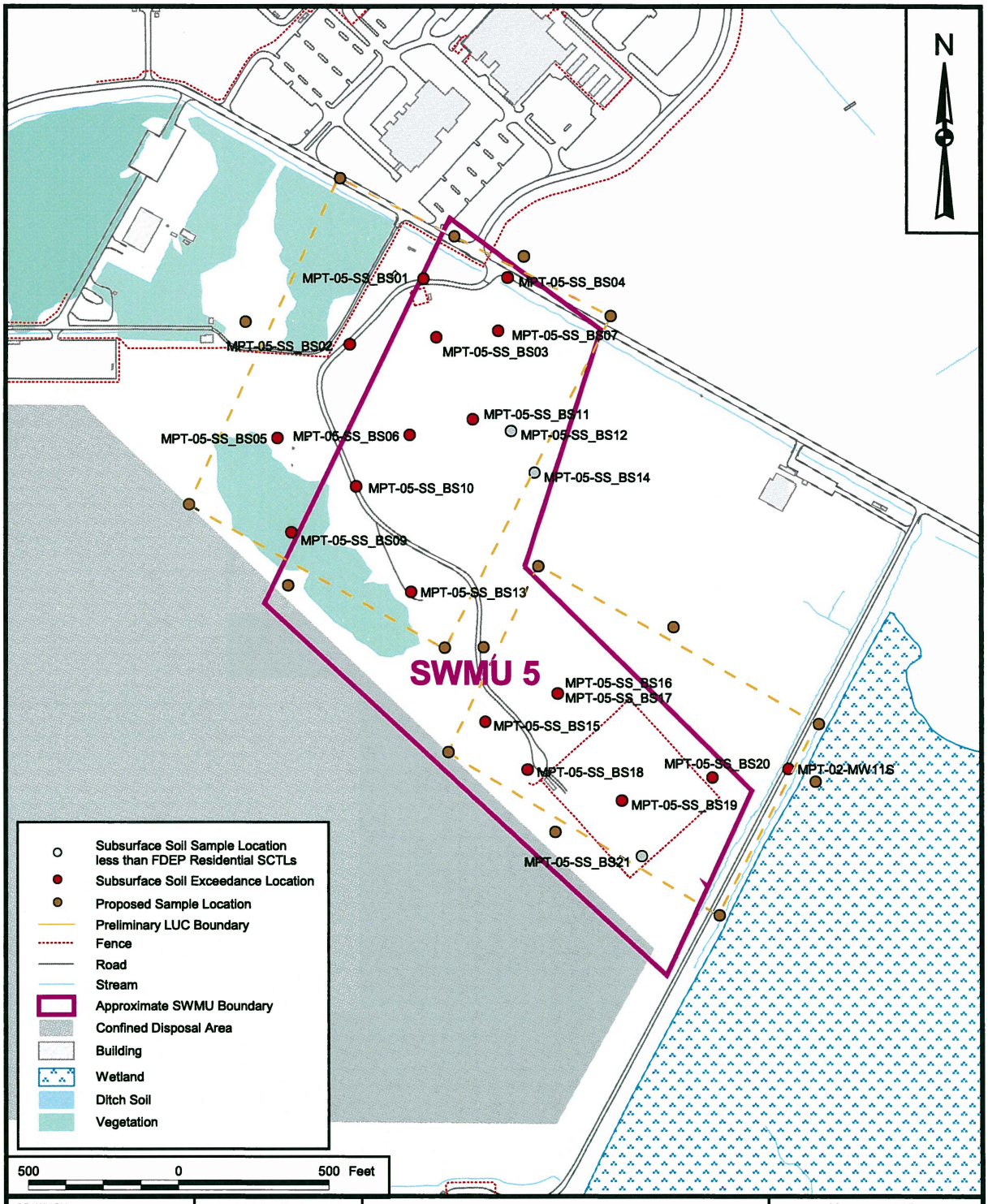

DRAWN BY: MK BOND	DATE: 8/22/06	SUBSURFACE SOIL SAMPLE LOCATION MAP SOIL SAMPLING WORK PLAN SWMU 5 - LANDFILL "F" NAVAL STATION MAYPORT MAYPORT, FLORIDA	CONTRACT NUMBER
CHECKED BY: J. JOHNSON	DATE: 4/9/07		APPROVED BY — DATE —
COST/SCHEDULE-AREA			APPROVED BY — DATE —
SCALE: AS NOTED			DRAWING NO. FIGURE 12 / REV 0

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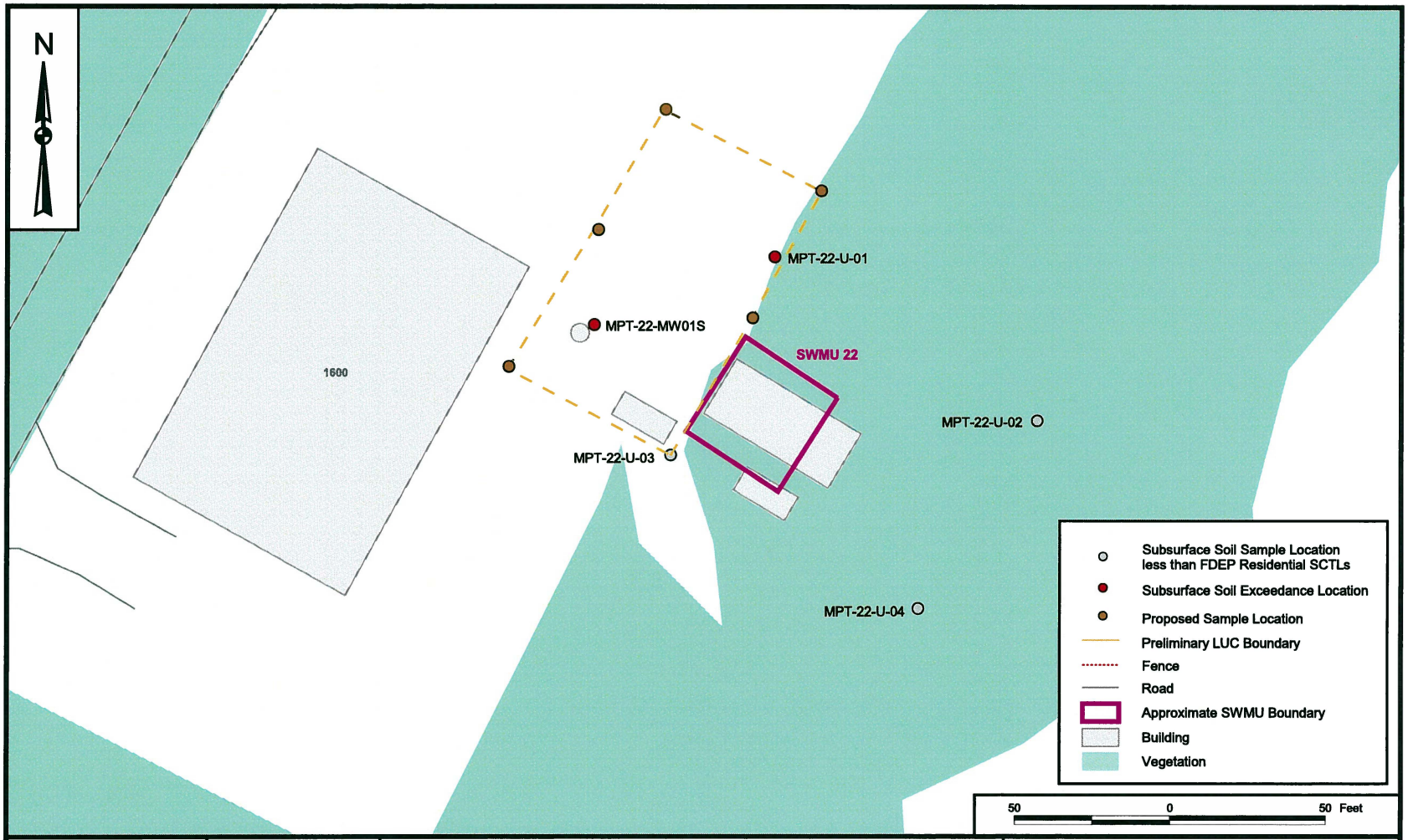


DRAWN BY	DATE
S. PAXTON	8/22/06
CHECKED BY	DATE
J. FOSTER	1/09/07
COST/SCHEDULE-AREA	
SCALE	AS NOTED

NAVFAC

SUBSURFACE SOIL SAMPLE LOCATION MAP
SOIL SAMPLING WORK PLAN
SWMU 22 - BUILDING 1600 BLASTING AREA
NAVAL STATION MAYPORT
MAYPORT, FLORIDA

CONTRACT NUMBER	
APPROVED BY	DATE
—	—
APPROVED BY	DATE
—	—
DRAWING NO.	REV
FIGURE 13	0

P:\GIS\MAYPORT_NS\SWMUS02_03_04_05_22.APR SWMU 22 SUBSURFACE SOIL SAMPLES LUC LAYOUT 1/09/07 SP

ATTACHMENT 1

JANUARY 2007 NAVSTA MAYPORT PARTNERING TEAM MINUTES

NAVSTA MAYPORT PARTNERING MEETING

January 23, 2007
TtNUS, Jacksonville, Florida

Leader: Diane Racine
Scribe: Libby Claggett

Members Present:	Shina Ballard	Tetra Tech NUS, Jacksonville
	Robbie Darby	NAVFAC SE (telecon)
	Jim Cason	FDEP
	Libby Claggett	Scribe
	Mike Halil	CH2M Hill
	Diane Racine	NAVSTA Mayport
	Adrienne Wilson	NAVFAC SE (telecon)
	Craig Benedikt	USEPA (adjunct member)
	Beverly Washington	NAVFAC SE (adjunct member) (telecon)
	Steve Hughes	Tetra Tech NUS, Pittsburgh (guest)
	Mark Peterson	Tetra Tech NUS, Jacksonville (guest)
	Dave Siefken	Tetra Tech NUS, Jacksonville (guest)

Meeting Start Time: 8:30 a.m.

1.1 Check In/Opening Remarks

Team members shared events since the last meeting.

1.2 Agenda Modifications/Additions

Team members reviewed the agenda.

1.3 Ground Rules/Minutes Approval/Action Item Review

The ground rules, minutes, and action items were reviewed. The team reached **consensus** to approve the November 2006 minutes.

Action Items Developed November 28-29, 2006

11.06.1.3.1 Diane to prepare a briefing paper for potential SWMUs on the site inventory by the January NAVSTA Mayport Partnering Team meeting. **Done**

11.06.1.3.2 Shina to add AOC E boundary to EGIS. **Done**

11.06.1.3.3 Mike H. to send Shina a list of wells not found in and around Site 1330. **Done**

11.06.1.6.1 Shina (along with Diane and Adrienne) to review CAMP dates. **Done**

11.06.1.6.2 Adrienne to update the Exit Strategy to reflect the revised CAMP dates. **Done**

11.06.1.7 Shina to perform a document review for SWMUs 6 and 7 to determine if an Ecological Risk Assessment needs to be performed or not. **Done**

11.06.1.9.1 Shina to send Diane SWMU 52 information by December 6, 2006. **Done**

11.06.1.9.2 Diane to obtain oily waste treatment and sanitary sewer drawings for Charlie and Alpha Piers and north of Moale Avenue (SWMUs 47 and 53) by December 15, 2006. **Done**

11.06.1.9.3 Shina to find out when samples were taken at SWMUs 47 and 53 and send information to Diane by December 5, 2006. **Done**

11.06.1.9.4 Shina to obtain aerial photos of NAVSTA Mayport prior to 1952 to present to the Team to access where dredge material has been placed at the base. **Done**

11.06.1.10 Diane to send to Team members the process for obtaining dig permits at NAVSTA Mayport by December 15, 2006. **Done**

11.06.1.11.1 Shina to provide Craig a copy of the GIS CD. **Done**

11.06.1.11.2 Adrienne to notify Libby what petroleum documents need to be included in the NAVSTA Mayport Administrative Record. **Ongoing**

Action Items Developed September 26-27, 2006

09.06.1.6.1 Shina and Diane to write a short summary of the stormwater ditches associated with SWMUs 2, 3, 4, 5, and 22 explaining current conditions and issues and submit the summary to Jim by January 23, 2007. **Done**

09.06.1.6.2 Jim to discuss summary of stormwater ditches with FDEP personnel to obtain advice on path forward by February 1, 2007. **Done**

09.06.2.1.1 Diane and Adrienne (Shina) to review the HSWA permit and develop a recommendation for the path forward on AOC D by January 2007. **Done**

09.06.2.5.1 Jim to send letters written for NAVSTA Mayport to Libby for inclusion into the Administrative Record starting November 28, 2006. **Done**

Action Items Developed March 30, 2006

03.06.1.5.2 TtNUS Jacksonville (Greg) to obtain the Whiting Field arsenic document from Larry Smith and send to Team members. **OBE**

03.06.1.7 Jim to send a draft letter to Diane for RFA at AOC E by January 2007. **Done**

03.06.1.8.1 TtNUS Jacksonville to review the Sediment Sampling Work Plan and submit it to Team members in draft form. **Ongoing**

03.06.1.8.3 Diane to send Shina a copy of the stormwater GIS when it is completed (electronic). **Done**

03.06.1.9.4 Shina to send Jim a revised copy of SWMU 56 SB – waiting on final CMS. **Ongoing**

1.4 Break

1.5 Petroleum Sites

250 – Land Use Control Remedial Design report is through review and will be sent electronically.

Action Item: Tetra Tech to send out electronic version LUC RD for Site 250 to Diane and Beverly for review by January 24, 2007. **Done**

351-1 – Need to complete SAR. Hope to have out by March 2007. The path forward is monitoring only.

351-2 – Need to complete SAR. Hope to have completed by March 2007. The path forward is a RAP.

413 – NFA report completed; waiting on comments.

1330 – Three new wells were installed and sampled in late December. Validated data has not been received. Another sampling event is scheduled for the end of February 2007. RAP scheduled to be submitted in March 2007.

1343 – Free product recovery is continuing.

1363 – Routine monitoring is being performed by Tetra Tech.

1585 – SAR completed. A little over 1 foot of free product (heating oil) was found in well MW-3. The path forward is to vacuum the free product, monitoring, and submit a SAR regarding findings.

Action Item: Diane to check compliance of Tank 1585 (heating oil).

1586 – Waiting to move forward with the RAP. Waiting for Treatability Study to be completed (RAC).

Action Item: Mike H. to evaluate a 4" diameter or greater product recover sump at Site 1586 by February 2007.

A/D Pier – One inch of free product found. RAP has been written.

NSC Fuel Farm – Tetra Tech to begin field work in March 2007.

Satellite 2 Parking Lot – Tetra Tech to begin soil and groundwater assessment in late February 2007.

Action Item: Jim and Craig to determine if the Satellite 2 Parking Lot should be investigated under petroleum or RCRA. **Done**

Jim and Craig determined from the MSDS that bitumastic 50 is not a petroleum product and, therefore, the Satellite 2 Parking Lot should be investigated under RCRA (currently funded under the UST program). Craig determined that the site should be an AOC not a SWMU based upon definition. The Satellite 2 Parking Lot site will be renamed AOC F.

Action Item: Mike H. to send Craig the Interim Source Removal Report for the Satellite 2 Parking Lot (that was submitted in October 2006). **Done**

(Funding for this is not ERN, it will come from Station funds).

1.6 SWMU Review

SWMUs 1, 23, 24, and 25 – The CMS Addendum has been prepared by Tetra Tech. Per regulator direction, avoid the words "naturally occurring" and "long term monitoring" in documents. It was iterated that the Statement of Basis needs to be kept generic. Use RCBA 780 justification and water use restriction and note the impacted media is not mobile.

Action Item: Shina to revise the wording for the CMS Addendum for SWMUs 1, 23, 24, and 25 and email to Team members for approval by January 30, 2007. The revised wording should clarify the purpose of the LUCs and removal any reference to naturally occurring arsenic.

SWMUs 2, 3, 4, 5, and 22 – A Soil and Sediment Work Plan is being prepared. Diane prepared a Point Paper for Jim regarding the sediments. Discussion ensued regarding the Point Paper and addressing the sediments under the stormwater program.

The Team reached **consensus** to defer the sediments at SWMUs 2, 3, 4, 5, and 22 from the RFI program and have them addressed under the FDEP stormwater program. The sediment ditches will not be resampled in the Work Plan since it is not required. Soil sampling will be conducted at SWMUs 2, 3, 4, 5,

and 22 to define LUC boundaries per regulator request. The Technical Memorandum to be written by Diane will need to be referenced in the Work Plan.

Action Item: Diane (and Shina) to prepare a Technical Memorandum to defer the sediments for SWMUs 2, 3, 4, 5, and 22 to the stormwater program.

SWMUs 6 and 7 – Sampling has concluded. Waiting on laboratory data. A CMS Addendum will be prepared after receipt of analyzed data and completion of excavation by CH2M Hill.

Action Item: Shina to email Mike H. the soil and groundwater sample figures and laboratory data for SWMUs 6 and 7 upon receipt.

SWMUs 8, 9, and 51 – The RFI Addendum is scheduled to be completed by February 2007. Soil data from SWMUs 8 and 9 have been received. Groundwater data are due by the end of the week. Since this site is not projected to be residential in the future and commercial/industrial standards have been met, the site can go to LUC. Benzo(a)pyrene at MPT08-SB38 is above MCS. However, if it is determined that residential standards are warranted, FLUCL may be used if sufficient samples have been collected. Benzo(a)pyrene will need to be addressed. Step out samples need to be taken for benzo(a)pyrene equivalents (to characterize the site) regardless of determination if going for residential standards or not. Jim wants to take a holistic approach to site assessment.

In addition, it was determined that a saturated soil sample needs to be taken below the gravel in the pit at SWMU 8.

Soil and groundwater data have been received for SWMU 51. Soil exceedances include TPH and arsenic. Groundwater exceedances include naphthalene, 1-methylnaphthlene, 2-methylnaphthalene, and TPH. Jim suggested that the possibility of off-site migration be addressed.

Action Item: Diane to send USACE report regarding petroleum found on the shore by the refueling pier to Jim.

Action Item: Shina and Mike H. to meet February 7 to discuss laboratory data for SWMUs 8, 9, and 51.

It was suggested to look at results from SWMUs 6 and 7 sampling in conjunction with SWMUs 10 and 11 and SWMUs 8, 9, and 51 sampling (i.e., holistically).

SWMUs 10 and 11 – Sampling events have concluded. Waiting on analytical results.

The ERA from the RFI (which addresses SWMUs 6, 7, 8, 9, 10, and 11) is acceptable; however, possible off-site migration to the river needs to be investigated. The HHRA will be conducted for SWMUs 6, 7, 8, 9, 10, 11, and 51 holistically as well. Ron Kotun has begun the HHRA evaluation.

SWMUs 12 and 17 – The SB for SWMU 17 was provided to Jim in draft form. Comments were reviewed and will be incorporated. Jim suggested making his changes, then letting Steve Beverly review the document again before submitting. I thought Jim wanted Steve Beverly to make his changes, and Jim has to be the final reviewer. The SB for SWMU 12 will have similar adjustments made to the document before submitting to Jim.

Action Item: Craig to forward January 2003 RCRA Orientation Manual to Team members.

SWMUs 13 and 16 – The SOB for SWMU 13 was provided to Jim in draft form. Comments were reviewed and will be incorporated. Jim suggested making his changes, then letting Steve Beverly review the document again before submitting. Same as above. The SOB for SWMU 16 will have similar adjustments made to the document before submitting to Jim.

SWMUs 14 and 15 – Draft CMIPs were issued in April 2006. The Final CMIPs need to have comments incorporated.

Action Item: Tetra Tech to insure that the Facility ID for NAVSTA Mayport be put on all documents per Craig. The NAVSTA Mayport Facility ID is FL9 170 024 260.

SWMUs 18, 20, 21, and 52 – The Final CMS is being completed based on the most recent FDEP guidelines.

SWMUs 19, 26, 28, and 56 – The Final CMS is being updated based on the most recent FDEP guidelines.

SWMUs 44 and 45 – Sampling event completed in December 2006. No analytical data have been received at this time.

SWMUs 47, 53, and 55 – Working on the Final CMS. Utility drawings have been made. Arsenic issues have been addressed along the ditch at the edge of the golf course. However, benzo(a)pyrene issues at Charlie and Alpha Piers still need to be addressed. Additional sampling will be required to delineate the exceedances above industrial limits. The Final CMS will be completed once benzo(a)pyrene issues are addressed.

Action Item: Shina to give Diane and Adrienne the summary for the benzo(a)pyrene exceedances on Charlie and Alpha Piers by Friday, January 26, 2007. The summary should include the depth and locations of exceedances.

AOC C – The CMS has been given to Jim to review. Craig had a minor comment that USEPA and FDEP standards should be compared using the stricter standard, and the text should state that the analytical assessments reflect both standards.

AOC D – A Scope of Work is to be written and awarded relatively soon (March 2006).

AOC E – A Scope of Work is to be written and awarded relatively soon (March 2006).

AOC F – This is the area formerly investigated under the UST program as the Satellite 2 Parking Lot. It is now AOC F based upon regulator directive that it should be evaluated under the RCRA program. A Scope of Work will need to be prepared.

Arsenic – According to 1939 maps, most of the base is comprised of fill material. In the past, arsenic was used in herbicides and pesticides. At this point, it needs to be stated why and how arsenic was determined not to be a release. Common pesticides and herbicides containing arsenic have been used extensively throughout the Station, especially on the golf course and in ditches. It was suggested that a statistical study be performed to address arsenic across NAVSTA Mayport and surrounding areas.

Action Item: Shina to check with USGS to see if any arsenic reports exist for NAVSTA Mayport and/or surrounding areas.

Action Item: Jim to email Shina and Steve (**Stephen.Hughes@ttnus.com**) a copy of the Avon Park soil report with geochemistry references.

Action Item: Tetra Tech to perform a statistical analysis for arsenic at NAVSTA Mayport.

New Sites – See information regarding AOC F.

1.7 Break

1.8 SCAP/CAMP/Critical Path/Exit Strategy

The CAMP was revised per discussions in the November 2006 Partnering Team meeting. The CAMP will be submitted to Jim and Craig. Adrienne discussed the Outstanding Document Schedule. Thirty-three documents are scheduled for submittal to Jim before his retirement date.

Action Item: Shina to email Jim as soon as possible the SOBs for SWMUs 12, 13, 16, and 17 once his comments have been incorporated.

1.9 Facility Update

An antenna is to be installed at Charlie Pier and Shina, Diane and Adrienne will coordinate the sampling of the soil where the antenna will be place to ensure it does not exceed industrial limits.

The QORE report for the release at the pier at the fuel farm has been received and will be sent out.

1.10 Tier II Update

Tier II will meet again March 7-9, 2007, in Orlando. Reorganization is a constant discussion for Tier II. Funding is also an ongoing issue. Installation Exit Strategies are reviewed at each meeting. NAVSTA Mayport's Exit Strategy looks good – some RIP dates might be able to be moved up. The Whiting Field Team gave a presentation, and there was a presentation on the Web Based LUC Tracking System. A format for the Petroleum SMP has been submitted to Navy RPMs.

1.11 Administrative Record Update

Nothing new to report.

1.12 Closeout Meeting: Action Item Review, Next Agenda, +/Δ List

Action and Consensus Item Review
Action and consensus items are provided on the next page(s).

Next Agenda
The agenda items were finished at this time and the team reviewed the action items. The next meeting is scheduled for March 20-21, 2007, at TtNUS in Jacksonville, Florida beginning at 1:00 p.m. on the 20th and concluding before 2:00 p.m. on the 21st. Adrienne Wilson will be the Team Leader.

Tentative Meeting Dates/Location

May 22-23, 2007	Tallahassee or Jacksonville, FL
July 17-18, 2007	Tallahassee, FL
September 11-12, 2007	Jacksonville, FL
November 7-8, 2007	Jacksonville, FL

Plus/Delta

+	Δ
Diane's quotes on agenda	
Steve Hughes at meeting	

ATTACHMENT 2

BACKGROUND INFORMATION PERTAINING TO SWMUs 2, 3, 4, 5, and 22

Background *(As obtained from RFI and CMS Reports for SWMUs 2, 3, 4, 5, and 22)*

SWMUs 2, 3, 4, 5, and 22 were all investigated as part of the Group I SWMUs during the Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) because of their common geographic location, common drainage to the Sherman Creek watershed, similarity of past waste disposal activities, and the potential for similar or related corrective actions. These five adjacent SWMUs are located in the southwestern portion of NAVSTA Mayport just to the southeast of the runway. SWMUs 2, 3, 4, and 5 are bordered to the south by SWMU 50. A draft CMS report for SWMUs 2, 3, 4, 5, and 22 at NAVSTA Mayport was completed in June 2004.

1996 RFI Report Findings and Recommendations for SWMUs 2, 3, 4, 5, and 22

The RFI at SWMUs 2, 3, 4, 5, and 22 was conducted between 1992 and 1994 as part of the Group I field activities. Field activities consisted of the collection of surface and subsurface soil samples, the collection of surface water and sediment samples, the installation of groundwater monitoring wells, and the collection of groundwater samples. Groundwater, sediment and surface water samples in and near these SWMUs were analyzed collectively since active dredging during 1994 resulted in the depositions of a large volume of water and sediment slurry in SWMU 50 located immediately south of SWMUs 2, 3, 4, 5, and 22. Per the RFI, the depositions of dredge material from the Mayport Turning Basin at SWMU 50 were believed to have impacted the water and sediments at SWMUs 2, 3, 4, 5, and 22 similarly. The RFI report for SWMU 2, 3, 4, 5, and 22 was submitted in March 1996.

Based upon laboratory analysis, it was determined during the RFI that there were some exceedances of United States Environmental Protections Agency (USEPA), FDEP, and/or NAVSTA Mayport background concentrations in soil at SWMUs 2, 3, 4, 5, and 22. However, because the land features at these SWMUs were influenced by the depositions of dredge material at SWMU 50, it could not be determined if the chemical concentrations detected in the soils were related to releases from the landfill or were residuals from the dredge material. Recommendations made in the RFI based upon human health and ecological receptor risks due to exposure to soil were based on the collective assessment of samples from SWMUs 2, 3, 4, 5, and 22. The RFI recommended that no further investigation or CMSs were needed for soils in the landfill area. The recommendation was based on the relatively low risk for carcinogenic and noncarcinogenic human health COPCs.

Recommendations made in the RFI based on human health and ecological receptor risks due to exposure to groundwater were based on the collective assessment of samples from SWMUs 2, 3, 4, 5, and 22. With regards to groundwater, the RFI recommended that no further investigation or CMSs were needed in the landfill area. The recommendation for groundwater was based on the finding that the surficial aquifer beneath the Group I SWMUs did not meet the criteria of a Class G-1 or G-11 drinking water supply. Also under current and future use scenarios, use of the surficial aquifer was recognized as unlikely to occur.

To aid in the description of the nature and extent of contaminants detected in sediment and surface water in the RFI, the sample locations were divided into four groups, three of which are pertinent to SWMUs 2, 3, 4, 5, and 22 areas (the eastern, central and western sediment/surface water areas). The fourth area, located northwest of the active runway on the northwestern side of Patrol Road, was not considered because this area receives no surface runoff or groundwater discharge from the SWMUs 2, 3, 4, 5, and 22 areas. Table 8-1 from the CMS (TtNUS, 2004) summarizes the division of the individual sediment samples into the eastern, central and western areas.

The RFI stated that inorganic contaminants detected in sediment and surface water might be related to a combination of sources including a release from SWMUs 2, 3, 4, and 5; a release from SWMU 50; and the natural leaching of inorganics from the dredge material used to construct the land mass at NAVSTA Mayport. It was also stated that a release from SWMU 50 would be a result of inorganic contaminants in the water (saline or brackish) used to convey dredge material to the Eastern and Western Dredge Material Holding Areas and natural leaching from the dredge material. No discernible pattern for the occurrence of any of the inorganic analytes detected in sediment at the Group I SWMU area was recognized in the RFI.

Recommendations made in the RFI based upon human health and ecological risks due to exposure to sediment were based on the collective assessment of samples from SWMUs 2, 3, 4, 5, and 22. The RFI recommended that no further investigation or CMSs were needed for sediment in the landfill area. The recommendation for sediment was based on the finding of low risk for carcinogenic and noncarcinogenic human health COPCs. However, because of adverse ecological risk, the drainage ditch that bisects SWMU 4 was recommended to be filled as an interim measure (IM) to reduce the exposure of ecological receptors to potentially harmful sediments. Removal of sediments in the ditch was an alternative that was recommended for consideration when planning the IM.

The RFI did not provide a specific recommendation for surface water in the Group I SWMU area. However, the human health risk assessment for surface water was noted based upon incidental ingestion of and dermal contact with surface water. Potential risks to ecological receptors related to exposure to COPCs-ecological in surface water (and sediments) were identified in the RFI. Although no risks to terrestrial wildlife populations were identified, risks associated with adverse effects for growth, reproduction, and survival were identified as likely for aquatic organisms.

IMs Performed at SWMUs 2 & 4

Recommendations for conducting an IM at SWMU 2 were presented in an initial RFI report for Group I SWMUs prepared in November 1992 and the IM was in progress during the preparation of the 1996 RFI report. The purpose of the IM was to eliminate the potential spreading of soil containing polychlorinated biphenyls (PCBs) to other areas surrounding or in the vicinity of SWMU 2. A soil concentration of 1 part per million (ppm), based on the USEPA's preliminary remediation goal for unlimited exposure by a residential receptor, was used as the cleanup criteria for the IM action. As a result, excavation, transportation, and disposal of the impacted soil were performed. Subsequently, it was recommended in the RFI that no further investigation was required for the SWMU 2 PCB area following the IM because the objectives of the IM and the reduction of PCB in soil to levels of 1 ppm or less was achieved. The recommendation was based on an assumption of future industrial land use and a requirement that any future development be reviewed in the context of current site conditions.

In 1997, an IM Performance Specification was conducted at SWMU 4 for the collection of surface water and sediment samples for contaminant analysis and biological (survival) testing. No surface or subsurface soil samples or groundwater samples were collected during this IM. The overall purpose of the additional sampling event at SWMU 4 and adjacent drainage ditch sampling sites was to collect sediment and surface water samples and use analytical and biological survival testing results from this and the RFI to further evaluate the SWMUs and, if necessary, to develop performance specifications for an IM.

Based upon the biological testing conducted, it was determined that adverse ecological effects may occur if the Western and Eastern Dredge Material Holding Areas (SWMU 50) were used in the future, and, that if no longer used, the system would reach some equilibrium similar to a freshwater system. Based on the overall sediment evaluation, it was concluded that neither additional investigation activities nor an IM under the RCRA corrective action program appears to be warranted for SWMU 4 sediment. Additionally, the Western and Eastern Dredge Material Holding Areas comprising SWMU 50 appear to be functioning as intended under Section 404 of the Clean Water Act.

Comparison of the analytical results to regulatory screening criteria and the ecological baseline risk assessment in the RFI suggests that surface water contained in the SWMU 4 landfill and Munitions Road drainage ditches does not impair or prevent reproduction, growth, and survival of terrestrial and aquatic receptors. As a result, neither additional investigation activities nor an IM under the RCRA corrective action program for NAVSTA Mayport appears to be warranted for SWMU 4 surface water.

CMS Report Findings and Recommendations for SWMUs 2, 3, 4, 5, and 22

COPCs for soil, groundwater, sediment, and surface water were determined in the RFI. However, after the RFI and IMs were completed at SWMUs 2, 3, 4, 5, and 22, additional data was collected and analyzed and

new cleanup target levels (CTLs) were promulgated. Furthermore, due to the physical separation of the soil located at SWMUs 2, 3, 4, 5, and 22, it was deemed appropriate to evaluate soil independently at each of the SWMUs for corrective actions. Previously, all of the SWMUs were evaluated together during the RFI. Therefore, chemicals of interest (COIs) and COPCs for each SWMU were independently evaluated to select the COCs to be carried forward in the CMS corrective action plan.

It should be noted that only the samples located at and near SWMUs 2, 3, 4, 5, and 22 were evaluated in the CMS. However, some groundwater, sediment and surface water samples near SWMUs 2, 3, 4, 5, and 22 were not included in the CMS evaluation because the drainage receives no surface runoff or groundwater discharge from the SWMUs. Instead, the associated samples were deferred to the evaluation of SWMU 50. It was determined that inclusion of samples in close proximity to SWMUs 2, 3, 4, 5, and 22 that do not contain surface runoff or groundwater discharge from the SWMUs could potentially bias the analysis based upon contaminants not associated with the SWMUs being addressed in the CMS.

Per the CMS, there were contaminated surface and subsurface soils present to varying degrees throughout SWMUs 2, 3, 4, 5, and 22. Detailed information regarding surface and subsurface soil sample exceedances for SWMUs 2, 3, 4, 5, and 22 can be found in the CMS tables. The table below summarizes surface and subsurface soil contaminants determined to be COCs in the CMS.

CMS SUMMARY OF SURFACE AND SUBSURFACE SOIL COCs

LOCATION	SURFACE SOIL COCS	SUBSURFACE SOIL COCS
SWMU 2	• *None Selected*	• 3&4-Methylphenol • Antimony
SWMU 3	• Antimony	• Arsenic • Chromium
SWMU 4	• Aroclor-1260 • Chlordane • Mercury	• 3&4-Methylphenol • Benzo(a)pyrene • Bis(3-Ethylhexyl)phthalate • Chrysene • Fluoranthene • Aroclor-1260 • Dieldrin • Endosulfan II • Antimony • Arsenic • Mercury
SWMU 5	• Aroclor-1260 • Arsenic • Mercury	• 3&4-Methylphenol • Benzo(a)anthracene • Aroclor-1254 • Antimony • Arsenic • Mercury
SWMU 22	• *None selected*	• *None Selected*

To address soil concerns at SWMUs 2, 3, 4, 5, and 22, the CMS recommended land use controls (LUCs) and site inspection as the corrective measure alternative at each SWMU. LUCs would be implemented at each of these SWMUs to ensure that land use remains industrial. LUCs would also be implemented in the form of soil disturbance prohibitions. Site inspection at each of these SWMUs would consist of ensuring LUCs remain in place. However, at SWMUs 2, 3, 4, and 5 groundwater monitoring was also included as part of the site inspection component. Despite the fact that there were no COCs selected for SWMU 22, LUCs were recommended to ensure industrial land use.

Per the CMS, groundwater COCs suspected to be related to seawater used to pump dredge material to SWMU 50 were discovered across various SWMUs. COCs for groundwater, as determined in the CMS, were chloroform, bis(2-ethylhexyl)phthalate, barium, cyanide, iron, manganese, sodium, thallium, ammonia

(as nitrogen), chloride, and sulfate. The CMS recommended LUCs and monitoring to address limited groundwater contamination at SWMUs 2, 3, 4, 5, and 22. This recommendation was deemed appropriate as any elaborate treatment system would not be justified because the surficial aquifer is not currently used as a potable water source and impact to ecological receptors was minimal. LUCs would ensure the site remains industrial and groundwater use controls would be implemented to ensure that access to the site is restricted. Restrictions would be in place to ban any new drinking water wells being installed and to keep the land use to non-residential.

Sediment ditches are impacted when dredged material is placed in the Confined Disposal Facilities (CDFs, formerly SWMU 50). During normal times, the ditches are dry and sediment in the shallow ditches surrounding SWMUs 2, 3, 4, 5, and 22 represent a medium to which a site maintenance or occupational worker might be repeatedly exposed. Therefore, sediments were treated as surface soil in an industrial setting for evaluating potential impacts to human health. COIs and COPCs were determined in the RFI. However, after the RFI was issued new soil CTLs were promulgated. Therefore, the COIs and COPCs for the Group I SWMU area sediment were reevaluated in the CMS to select the COCs to be carried forward in the CMS corrective action selection process.

COCs for sediment, as determined in the CMS, were methylene chloride, N-nitrosodiphenylamine, 4,4'-DDD, 4,4'-DDT, chlordane, endrin, endrin ketone, alpha-BHC, beta-BHC, delta-BHC, gamma-BHC (lindane), arsenic, and mercury. The CMS recommended excavation, offsite disposal, and LUCs to address sediment contamination at SWMUs 2, 3, 4, 5, and 22. Based on potential ecological threats, sediment excavation was deemed necessary. Based on information presented in the RFI and IM, the following sampling locations were determined present risks to aquatic receptors during the CMS evaluation: MPT-2-SD17, -SD32, and -SD33 along the SWMU 4 cut-through ditch; -SD38 at the marsh receiving drainage from the SWMU 4 cut-through ditch; -SD34 at the Munitions Bunker; -SD28 at the discharge of the Western SWMU 50; -SD15 at the marsh near SWMU 2; and -SD24 near the Skeet and Pistol Range on the easternmost location. Based upon CMS recommendations, a total of approximately 1,150 cubic yards of sediments would be excavated from these areas.

COCs for surface water, as determined in the CMS, were bis(2-thylhexyl)phthalate, barium, beryllium, copper, cyanide, iron, lead, and mercury. The CMS recommended LUCs and site inspection to address limited surface water contamination at SWMUs 2, 3, 4, 5, and 22. LUCs would include restrictions on future usage of the site for residential purposes, restrictions on direct contact of surface water and fishing and other recreational activities, and the use of the water for drinking. This recommendation was deemed appropriate as any elaborate treatment system would not be justified because most of the COCs were based on ecological base screening values and by controlling the fishing activity in those waters, risk to human health would be negligible.

Specific details regarding the COC selection process, the estimated volumes of contaminated media, LUC boundaries, the specific LUCs applicable, and costs of implementation at each SWMU can be found in the CMS.

Per the NAVSTA Mayport Partnering Team meeting held in January 2007, the Team reached consensus to defer the sediments at SWMUs 2, 3, 4, 5, and 22 from the RFI program and have them addressed under the FDEP stormwater program. The sediment ditches will not be re-sampled in the workplan since it is not required. A Technical Memorandum has been written to defer the sediments from SWMUs 2, 3, 4, 5, and 22 to the FDEP stormwater program. Soil sampling will be conducted at SWMUs 2, 3, 4, 5, and 22 to define LUC boundaries per regulator request. The January 2007 NAVSTA Mayport Partnering Team minutes are included as Attachment 1 of the Soil Sampling Work Plan.

Hazardous and Solid Waste Act of 1984 (HSWA) Permit Modification – NFA required for SWMU 50

After an overall analysis of site conditions and an evaluation of laboratory analytical results for media samples collected at SWMU 50, the FDEP modified the HSWA permit to incorporate the final decision into the NAVSTA Mayport RCRA operating permit. The final selection details the NFA corrective measure chosen for SWMU 50. Additional details pertaining to the NFA decision for SWMU 50 can be found in RCRA Operating Permit #72442-HO-003, Appendix A2. The final permit modification became effective on August 30, 2005. Based upon the NFA classification, the area where the dredged material is placed is no longer considered a SWMU and is now referred to as the Confined Disposal Facilities (CDFs).

ATTACHMENT 3

FDEP COMMENTS LETTER DATED FEBRUARY 1, 2005
FOR
DRAFT CMS REPORT FOR SWMUS 2, 3, 4, 5, AND 22 (REVISION 1)

Department of Environmental Protection

Jeb Bush
Governor

Twin Towers Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Colleen M. Castille
Secretary

February 1, 2005

Ms. Adrienne Wilson
Department of the Navy, Southern Division
Naval Facilities Engineering Command
2155 Eagle Drive, PO Box 190010
North Charleston, SC 29419-9010

file: 2_3_4_5_22CMS1.doc

RE: Corrective Measures Study for Solid Waste Management Units 2, 3, 4, 5 and 22, Revision 1, Naval Station Mayport, Mayport, Florida

Dear Ms. Wilson:

I have reviewed the above document dated June 2004 (received July 12, 2004). The document describes the proposed corrective measures for the named SWMUs, generally land use controls and monitoring, but also removal of contaminated sediments. Please address the following in the final document:

1. The document has noted varying amounts of soil, sediment, surface water and groundwater contamination at the sites. Are the investigational data sufficient to delineate the boundary of Industrial Scenario contaminants? Should additional delineation be accomplished, the results of which would be utilized in the overall management of the media at these SWMUs? If not, how does the Navy propose to determine the final boundary for the sites?

2. During recent Partnering meetings, we discussed the possibility of not removing the ditch sediments and placing them in another adjoining SWMU. In the summary discussion for sediment (page ES-6), it is stated, "In lieu of current sediment sample analyses documenting natural recovery of the watershed following the cessation of dredge slurry disposal, only Alternative 3 was determined to provide short and long-term ecological protection." Since dredging is currently scheduled to resume in the near future, will dredge spoil placement affect the monitoring results for any of the media on these SWMUs? If so, what will the Navy do in response?

3. Similar to the sediment discussion and my preceding observations, on page ES-7, regarding surface water, it states that "Alternative 2 also relies on the general recovery of the watershed following cessation of dredge disposal activities at SWMU 50 which ended in 1994." Given that dredging and dredge material placement is anticipated at SWMU 50, are our assessments and conclusions for the five named SWMUs sufficient? Are the recommendations valid?

4. Please provide a summary discussion regarding SWMU 50 and its effects within the context of the above SWMUs, especially their future management and use.

Thank you for the opportunity to review this document. Please address these concerns and finalize it. If you require further clarification or other assistance, please contact me at 850-245-8999.

Sincerely,

James H. Cason, P.G.
Remedial Program Manager

CC: Craig Benedikt, US EPA Region IV, Atlanta
Terry Hansen, Tetra Tech, Tallahassee
Diane Lancaster, NAVSTA Mayport
Tim Bahr, FDEP, Tallahassee

ESN ESN JJC JJC by ESN

ATTACHMENT 4

FIELD DATA SHEETS

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: _____ BORING No.: _____
PROJECT NUMBER: _____ DATE: _____
DRILLING COMPANY: _____ GEOLOGIST: _____
DRILLING RIG: _____ DRILLER: _____

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	MATERIAL DESCRIPTION: Color	MATERIAL DESCRIPTION: Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	PID/FID Reading (ppm): Sampler BZ	PID/FID Reading (ppm): Borehole**	PID/FID Reading (ppm): Driller BZ**

* When rock coring, enter rock brokeness.

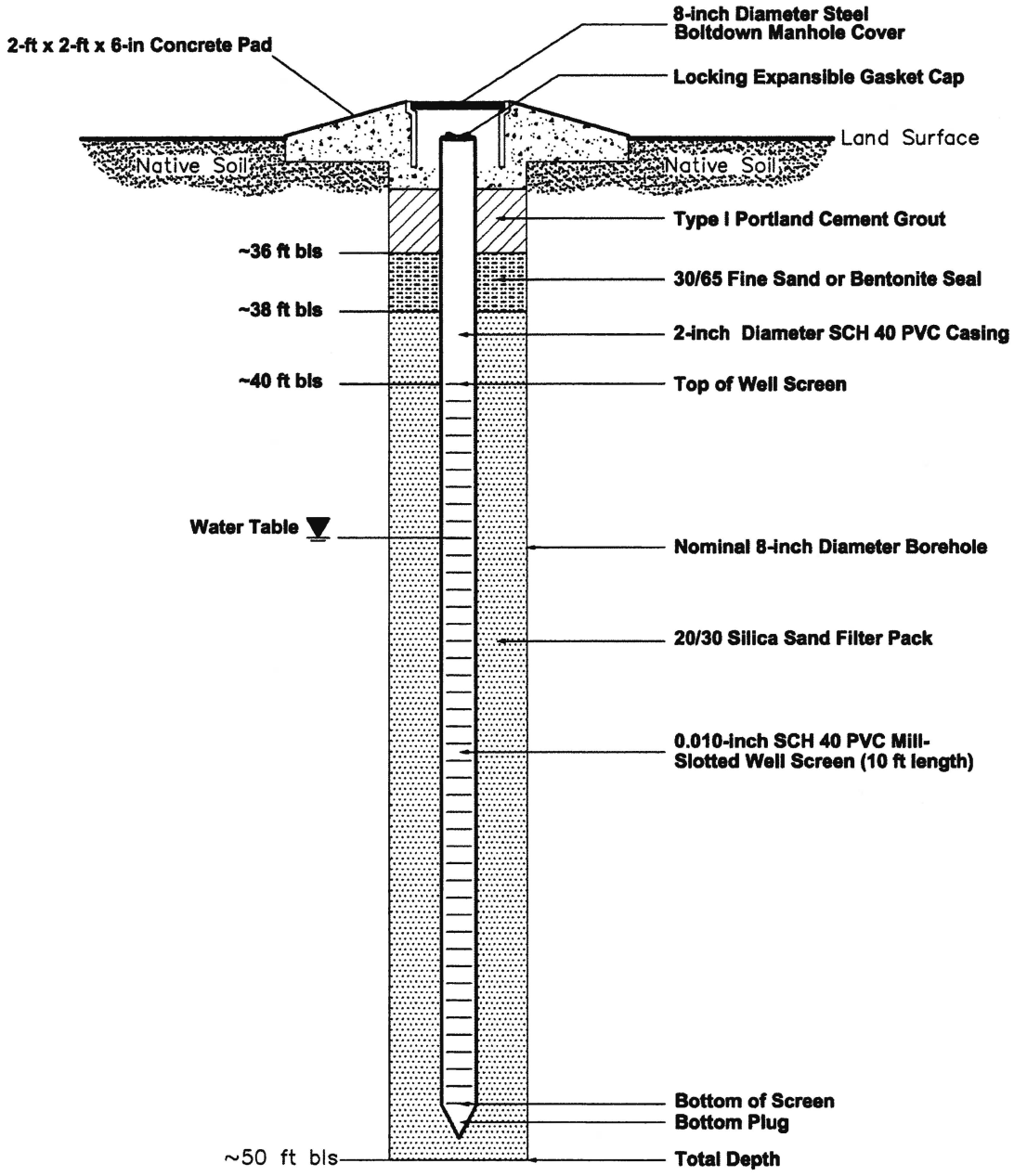
** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): ☐

Remarks: _____

Converted to Well: Yes _____ No _____ Well I.D. #: _____

S:\CADD\WELCON\MW_sh_fm



DRAWN BY LLK DATE 7/13/05		TYPICAL MONITORING WELL DESIGN OLF SAUFLEY FIELD PENSACOLA, FLORIDA	CONTRACT NO. 00036
CHECKED BY DATE			APPROVED BY DATE
COST/SCHED-AREA			APPROVED BY DATE
SCALE NOT TO SCALE	NAVFAC		DRAWING NO. / REV. 0

CTO 0370

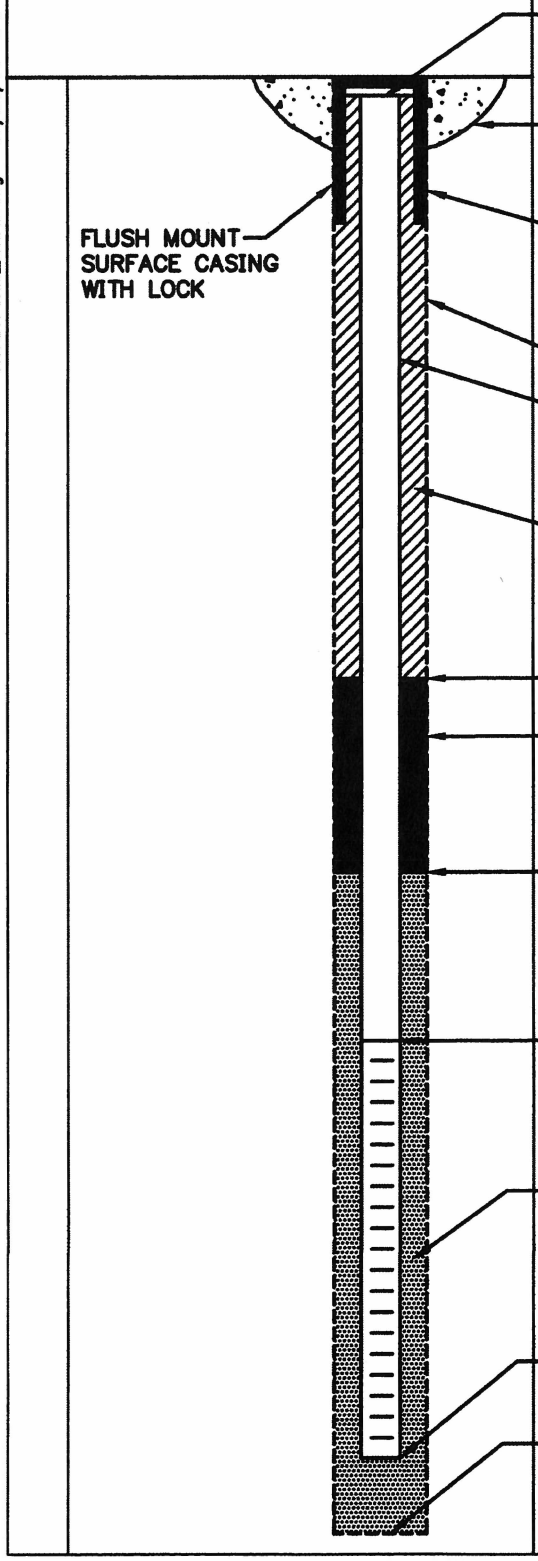
WELL NO.: _____

Tetra Tech NUS, Inc.

OVERBURDEN
MONITORING WELL SHEET
FLUSH - MOUNT

PROJECT _____	LOCATION _____	DRILLER _____
PROJECT NO. _____	BORING _____	DRILLING METHOD _____
DATE BEGUN _____	DATE COMPLETED _____	
FIELD GEOLOGIST _____		DEVELOPMENT METHOD _____
GROUND ELEVATION _____	DATUM _____	

ACAD:FORM_MWFM.dwg 07/20/99 INL



ELEVATION TOP OF RISER: _____

TYPE OF SURFACE SEAL: _____

_____

TYPE OF PROTECTIVE CASING: _____

_____

I.D. OF PROTECTIVE CASING: _____

DIAMETER OF HOLE: _____

TYPE OF RISER PIPE: _____

_____

RISER PIPE I.D.: _____

TYPE OF BACKFILL/SEAL: _____

_____

ELEVATION/DEPTH TOP OF SEAL: ____ / ____

TYPE OF SEAL: _____

_____

ELEVATION/DEPTH TOP OF SAND: ____ / ____

ELEVATION/DEPTH TOP OF SCREEN: ____ / ____

TYPE OF SCREEN: _____

SLOT SIZE x LENGTH: _____

TYPE OF SAND PACK: _____

_____

DIAMETER OF HOLE IN BEDROCK: _____

ELEVATION / DEPTH BOTTOM OF SCREEN: ____ / ____

ELEVATION / DEPTH BOTTOM OF SAND: ____ / ____

ELEVATION/DEPTH BOTTOM OF HOLE: ____ / ____

BACKFILL MATERIAL BELOW SAND: _____

_____

Tetra Tech NUS / FDEP Groundwater Sampling Sheet

SITE NAME:	SITE LOCATION:
WELL NO:	SAMPLE ID:	DATE:

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
only fill out if applicable)

_____Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

_____Liters

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (Liters):

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (lpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISSOLVED OXYGEN (circle mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
PUMP OR TUBING DEPTH IN WELL (feet):	SAMPLE PUMP FLOW RATE (mL per minute):	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: Y N	FIELD-FILTERED: Y N FILTER SIZE: ____ µm Filtration Equipment Type: _____	DUPLICATE: Y N	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
PP	3	CG	40 ml	HCL	NONE	<2	8260B	SM

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: _____
Project No.: _____

[] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other: _____
[] QA Sample Type: _____

Sample ID No.: _____
Sample Location: _____
Sampled By: _____
C.O.C. No.: _____

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date:	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time:			
Method:			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings				
(Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

DAILY ACTIVITIES RECORD

PROJECT NAME: _____ **PROJECT NUMBER:** _____

CLIENT: _____ **LOCATION:** _____

DATE: _____ **ARRIVAL TIME:** _____

Tt NUS PERSONNEL: _____ **DEPARTURE TIME:** _____

CONTRACTOR: _____ **DRILLER:** _____

ITEM	QUANTITY ESTIMATE	QUANTITY TODAY	PREVIOUS TOTAL QUANTITY	CUMULATIVE QUANTITY TO DATE

COMMENTS: _____

_____

_____

_____

APPROVED BY:

_____ _____

Tt NUS REPRESENTATIVE DRILLER

DATE: _____

Tetra Tech NUS, Inc.

EQUIPMENT CALIBRATION LOG

PROJECT NAME : ____________________

SITE NAME: ____________________

PROJECT No.: ____________________

INSTRUMENT NAME/MODEL: ____________________

MANUFACTURER: ____________________

SERIAL NUMBER: ____________________

Date of Calibration	Instrument I.D. Number	Person Performing Calibration	Instrument Settings		Instrument Readings		Calibration Standard (Lot No.)	Remarks and Comments
			Pre-calibration	Post-calibration	Pre-calibration	Post-calibration		

ATTACHMENT 5

NAVSTA MAYPORT SOP FOR IDW

Standard Operating Procedure for Investigative Derived Waste

1. At Naval Station Mayport (NAVSTA), Investigative Derived Waste is defined as soil or water that is generated from the remedial investigation of contaminated sites. IDW can include, but not be limited to, drill cuttings, purge water, soil, sediment or decontamination water. Operations usually associated with IDW include soil and groundwater sampling, monitoring well installation and decontamination of equipment used for sampling and installation.

2. IDW will be containerized when generated and kept at the site of generation as coordinated with the tenant occupying the area. Drums can be moved to other locations in the general area to accommodate NAVSTA personnel movement or requirements within reason. A central location can be identified prior to the sampling event if in the best interest of the government.

3. IDW drums shall be clearly identified with "Awaiting Analytical" sticker visible containing contractor name and phone number, generation location, date of generation, NAVSTA point of contact, and contents of drum. A drum log using the format of Enclosure (1) shall be completed for each drum and provided to the NAVSTA point of contact when drum is generated. Drums shall be inspected weekly until disposal using Enclosure (2) and inspection form shall be faxed to NAVSTA Environmental Department. When sample results have been received, the analytical shall be provided to the NAVSTA point of contact for waste and disposal determination. The contractor shall be responsible for disposal of all IDW. IDW with analytical results less than Cleanup Target Levels identified in 62-777 Florida Administrative Code may be disposed onsite if sufficient soil is at location. IDW may not be disposed in storm drain or on an impervious surface. In certain conditions, non-hazardous IDW may be disposed through a sewer lift station to the Wastewater Treatment Plant with prior written approval by the Utility Engineer at Public Works Center Jacksonville.

4. If the IDW is identified as hazardous waste, the contractor shall manage drums per the NAVSTA Hazardous Waste Management Plan (SOPA(ADMIN) MYPTINST 5090.1F) and shall be disposed through the NAVSTA Hazardous Waste Storage Facility with the contractor paying disposal cost to PWC (2005 cost approximately $1.75/pound). IDW that is not hazardous waste but does not meet the Target Levels to be disposed onsite, the contractor shall arrange for the IDW to be legally transported and disposed at an approved facility. The contractor will coordinate with NAVSTA personnel to sign the non-hazardous manifest as generator.

Naval Station Mayport Investigative Derived Waste Drum Log

Contractor Company Name: _____

Individual Name: _____

Location Name: _____
(i.e. SWMU number, Bldg number)

Date of generation: _____

Expected date of results: _____

Drum Number: _____
(Use site # and unique drum number)

Type of Waste (i.e. drill cuttings, purge water)	**Quantity of Waste** (gals/lbs)	**Date**	**Individual's Initials/ Name**

Enclosure (1)

Revised 1/24/2006

WEEKLY INVESTIGATIVE DERIVED WASTE INSPECTION CHECKLIST
NAVAL STATION MAYPORT

This form is to be completed legibly by the contractor when conducting weekly inspections of IDW drums.

All discrepancies shall be corrected immediately. Failure to correct discrepancy(s) shall result in contractual action.

Date: _____

Inspector: _____

Company Name: _____

		YES	NO
1.	Are all containers properly labeled/dated?		
2.	Are containers compatible with contents?		
3.	Are all containers in good condition?		
4.	Are containers closed?		
5.	Are lids/caps/bolts/rings tight?		
6.	Are any containers dated longer than 60 days?		
7.	Number of containers inspected. _____		
Comments:			
Date/nature of repairs or remedial actions:			
Copy to: NAVSTA Mayport N4E FAX: 270-7398 (EACH FRIDAY)			

Enclosure (2)

Revised 1/24/2006