REVISED PHASE II ENVIRONMENTAL SITE ASSESSMENT REPORT

ARMED FORCES RETIREMENT HOME-MAIN CAMPUS 3700 N. CAPITAL STEET WASHINGTON, DC 20011

Presented to:

GENERAL SERVICES ADMINISTRATION (GSA)
PUBLIC BUILDINGS SERVICE
PROPERTY DISPOSAL DIVISION (WPR)
301 7TH STREET, SW, ROOM 7709
WASHINGTON, DC 20407
ATTN: MR. TIM SHECKLER

Prepared by:

MACTEC ENGINEERING AND CONSULTING, INC.
21740 BEAUMEADE CIRCLE, SUITE 150
ASHBURN, VIRGINIA 20147

MACTEC PROJECT 3552-06-0897

APRIL 10, 2006

April 10, 2007

Mr. Tim Sheckler
GSA, Public Buildings Service
Property Disposal Division (WPR)
301 7th Street, SW Room 7709
Washington, DC 20407

Subject: **Revised Phase II Environmental Site Assessment Report**
Armed Forces Retirement Home – Main Campus
Washington, DC
MACTEC Project 3552-06-0897

Dear Mr. Sheckler:

MACTEC Engineering and Consulting, Inc. (MACTEC) is pleased to submit this Revised Phase II Environmental Site Assessment Report for the Armed Forces Retirement Home (AFRH) Main Campus located in Washington, DC. The Phase II ESA was performed for the General Services Administration (GSA) to evaluate the presence or absence of contaminants of concern and related recognized environmental conditions (RECs) identified at the AFRH site in a January 2005 *Phase I ESA Report* prepared by Greenhorne & O'Mara. This project was completed in general accordance with MACTEC's Technical Proposal Prop06wash.0098 dated June 8, 2006 and authorized by GSA Work Order GS-P-11-06-YA-0087 dated June 28, 2006. Additional services were performed at Buildings 75/76 in accordance with our Proposal for Suspected Underground Storage Tank (UST) Evaluations dated November 30, 2006.

We appreciate the opportunity to provide our continuing environmental services to both GSA and AFRH and are committed to providing the expertise you require for successful completion of this project. If you have any questions, please do not hesitate to contact Mr. Brent Chapman at 571-252-2522.

Sincerely,

MACTEC ENGINEERING AND CONSULTING, INC.

Brent R. Chapman, P.G.
Principal

Ben Grosser
Staff Geologist

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EXECUTIVE SUMMARY

MACTEC Engineering and Consulting, Inc. (MACTEC) has completed a Phase II Environmental Site Assessment (ESA) at the Armed Forces Retirement Home (AFRH) located at 3700 N. Capitol Street, NW in Washington, DC. The Phase II ESA was performed for the General Services Administration (GSA) to evaluate the presence or absence of contaminants of concern and related recognized environmental conditions (RECs) identified at the AFRH Site in a January 2005 *Phase I ESA Report* prepared by Greenhorne & O'Mara.

Phase II sampling activities included underground storage tank (UST), drycleaning solvent, pesticide, hydraulic lift, and incineration ash assessments, as well as performing dye tracer studies, geophysical surveys, and regulatory file reviews. In general, invasive Phase II sampling activities included advancing a total 28 shallow hand auger or Geoprobe® soil borings and installing 6 deep ground-water monitoring wells to collect subsurface data. The Phase II ESA did not include UST removals, UST tightness testing, asbestos or lead-based paint sampling, remediation or the characterization/removal of drums or containerized waste materials. Borings advanced at the Site typically encountered man-made fill at or near the surface, underlain by unconsolidated Coastal Plain soils described as silty clay to clayey silt, with alternating strata of silty sand to sandy silt, including some silty gravel lenses. The following summary and conclusions were developed based on the results of the Phase II sampling and laboratory analyses.

- Static ground-water levels at the site ranged from approximately 13.8 to 44.7 feet (in the shallow or perched ground water in monitoring wells W46-1 and W48-1) to 79.8 to 95.4 feet below the top of PVC casing in the seven remaining wells. No light non-aqueous phase liquid (LNAPL) was detected in any of the monitoring wells. The static ground-water elevations generally indicated a ground-water flow direction to the south, likely with both southeast and southwest components. Ground water is not reportedly used on site as a drinking water source.

- Regulatory file reviews were completed at the DC Department of the Environment (DDOE) UST Division for each of the three petroleum USTs removed at Buildings 26/27, 43 and 74. Table 7 summarizes registration and closure information for these and other petroleum USTs at the site. In general, active USTs are present at Buildings 56, 64 and 52, inactive USTs are present at Buildings 46 and 75, and closed USTs with undocumented closure reports were formerly located at Buildings 26/27 and 74A.

- A file review of regulatory documents from the USEPA Region III related to a "No Further Remedial Action Planned" (NFRAP) listing for the AFRH Site was also completed. Based on the documents reviewed, AFRH procured several thousand war surplus cans of paint in 1947 to be used in maintenance activities at the facility. When the paint was determined not to be suitable for use, the paint cans were buried in a storage cell several feet deep in the area northwest of Building 72, where a current paved road exists. During 1990 hot water/steam system installation activities, these paint cans and approximately 1,000 tons of xylenes contaminated soil, were removed down to a depth of approximately 30 feet and the excavation backfilled. Five ground-water monitoring wells (designated by ABB Environmental Services, Inc. as MW-1, 2, 3, 4 and 5) were also installed in this area. Laboratory analysis of soil and ground-water samples collected from these wells did not have detectible xylenes concentrations, and the case was subsequently closed by the USEPA. Although MACTEC did not have this information for the preparation of our Sampling and Analysis Plan (SAP) and associated Phase II ESA field work, we did find and sample three of these five wells. The three wells sampled by MACTEC were designated as W72-1 (ABB well MW-4), W72-2 (ABB well MW-1) and W72-3 (ABB well MW-5).

- A geophysical survey was completed in the areas west and southeast of Building 75 and between Building 75 and Building 76, to evaluate the potential presence of former or existing USTs that may not have been removed from the ground. As indicated in the ERT Geophysical Survey Report (Appendix E, Figure 12), subsurface anomalies representing six suspected buried USTs were noted along the west and southwest sides of Building 75. Vacuum assisted "soil knifing" borings were subsequently completed at each of these six locations, to evaluate the presence or absence of suspected USTs, and to collect soil samples for TPH-DRO and TPH-GRO analysis. No indications of existing USTs were identified and soil TPH-DRO/GRO concentrations were ND, aside from a trace TPH-DRO of 5.6 mg/kg.

- Based on the results of floor drain dye tracer testing performed at Buildings 46, 72, 76 and 77, these floor drains discharge directly into either the sanitary sewer or an oil-water separator, and not into the storm-water system, or into a related illicit discharge location.

- Building 46: Drycleaning and laundry operations activities have reportedly been performed in the past at Building 46 (i.e., Building 46A). Potential hazardous wastes generated by drycleaning operations are primarily solvents, and historically have included petroleum solvents such as Stoddard (naphtha), and other solvents such as tetrachloroethene (also known as perchloroethylene; PCE) and valclene (fluorocarbon 113 or trichlorotrifluoroethane). Naphthalene was detected in soil at Building 46 at a concentration of 1,820 ug/kg, and a distinct "moth ball" odor (commonly associated with naphthalene) was noted in soil samples collected from boring G46-1. In addition, various other VOCs (acetone, carbon disulfide, tetrachloroethene, trichloroethene, and 1,2,4-trimethylbenzene) were detected in soil at levels below their respective USEPA Risk-Based Concentrations (RBCs) and DC Risk-Based Screening Levels (RBSLs). Based on this data, the elevated naphthalene concentrations detected in soil at G46-1 are apparently associated with a release or spill from historical drycleaning activities at Building 46. In addition, the presence of PCE and it's daughter product TCE, suggest that PCE was also utilized at Building 46 for drycleaning activities. The W46-1 ground-water sample had concentrations of 1,2-dichloroethane (1.49 ug/L) and 1,2,3-trichloropropane (32.5 ug/L), which exceeded their respective tap water RBCs, although bromomethane (1.76 ug/L) was less than its RBC. 1,2-dichloroethane is a daughter or breakdown product for the dehalogenation of PCE, while 1,2,3-trichloropropane is a solvent, paint, and varnish remover and a cleaning and degreasing agent. In addition, the ground-water sample collected in W72-1 (located approximately 200 feet downgradient of Building 46) had detectible concentrations of PCE, TCE and cis-1,2-dichloroethene which exceeded their respective tap water RBCs, while PCE and TCE also exceeded their respective Maximum Contaminant Levels (MCLs). Although it can be inferred that the chlorinated solvents detected in W72-1 were from a drycleaning solvent spill or release in the area of Building 46, no actual "source area" was identified, and historic paint can disposal activities northwest of Building 72 could also be contributing to their presence.

- Building 48 (Golf Course Maintenance Shed/Bathrooms): Two pesticides, beta-BHC (0.0276 mg/kg) and methoxychlor (0.052 mg/kg), were detected in soil at Building 48, while the remaining pesticides and herbicides analyzed were Not Detected (ND). The methoxychlor concentration was less than its RBC, while no RBC exists for beta-BHC. Various metals detected in soil included arsenic, barium, cadmium, chromium, lead, and mercury. Arsenic concentrations detected exceeded RBC and RBSL levels, while cadmium and chromium exceeded their respective RBSLs only. Although no RBC or RBSL exists for mercury, mercury was detected in soil at concentrations ranging from 0.137 to 0.46 mg/kg. Arsenic, mercury, and lead are potential by-products associated with pesticides, although these metals can be found naturally occurring.

The W48-1 ground-water sample was ND for pesticides and herbicides, although relatively low concentrations of the metals barium, cadmium, chromium, and lead were detected (at concentrations less than their respective RBCs, MCLs and DC Ground-Water Quality Standards). Based on this data, shallow soil in the area of HA48-3 has been impacted by pesticides, although detected concentrations were less than available RBCs. The metals detected in soil and ground water are likely from naturally occurring metals.

- Building 77: A distinct "pesticide" odor and apparent pesticide/herbicide residue was observed coating the concrete floor inside of the Building 77 Pesticide Storage Room. However, soil samples collected beneath the concrete slab-on-grade and from beneath the adjacent asphalt parking surface were ND for pesticides and herbicides (although the metals barium, chromium, and lead were detected). Chromium in soil exceeded its RBSL, but did not exceed its RBC. The W77-1 ground-water sample was ND for pesticides and herbicides, aside from the herbicide MCPP (detected at 132 ug/L). The MCPP concentration detected exceeded the 37 ug/L tap water RBC. Relatively low concentrations of the metals barium, cadmium, and mercury were detected in ground water below their respective RBCs, MCLs and DC Ground-Water Quality Standards (except for cadmium which exceeded its DC Water Quality Standard). The metals detected in soil and ground water are likely from naturally occurring metals.

- Building 78: Soil samples collected at Building 78 were ND for pesticides and herbicides, aside from the pesticides 4,4'-DDE (detected at 0.0023 mg/kg) and methoxychlor (detected at 0.00329 mg/kg). However, the 4,4'-DDE and methoxychlor concentrations were less than their respective RBCs. An unknown "chemical" odor was also noted in several of the soil samples collected near the surface in borings H78-2, 3, 5 and W78-1; however, organic vapor concentrations for these soil samples measured on site using a photoionization detector (PID) were generally less than 2 parts per million. Various metals including arsenic, barium, chromium, and lead were detected in soil. Aside from chromium which exceeded its RBSL, the other metals did not exceed their respective RBSLs or RBCs. The W78-1 ground-water sample was ND for pesticides and herbicides. Relatively low concentrations of the metals barium, cadmium, chromium, and lead were also detected in ground water. Cadmium was greater than its DC Water Quality Standard while lead exceeded its MCL and DC Water Quality Standard. Based on this data, limited pesticide impact to shallow soils has occurred in the various greenhouses at Building 78, although no pesticide/herbicide impact to ground water was detected. The metals detected in soil and ground water are likely from naturally occurring metals.

- Building 69: The composite sample of the ash waste material inside of the incinerator ash clean-out chute at Building 69 was ND for Toxicity Characteristics Leaching Procedure (TCLP) VOCs, SVOCs, pesticides and herbicides; and ignitability, corrosivity, and reactivity did not indicate hazardous waste characteristics. However, the TCLP lead concentration of 13.3 mg/L, was greater than the 5.0 mg/L regulatory standard (other metals did not exceed their associated regulatory standards). Based on this data, ash waste material located inside of the incinerator is a lead characteristic hazardous waste.

- Building 76: Total petroleum hydrocarbons-diesel range organics (TPH-DRO) concentrations up to 1,420 mg/kg were detected in soil at Building 76, which is greater than the DC release reporting level of 100 mg/kg and is also greater than DC Tier 1 RBSL (aka the Soil Quality Standard; typically used as a cleanup standard on leaking UST sites) of 960 mg/kg. PCBs were ND in each soil sample, while butyl benzyl phthalate was the only SVOC detected (at 0.643 ug/kg) which was less than its RBC and RBSL. These borings were located adjacent to hydraulic lifts, and apparently represent hydraulic oil releases from hydraulic lifts or hydraulic lines. The

W76-1 ground-water sample had a relatively low TPH-DRO concentration of 415 ug/L, which was less than the DC Risk-Based Ground-Water Standard at the Point of Exposure concentration of 3,570 ug/L. Bis(2-ethylhexyl)phthalate was the only SVOC detected in ground water, although no RBC or RBSL exists for this constituent. Based on this data, no significant petroleum impact has occurred to ground water in the area of Building 76, although a significant impact to soil in the area of the hydraulic lifts has occurred, above DC reporting and soil cleanup guidelines.

- Although the District of Columbia does not have guidelines regarding typical background levels for metals in soil, the adjacent State of Maryland does have published Anticipated Typical Concentrations (ATCs) for various metals, according to the various Geologic Provinces in the State. The ATCs for Eastern Maryland (generally the same as the Coastal Plain soils at the AFRH site) are 3.6 mg/kg for arsenic, 28 mg/kg for chromium, and 0.51 mg/kg for mercury. These ATCs are generally in line with metals concentrations detected at the AFRH site Buildings 48, 77, and 78, suggesting the metals are naturally occurring background levels. In addition, where pesticides were detected in soil at H48-3, H78-1 and H78-6, corresponding metals at those locations were not significantly higher than other locations where no pesticides were detected.

The following recommendations were developed based on the conclusions stated above. Recommendations and opinions of cost for potential soil and ground-water remediation will be provided in a separate report.

- No further assessment of floor drains is recommended, because the floor drains dye tested discharge into the sanitary sewer system or into an oil-water separator. However, the oil-water separator at Building 76 should be removed if it is no longer needed.

- Based on information included in Table 7, existing UST systems at Buildings 56, 64 and 52, should be tightness tested to confirm that there are no current leaks. In addition, inactive UST systems at Buildings 46 and 75 should be removed and properly closed. Additional subsurface sampling should be completed at Buildings 26/27 and 74A, to evaluate the presence/absence of petroleum hydrocarbons in soil, where no closure data exists.

- Additional assessment at Building 46 is recommended to delineate the lateral and vertical extent of naphthalene, PCE, TCE and related drycleaning solvents and to establish the actual source area. An active or passive soil-gas survey should be performed as the initial investigative task for this assessment, prior to additional soil and ground-water sampling.

- Wipe samples should be collected on the concrete floor in the Building 77 Pesticides Storage Room to confirm the presence/absence of pesticides and herbicides, if future occupancy or demolition is proposed.

- The ash waste material located inside of the incinerator at Building 69 should be removed by a qualified contractor, and transported and disposed of off-site as a lead characteristic hazardous waste.

- Additional subsurface soil sampling is recommended in the area of the hydraulic lifts at Building 76, to delineate the lateral and vertical extent of petroleum impact. No additional ground-water sampling is recommended, although the DC UST Division may require additional ground-water data. Remediation of soils with TPH-DRO greater than 960 mg/kg, will likely be required by the DC UST Division. In addition, petroleum contaminated soils that are removed from the ground

at Building 76 or at other buildings at the AFRH that cannot be used on site as approved fill (typically with a TPH less than 100 mg/kg), must be remediated or transported off site for treatment/disposal at a properly permitted facility.

- Although no further assessment is recommended at Buildings 48 and Building 78 (since the levels of detected pesticides were less than RBCs), future landholders should be advised that if greenhouses/structures at these sites are demolished, the interior soil will need to be characterized prior to disposal.

- The TPH-DRO concentrations detected at Building 76 (greater than the 100 mg/kg) should be reported to the DDOE UST Division as a release. The DDOE UST Division is typically the regulatory agency responsible for managing non-UST petroleum release cases, and will likely require a Comprehensive Site Assessment. This report should be provided to the DDOE Water Quality Division, to document reporting of the contaminants of concern detected in ground water at concentrations greater than either RBCs, MCLs or RBSLs.

LIST OF ACRONYMS, ABBREVIATIONS, AND UNITS

AFRH	Armed Forces Retirement Home
ASTM	America Society of Testing Materials
ATC	Anticipated Typical Concentration
bgs	below ground surface
DC	District of Columbia
DOH-EHA	Department of Health – Environmental Health Administration
DDOE	DC Department of Environment
ERT	Earth Resources Technology, Inc.
ESA	Environmental Site Assessment
G&O	Greenhorne & O'Mara
GPR	ground penetrating radar
GRO	gasoline range organics
GSA	General Services Administration
HSA	hollow-stem auger
IDW	Investigation derived waste
LNAPL	light non-aqueous phase liquid
LUST	leaking underground storage tank
MCLs	Maximum Contaminant Level
mg/kg	milligrams per kilogram
MTBE	methyl tert-Butyl ether
ND	Not Detected
NFRAP	No Further Remedial Action Planned
PCBs	Polychlorinated biphenols
PCE	perchloroethylene
PID	photoionization detector
PVC	polyvinyl chloride
RBC	Risk-Based Concentration
RBSL	Risk-Based Screening Level
REC	recognized environmental conditions
SAP	Sampling and Analysis Plan
SVOC	semi-volatile organic compound
TCE	trichloroethene
TCLP	Toxicity Characteristics Leaching Procedure
TPH-DRO	Total petroleum hydrocarbons-diesel range organics
ug/kg	micrograms per kilogram
ug/L	micrograms per Liter
USEPA	United States Environmental Protection Agency
UST	Underground storage tank
VOC	volatile organic compound

1.0 INTRODUCTION

MACTEC Engineering and Consulting, Inc. (MACTEC) has completed a Phase II Environmental Site Assessment (ESA) at the Armed Forces Retirement Home (AFRH) located at 3700 N. Capitol Street, NW in Washington, DC. The AFRH Main Campus is a 276-acre parcel, bordered on the south by Irving Street, and on the west by Park Place and Rock Creek Church Road. The eastern border is formed by North Capitol Street and the northeastern border follows Harewood Road (Figure 1). The AFRH property includes a hospital, retirement home, nursing home, cemetery, golf course, and various other administrative and support facilities including a central heating plant and incinerator. A total of 93 buildings are listed on the AFRH's building inventory (Figures 2 and 3). The majority of the campus has been disturbed by grading, filling, and construction activities.

The General Services Administration (GSA) requested a Phase II ESA of the AFRH site, which was described in a May 2006 Scope of Work – Phase II Environmental Site Assessment for the Armed Forces Retirement Home – Main Campus. Based on the GSA Scope of Work, MACTEC prepared a proposal and subsequent Sampling and Analysis Plan (SAP) dated July 25, 2006, which described procedures to be utilized in evaluating recognized environmental conditions (RECs) identified in a *Phase I ESA Report* for the AFRH prepared by Greenhorne & O'Mara, Inc. (G&O), dated January 2005.

This Phase II ESA Report has been prepared in general accordance with MACTEC's Technical Proposal PROP06WASH.0098 dated June 8, 2006. Additional services were performed at Buildings 75/76 in accordance with our Proposal for Suspected Underground Storage Tank (UST) Evaluations dated November 30, 2006. Phase II sampling and reporting activities were completed based on procedures outlined in American Society for Testing Materials (ASTM), Standard Guide for Environmental Site Assessments: Phase II Environmental Site Assessment Process (E1903-97).

1.1 OBJECTIVE

The objective of this Phase II ESA is to describe sampling activities completed by MACTEC to evaluate the presence or absence of contaminants of concern and related RECs (previously identified by G&O), as well as to recommend remedial alternatives, where applicable. The Phase II ESA did not include underground storage tank (UST) removals, UST tightness testing, asbestos or lead-based paint sampling, remediation or the characterization/removal of drums or containerized waste materials. The scope of work generally included the completing environmental sampling activities described below:

Buildings 75, 75/76, and 46 – Document Reviews and Geophysical Surveys

Buildings 26/27, 43, and 74 – Regulatory File Reviews

Buildings 46, 72, 76, and 77 – Floor Drain Dye Tracer Testing

Building 75 – Petroleum UST Phase II Sampling and Analysis

Building 46 – Drycleaning Solvent Phase II Sampling and Analysis

Buildings 77, 78, and 48 - Pesticides Phase II Sampling and Analysis

1.2 LIMITATIONS

This report was prepared for the sole use of GSA. No other party should rely on the information contained herein without prior written consent of MACTEC. The scope of work specified is reasonably supported by the results of the previous work described herein and the application of professional standards of care that are generally accepted for completion of environmental investigations. If additional information becomes available which might impact our scope of work, we will review the information, reassess the potential concerns, and modify our approach, if warranted.

2.0 SITE DESCRIPTION AND BACKGROUND

2.1 SITE DESCRIPTION

A total of 93 buildings are listed on the AFRH's building inventory. The main campus also has two fishing ponds and two other ponds within or near the golf course. In addition, a 15 million-gallon underground reservoir, leased to the District public water system, is located in the golf course area. In general, most of the RECs identified by G&O were located along the southeastern portion of the AFRH Site, in a location designated as Development Zone 3 (see Figure 4). This area of the Site primarily includes paved and grassy landscaped areas, with many of the buildings unoccupied, and utilized for storage, or as greenhouses. A listing of the buildings identified as either RECs or environmental concerns by G&O is as follows:

Building 46 - Heating Plant
Building 69 – Incinerator and Storage Building
Building 72 - Shop Building #2
Building 75 – Flammable Gas and Storage Building
Building 76 – Garage
Building 77 – Grounds Maintenance Building
Building 78 – Greenhouse Buildings
Building 48 – Golf Course Maintenance/Storage and Bathrooms

In addition, regulatory file reviews for previously removed petroleum USTs were recommended by G&O for Building 26/27 (Tunnel Exhaust Fan/Manhole C Converter), Building 43 (Auto Craft Shop), and Building 74 (Warehouse).

2.2 BACKGROUND

MACTEC reviewed the following documents for the Site, to obtain background information, establish a site chronology and to assist in the placement of sampling points to assess the presence or absence of contaminants of concern:

- *GENERAL SITE MAP – Master Plan Update, Existing Conditions, U.S. Soldiers' and Airman's Home,* Rhodeside and Harwell Incorporated, January 1994.
- *Draft Report of Phase I Environmental Site Assessment and Other Environmental Assessment (EA) Components, U.S. Soldiers and Airmens Home,* Law Engineering and Environmental Services, Inc., October 25, 1998.

- *Final Phase I Environmental Site Assessment, Armed Forces Retirement Home-Main Campus,* Greenhorne & O'Mara, Inc., January 2005.

- *Scope of Work - Phase II Environmental Site Assessment, Armed Forces Retirement Home - Main Campus,* General Services Administration, May 2006.

- *Final Sampling and Analysis Plan (SAP) for Phase II Environmental Site Assessment Activities, Armed Forces Retirement Home –Main Campus,* MACTEC Engineering and Consulting, Inc., July 25, 2006.

3.0 PHASE II INVESTIGATION METHODOLOGY

Phase II sampling activities were performed in general accordance with the Standard Operating Procedures included in MACTEC's Sampling and Analysis Plan (SAP). **The AFRH building number, number of borings/ground-water monitoring wells, sample type, number of samples, final boring/well depths, and analytical parameters completed at each site are summarized in Table 1.** Field sampling procedures are included in Appendix A. The locations of each sample location, soil boring and monitoring well are shown on Figures 5 and 6.

In general, Phase II sampling activities included UST, dry cleaning solvent, pesticide, hydraulic lift and incineration ash assessments, as well as performing dye tracer studies, geophysical surveys and regulatory file reviews described below in Sections 3.1 through 3.6. Field investigation work was performed with the on-site technical oversight of a MACTEC environmental geologist. The environmental geologist directed the sampling efforts, field classified recovered samples, noted ground-water conditions, and recorded other appropriate information. Although detailed sampling procedures are included in the SAP and in Appendix A, invasive soil and ground-water sampling generally utilized the following procedures:

- Invasive soil and ground-water sampling was performed using direct push (Geoprobe®) drilling and hand augers for shallow borings, while deep ground-water monitoring wells were completed using hollow-stem auger (HSA) drilling and sampling techniques.

- A photo-ionization detector (PID) was utilized to screen the soil samples collected from each boring for organic vapors. For petroleum and volatile organic constituents of concern, soil samples from each boring that exhibited the most obvious evidence of suspected contamination (based on visual observation, staining, or PID readings) were typically selected for laboratory analysis.

- After well development, ground-water samples were collected using a disposable high density polyethylene bailer. Each monitoring well was gauged using an oil-water interface probe, to measure the depth to ground water and potential light non-aqueous-phase liquid (LNAPL).

- No detailed elevation surveying was performed, and each sampling point location was nominally established using a scaled drawing and measuring tape. However, elevations for the monitoring wells were established based on existing survey points using a level and rod to estimate the localized ground-water flow direction.

3.1 UNDERGROUND STORAGE TANK (UST) PHASE II ASSESSMENT ACTIVITIES

Regulatory file reviews were completed at the DC Department of the Environment (DDOE) UST Division to obtain closure documentation and related correspondence for each of the three USTs removed at Buildings 26/27, 43 and 74. In addition, all other available AFRH UST file documents were copied and reviewed, to gain a more accurate inventory of registered USTs, closed USTs, and USTs where no information or conflicting information exists.

- Although no recent UST records were provided by the AFRH, DC Fire Department records were also reviewed to evaluate the presence/absence of suspected USTs at Buildings 76, 75/76 and 46.

- Earth Resources Technology, Inc. subsequently performed geophysical surveys at Buildings 76, 75/76 and 46 using a magnetometer/ground penetrating radar (GPR), to further evaluate or confirm the presence of suspected USTs.

- A pre-closure Phase II assessment at each of the 3 existing USTs at Building 75 was performed to evaluate the presence/absence of petroleum hydrocarbons prior to anticipated future tank removals. The Pre-closure assessment included 4 direct-push (Geoprobe®) borings adjacent to the sides of each UST (G75-1, 2, 3 and 4) to approximately 15 feet bgs. In addition, 1 deep ground-water monitoring well (W75-1) was installed to a depth of approximately 98 feet bgs.

3.2 FLOOR DRAIN DYE TESTING AND BUILDING 46 (DRYCLEANING SOLVENT) SAMPLING

Prior to performing Phase II sampling activities, drawing reviews and dye tracer testing were performed at Building 46 to establish the discharge locations of eight representative floor drains. Drawing reviews and subsequent dye tracer testing were also performed to establish the discharge locations of representative floor drains in Buildings 72, 76 and 77. Dye tracer testing was performed by injecting a fluorometric or colored dye into representative floor drains and washing the dye into the piping system using a garden hose with a constant flow of water. Representative sewer and storm-water manholes were opened and visually monitored around the building perimeter to document when the dye was detected discharging into the main piping.

After the dye testing was completed, Phase II soil and ground-water sampling was performed at the northwest portion of Building 46 to evaluate the presence/absence of drycleaning solvents in the area of former laundry and drycleaning operations. The area of Building 46 (i.e., 46A) where dry cleaning and laundry operations were reported, is located on a second floor, and is underlain by the first floor boiler room. Therefore, potential leaks from drycleaning equipment would not have been released directly onto

the concrete slab-on-grade. However, the west wall of Building 46 is almost at grade with the adjacent sidewalk and paved parking/access road.

- Three direct-push Geoprobe® borings were advanced adjacent to Building 46 (G46-1, 2 and 3) to approximately 25 feet bgs and one down gradient exterior deep ground-water monitoring well (W46-1) was completed to a depth of 45 feet bgs.

- In addition, ground-water samples were collected from the three existing wells at Building 72, located down gradient of Building 46 (designated by MACTEC as W72-1, 2 and 3).

3.3 BUILDINGS 48, 77, AND 78 PESTICIDES SAMPLING

Phase II soil and ground-water sampling was performed at Building 48 (Golf Course Maintenance/Storage and Bathrooms), Building 77 (Pesticides Storage Room) and at representative greenhouses managed by the Smithsonian Institution at Building 78 to evaluate the presence/absence of pesticides/herbicides and related metals (primarily arsenic, lead and mercury) by-products.

- Building 77 assessment activities included completing 6 hand auger/Geoprobe® borings (G77-1 through 6) to a depth of approximately 5 feet each near the building's southeast corner, inside and adjacent to the Pesticide Storage Room. In addition, 1 exterior deep ground-water monitoring well (W77-1) was completed in the down gradient direction adjacent to the southeast building corner of Building 77 to a depth of 90 feet bgs.

- Building 78 (Greenhouse) assessment activities included completing 6 shallow hand-auger borings (H78-1 through H78-6) to approximately 5 feet bgs adjacent and within the oldest representative Building 78 greenhouses. One of the 6 hand augers (H78-1) was completed in the Pesticide Storage Room by coring through the concrete floor. In addition, 1 exterior deep ground-water monitoring well (W78-1) was completed to a depth of 90 feet bgs.

- Building 48 assessment activities included completing 5 shallow hand-auger/Geoprobe® borings (H48-1 through G48-5) to approximately 5 feet bgs adjacent to golf course maintenance sheds/chemical storage areas and at representative proximal locations. In addition, 1 ground-water monitoring well (W48-1) was completed to a depth of 29.5 feet bgs.

3.4 BUILDING 69 ASH WASTE CHARACTERIZATION

One composite sample of ash waste material was collected inside of the incinerator ash clean-out chute at Building 69 (designated as H69-1) using a stainless steel trowel to evaluate if the ash material remaining in the incinerator is a characteristic hazardous waste.

3.5 BUILDING 76 (HYDRAULIC LIFT) SAMPLING

Three hydraulic lifts are present inside Building 76, and no hydraulic lifts were observed at Building 77 (although, G&O reported the potential for their presence). Three borings were completed inside of Building 76 (one adjacent to each lift) and one exterior boring was completed along the southern wall of Building 76, in the area of significant staining on the asphalt from apparent waste oil spillage. These 4 direct-push Geoprobe® borings (G76-1, 2, 3 and 4) were completed to a depth of approximately 15 feet bgs. One deep ground-water monitoring well (W76-1) was installed along the southern exterior wall of Building 76 to a depth of 85 feet bgs.

3.6 INVESTIGATION DERIVED WASTE (IDW)

Investigation derived waste (IDW), consisting of soil cuttings, decontamination materials, purge water and decontamination water generated during the Phase II sampling activities were placed into 55-gallon steel drums, labeled and staged on-site. In general, IDW associated with the Phase II sampling activities was managed using procedures specified in the SAP and as generally described below:

- IDW (primarily soil samples and drill cuttings) was assumed to be non-hazardous, and was placed in steel 55-gallon drums, labeled, and staged adjacent to the boring/monitoring well location or at an approved central location. Our scope of work did not include collecting composite samples from the drums for waste characterization testing or disposal. However, we can assist GSA with future characterization and IDW disposal activities.

- Well development water, purge water and decontamination water was also containerized in 55-gallon drums, labeled and staged on site.

- General debris (i.e., wood, paper, plastic, personnel protective equipment) was collected in plastic garbage bags or drums and disposed of as non-hazardous municipal waste.

3.7 BUILDING 75 SUSTPECTED UST EVALUATIONS

As described in Task 3.1, a geophysical survey was completed in the area between Building 75 and Building 76, to evaluate the potential presence of suspected USTs that may not have been removed from the ground. Subsurface anomalies representing six suspected buried USTs were noted along the west and southwest sides of Building 75. MACTEC subsequently completed six vacuum assisted "soil knifing" borings at each of these six locations, to physically evaluate the presence or absence of suspected USTs. Backhoe excavated test pits could not be performed based on the presence of numerous proximal underground utility lines.

In general, the exploratory borings were completed using high pressure air knifing to initially break up the soil, and the soil was subsequently removed from the borehole using a vacuum truck. The borings were extended to a depth of approximately three to six feet below the ground surface (bgs), where the geophysical anomalies were previously detected. One soil sample collected from the bottom of each boring was screened on site for organic vapors using a PID. The three soil samples with the highest PID readings or suspected petroleum contamination were transferred to appropriate sample containers, and laboratory analyzed for TPH-DRO and TPH-GRO. After completion, each boring was backfilled with soil and the surface capped with an asphalt cold-patch.

4.0 RESULTS AND FINDINGS

The results and findings of MACTEC's Phase II ESA are discussed in the following sections. Soil and ground-water analytical results are summarized in Tables 2 and 3, respectively. Monitoring well gauging and construction data are summarized in Tables 4 and 5, respectively. Table 6 includes TCLP and hazardous waste characterization parameter results for the Building 69 ash sample, while UST and related regulatory file review data is summarized in Table 7. Boring logs with well completion details are provided in Appendix B. Laboratory Test Data reports are included in Appendix C, while selected site photographs are included in Appendix D.

4.1 GENERAL GEOLOGY AND STRATIGRAPHY

The subject site is located within the uplands of the Coastal Plain physiographic province. The Coastal Plain consists mainly of marine sediments that were deposited during successive periods of fluctuating sea level and moving shorelines. The unconsolidated formations dip slightly seaward and several are exposed at the surface in bands paralleling the coastline. Many beds exist only as fragmental erosional remnants sandwiched between more continuous strata above and below. Coastal Plain sediments are typical of those deposited in shallow sloping sea bottom, near-shore and riverene environments: gravels, sands, silts and clays, with irregular deposits of shells.

The Site is underlain by the basal formation of the Potomac Group, known as the Patuxent Formation. This Formation is generally described as fine-to medium-grained, tan, white, yellow, or pink sands commonly mixed with clays, kaolin, gravels and lenses of varicolored massive clay. The natural surficial material belongs to the Wicomico formation which is characterized as gravel, sand, and silt with local basal deposits of carbonaceous clay often containing tree stumps and other woody debris. Udorthents (fill soils) are also common at or near the surface of the site. Although isolated seasonal or perched ground water can often be encountered, the depth to the water table is generally on the order of 80 to 90 feet below the ground surface (bgs). Topographically, the Site slopes to the south with both southeast and southwest components.

Detailed descriptions of the soil strata encountered are presented on the Soil Boring and Hand Auger Logs and Soil Test Boring Records contained in Appendix B. The contacts between strata indicated on the Soil Test Boring Records represent approximate boundaries, which may be gradational or transitional. In general, borings advanced at the Site encountered varying thicknesses of man-made fill at or near the surface, grading to a silty clay to clayey silt, with alternating strata of silty sand to sandy silt, including some

silty gravel lenses.

4.2 GROUND-WATER CONDITIONS

In the geologic setting of the subject site, shallow ground water typically occurs as an unconfined (water table) aquifer, and the water table is usually a subdued reflection of the surface topography. Locally, confined aquifers or perched water tables also may occur. Perched or shallow ground water was encountered above apparently discontinuous clay strata at Buildings 46 and 48, but was not encountered in the four other monitoring wells installed. Ground water typically flows towards the nearest stream or other surface water body; these topographically low areas commonly consist of local drainage features that have eroded deeply enough to intersect the water table or to act as ground-water discharge zones.

Construction data, screen intervals and well depths for ground-water monitoring wells installed at the Site are summarized in Table 5. Static ground-water levels in the monitoring wells were gauged on September 8, 2006. Static ground-water levels ranged from approximately 13.8 to 44.7 feet below the top of PVC casing (perched at wells W46-1 and W48-1) to 79.8 to 95.4 feet in the seven remaining wells. No light non-aqueous phase liquid (LNAPL) were detected in any of the monitoring wells. A summary of monitoring well gauging data is presented in Table 4. The static ground-water elevations generally indicated a ground-water flow direction to the south, likely with both southeast and southwest components (see Figure 7).

No hydraulic conductivity testing was performed to estimate the ground-water flow velocity and related hydrogeologic characteristics. However, solutes (i.e. contaminants of concern) are subject to a number of different processes through which they can be removed from ground water. They can be sorbed onto the surfaces of mineral grains in the aquifer, sorbed by organic carbon that might be present in the aquifer, undergo chemical precipitation, be subjected to abiotic degradation or biodegradation, and participate in oxidation-reduction reactions. As a result of these sorption processes, some solutes will move substantially slower through the aquifer than the ground water that is transporting them; this effect is called “retardation”. Dissolved oxygen in ground-water samples collected during monitoring well sampling activities ranged from 3.01 to 7.10 mg/L (with an average of 5.2 mg/L), indicating aerobic conditions are present at many locations to support natural biodegradation. However, chlorinated solvents typically biodegrade (dehalogenate) more rapidly under anaerobic conditions.

4.3 UNDERGROUND STORAGE TANK (UST) ASSESSMENT RESULTS

4.3.1 Regulatory File Review Results

Regulatory file reviews were completed at the DDOE UST Division for each of the three USTs removed at Buildings 26/27, 43 and 74, including all other UST/LUST files for the AFRH site which were provided by the DDOE UST Division. The Fire Department only had records for 300-gallon gasoline UST removed in December 1998, but did not indicate the building location. Table 7 is a summary of the information obtained from these file reviews. The closure status and recommendations for each active, closed or suspected UST are summarized below:

Location	Size (gallons)	Contents	Closure Status	Recommendations
17	400	Diesel	Removed	Closure Assessment completed with no release detected. No Further Assessment recommended.
26/27	500	Diesel	Unknown	No documentation of closure produced or obtained. Complete soil borings in area of reported UST (Former UST is possibly designated as a FST 55 feet NE of Building 26 on the General Site Map dated January 1994 by Rhodeside and Harwell, Inc.).
43	500	Used Oil	Removed	Closure assessment completed with no TPH >100 mg/kg. No Further assessment recommended
46A/46	Unknown	Unknown	Inactive	Fill ports and vent pipes present for 2 suspected heating oil USTs at SE Corner of Building. Perform tank removals or in-place closures if utility conflicts exist.
52	500	Diesel	Unknown	Existing UST at Building SE corner. Tightness test existing UST system.
56	1,500	Diesel	Active	In use. Perform tightness test of existing UST system.
64	1,000	Diesel	Active	Previous 1,200 gallon UST removed and soil remediation in 1994 by bioventing. Perform tightness test of existing UST system.
74A	500	Diesel	Unknown	No location or closure information provided or available. Complete soil borings at SE corner of Building 74 where a former UST is located (at existing AST).
75	8,000	Gasoline	Inactive	Three previous USTs removed in 1990/1991, and soil remediation performed. Records indicate one compartmentalized 8,000-gallon no longer in use. Remove and properly close existing UST system.

As indicated above, active USTs are present at Buildings 56, 64 and Building 52, inactive USTs are present at Buildings 46 and 75, and closed USTs with undocumented closure reports were formerly located at Buildings 26/27 and 74A.

MACTEC was also provided a CD by the USEPA Region III on September 22, 2005, which contained regulatory files related to a "No Further Remedial Action Planned" (NFRAP) listing for the AFRH

described in LAW's previous Phase I ESA report. Based on our review of the *Soil and Groundwater Investigation Report, Waste Paint Disposal Site* prepared by ABB Environmental Services, Inc. dated August 14, 1991, AFRH procured several thousand war surplus cans of paint in 1947 to be used in maintenance activities at the facility. When the paint was determined not to be suitable for use, the paint cans were buried in a storage cell several feet deep in the area northwest of Building 72, where a current paved road exists. In the spring of 1990, during installation of piping for a hot water/steam system, the contractor encountered the buried paint cans. The paint cans and approximately 1,000 tons of xylenes contaminated soil, were removed down to a depth of approximately 30 feet and the excavation backfilled. Five ground-water monitoring wells (designated by ABB as MW-1, 2, 3, 4 and 5) were also installed in this area. Laboratory analysis of soil and ground-water samples collected from these wells did not have detectible xylenes concentrations, and the case was subsequently closed by the USEPA. Although MACTEC did not have this information for the preparation of our SAP and associated Phase II ESA field work, we did find and sample three of these five wells. The three wells sampled by MACTEC were designated as W72-1 (ABB well MW-4), W72-2 (ABB well MW-1) and W72-3 (ABB well MW-5).

4.3.2 Building 46 and 75/76 Geophysical Surveys

Building 46 Suspected UST(s)

MACTEC observed two vent pipes, a 3-inch steel fill port and two bolted-down steel manway covers along the southwestern exterior wall of Building 46 underneath the steps (Photograph 1). MACTEC removed the two bolted-down manway covers which each extended down approximately 3.0 feet to the top of what appeared to be two separate tanks (or compartments for a single tank). The depth to the bottom of the tanks was approximately 8.5 feet bgs, suggesting the tanks have a diameter of approximately 5.5 feet. Both tanks were filled with water, which had a distinct petroleum or fuel oil odor and sheen. In addition, ERT completed a geophysical survey in this area which indicated the presence of one or several suspected USTs (see Figure 13 in Appendix E). Based on this information, several USTs are apparently located at the southwest exterior corner of Building 46, which are no longer in use. Since no drawings for the USTs were found, the length, capacity and orientation of the tanks is unknown, but could extend beneath the building foundation or proximal underground utility lines. The asphalt, concrete, grass and concrete retaining wall located above the tanks will need to be removed to confirm their size and orientation, prior to closure.

Building 75/76 Suspected USTs

A geophysical survey was completed in the areas west and southeast of Building 75, and in the area between Building 75 and Building 76, to evaluate the potential presence of former or existing USTs that may not have been removed from the ground. As indicated in the ERT Geophysical Survey Report (Appendix E, Figure 12), subsurface anomalies representing six suspected buried USTs were noted along the west and southwest sides of Building 75. In addition, indications of a pit or excavation were noted in this area, which could represent a UST that was previously removed. Vacuum assisted "soil knifing" borings were subsequently completed at each of the six suspected UST locations, as described in Section 4.9.

Along the northeast side of Building 75, MACTEC observed three vent pipes, and a rectangular-shaped concrete pad with three manway covers and three fill covers for three suspected USTs (Photograph 3). A fuel pump island with three fuel pumps was observed along the southeastern corner of Building 75 (see Figure 5). MACTEC removed the three manway covers for each tank; however, they were locked and inaccessible. No data was available beyond the installation documentation in 1991. Based on records reviewed and described in Table 7, AFRH indicated one manifolded 8,000-gallon UST is present at this location. In addition, ERT completed a geophysical survey in this area which indicated the presence of a UST (see Figure 12 in Appendix E).

Based on this information, one manifolded, three-compartment UST is located along the northeast exterior wall of Building 75. Although conflicting records exist regarding the size, orientation and contents of the UST, this UST system and the fuel pump dispensers are no longer in use and will need to be closed in accordance with DDOE-UST Division requirements.

Four Geoprobe® borings (G75-1, 2, 3 and 4) and one deep ground-water monitoring well (W75-1) were completed adjacent to the USTs and the fuel pump island at Building 75. Five soil samples (one per boring/well) and a ground-water sample collected from monitoring well W75-1 were laboratory analyzed for TPH-DRO/GRO, and VOCs. Soil and ground-water results are discussed below and are summarized in Tables 2 and 3.

Soil:

A TPH-GRO concentration of 10.9 mg/kg was detected in boring G75-3, which was less than the DC release reporting concentration of 100 mg/kg. Acetone was detected in soil at three locations at concentrations ranging from 90 to 95 ug/kg, which was less than the acetone USEPA Region III risk-

based concentration (RBC) and the DC Risk-Based Screening Level (RBSL) for both residential and industrial use. Acetone is strong solvent for most plastics and synthetic fibres, can be used as a fuel additive, is commonly found in nail polish removers, and is used for thinning and cleaning fiberglass resins and epoxies. However, acetone is also a common laboratory contaminant. Carbon disulfide (often used as a solvent in metal industries) was also detected at two locations (at 10 and 16 ug/kg), which was less than its RBC and RBSL. Benzene (detected at 2 ug/kg) was also less than its RBC and RBSL. The low concentrations of TPH, acetone and benzene may be associated with minor leaks, overfill or fuel/chemical spillage around the Building 75 UST system. It should be emphasized that no borings were completed directly beneath or directly adjacent to the USTs or piping, and higher contaminant concentrations may be discovered, when the USTs and piping are removed from the ground.

Ground Water:

TPH-DRO/GRO were not detected (ND) above the laboratory detection limits in the W75-1 ground-water sample, although a relatively low methyl tert-Butyl ether (MTBE; a gasoline additive) concentration of 1.4 ug/L and a relatively low chloroform (once a general anesthetic and also used as a solvent for fats, alkaloids, iodine, and other substances) concentration of 1.44 ug/L were detected. The chloroform concentration exceeded the tap water RBC. Based on this data, a slight impact to soil and ground water has occurred in the area of Building 75, likely from current/historic fuel leaks or chemical spills.

4.4 FLOOR DRAIN DYE TESTING RESULTS

Floor drain dye tracer testing was performed on representative floor drains at Buildings 46, 72, 76 and 77 to evaluate if floor drains may be discharging into the storm-water system, or into a related illicit discharge location. A total of eight floor drains were dye tested at Building 46. Two of these floor drains discharged into an internal dry trench, which subsequently flows into the boiler room pit, and then discharges into the sanitary sewer system. Four other floor drains (primarily along the northeast side of Building 46) were confirmed to discharge into the sanitary sewer, while two of the drains along the building's southeast side, were clogged and the final discharge point could not be confirmed. However, based on information provided by the Heating Plant Manager, these floor drains also discharge into the sanitary sewer system.

Two floor drains were dye tested at Building 72. The floor drain at the building's southeast corner beneath a sink was confirmed to discharge into the sanitary sewer, while the second floor drain in the Cement Storage Room, was clogged (although this drain also likely discharges into the sanitary sewer). The four floor drains along the northeastern portion of Building 76 (garage area), were confirmed to discharge into an oil-water separator located at the northeast exterior corner of the building, which subsequently discharges into the sanitary sewer system. Building 77 had three floor drains, each located inside of the two bathrooms. Although there were no proximal sanitary sewer manholes to visually

monitor the dye injected into these floor drains, down gradient storm-water inlets were visually monitored. The floor drains were flushed for approximately 30 minutes with multiple dye injections, and no indications of discharge were observed in the storm-water system. Given that these floor drains are located within bathrooms, it is likely they are connected to the sanitary sewer system, and no illicit discharges are anticipated.

Based on the dye testing performed at Buildings 46, 72, 76 and 77, the floor drains at these buildings appear to discharge into the sanitary sewer system, and do not discharge into the storm-water system.

4.5 BUILDING 46 DRYCLEANING SOLVENT SAMPLING RESULTS

Three Geoprobe® borings (G46-1, 2 and 3) and one ground-water monitoring well (W46-1) were completed near the southwest corner of Building 46, where former dry cleaning activities were suspected. In addition, ground-water samples were collected from the three existing wells at Building 72, located approximately 200 to 350 feet down gradient of Building 46 (designated as W72-1, 2 and 3). A total of five soil samples (with a minimum of one sample from each boring/well) and a ground-water sample collected from monitoring well W46-1 were laboratory analyzed for volatile organic compounds (VOCs). The three ground-water samples collected from existing wells W72-1, 2 and 3 were laboratory analyzed for VOCs and for TPH-DRO and TPH-GRO.

Soil:

A distinct "moth ball" odor commonly associated with naphthalene was noted in soil samples collected from boring G46-1. In addition, a 1,820 ug/kg naphthalene concentration in soil was detected in boring G46-1 from 10.5 to 12.0 feet bgs, but was ND at 24 to 25 feet. The 1,820 ug/kg naphthalene concentration was less than the USEPA Region III risk-based concentration of 1,600,000 ug/kg (residential use), and naphthalene was ND in the other soil samples analyzed at Building 46. In addition, various other VOCs (acetone, carbon disulfide, tetrachloroethene, trichloroethene, and 1,2,4-trimethylbenzene) were detected in soil at Building 46. However, each of these VOCs were less than their respective RBCs and RBSLs.

Potential hazardous wastes generated by drycleaning and laundry operations are primarily solvents, and historically have included petroleum solvents such as Stoddard (naphtha), and other solvents such as tetrachloroethene (also known as perchloroethylene; PCE) and valclene (fluorocarbon 113 or trichlorotrifluoroethane). Stoddard solvent is a mixture of petroleum distillate fractions (petroleum naphtha), which is composed of over 200 different compounds primarily a mixture of C5 to C12 petroleum hydrocarbons, including naphthalene. Drycleaners began using Stoddard solvent in 1928 and it was the predominant drycleaning solvent in the United States from the late 1920s until the late 1950s. Based on this data, it is likely that the elevated naphthalene concentrations detected in soil at G46-1 are associated with a release or spillage from historical drycleaning activities at Building 46. In addition, the

presence of PCE and it's daughter product trichloroethene (TCE), suggest that PCE was also utilized at Building 46 for dry cleaning activities.

Ground Water: The W46-1 ground-water sample had concentrations of 1,2-dichloroethane (1.49 ug/L) and 1,2,3-trichloropropane (32.5 ug/L), which exceeded their respective tap water RBCs, although bromomethane (1.76 ug/L) was less than its RBC. 1,2-dichloroethane is a daughter or breakdown product for the dehalogenation of PCE, while 1,2,3-trichloropropane is a solvent, paint, and varnish remover and a cleaning and degreasing agent. The ground-water sample collected from down gradient well W72-1 had a trace TPH-DRO concentration of 331 ug/L, a PCE concentration of 44.5 ug/L, including trichloroethene (TCE) at 4.47 ug/L and l cis-1, 2-dichloroethene (at 3.84 ug/L). The ground-water samples collected from wells W72-2 and W72-3 were ND for TPH and VOCs. The PCE, TCE and cis-1,2-DCE concentrations detected in W72-1 exceeded their respective tap water RBCs, while PCE and TCE also exceeded their respective MCLs. Although it can be inferred that the chlorinated solvents detected in W72-1 were from a drycleaning solvent spill or release in the area of Building 46, no actual "source area" was identified, and historic paint can disposal activities at Building 72 could also be contributing to their presence.

4.6 BUILDINGS 48, 77, AND 78 PESTICIDES SAMPLING RESULTS

4.6.1 Building 48 Pesticides Sampling Results

Five shallow hand-auger/Geoprobe® borings (H48-1 through G48-5) and one ground-water monitoring well (W48-1) were completed in the area of the Golf Course Building 48. A total of six soil samples (one from each shallow boring/monitoring well) and a ground-water sample collected from monitoring well W48-1 were laboratory analyzed for pesticides and herbicides, and for the RCRA metals.

Soil:

The two pesticides beta-BHC (0.0276 mg/kg) and methoxychlor (0.052 mg/kg) were detected in the soil sample collected from H48-3. The remaining pesticides and herbicides analyzed were ND in this and the five other samples collected at Building 48. The methoxychlor concentration was less than its RBC, while no RBC exists for beta-BHC. Various metals detected in soil at Building 48 included arsenic, barium, cadmium, chromium, lead, and mercury. Arsenic concentrations detected exceeded its RBC and RBSL, while cadmium and chromium exceeded their respective RBSLs only. Although no RBC or RBSL exists for mercury, mercury was also detected in soil at concentrations ranging from 0.137 to 0.46 mg/kg. Arsenic, mercury, and lead are potential by-products associated with pesticides, although these metals can be found naturally occurring.

Based on information provided to MACTEC by Mr. Mark Hughes, Inspector for the Washington D.C. Environmental Health Administration Hazardous Waste Division (DC EHA) on a previous project, the District of Columbia generally adheres to the USEPA Region III RBC regulatory criteria for arsenic, and acceptable background levels in Washington D.C. for arsenic are 5.5 mg/kg in urban areas and 1 to 3 mg/kg in natural areas. The AFRH campus lies within the urban area of Washington D.C., and therefore, the relatively low concentrations of arsenic detected in soil (ranging from 2.3 to 6.7 mg/kg) are generally in line with acceptable background level for arsenic in urban areas.

Ground Water:

The W48-1 ground-water sample was ND for pesticides and herbicides, although relatively low concentrations of the metals barium, cadmium, chromium, and lead were detected. However, the detected metals concentrations were below their respective RBCs, MCLs and DC Ground-Water Quality Standards. Based on this data, some pesticides impact to shallow soils has occurred in the area of Building 48, although detected concentrations are less than available regulatory standards. The low levels of metals detected in ground water are likely from naturally occurring metals.

4.6.2 Building 77 Pesticides Sampling Results

Six shallow Geoprobe® borings (G77-1 through G77-6) and one ground-water monitoring well (W77-1) were completed near the southeast building corner of Building 77, within and adjacent to the pesticides storage room. A total of eight soil samples (one from each shallow boring and two from the deep monitoring well) and a ground-water sample collected from monitoring well W77-1 were laboratory analyzed for pesticides and herbicides, and for the RCRA metals.

Soil:

The seven soil samples collected at Building 77 were ND for pesticides and herbicides, although the metals barium, chromium, and lead were detected. Chromium in soil exceeded its RBSL, but did not exceed its RBC. As previously stated, these metals are naturally occurring and may not be associated with pesticide/herbicide impact. However, a distinct "pesticide odor" and apparent pesticide/herbicide residue was observed coating the concrete slab-on-grade floor inside of the Building 77 Pesticide Storage Room. Additional wipe samples would be required to confirm the presence/absence of pesticides and herbicides inside of this room, if future occupancy or demolition is performed.

Ground Water:

The W77-1 ground-water sample was ND for pesticides and herbicides, aside from the herbicide MCPP (detected at 132 ug/L). The MCPP concentration detected exceeded the 37 ug/L tap water RBC. Relatively low concentrations of the metals barium, cadmium, and mercury were detected. However, the detected metals concentrations were below their respective RBCs, MCLs and DC Ground-Water Quality Standards, except for cadmium (which exceeded the DC Water Quality Standard).

4.6.3 Building 78 Pesticides Sampling Results

Six shallow hand-auger borings (designated H78-1 through H78-6) and one ground-water monitoring well (W78-1) were completed within and adjacent to representative greenhouses in the Building 78 area. A total of nine soil samples (one from each shallow boring and three from the deep monitoring well) and a ground-water sample collected from monitoring well W78-1 were laboratory analyzed for pesticides and herbicides, and for the 8 RCRA metals.

Soil:

The nine soil samples collected at Building 78 were ND for pesticides and herbicides, aside from the pesticides 4,4'-DDE (detected at 0.0023 mg/kg) and methoxychlor (detected at 0.00329 mg/kg). However, the 4,4'-DDE and methoxychlor concentrations were less than their respective RBCs. An unknown "chemical" odor was also noted in several of the soil samples collected near the surface in borings H78-2, 3, 5 and W78-1; however, organic vapor concentrations for these soil samples measured on site using a photoionization detector (PID) were generally less than 2 parts per million. Various metals including arsenic, barium, chromium, and lead were detected in soil. Aside from chromium which exceeded its RBSL, the other metals did not exceed their respective RBSLs or RBCs. As previously stated, these metals are naturally occurring and may not be associated with pesticide/herbicide impact.

Ground Water:

The W78-1 ground-water sample was ND for pesticides and herbicides. Relatively low concentrations of the metals barium, cadmium, chromium, and lead were detected. Cadmium was greater than its DC Water Quality Standard while lead exceeded its MCL and DC Water Quality Standard. Based on this data, limited pesticide impact to shallow soils has occurred at the random locations sampled, although no pesticide/herbicide impact to ground water was detected. The metals detected in both soil and ground water could potentially be by-products of pesticide/herbicide use, or are naturally occurring.

4.7 BUILDING 69 ASH WASTE SAMPLING RESULTS

One composite sample of the ash waste material inside of the incinerator ash clean-out chute at Building 69 (designated as H69-1) was collected to evaluate if the ash is a characteristic hazardous waste. This soil sample was analyzed for Toxicity Characteristics Leaching Procedure (TCLP) VOCs, semi-volatile organic compounds (SVOCs), metals, and pesticides/herbicides, as well as for the hazardous waste parameters ignitability, corrosivity and reactivity. The ash material analytical results are summarized in Table 6.

No TCLP VOCs, SVOCs, pesticides or herbicides were detected above the laboratory detection limits. In addition, ignitability, corrosivity, and reactivity did not indicate hazardous waste characteristics. However, the TCLP lead concentration of 13.3 mg/L, was greater than the 5.0 mg/L regulatory standard. The remaining TCLP metals detected did not exceed their associated regulatory standards. Based on this data, ash waste material located inside of the incinerator is a lead characteristic hazardous waste.

4.8 BUILDING 76 (HYDRAULIC LIFT) SAMPLING RESULTS

Four Geoprobe® borings (G76-1, 2, 3 and 4) and one ground-water monitoring well (W76-1) were completed at Building 76. A total of five soil samples (one from each shallow boring/monitoring well)

were laboratory analyzed for TPH-DRO, SVOCs and polychlorinated biphenyls (PCBs). The ground-water sample collected from monitoring well W76-1 was analyzed for TPH-DRO, SVOCs and PCBs.

Soil:

TPH-DRO concentrations detected in soil ranged from 5.73 mg/kg (G76-4) to 1,420 mg/kg (G76-3). Two of the soil samples had TPH concentrations greater than the DC release reporting concentration of 100 mg/kg and was also greater than the DC Tier 1 RBSL (aka the Soil Quality standard; typically used as a cleanup standard on leaking UST sites) of 960 mg/kg. PCBs were ND in each soil sample, while butyl benzyl phthalate was the only SVOC detected (at 0.643 ug/kg) which was less than its RBC and RBSL. These borings were located adjacent to hydraulic lifts, and apparently represent hydraulic oil leaks from hydraulic lift or hydraulic lines. Additional assessment will be required to delineate the lateral and vertical extent of petroleum impact in this area.

Ground Water:

The W76-1 ground-water sample had a relatively low TPH-DRO concentration of 415 ug/L, which was less than the DC Risk-Based Ground-Water Standard at the Point of Exposure concentration of 3,570 ug/L. Bis(2-ethylhexyl)phthalate was the only SVOC detected, although no RBC or RBSL exists for this constituent. Based on this data, only limited petroleum impact has occurred to ground water in the area of Building 76, although a significant impact to soil in the area of the hydraulic lifts has occurred, above DC reporting and soil cleanup guidelines.

4.9 BUILDING 75 SUSPECTED UST EVALUATIONS

Six vacuum-assisted "soil knifing" borings were completed near the centers of each of the six suspected UST anomalies identified at Building 75 during the previous geophysical survey. The locations of the six borings designated as SB-01 through SB-06 are shown on Figure 8. Boring logs with a description of subsurface materials encountered and PID organic vapor screening results are included in Appendix B. TPH-DRO and TPH-GRO analytical results for the three soil samples selected for laboratory analysis are summarized in Table 2, while the lab data reports are included in Appendix C.

The six soil knifing borings did not encounter either steel or fiberglass-reinforced plastic materials considered to be a petroleum UST. Boring SB-01 encountered a 6 to 8-inch diameter steel utility pipe at approximately 3 feet bgs, while the other borings generally encountered fill material. The anomalies detected during the geophysical investigation likely represent buried metal debris or utility lines, and do not appear to represent unknown petroleum USTs. Soil TPH-DRO/GRO concentrations were ND, aside from a trace TPH-DRO of 5.6 mg/kg. Therefore, no significant petroleum impact to soil was present at the locations tested.

5.0 SUMMARY AND CONCLUSIONS

- This Phase II ESA was completed by MACTEC to evaluate the presence or absence of contaminants of concern and related RECs (previously identified by G&O), as well as to recommend remedial alternatives, where applicable.

- Phase II sampling activities included UST, dry cleaning solvent, pesticide, hydraulic lift and incineration ash assessments, as well as performing dye tracer studies, geophysical surveys and regulatory file reviews. In general, invasive Phase II sampling activities included advancing a total 28 shallow hand auger or Geoprobe® soil borings and installing six deep ground-water monitoring wells to collect subsurface data. The Phase II ESA did not include UST removals, UST tightness testing, asbestos or lead-based paint sampling, remediation or the characterization/removal of drums or containerized waste materials.

- Borings advanced at the Site generally encountered man-made fill at or near the surface, grading to unconsolidated Coastal Plain soils described as silty clay to clayey silt, with alternating strata of silty sand to sandy silt, including some silty gravel lenses.

- Static ground-water levels at the site ranged from approximately 13.8 to 44.7 feet (in the shallow or perched ground water in monitoring wells W46-1 and W48-1) to 79.8 to 95.4 feet below the top of PVC casing in the seven remaining wells. No light non-aqueous phase liquid (LNAPL) was detected in any of the monitoring wells. The static ground-water elevations generally indicated a ground-water flow direction to the south, likely with both southeast and southwest components. Ground water is not reportedly used on site as a drinking water source.

- Regulatory file reviews were completed at the DDOE UST Division for each of the three petroleum USTs removed at Buildings 26/27, 43 and 74. Table 7 summarizes registration and closure information for these and other petroleum USTs at the site. In general, active USTs are present at Buildings 56, 64 and 52, inactive USTs are present at Buildings 46 and 75, and closed USTs with undocumented closure reports were formerly located at Buildings 26/27 and 74A.

- A file review of regulatory documents from the USEPA Region III related to a "No Further Remedial Action Planned" (NFRAP) listing for the AFRH was also completed. Based on the documents reviewed, AFRH procured several thousand war surplus cans of paint in 1947 to be used in maintenance activities at the facility. When the paint was determined not to be suitable for use, the paint cans were buried in a storage cell several feet deep in the area northwest of Building 72, where a current paved road exists. During 1990 hot water/steam system installation activities, these paint cans and approximately 1,000 tons of xylenes contaminated soil, were removed down to a depth of approximately 30 feet and the excavation backfilled. Five ground-water monitoring wells (designated by ABB Environmental Services, Inc. as MW-1, 2, 3, 4 and 5) were also installed in this area. Laboratory analysis of soil and ground-water samples collected from these wells did not have detectible xylenes concentrations, and the case was subsequently closed by the USEPA. Although MACTEC did not have this information for the preparation of our Sampling and Analysis Plan (SAP) and associated Phase II ESA field work, we did find and sample three of these five wells. The three wells sampled by MACTEC were designated as W72-1 (ABB well MW-4), W72-2 (ABB well MW-1) and W72-3 (ABB well MW-5).

- A geophysical survey was completed in the areas west and southeast of Building 75 and between Building 75 and Building 76, to evaluate the potential presence of former or existing USTs that may not have been removed from the ground. As indicated in the ERT Geophysical Survey Report (Appendix E, Figure 12), subsurface anomalies representing six suspected buried USTs were noted along the west and southwest sides of Building 75. Vacuum assisted "soil knifing" borings were subsequently completed at each of these six locations, to evaluate the presence or absence of suspected USTs, and to collect soil samples for TPH-DRO and TPH-GRO analysis. No indications of existing USTs were identified and soil TPH-DRO/GRO concentrations were ND, aside from a trace TPH-DRO of 5.6 mg/kg.

- Based on the results of floor drain dye tracer testing performed at Buildings 46, 72, 76 and 77, these floor drains discharge directly into either the sanitary sewer or an oil-water separator, and not into the storm-water system, or into a related illicit discharge location.

- Building 46: Drycleaning and laundry operations activities have reportedly been performed in the past at Building 46 (i.e., Building 46A). Potential hazardous wastes generated by drycleaning operations are primarily solvents, and historically have included petroleum solvents such as Stoddard (naphtha), and other solvents such as tetrachloroethene (also known as perchloroethylene; PCE) and valclene (fluorocarbon 113 or trichlorotrifluoroethane). Naphthalene was detected in soil at Building 46 at a concentration of 1,820 ug/kg, and a distinct "moth ball" odor (commonly associated with naphthalene) was noted in soil samples collected from boring G46-1. In addition, various other VOCs (acetone, carbon disulfide, tetrachloroethene, trichloroethene, and 1,2,4-trimethylbenzene) were detected in soil at levels below their respective USEPA Risk-Based Concentrations (RBCs) and DC Risk-Based Screening Levels (RBSLs). Based on this data, the elevated naphthalene concentrations detected in soil at G46-1 are apparently associated with a release or spill from historical drycleaning activities at Building 46. In addition, the presence of PCE and it's daughter product TCE, suggest that PCE was also utilized at Building 46 for drycleaning activities. The W46-1 ground-water sample had concentrations of 1,2-dichloroethane (1.49 ug/L) and 1,2,3-trichloropropane (32.5 ug/L), which exceeded their respective tap water RBCs, although bromomethane (1.76 ug/L) was less than its RBC. 1,2-dichloroethane is a daughter or breakdown product for the dehalogenation of PCE, while 1,2,3-trichloropropane is a solvent, paint, and varnish remover and a cleaning and degreasing agent. In addition, the ground-water sample collected in W72-1 (located approximately 200 feet downgradient of Building 46) had detectible concentrations of PCE, TCE and cis-1,2-dichloroethene which exceeded their respective tap water RBCs, while PCE and TCE also exceeded their respective Maximum Contaminant Levels (MCLs). Although it can be inferred that the chlorinated solvents detected in W72-1 were from a drycleaning solvent spill or release in the area of Building 46, no actual "source area" was identified, and historic paint can disposal activities northwest of Building 72 could also be contributing to their presence.

- Building 48 (Golf Course Maintenance Shed/Bathrooms): Two pesticides, beta-BHC (0.0276 mg/kg) and methoxychlor (0.052 mg/kg), were detected in soil at Building 48, while the remaining pesticides and herbicides analyzed were Not Detected (ND). The methoxychlor concentration was less than its RBC, while no RBC exists for beta-BHC. Various metals detected in soil included arsenic, barium, cadmium, chromium, lead, and mercury. Arsenic concentrations detected exceeded its RBC and RBSL, while cadmium and chromium exceeded their respective RBSLs only. Although no RBC or RBSL exists for mercury, mercury was detected in soil at concentrations ranging from 0.137 to 0.46 mg/kg. Arsenic, mercury, and lead are potential by-products associated with pesticides, although these metals can be found naturally occurring. The

W48-1 ground-water sample was ND for pesticides and herbicides, although relatively low concentrations of the metals barium, cadmium, chromium, and lead were detected (at concentrations less than their respective RBCs, MCLs and DC Ground-Water Quality Standards). Based on this data, shallow soil in the area of HA48-3 has been impacted by pesticides, although detected concentrations were less than available RBCs. The metals detected in soil and ground water are likely from naturally occurring metals.

- Building 77: A distinct "pesticide" odor and apparent pesticide/herbicide residue was observed coating the concrete floor inside of the Building 77 Pesticide Storage Room. However, soil samples collected beneath the concrete slab-on-grade and from beneath the adjacent asphalt parking surface were ND for pesticides and herbicides (although the metals barium, chromium, and lead were detected). Chromium in soil exceeded its RBSL, but did not exceed its RBC. The W77-1 ground-water sample was ND for pesticides and herbicides, aside from the herbicide MCPP (detected at 132 ug/L). The MCPP concentration detected exceeded the 37 ug/L tap water RBC. Relatively low concentrations of the metals barium, cadmium, and mercury were detected in ground water below their respective RBCs, MCLs and DC Ground-Water Quality Standards (except for cadmium which exceeded its DC Water Quality Standard). The metals detected in soil and ground water are likely from naturally occurring metals.

- Building 78: Soil samples collected at Building 78 were ND for pesticides and herbicides, aside from the pesticides 4,4'-DDE (detected at 0.0023 mg/kg) and methoxychlor (detected at 0.00329 mg/kg). However, the 4,4'-DDE and methoxychlor concentrations were less than their respective RBCs. An unknown "chemical" odor was also noted in several of the soil samples collected near the surface in borings H78-2, 3, 5 and W78-1; however, organic vapor concentrations for these soil samples measured on site using a photoionization detector (PID) were generally less than 2 parts per million. Various metals including arsenic, barium, chromium, and lead were detected in soil. Aside from chromium which exceeded its RBSL, the other metals did not exceed their respective RBSLs or RBCs. The W78-1 ground-water sample was ND for pesticides and herbicides. Relatively low concentrations of the metals barium, cadmium, chromium, and lead were also detected in ground water. Cadmium was greater than its DC Water Quality Standard while lead exceeded its MCL and DC Water Quality Standard. Based on this data, limited pesticide impact to shallow soils has occurred in the various greenhouses at Building 78, although no pesticide/herbicide impact to ground water was detected. The metals detected in soil and ground water are likely from naturally occurring metals.

- Building 69: The composite sample of the ash waste material inside of the incinerator ash clean-out chute at Building 69 was ND for Toxicity Characteristics Leaching Procedure (TCLP) VOCs, SVOCs, pesticides and herbicides; and ignitability, corrosivity, and reactivity did not indicate hazardous waste characteristics. However, the TCLP lead concentration of 13.3 mg/L, was greater than the 5.0 mg/L regulatory standard (other metals did not exceed their associated regulatory standards). Based on this data, ash waste material located inside of the incinerator is a lead characteristic hazardous waste.

- Building 76: Total petroleum hydrocarbons-diesel range organics (TPH-DRO) concentrations up to 1,420 mg/kg were detected in soil at Building 76, which is greater than the DC release reporting level of 100 mg/kg and is also greater than DC Tier 1 RBSL (aka the Soil Quality Standard; typically used as a cleanup standard on leaking UST sites) of 960 mg/kg. PCBs were ND in each soil sample, while butyl benzyl phthalate was the only SVOC detected (at 0.643 ug/kg) which was less than its RBC and RBSL. These borings were located adjacent to hydraulic lifts, and apparently represent hydraulic oil releases from hydraulic lifts or hydraulic lines. The

W76-1 ground-water sample had a relatively low TPH-DRO concentration of 415 ug/L, which was less than the DC Risk-Based Ground-Water Standard at the Point of Exposure concentration of 3,570 ug/L. Bis(2-ethylhexyl)phthalate was the only SVOC detected in ground water, although no RBC or RBSL exists for this constituent. Based on this data, no significant petroleum impact has occurred to ground water in the area of Building 76, although a significant impact to soil in the area of the hydraulic lifts has occurred, above DC reporting and soil cleanup guidelines.

- Although the District of Columbia does not have guidelines regarding typical background levels for metals in soil, the adjacent State of Maryland does have published Anticipated Typical Concentrations (ATCs) for various metals, according to the various Geologic Provinces in the State. The ATCs for Eastern Maryland (generally the same as the Coastal Plain soils at the AFRH site) are 3.6 mg/kg for arsenic, 28 mg/kg for chromium, and 0.51 mg/kg for mercury. These ATCs are generally in line with metals concentrations detected at the AFRH site Buildings 48, 77, and 78, suggesting the metals are naturally occurring background levels. In addition, where pesticides were detected in soil at H48-3, H78-1 and H78-6, corresponding metals at those locations were not significantly higher than other locations where no pesticides were detected.

The following recommendations were developed based on the conclusions stated above. Recommendations and opinions of cost for potential soil and ground-water remediation will be provided in a separate report.

- No further assessment of floor drains is recommended, because the floor drains dye tested discharge into the sanitary sewer system or into an oil-water separator. However, the oil-water separator at Building 76 should be removed if it is no longer needed.

- Based on information included in Table 7, existing UST systems at Buildings 56, 64 and 52 should be tightness tested to confirm that there are no current leaks. In addition, inactive UST systems at Buildings 46 and 75 should be removed and properly closed. Additional subsurface sampling should be completed at Buildings 26/27 and 74A, to evaluate the presence/absence of petroleum hydrocarbons in soil, where no closure data exists.

- Additional assessment at Building 46 is recommended to delineate the lateral and vertical extent of naphthalene, PCE, TCE and related drycleaning solvents and to establish the actual source area. An active or passive soil-gas survey should be performed as the initial investigative task for this assessment, prior to additional soil and ground-water sampling.

- Wipe samples should be collected on the concrete floor in the Building 77 Pesticides Storage Room to confirm the presence/absence of pesticides and herbicides, if future occupancy or demolition is proposed.

- The ash waste material located inside of the incinerator at Building 69 should be removed by a qualified contractor, and transported and disposed of off-site as a lead characteristic hazardous waste.

- Additional subsurface soil sampling is recommended in the area of the hydraulic lifts at Building 76, to delineate the lateral and vertical extent of petroleum impact. No additional ground-water sampling is recommended, although the DDOE UST Division may require additional ground-water data. Remediation of soils with TPH-DRO greater than 960 mg/kg, will likely be required by the DC UST Division. In addition, petroleum contaminated soils that are removed from the

ground at Building 76 or at other buildings at the AFRH that cannot be used on site as approved fill (typically with a TPH less than 100 mg/kg), must be remediated or transported off site for treatment/disposal at a properly permitted facility.

- Although no further assessment is recommended at Buildings 48 and 78 (since the levels of detected pesticides were less than RBCs), future landholders should be advised that if greenhouses/structures at these sites are demolished, the interior soil will need to be characterized prior to disposal.

- The TPH-DRO concentrations detected at Building 76 (greater than the 100 mg/kg) should be reported to the DDOE UST Division as a release. The DDOE UST Division is typically the regulatory agency responsible for managing non-UST petroleum release cases, and will likely require a Comprehensive Site Assessment. This report should be provided to the DDOE Water Quality Division, to document reporting of the contaminants of concern detected in ground water at concentrations greater than either RBCs, MCLs or RBSLs.

TABLES

Table 1: Summary of Phase II Environmental Sampling Paremeters

Sub-Task Description	AFRH Building Number	Number of Geoprobe/ Hand Auger Borings	Number of GW Monitoring Wells	Sample Type	Number of Samples	Final Boring/Well Depths(ft)	Analytical Parameters	Rationale/Scope of Work
TASK 2.0 - CONDUCT PHASE II INVESTIGATIVE ACTIVITIES (See Sampling and Anaysis Plan text for detailed description of Phase II activities)								
TASK 2.1 - UNDERGROUND STORAGE TANK PHASE II ASSESSMENT ACTIVITIES								
Task 2.1.1 - Geophysical Surveys for Suspected USTs at Buildings 46, 75/76 and 76 **(no sampling).**								Perform additional records and drawings reviews including file review of DC Fire Department records and interviews to establish the presence/absence of suspected USTs at all 3 building locations. Perform a geophysical survey at each site using a magnetometer/ground penetrating radar (GPR).
Task 2.1.2 - Phase II Sampling at 3 Known USTs	75	4	1	Soil	5	15	TPH-DRO/GRO by EPA method 8015M and VOCs by EPA Method 8260.	Perform a pre-closure Phase II assessment at each of the 3 USTs to evaluate the presence/absence of petroleum hydrocarbons prior to future tank removals. Preclosure assessment to include 4 direct-push (Geoprobe) borings adjacent to the sides of each UST to 15 feet bgs. Complete 1 deep ground-water monitoring well downgradient of the UST to a depth of 98 feet bgs.
				GW	1	98	TPH-DRO/GRO by EPA method 8015M and VOCs by EPA Method 8260.	
Task 2.1.3 - Regulatory File Reviews for Former USTs at Buildings 26/27, 43 and 74 (**no sampling**)								Perform regulatory file reviews at the DC EHA UST Division to obtain closure documentation and related correspondence for each UST removed.
TASK 2.2 - FORMER DRY CLEANING PHASE II ASSESSMENT								
Task 2.2.1 - Drawing/Document Review and Tracer Testing of Floor Drains at Building 46								Perform drawing reviews and subsequent dye tracer testing to establish the discharge locations of floor drains.
Task 2.2.2 - Phase II Soil and Ground-Water Sampling				Soil	5	25	VOCs by EPA method 8260	Perform a Phase II assessment to evaluate the presence/absence of chlorinated solvents in the arrea of suspected dry cleanring at the northwest portion of Building 46. Phase II assessment to include 3 direct-push (Geoprobe) borings adjacent inside of the building to 25 feet bgs, with 1 exterior boring completed to a depth of 45 feet bgs as a deep ground-water monitoring well. In addition, three existing monitoring wells at Building 72 (downgradient of Building 46) will be sampled and analyzed for TPH-DRO and for VOCs.
				GW	1	45	VOCs by EPA method 8260 (New well)	
	46	3	1	GW	3	106 to 119	(3 Existing wells at Building 72) TPH-DRO/GRO by EPA method 8015M and VOCs by EPA method 8260	
Task 2.2.3 - Drawing/Document Review and Tracer Testing of Building 72, 76 and 77 Floor Drains **(no sampling).**								Perform drawing reviews and subsequent dye tracer testing to establish the discharge locations of floor drains.

Table 1: Summary of Phase II Environmental Sampling Paremeters

Sub-Task Description	AFRH Building Number	Number of Geoprobe/ Hand Auger Borings	Number of GW Monitoring Wells	Sample Type	Number of Samples	Final Boring/Well Depths(ft)	Analytical Parameters	Rationale/Scope of Work
TASK 2.3 - PHASE II SAMPLING FOR PESTICIDES AT BUILDING 77, GREEN HOUSE AND GOLF COURSE								
Task 2.3.1 - Phase II Soil and Ground-Water Sampling for Pesticides at Building 77	77	6	1	Soil	8	15	Pesticides by EPA method 8081, herbicides by EPA method 8151, and 8 RCRA metals by 6020/7471	Perform a Phase II assessment to evaluate the presence/absence of pesticides/herbicides and related metals (primarily arsenic and mercury) degradation products. Assessment to include 6 hand auger/or Geoprobe borngs to a depth of 5 feet each (3 interior and 3 exterior borings) near the pesticides storage room . Complete 1 exterior deep ground-water monitoring well to a depth of 90 feet bgs.
				GW	1	90	Pesticides by EPA method 8081, herbicides by EPA method 8151, and 8 RCRA metals by 6020/7471	
Task 2.3.2 - Phase II Soil and Ground-Water Sampling for Pesticides at the Greenhouses	78 (Greenhouses)	6	1	Soil	9	5	Pesticides by EPA method 8081, herbicides by EPA method 8151, and 8 RCRA metals by 6020/7471	Perform a Phase II assessment to evaluate the presence/absence of pesticides/herbicides and related metals (primarily arsenic and mercury) degradation products. Assessment to include 6 shallow hand-auger borings to 5 feet bgs adjacent to the greenhouses and in suspected areas of concern. Complete 1 deep ground-water monitoring well to a depth of 90 feet bgs.
				GW	1	90	Pesticides by EPA method 8081, herbicides by EPA method 8151, and 8 RCRA metals by 6020/7471	
Task 2.3.3 - Phase II Soil and Ground-Water Sampling for Pesticides at the Golf Course	48 (Golf Course)	5	1	Soil	6	5	Pesticides by EPA method 8081, herbicides by EPA method 8151, and 8 RCRA metals by 6020/7471	Perform a Phase II assessment to evaluate the presence/absence of pesticides/herbicides and related metals (primarily arsenic and mercury) degradation products. Assessment to include 5 shallow hand-auger borings to 5 feet bgs adjacent to golf course maintenance sheds/chemical storage areas and at representative locations throughout the golf course and 1 deep ground-water monitoring well to a depth of 30 feet bgs, adjacent to Golf Course chemical storage area.
				GW	1	30	Pesticides by EPA method 8081, herbicides by EPA method 8151, and 8 RCRA metals by 6020/7471	
TASK 2.4 - Ash Waste Sampling and Characterization at Building 69	69	1	0	Soil	1	0 to 5	Full TCLP Analysis (VOCs, SVOCs, metals, pesticides/herbicides) and hazardous waste parameters ignitability, corrosivity, and reactivity.	Collect one composite sample of the ash waste material using a stainless steel trowel to evaluate if the ash is a charcteristic hazardous waste.
TASK 2.5 – Hydraulic Lift Phase II Sampling at Buildings 76	76	4	1	Soil	5	15	Six samples analyzed for TPH-DRO by EPA method 8015M; with four samples analyzed for SVOCs by EPA method 8270 and PCBs by EPA method 8082.	Three hydraulic lifts are present inside of the buildinjg and a waste oil drum is located along the buildings southern border. Assessment to include 4 direct-push (Geoprobe) borings to 15 feet bgs, with one deep ground-water monitoring well installed at the Building 76 site to a depth of 90 feet bgs.
				GW	1	90	TPH-DRO by EPA method 8015M, SVOCs by EPA method 8270 and PCBs by EPA method 8082.	

Table 2: Soil Analytical Results

Site:	Building 46					Building 48						DC Tier 1 RBSL [3]	DC Tier 1 RBSL [3]	U.S. EPA Region III Risk-Based Concentrations April 2006 (RBCs)	U.S. EPA Region III Risk-Based Concentrations April 2006 (RBCs)
Field Sample ID:	G46-1(10.5-12)	G46-1(24-25)	G46-2(0-1.5)	G46-3(16.5-18)	W46-1 (28.5-30)	H48-1(0.25-1)	G48-2(1-2)	H48-3(2-2.75)	G48-4(1-2)	G48-5(1-2)	W48-1(28.5-30)				
Sample Location:	G46-1	G46-1	G46-2	G46-3	W46-1	H48-1	G48-2	H48-3	G48-4	G48-5	W48-1				
Sample Date:	8/17/2006	8/17/2006	8/17/2006	8/17/2006	8/25/2006	8/2/2006	8/16/2006	8/3/2006	8/16/2006	8/16/2006	8/27/2006				
Sample Depth (feet bgs):	10.5-12	24-25	0-1.5	16.5-18	28.5-30	0.25-1	1-2	2-2.75	1-2	1-2	28.5-30	Residential	Industrial	Residential	Industrial
TPH (mg/kg)														(mg/kg)	
DRO	--	--	--	--	--	--	--	--	--	--	--	960	--	--	--
GRO	--	--	--	--	--	--	--	--	--	--	--	1,490	--	--	--
VOCs (ug/kg)														(ug/kg)	
Acetone	<50	**69**	<50	<50	<50	--	--	--	--	--	--	6,590,000	48,200,000	70,000,000	920,000,000
Benzene	<2	<2	<2	<2	<2	--	--	--	--	--	--	157	429	12,000	52,000
Carbon disulfide	**5**	<5	<5	<5	<5	--	--	--	--	--	--	18,000	151,000	780,000	100,000,000
Naphthalene	**1820**	<5	<5	<5	<5	--	--	--	--	--	--	47,700,000	47,700,000	1,600,000	20,000,000
Tetrachloroethene	<2	<2	<2	**3**	<2	--	--	--	--	--	--	1,070	3,360	1,200	5,300
Trichloroethene	<2	<2	<2	**3**	<2	--	--	--	--	--	--	656	2,060	1,600	7,200
1,2,4- Trimethylbenzene	**2**	<2	<2	<2	<2	--	--	--	--	--	--	15,200	123,000	--	--
Remaining VOC Constituents	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--
SVOCs (ug/kg)														(ug/kg)	
Butyl benzyl phthalate	--	--	--	--	--	--	--	--	--	--	--	370,000	370,000	340,000	1,500,000
Remaining SVOC Constituents	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCBs (ug/kg)														(ug/kg)	
All PCB constituents were ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
RCRA Metals (mg/kg)														(mg/kg)	
Arsenic	--	--	--	--	--	**2.3**	**2.4**	<3	**6.7**	<2	**2.82**	0.101	0.403	0.43	1.9
Barium	--	--	--	--	--	**55.0**	**73.2**	**50**	**44.6**	**33.3**	**5.62**	--	--	16,000	250,000
Cadmium	--	--	--	--	--	<0.98	**1.73**	<0.95	**1.1**	<0.98	<0.98	0.3	1.31	39	510
Chromium	--	--	--	--	--	**16.8**	**7.3**	**12.1**	**8.6**	**8.8**	**5.26**	0.0461	0.201	230	3,100
Lead	--	--	--	--	--	**51.9**	**158**	**182**	**127**	**68.7**	**3.32**	--	--	400*	400*
Mercury	--	--	--	--	--	**0.46**	<0.0976	**0.432**	**0.137**	<0.0984	<0.0968	--	--	--	--
Selenium	--	--	--	--	--	<0.98	<2	<0.95	<3	<0.98	<0.98	329	2,410	390	5,100
Silver	--	--	--	--	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.49	329	2,410	390	5,100
Pesticides (mg/kg)														(mg/kg)	
4,4' DDE	--	--	--	--	--	<0.00825	<0.00167	<0.00828	<0.00837	<0.00166	<0.00168	--	--	1.9	8.4
beta-BHC	--	--	--	--	--	<0.016	<0.00325	**0.0276**	<0.162	<0.00323	<0.00327	--	--	--	--
Methoxychlor	--	--	--	--	--	<0.016	<0.00325	**0.052**	<0.162	<0.00323	<0.00327	--	--	390	5,100
Remaining pesticides constituents	--	--	--	--	--	ND	ND	ND	ND	ND	ND	--	--	--	--
Herbicides (mg/kg)														(mg/kg)	
All Herbicides were ND	--	--	--	--	--	ND	ND	ND	ND	ND	ND	--	--	--	--

Prepared/Date:BDG 9/7/2006
Checked/Date: BRC 9/18/06

Notes:
1. Table includes detected constituents only and not all analyzed parameters. See lab data reports for a summary of all parameters analyzed which were not detected.
2. Analytical results that exceed one of the following regulatory criteria are highlighted with the corresponding color.
3. DC Tier 1 Risk Based Screening Levels (RBSLs) in Soil for Residential Adult (Table 5-9), and for an Extended List of Chemicals (Table F-2, Residential Soils), dated 2002.
* 400 mg/kg is the HUD lead in soil guideline and not a USEPA RBC.
For the case where both the DC RBSL and the USEPA RBC are exceeded, the most conservative exceedence was highlighted.

D.C. Tier 1 Risk Based Screening Level (RBSL) exceeded for residential standards
D.C. Tier 1 Risk Based Screening Level (RBSL) exceeded for industrial standards
U.S. EPA Region III Risk-Based Concentrations (RBCs) exceeded for residential standards
U.S. EPA Region III Risk-Based Concentrations (RBCs) exceeded for industrial standards

Abbreviations:
mg/kg: milligrams per kilogram
mg/L: milligrams per Liter
SVOCs: Semi-Volatile Organic Compounds. Analyzed using EPA Method 8270C. Only detected analytes are listed.
VOCs: Volatile Organic Compounds. Analyzed using EPA Method 8260B. Only detected analytes are listed.
ug/kg: micrograms per kilogram
-- Not analyzed for this parameter/ not applicable
ND: Not detected

Table 2: Soil Analytical Results

Site:	Building 75								Building 76					DC Tier 1 RBSL [3]	DC Tier 1 RBSL [3]	U.S. EPA Region III Risk-Based Concentrations April 2006 (RBCs)	U.S. EPA Region III Risk-Based Concentrations April 2006 (RBCs)
Field Sample ID:	G75-1(4.5-6)	G75-2(3-4.5)	G75-3(1.5-3)	G75-4(10.5-12)	W75-1(93-95)	SB02	SB04	SB06	G76-1(10.5-12)	G76-2(12-13.5)	G76-3(9-10.5)	G76-4(7.5-9)	W76-1(83.5-85)				
Sample Location:	G75-1	G75-2	G75-3	G75-4	W75-1	Soil Knifing Borings			G76-1	G76-2	G76-3	G76-4	W76-1				
Sample Date:	8/17/2006	8/17/2006	8/17/2006	8/17/2006	8/29/2006	3/12/2007	3/12/2007	3/12/2007	8/16/2006	8/16/2006	8/16/2006	8/16/2006	8/28/2006				
Sample Depth (feet bgs):	4.5-6	3-4.5	1.5-3	10.5-12	93-95	5-6	5-6	5-6	10.5-12	12-13.5	9-10.5	7.5-9	83.5-85	Residential	Industrial	Residential	Industrial
TPH (mg/kg)															(mg/kg)		
DRO	<4.86	<4.98	<4.79	<49.8	<4.9	**5.60**	<4.90	<4.88	**9.75**	**449**	**1420**	**5.73**	<4.10	960	--	--	--
GRO	<5.01	<4.96	**10.9**	<5	<5.03	<4.72	<4.87	<4.98	--	--	--	--	--	1,490	--	--	--
VOCs (ug/kg)															(ug/kg)		
Acetone	**95**	**90**	**93**	<50	<50	--	--	--	--	--	--	--	--	6,590,000	48,200,000	70,000,000	920,000,000
Benzene	**2**	<2	<2	<2	<2	--	--	--	--	--	--	--	--	157	429	12,000	52,000
Carbon disulfide	**10**	<5	**16**	<5	<5	--	--	--	--	--	--	--	--	18,800	151,000	780,000	100,000,000
Naphthalene	<5	<5	<5	<5	<5	--	--	--	--	--	--	--	--	47,700,000	47,700,000	1,600,000	20,000,000
Tetrachloroethene	<2	<2	<2	<2	<2	--	--	--	--	--	--	--	--	1,070	3,360	1,200	5,300
Trichloroethene	<2	<2	<2	<2	<2	--	--	--	--	--	--	--	--	656	2,060	1,600	7,200
1,2,4- Trimethylbenzene	<2	<2	<2	<2	<2	--	--	--	--	--	--	--	--	15,200	123,000	--	--
Remaining VOC Constituents	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--
SVOCs (ug/kg)															(ug/kg)		
Butyl benzyl phthalate	--	--	--	--	--	--	--	--	<332	<322	**0.643**	<325	<330	370,000	370,000	340,000	1,500,000
Remaining SVOC Constituents	--	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	--	--	--	--
PCBs (ug/kg)															(ug/kg)		
All PCB constituents were ND	--	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	--	--	--	--
RCRA Metals (mg/kg)															(mg/kg)		
Arsenic	--	--	--	--	--	--	--	--	--	--	--	--	--	0.101	0.403	0.43	1.9
Barium	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	16,000	250,000
Cadmium	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3	1.31	39	510
Chromium	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0461	0.201	230	3,100
Lead	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	400*	400*
Mercury	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Selenium	--	--	--	--	--	--	--	--	--	--	--	--	--	329	2,410	390	5,100
Silver	--	--	--	--	--	--	--	--	--	--	--	--	--	329	2,410	390	5,100
Pesticides (mg/kg)															(mg/kg)		
4,4' DDE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.9	8.4
beta-BHC	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methoxychlor	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	390	5,100
Remaining pesticides constituents	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Herbicides (mg/kg)															(mg/kg)		
All Herbicides were ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Prepared/Date:BDG 9/7/2006
Checked/Date: BRC 9/18/06

Notes:
1. Table includes detected constituents only and not all analyzed parameters. See lab data reports for a summary of all parameters analyzed which were not detected.
2. Analytical results that exceed one of the following regulatory criteria are highlighted with the corresponding color.
3. DC Tier 1 Risk Based Screening Levels (RBSLs) in Soil for Residential Adult (Table 5-9), and for an Extended List of Chemicals (Table F-2, Residential Soils), dated 2002.
* 400 mg/kg is the HUD lead in soil guideline and not a USEPA RBC.
For the case where both the DC RBSL and the USEPA RBC are exceeded, the most conservative exceedence was highlighted.

D.C. Tier 1 Risk Based Screening Level (RBSL) exceeded for residential standards
D.C. Tier 1 Risk Based Screening Level (RBSL) exceeded for industrial standards
U.S. EPA Region III Risk-Based Concentrations (RBCs) exceeded for residential standards
U.S. EPA Region III Risk-Based Concentrations (RBCs) exceeded for industrial standards

Abbreviations:
mg/kg: milligrams per kilogram
mg/L: milligrams per Liter
SVOCs: Semi-Volatile Organic Compounds. Analyzed using EPA Method 8270C. Only detected analytes are listed.
VOCs: Volatile Organic Compounds. Analyzed using EPA Method 8260B. Only detected analytes are listed.
ug/kg: micrograms per kilogram
-- Not analyzed for this parameter/ not applicable
ND: Not detected

Table 2: Soil Analytical Results

Site:	Building 77								Building 78									DC Tier 1 RBSL [3]	DC Tier 1 RBSL [3]	U.S. EPA Region III Risk-Based Concentrations April 2006 (RBCs)	U.S. EPA Region III Risk-Based Concentrations April 2006 (RBCs)
Field Sample ID:	G77-1(1-2)	G77-2(1-2)	G77-3(0-1)	G77-4(0-1)	G77-5(1-2)	G77-6(0-1)	W77-1(23.5-25)	W77-1(83.5-85)	H78-1(1-2)	H78-2(2-3)	H78-3(3-4)	H78-4(1-2)	H78-5(1-2)	H78-6(3-3.5)	W78-1(1-3)	W78-1(3-5)	W78-1(88-90)				
Sample Location:	G77-1	G77-2	G77-3	G77-4	G77-5	G77-6	W77-1	W77-1	H78-1	H78-2	H78-3	H78-4	H78-5	H78-6	W78-1	W78-1	W78-1				
Sample Date:	8/16/2006	8/16/2006	8/16/2006	8/16/2006	8/16/2006	8/16/2006	8/26/2006	8/26/2006	8/7/2006	8/7/2006	8/7/2006	8/3/2006	8/7/2006	8/3/2006	8/30/2006	8/30/2006	9/6/2006				
Sample Depth (feet bgs):	1-2	1-2	0-1	0-1	1-2	0-1	23.5-25	83.5-85	1-2	2-3	3-4	1-2	1-2	3-3.5	1-3	3-5	88-90	Residential	Industrial	Residential	Industrial
TPH (mg/kg)																				(mg/kg)	
DRO	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	960	--	--	--
GRO	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1,490	--	--	--
VOCs (ug/kg)																				(ug/kg)	
Acetone	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6,590,000	48,200,000	70,000,000	920,000,000
Benzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	157	429	12,000	52,000
Carbon disulfide	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	18,800	151,000	780,000	100,000,000
Naphthalene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	47,700,000	47,700,000	1,600,000	20,000,000
Tetrachloroethene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1,070	3,360	1,200	5,300
Trichloroethene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	656	2,060	1,600	7,200
1,2,4- Trimethylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	15,200	123,000	--	--
Remaining VOC Constituents	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SVOCs (ug/kg)																				(ug/kg)	
Butyl benzyl phthalate	--	--	--	--	--	--	--	--							--			370,000	370,000	340,000	1,500,000
Remaining SVOC Constituents	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCBs (ug/kg)																				(ug/kg)	
All PCB constituents were ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
RCRA Metals (mg/kg)																				(mg/kg)	
Arsenic	<1.9	<1.9	<1.9	<2	<1.9	<2	<1.85	<1.94	<2.0	<2.0	<1.9	<2	<1.9	**2.3**	<1.90	<1.92	<1.9	0.101	0.403	0.43	1.9
Barium	**16.3**	**14**	**17.2**	**18.6**	**15.8**	**22.6**	**11.4**	**3.05**	**21.4**	**14.1**	**34.9**	**42.8**	**11.8**	**33.1**	**28.5**	**49.4**	**9.07**	--	--	16,000	250,000
Cadmium	<0.96	<0.96	<0.96	<0.98	<0.93	<1	<0.926	<0.971	<1.0	<1.0	<0.94	<0.96	<0.97	<0.93	<0.952	<0.962	<0.952	0.3	1.31	39	510
Chromium	**22.8**	**11.9**	**14**	**17.6**	**14.6**	**15**	**5.16**	<1.94	**5.2**	**14.3**	**8.4**	**11.8**	**10.0**	**20.6**	**16.6**	**12.3**	**6.41**	0.0461	0.201	230	3,100
Lead	**10.2**	**5.59**	**8.54**	**8.13**	**8.04**	**8.9**	**4.31**	**1.12**	**7.3**	**6.6**	**11.1**	**4.56**	**2.66**	**7.84**	**9.07**	**10.9**	**5.96**	--	--	400*	400*
Mercury	<0.0987	<0.0984	<0.0969	<0.0969	<0.0993	<0.099	<0.0997	<0.0979	<0.0976	<0.101	<0.0984	<0.1	<0.0984	<0.101	<0.0963	<0.0987	<0.0971	--	--	--	--
Selenium	<0.96	<0.96	<0.96	<0.98	<0.93	<1	<0.926	<0.971	<1.0	<2.0	<0.94	<0.98	<0.97	<0.93	<0.952	<0.962	<0.952	329	2,410	390	5,100
Silver	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.463	<0.485	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.476	<0.481	<0.476	329	2,410	390	5,100
Pesticides (mg/kg)																				(mg/kg)	
4,4' DDE	<0.00167	<0.00165	<0.00169	<0.00169	<0.00169	<0.00168	<0.00166	<0.00168	<0.00168	<0.00167	<0.00163	<0.00168	<0.00168	**0.0023**	<0.00168	<0.0017	<0.00165	--	--	1.9	8.4
beta-BHC	<0.00324	<0.00321	<0.00327	<0.00327	<0.00327	<0.00325	<0.00321	<0.00327	<0.00326	<0.00324	<0.00316	<0.00326	<0.00327	<0.00326	<0.00327	<0.0033	<0.0032	--	--	--	--
Methoxychlor	<0.00324	<0.00321	<0.00327	<0.00327	<0.00327	<0.00325	<0.00321	<0.00327	**0.00329**	<0.00324	<0.00316	<0.00326	<0.00327	<0.00326	<0.00327	<0.0033	<0.0032	--	--	390	5,100
Remaining pesticides constituents	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	--	--	--
Herbicides (mg/kg)																				(mg/kg)	
All Herbicides were ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	--	--	--

Prepared/Date:BDG 9/7/2006
Checked/Date: BRC 9/25/06

Notes:
1. Table includes detected constituents only and not all analyzed parameters. See lab data reports for a summary of all parameters analyzed which were not detected.
2. Analytical results that exceed one of the following regulatory criteria are highlighted with the corresponding color.
3. DC Tier 1 Risk Based Screening Levels (RBSLs) in Soil for Residential Adult (Table 5-9), and for an Extended List of Chemicals (Table F-2, Residential Soils), dated 2002.
* 400 mg/kg is the HUD lead in soil guideline and not a USEPA RBC.
For the case where both the DC RBSL and the USEPA RBC are exceeded, the most conservative exceedence was highlighted.

D.C. Tier 1 Risk Based Screening Level (RBSL) exceeded for residential standards
D.C. Tier 1 Risk Based Screening Level (RBSL) exceeded for industrial standards
U.S. EPA Region III Risk-Based Concentrations (RBCs) exceeded for residential standards
U.S. EPA Region III Risk-Based Concentrations (RBCs) exceeded for industrial standards

Abbreviations:
mg/kg: milligrams per kilogram
mg/L: milligrams per Liter
SVOCs: Semi-Volatile Organic Compounds. Analyzed using EPA Method 8270C. Only detected analytes are listed.
VOCs: Volatile Organic Compounds. Analyzed using EPA Method 8260B. Only detected analytes are listed.
ug/kg: micrograms per kilogram
-- Not analyzed for this parameter/ not applicable
ND: Not detected

TABLE 3: Ground-Water Analytical Results

Field Sample ID:	W72-1	W72-2	W72-3	W46-1	W48-1	W75-1	W76-1	W77-1	W78-1	DC Ground-Water Quality Standard (*) [3]	DC Tier 1 RBSL for Ground water (residential)	DC Tier 1 RBSL for Ground water (industrial)	U.S. EPA Region III Risk-Based Concentrations	U.S. EPA Maximum Contaminant Levels (MCLs)
Sample Date:	8/2/2006	8/2/2006	8/2/2006											
TPH (ug/L)										(ug/L)				
DRO	**331**	<94.3	<94.3	---	---	<96.2	**415**	---	---	3,570*	--	--	--	
GRO	<100	<100	<100	---	---	<100	---	---	---	7,300*	--	--	--	
VOCs (ug/L)										(ug/L)				
Bromomethane	<1	<1	<1	**1.76**	---	<1	---	---	---	--	726	5,850	8.5	---
Chloroform	<1	<1	<1	<1	---	**1.44**	---	---	---	--	11,900	38,600	0.15	---
1,2 - Dichloroethane	<1	<1	<1	**1.49**	---	<1	---	---	---	5.0	385	1,210	0.12	5
cis-1, 2-Dichloroethene	**3.84**	<1	<1	<1	---	<1	---	---	---	--	--	--	0.12	70
Methyl tert-Butyl Ether	<1	<1	<1	<1	---	**1.40**	---	---	---	--	6,800,000	48,000,000	2.6	---
Trichloroethene	**4.47**	<1	<1	<1	---	<1	---	---	---	--	799	2,510	0.026	5
Tetrachloroethene	**44.5**	<1	<1	<1	---	<1	---	---	---	--	1,500	4,700	0.1	5
1,2,3 - Trichloropropane	<2	<2	<2	**32.5**	---	<2	---	---	---	--	23,800	192,000	0.0053	---
Remaining VOC Constituents	ND	ND	ND	ND	---	ND	---	---	---					
SVOCs (ug/L)										(ug/L)				
Bis(2-ethylhexyl)phthalate	---	---	---	---	---	---	**10.9**	---	---	--	--	--	---	---
Remaining SVOC Constituents	---	---	---	---	---	---	ND	---	---					
PCBs (ug/L)										(ug/L)				
All PCBs were ND	---	---	---	---	---	---	ND	---	---					
RCRA Metals (mg/L)										(mg/L)				
Arsenic	---	---	---	---	<0.005	---	---	<0.005	<0.02	0.05	---	---	0.000045	0.010
Barium	---	---	---	---	**0.0981**	---	---	**0.174**	**0.306**	1.0	---	---	7.3	2.0
Cadmium	---	---	---	---	**0.000526**	---	---	**0.0031**	**0.00323**	0.0005	---	---	0.018	0.005
Chromium	---	---	---	---	**0.0029**	---	---	<0.002	**0.0552**	0.10	---	---	0.110	0.10
Lead	---	---	---	---	**0.00222**	---	---	<0.001	**0.0734**	0.05	---	---	---	0.015
Mercury	---	---	---	---	<0.0002	---	---	**0.00042**	<0.002	0.0002	---	---	---	0.002
Selenium	---	---	---	---	<0.005	---	---	<0.005	<0.01	0.05	---	---	0.18	0.05
Silver	---	---	---	---	<0.0005	---	---	<0.0005	<0.001	0.05	---	---	0.18	---
Pesticides (ug/L)										(ug/L)				
All Pesticide constituents were ND	---	---	---	---	ND	- -	-	ND	ND					
Herbicides (ug/L)										(ug/L)				
MCPP	---	---	---	---	<9.71	---	---	**132**	<22.2	---	---	---	37	---
Remaining herbicide constituents	---	---	---	---	ND	---	---	ND	ND					

Prepared/Date: BDG 9/7/2006
Checked/Date: BRC 9/25/06

Notes:
1. Table includes detected constituents only and not all analyzed parameters. See lab data reports for a summary of all parameters analyzed which were not detected.
2. Analytical results that exceed one of the following regulatory criteria are highlighted with the corresponding color.
3. District of Columbia Ground Water Quality Standards, Amended January 2000.
4. District of Columbia Tier 1 Risk Based Screening Levels (RBSLs) for Ground Water (Table 5-2) and for an Extended List of Chemicals (Table F-2, Residential), dated 2002.

For the case where the DC RBSL, the USEPA RBC and/or the USEPA MCL are exceeded, the most conservative exceedence was highlighted.

DC Ground-Water Quality Standard exceeded for ground water at the point of exposure
DC Tier 1 RBSL exceeded for ground water (residential)
DC Tier 1 RBSL exceeded for ground water (industrial)
U.S. EPA Region III Risk-Based Concentrations (RBCs) exceeded for tap water.
U.S. EPA Maximum Contaminant Levels (MCLs) for drinking water.

Abbreviations:
ND: Not detected above the laboratory reporting limit.
SVOCs: Semi-Volatile Organic Compounds. Analyzed using EPA Method 8270C. Only detected analytes are listed.
TPH: Total petroleum hydrocarbons by EPA Method 8015M.
VOCs: Volatile Organic Compounds. Analyzed using EPA Method 8260B. Only detected analytes are listed.
ug/L: micrograms per Litre
---: Not available / not applicable

Table 4: Monitoring Well Gauging Data

Location	Elevation of TOC	Depth to TOS	8/2/2006				9/8/2006			
			Depth to LPH	Depth to GW	Thickness of LPH	GW Elevation	Depth to LPH	Depth to GW	Thickness of LPH	GW Elevation
W72-1	240.31	Unknown	ND	87.37	ND	152.94	ND	87.05	ND	153.26
W72-2	248.17	Unknown	ND	95.3	ND	152.87	ND	95.36	ND	152.81
W72-3	239.57	Unknown	ND	87.17	ND	152.40	ND	87.21	ND	152.36
W46-1	251.04	24.5	ND	--	ND	--	ND	44.67	ND	206.37
W48-1	215.18	13.5	ND	--	ND	--	ND	13.81	ND	201.37
W75-1	233.39	73.5	ND	--	ND	--	ND	81.33	ND	152.06
W76-1	231.29	69.5	ND	--	ND	--	ND	79.88	ND	151.41
W77-1	231.53	69.5	ND	--	ND	--	ND	79.8	ND	151.73
W78-1	229.87	74.5	ND	--	ND	--	ND	79.7	ND	150.17

Prepared/Date: BDG 9/19/2006
Checked/Date: BRC 9/25/2006

Notes:

ND	Not Detected
TOS	Top of Screen
TOC	Top of Casing
LPH	Liquid Phase Hydrocarbons
GW	Ground Water
--	No Data Collected (or well not yet constructed)

[1] Depths and thicknesses measured in feet.

[2] Relative Elevations were established using a level and rod relative to survey elevations adjacent to each building

Table 5: Monitoring Well Construction Data

Well Number	Date Const.	El.[1] of TOC (feet)	Ground Surface El.[1] (feet)	Depth of Boring[2] (feet)	Depth of Well[2] (feet)	Well Casing Inside Diameter (inches)	PVC Screen Interval[2] (ft-ft)	Depth to Ground Water (ft. BTOC) 9/8/2006	Formation Screened
W46-1	8/25/06	251.04	251.74	45	44.5	2	24.5-44.5	44.67	Silty clay to clay fill to 15 ft with interbedded clay, silt, silty sand, and sand
W48-1	8/27/06	215.18	215.59	29.5	28.5	2	13.5-28.5	13.81	Silty clay fill to 6 ft with interbedded clayey sand, clay, and sand
W75-1	8/29/06	233.39	233.66	98.5	98.5	2	73.5-98.5	81.33	Clay fill to 14 ft with interbedded clay, silty clay, silty sand, and sand
W76-1	8/28/06	231.29	231.61	85	85	2	69.5-85	79.88	Silty clay fill to 9 ft with interbedded clay, silty sand, clayey sand, sand, and sandy clay
W77-1	8/26/06	231.53	231.94	90	90	2	69.5-89.5	79.8	Clay fill to 20 ft with interbedded sandy clay, sand, silty sand, silty clay, sandy silt, and gravel
W78-1	9/6/06	229.87	230.51	90	90	2	74.5-89.5	79.7	Sand and silty clay fill to 5 ft with interbedded clay, clayey sand, sand, and silty sand
W72-1	--	240.31	240.62	--	106	2	--	87.05	No boring Logs available.
W72-2	--	248.17	248.52	--	119	2	--	95.36	No boring Logs available.
W72-3	--	239.57	239.76	--	114	2	--	87.21	No boring Logs available.

Prepared/Date: BDG 9/19/06
Checked/Date: BRC 9/25/2006

Notes:

TOC	Top of PVC casing	PVC	Polyvinyl Chloride
(ft)	Feet	BTOC	Below top of casing
GW	Ground water	NA	Not available
--	Unknown		

[1] Relative Elevations were established using a level and rod relative to survey elevations adjacent to each building

[2] Depths were estimated from the ground surface. All wells are machine-threaded 2-inch I.D. PVC.

Table 6: Building 69 TCLP and Waste Characterization Parameters Analytical Results

	Building 69[1]	**TCLP Regulatory Limits (mg/L) and Hazard Classification[2]**
Field Sample ID:	H69-1	
Sample Location:	H69-1	
Sample Date:	8/3/2006	
Sample Depth (feet):	0-0.5	
Waste Characterization		
Ignitability	>200	Flashpoint <140^{O}F
Corrosivity (solid waste pH)	6.3	(aqueous pH <2 or > 12.5)
Reactive Cyanide (mg/kg)	<20	Not Reactive
Reactive Sulfide (mg/kg)	<100	Not Reactive
TCLP VOCs (mg/L)		
10 constituents	ND	--
TCLP SVOCs (mg/L)		
11 constituents	ND	--
TCLP Metals (mg/L)		
Arsenic	<0.1	5
Barium	0.25	100
Cadmium	0.382	1
Chromium	<0.05	5
Lead	13.3	5
Mercury	<0.01	--
Selenium	<0.1	1
Silver	<0.05	5
TCLP Pesticides (mg/L)		
7 constituents	ND	--
TCLP Herbicides (mg/L)		
2 constituents	ND	--

Prepared/Date: BDG 8/23/06
Checked/Date: BRC 9/25/2006

Notes:
1. Table includes detected constituents only and not all analyzed parameters. See lab data reports for a summary of all parameters analyzed which were not detected.
2. EPA Toxicity Characteristic Leachate Procedure (TCLP) regulatory limits, and EPA hazardous waste classification.

Abbreviations:
mg/L: milligrams per Litre
mg/kg: milligrams per kilogram
SVOCs: Semi-Volatile Organic Compounds. Analyzed using EPA Method 8270C. Only detected analytes are listed.
VOCs: Volatile Organic Compounds. Analyzed using EPA Method 8260B. Only detected analytes are listed.
-- Not analyzed for this parameter/ not applicable

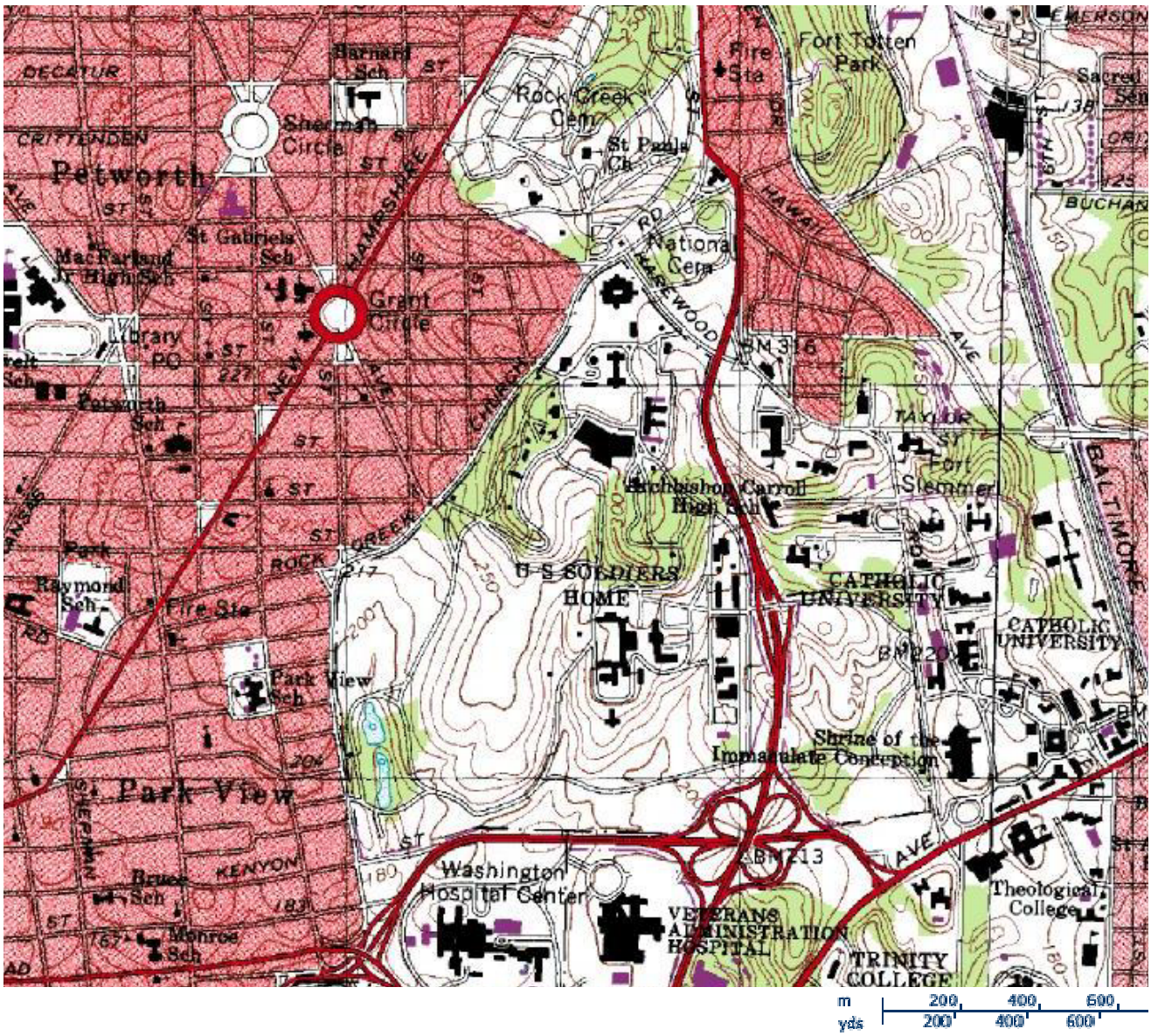
Table 7: File Review and Underground Storage Tank Summary

Building	Case ID	Building #	# of tanks	Date Installed	Size	Tank Contents	Tank Status	Date Removed	Assessments	Leaks	Additional information
Sheridan Building	400696	17	1	1986	400	diesel	Removed	Dec-98	Yes	No	No leaks detected. 2 soil samples from 1999; TPH-DRO < 10mg/kg.
Lagarde Bldg	400699	56	1	1992	1500	diesel	Active	NA	NA	NA	Tank in use based on information provided by AFRH in 2006.
Barnes Bldg of the King Center	400700	52	1	1993	550	diesel	Active	NA	NA	NA	Tank in use based on information provided by AFRH in 2006.
USSAH Auto Craft Shop	400697	43	1	1986	1000	used oil	Removed	Nov-98	Yes	No	Properly closed. No leaks detected. Assessment data: Benzene, Ethlybenze, Toluene < 5ug/kg, Xylene =7.0 ug/kg, TPH-DRO=24.3 mg/kg
Pipes Bldg- King Health Center	400694, 400695	64	1	1986	1200	diesel	Removed	Oct-90	Yes	Yes-1990	Leak detected 1990. TPH=61.5ppm, insitu remediation study,more borings TPH up to 6,300ppm; System ran from 1993 to 1994; Case closed in 1994; Post closure TPH-DRO = 13 mg/kg
			1	1992	1000	diesel	Active	NA	NA	NA	Tank in use based on information provided by AFRH in 2006.
Cold Storage Warehouse	4000696	74a	1	Unknown	1000	Unknown	Removed	Nov-98	NA	NA	No location of UST provided. No closure documentation. Tank was removed based on
Supply Management Branch/Fuel Services/Service Station	400698, 4000694	74/75	3	1986	2500	gasoline	Removed	1990	Yes	Yes	Approximately 83 tons of soil excavated; Soil samples: TPH=43.9ppm composite bottom; TPH 59.8ppm wall composite
					3000	gasoline	Removed	Jan-91	Yes	No	The 3000 gal tank was removed in 1991contamination detected of 70-80 ppm HNU. Removed at least another 1 to 2 ft of soil; 0 ppm HNU. Sampled for TPH-GRO= 3mg/kg, TPH-DRO= 18mg/kg.
					1000	diesel	Removed	1990	Yes	No	50yd3 soil removed; TPH 617ppm at bottom; excavated until clean; TPH-DRO 32 mg/kg
			1	1991	8000	gasoline/diesel	Out of Use	NA	NA	NA	Based on information provided by AFRH in 2006, the 3-compartment UST was installed in 1991. The UST includes two 3,000-gallon gasoline compartments and one 2,000-gallon diesel fuel compartment.
Laundry Building/Heating Plant Building	NA	46A/46	1 or 2	Unknown	UNK	Unknown	Out of Use - contains water.	NA	NA	UNK	MACTEC observed 2 vent pipes and opened 2 manway covers at the southwest corner of Building 46A . Either two 5.5 ft diameter tanks or one 5.5 ft diameter manifolded tank exist. Tanks are filled with water and oily sheen. Apparently inactive USTs.
Tunnel Exhaust Fan/Manhole "C" (Converter)	NA	26/27	1	1986	500	Diesel	unknown	NA	NA	UNK	Tank was removed based on information provided by AFRH in 2006. No closure data available.

Notes:

NA	Not available/not applicable
TPH-DRO	Total Petroleum Hydrocarbons Diesel Range Organics
TPH-GRO	Total Petroleum Hydrocarbons Gasoline Range Organics
UNK	Unknown

FIGURES

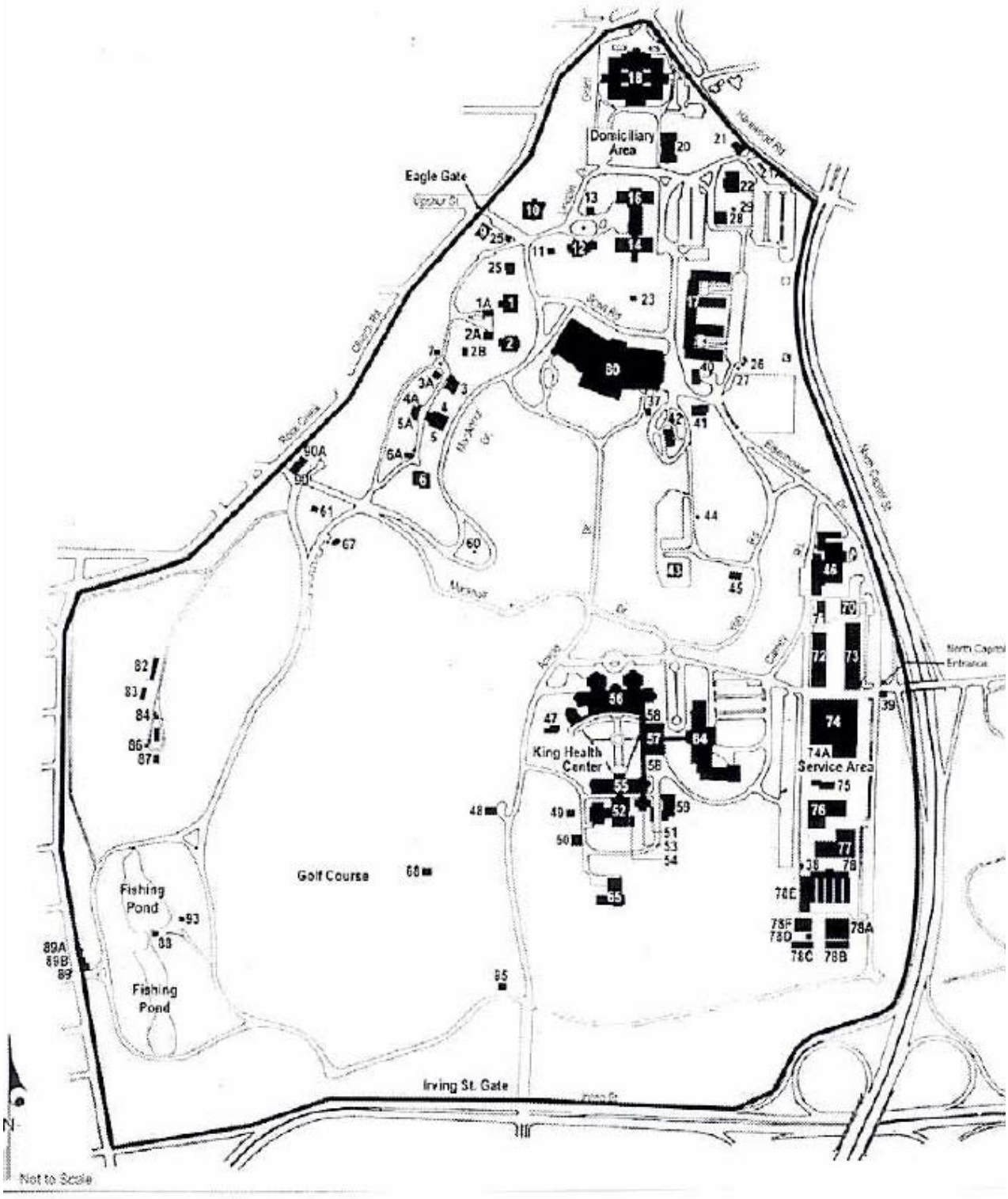


Source: USGS 7.5 Minute Topographic Map dated July 1, 1984 from http://terraserver.microsoft.com.

AFRH Phase II ESA 3700 North Capitol Street NW Washington, DC	MACTEC 21740 Beaumeade Circle, Suite 150 Ashburn, Virginia 20147	SITE TOPOGRAPHIC MAP Project 3552-06-0897 Figure 1

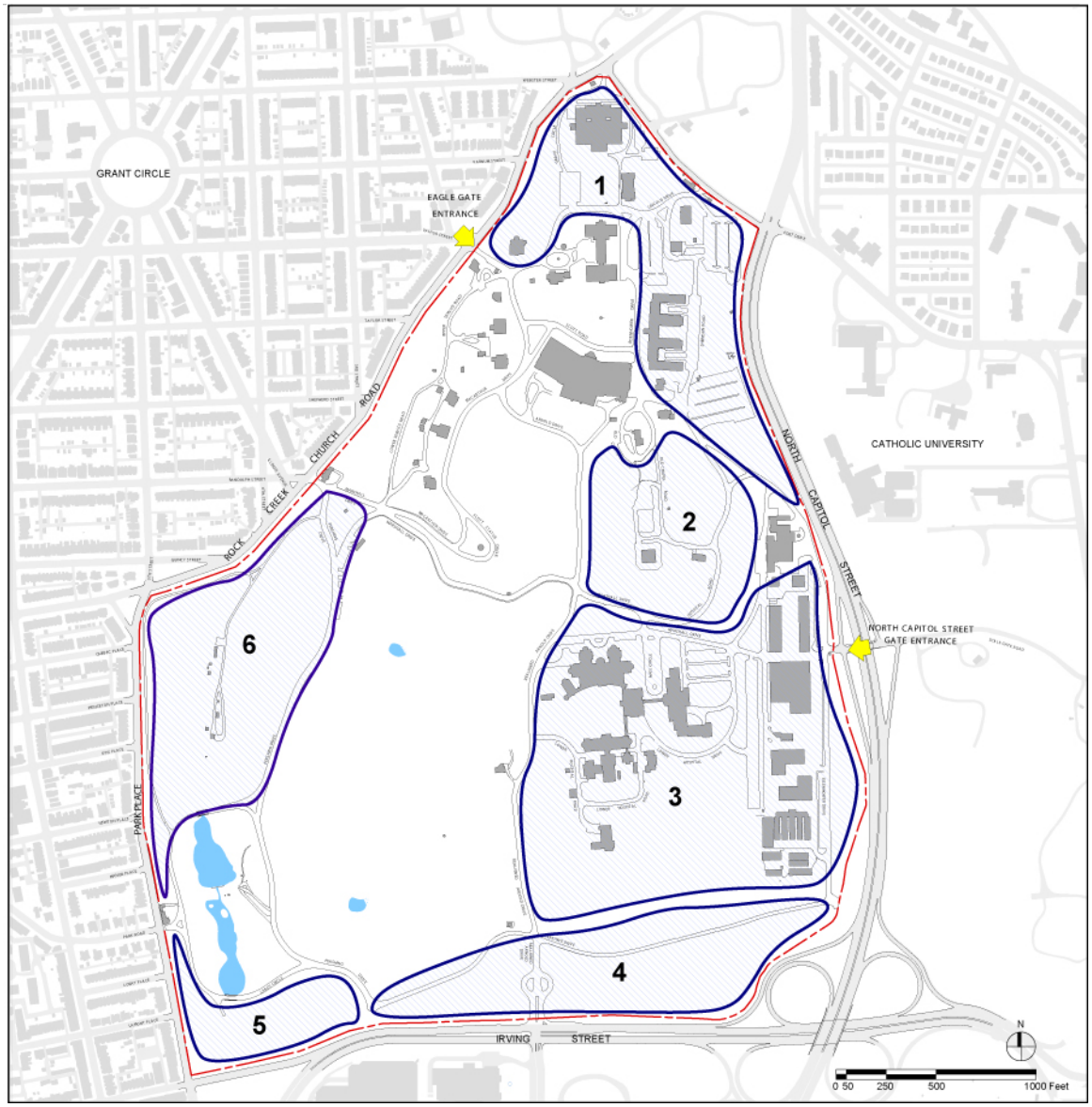
Source: http://terraserver.microsoft.com, dated April 26, 2002.

AFRH Phase II ESA 3700 North Capitol Street NW Washington, DC	MACTEC 21740 Beaumeade Circle, Suite 150 Ashburn, Virginia 20147	SITE VICINITY MAP Project 3552-06-0897 Figure 2



Source: Greenhorne & O'Mara, Inc. Phase I ESA Report, January 2005

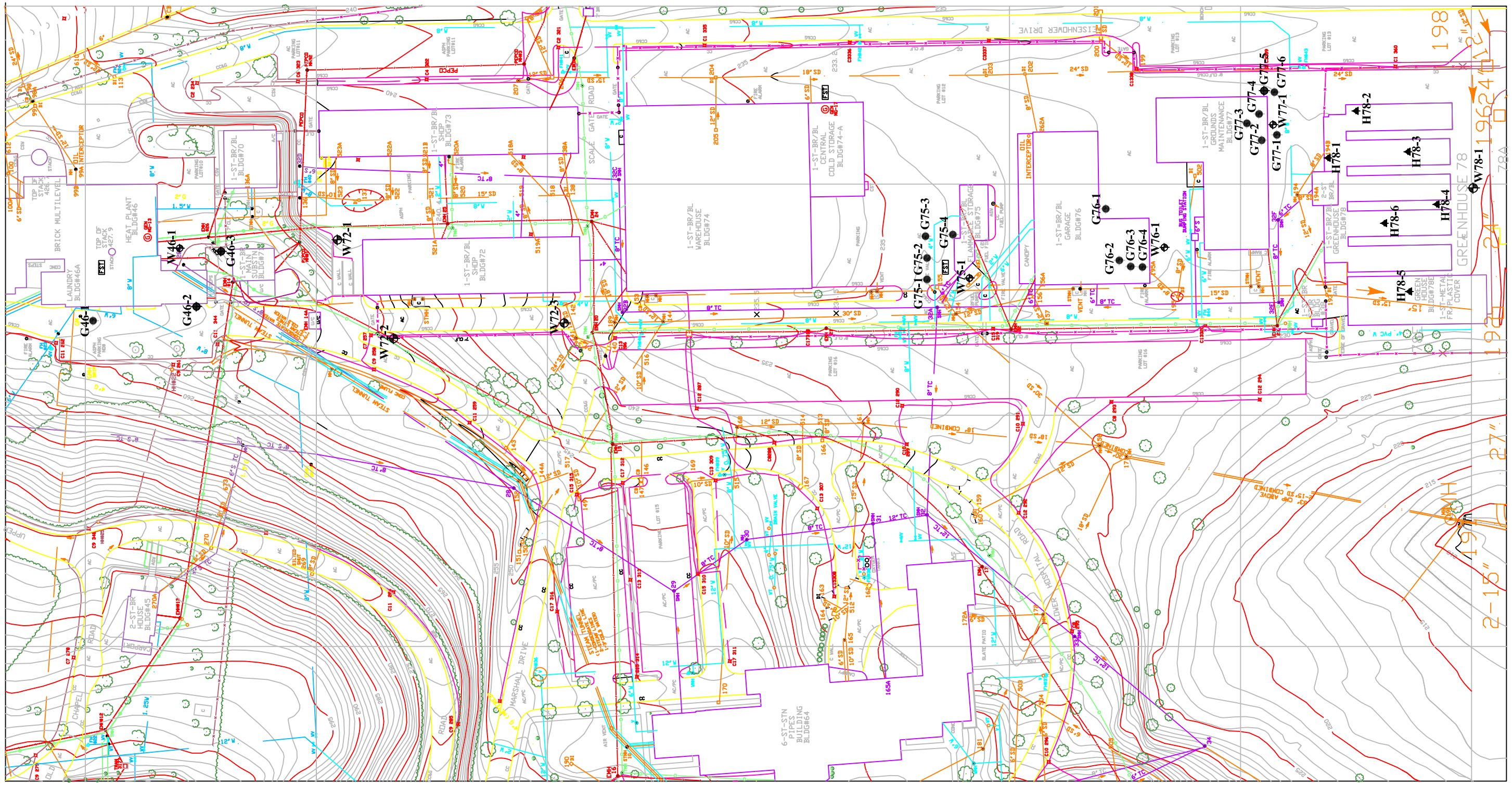
AFRH Phase II ESA 3700 N. Capitol Street Washington, DC	MACTEC 21740 Beaumeade Circle, Suite 150 Ashburn, Virginia 20147	AFRH SITE LAYOUT MAP Project 3552-06-0897 Figure 3



N

Source: General Services Administration, 2006

AFRH Phase II ESA 3700 North Capitol Street NW Washington, DC	MACTEC 21740 Beaumeade Circle, Suite 150 Ashburn, Virginia 20147	DEVELOPMENT ZONES Project 3552-06-0897 Figure 4



N

50 0 50 100 150

CONTOUR INTERVAL: 1'
SCALE IN FEET

Legend

- MACTEC HAND AUGER
- MACTEC MONITORING WELL
- MACTEC GEOPROBE BORING

ARMED FORCES RETIREMENT HOME
3700 N. CAPITOL STREET
WASHINGTON, D.C.

MACTEC

MACTEC Engineering and Consulting, Inc.
21740 Beaumeade Circle. Suite 150
Ashburn, Virginia 20147

BORING AND MONITORING WELL LOCATION MAP
(BUILDINGS 46, 75, 76, 77, AND 78)

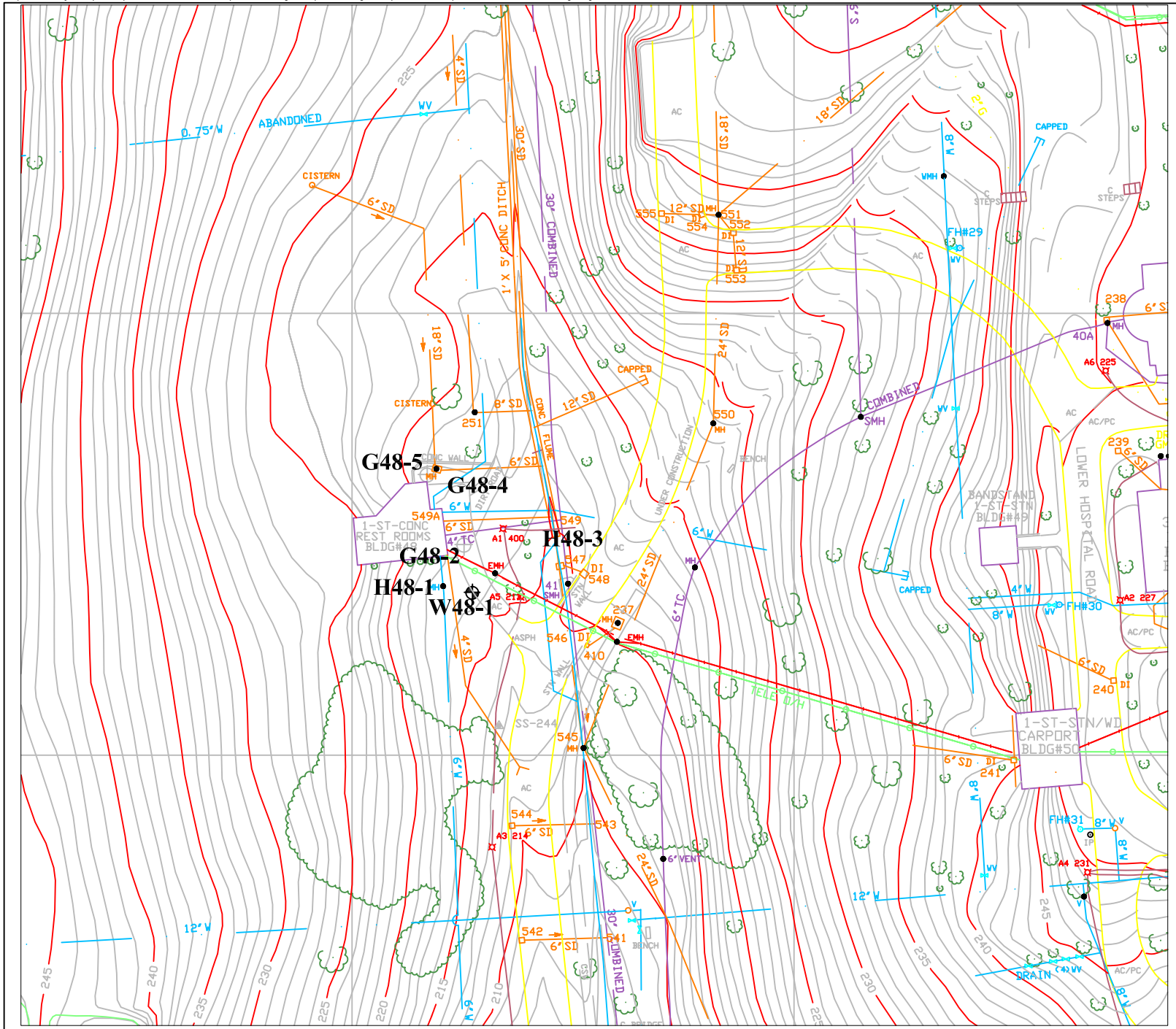
PROJECT NO: 3552-06-0897

FIGURE 5

FILE: P:\2006 Projects\3552\0897 AFRH Phase II\CADD - Figures\AFRH Originals\AFRH TOPO\AFRH Combined Drawing.dwg DRAWN BY/DATE:
CHECKED BY/DATE: BC 09/25/06
APPROVED BY/DATE: BC 09/25/06

P:\2006 Projects\3552\0897 AFRH Phase II\CADD – Figures\AFRH Originals\AFRH TOPO\AFRH Combined Drawing.dwg

CHECKED BY: BC 09/25/06



Legend

- MACTEC HAND AUGER
- MACTEC MONITORING WELL
- MACTEC GEOPROBE BORING

50 0 50 100

CONTOUR INTERVAL: 1'
SCALE IN FEET

N

ARMED FORCES RETIREMENT HOME
3700 N. CAPITAL STREET
WASHINGTON DC

MACTEC

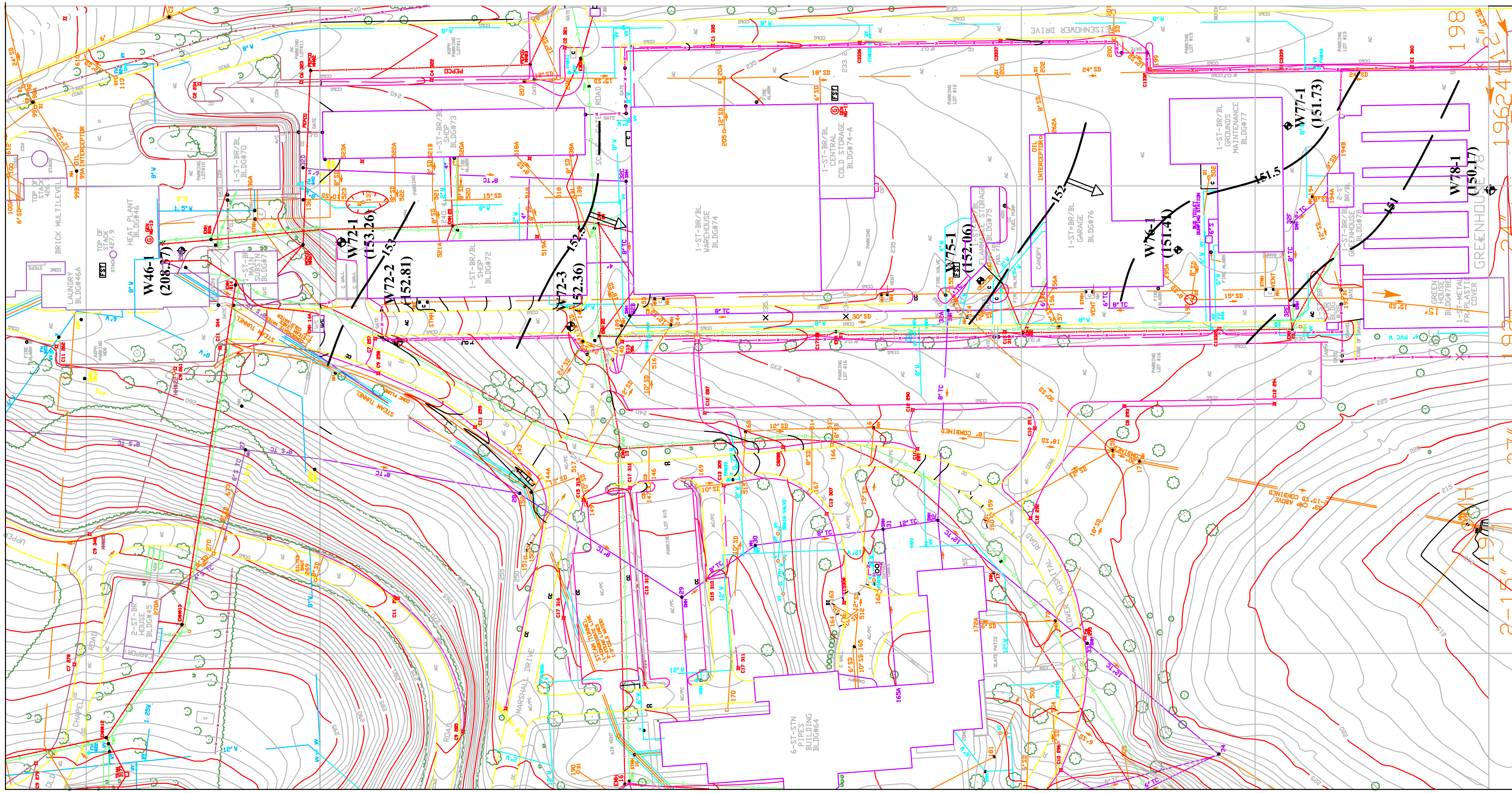
MACTEC Engineering and Consulting, Inc.
21740 Beaumeade Circle, Suite 150
Ashburn, Virginia 20147

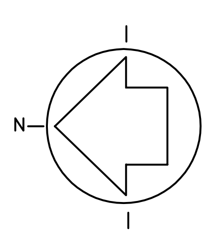
BORING AND MONITORING WELL LOCATION MAP
(BUILDING 48)

PROJECT NO:
3552-06-0897

FIGURE 6

FILE: P:\2006 Projects\3552\0897 AFRH Phase II\CADD - Figures\AFRH Originals\AFRH TOPO\AFRH Combined Drawing.dwg DRAWN BY/DATE: CHECKED BY/DATE: BC 09/25/06 APPROVED BY/DATE: BC 09/25/06





50 0 50 100 150

CONTOUR INTERVAL: 1'

SCALE IN FEET

LEGEND

⊕	MACTEC MONITORING WELL
(153.26)	STATIC GROUND-WATER ELEVATION
*	OUTLIER-PERCHED GROUND-WATER
—152—	ESTIMATED POTENTIOMETRIC CONTOUR
⇨	ESTIMATED GROUND-WATER FLOW DIRECTION

ARMED FORCES RETIREMENT HOME
3700 N. CAPITOL STREET
WASHINGTON, D.C.

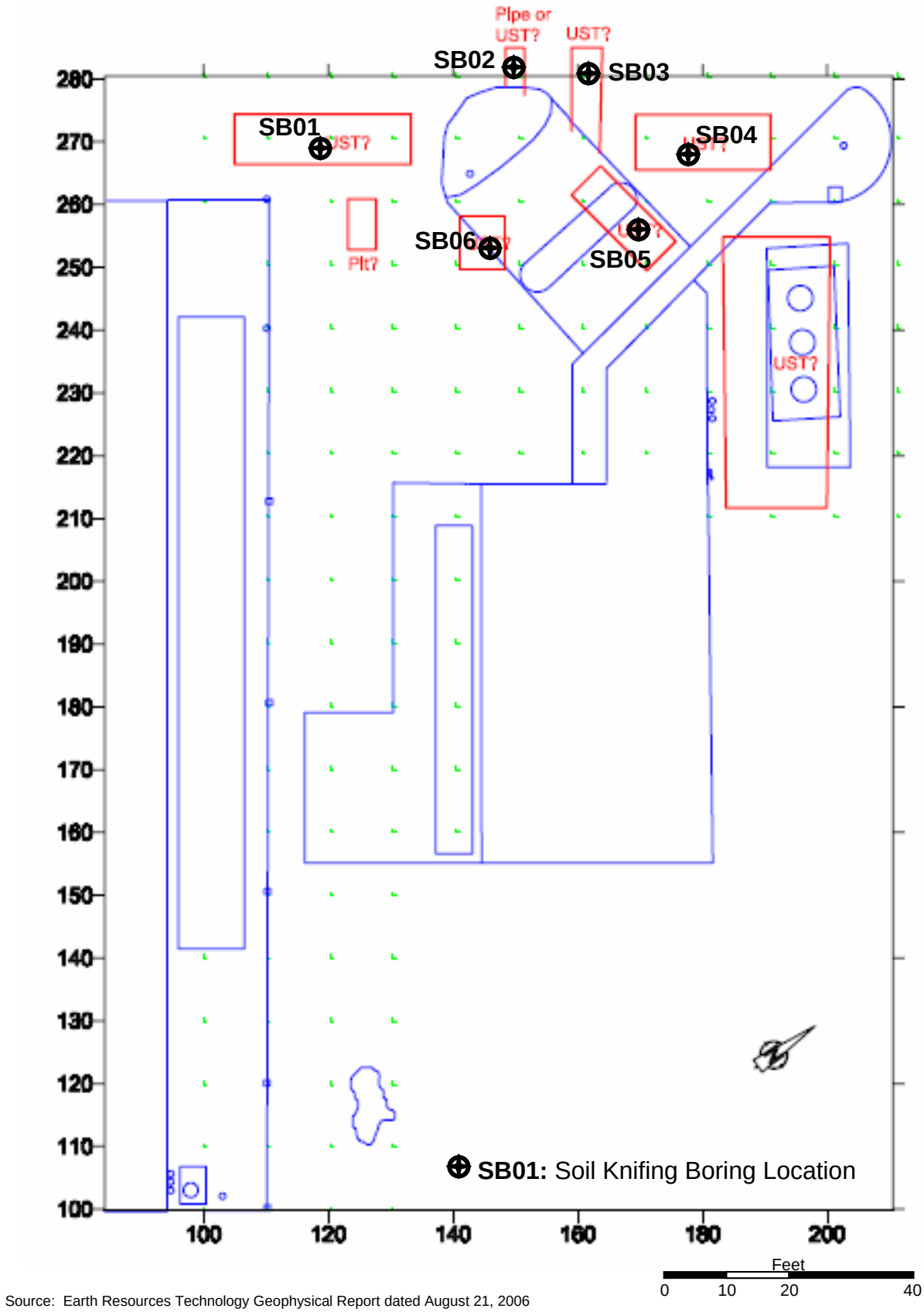
MACTEC

MACTEC Engineering and Consulting, Inc.
21740 Beaumeade Circle. Suite 150
Ashburn, Virginia 20147

ESTIMATED GROUND-WATER FLOW DIRECTION MAP
(SEPTEMBER 8, 2006)

PROJECT NO: 3552-06-0897

FIGURE 7



Source: Earth Resources Technology Geophysical Report dated August 21, 2006

AFRH Phase II ESA 3700 North Capitol Street NW Washington, DC	MACTEC 21740 Beaumeade Circle, Suite 150 Ashburn, Virginia 20147	Suspected UST - Soil Knifing Boring Locations Project 3552-06-0897.05 Figure 8

APPENDIX A
FIELD PROCEDURES

APPENDIX A - FIELD PROCEDURES

A field notebook was maintained and a Soil Test Boring Log for visual classification was completed for soil samples collected from each soil boring advanced at the site. The boring log will provide documentation of procedures used, observations made, results obtained, and pertinent logistical information.

- A geologist or engineer field classified soils collected during sampling activities in accordance with the Unified Soil Classification System (USCS) and will report this data using a Soil Test Boring Log.

- The physical appearance of the soil observed during sampling was recorded along with any discolorations or chemical staining indicative of potential light non-aqueous phase liquid (LNAPL).

- Field instruments were calibrated according to manufacturers' specifications.

- A drill rig or hand auger were used as the primary means for collecting soil samples. Sampling equipment, including the drill rig, was observed for cleanliness and obvious potential cross contamination hazards prior to mobilization to the sampling area.

- Borings were advanced using Direct-Push Geoprobe® rigs, 4.25-inch inside-diameter (I.D.) or 3.25-inch I.D. hollow stem auger (HSA) rigs or using hand augers.

- Soil samples from the direct-push Geoprobe® borings were collected continuously using a 1 3/8 inch outside diameter (O.D.) steel sampling tube (MacroCore® sampler) with an interior disposable acetate liner.

- Soil samples from the HSA borings were collected using a split-barrel (split-spoon) sampling device, in general accordance with ASTM Method D 1586-84. At regular intervals, drilling tools were removed and soil samples obtained with a standard 1.4 inch I.D., 2-inch O.D., split-barrel sampler. The sampler was first seated 6 inches to penetrate any loose cuttings and then driven an additional 18 inches with blows of a 140-pound hammer falling 30 inches. The number of hammer blows required to drive the sampler 12 inches after if it is seated 6 inches was recorded and designated the "standard penetration resistance". Penetration resistance, when properly evaluated, is an index to engineering properties of the soil.

- Shallow hand auger soil samples were collected continuously using a stainless steel hand auger, manually advanced to the target depth.

- Soil samples were transferred directly to the appropriate container(s). Sample containers were provided by the laboratory contracted to perform the analyses. Sample containers were filled as completely as possible so as to minimize headspace or void space.

- Each sampling and measurement location was marked in the field logbook and on a map, sequentially, according to type. Each sample container was marked with the type, number, a unique project number (used for all samples), project name and date.

- Downhole drilling equipment was steam cleaned prior to drilling each soil boring to reduce the potential for cross contamination, or decontaminated using an Alconox and water rinse, followed by a distilled water rinse.

FIELD VAPOR HEADSPACE SCREENING

A photoionization detector (PID) was used to field screen the head space of each collected soil sample for organic vapors. Soil vapor headspace screening procedures are designed to promote volatilization of organic vapors into the headspace of the sampling container. The degree of volatilization is dependent on temperature, exposed surface area, and other factors in addition to organic concentrations. Ionization detectors were calibrated to read in meter deflection units relative to a gas standard and a zero-air standard; however, a variety of organic compounds will produce a response if volatile constituents are present. Readings obtained with the ionization detector therefore should not be confused with concentrations of any specific compound.

Steps followed for headspace screening include the following:

- For non-cohesive soils, an 8 ounce soil sample jar or Ziploc style plastic baggie will filled approximately half full with loose, crumbled soil. For cohesive soils, the sample was broken into several pieces to increase surface area.

- The mouth of the jar was covered with aluminum foil and secured with a screw-on-lid or the baggie zipped close.

- The jar/baggie was placed in a relatively warm location (at least 20°F above the average annual temperature in the area) for approximately 10 minutes.

- The PID probe was inserted through the foil or into the partially opened baggie into the vapor headspace.

- The maximum identified reading over a 15 second period was recorded

This procedure encourages volatile organics to enter the vapor phase thus allowing for measurement by the headspace technique. Only a portion of the soil sample is required for the headspace analysis. The portion of the sample that was sent to the laboratory will be excluded from the headspace analysis.

MONITORING WELL INSTALLING, DEVELOPING, GAUGING, PURGING AND SAMPLING PROCEDURES

The following procedures were utilized during monitoring well installation, development, gauging, purging, and sampling activities.

TYPE II (SINGLE CASED) MONITORING WELL INSTALLATION PROCEDURES

Ground-water monitoring well installation and development were based on the ASTM Test Method D5092. The Type II (single-cased) ground-water monitoring wells were constructed with 2-inch I.D., machine threaded, schedule 40 PVC casing installed approximately 10 feet above the saturated zone. The bottom section of the Type II monitoring well will be completed with 2-inch I.D. 0.010-inch machine slotted well screen. The well screen was set to intercept the top of the saturated zone encountered at the time of drilling. Silica sand backfill was placed around the outside of the PVC pipe at least one foot above the top of the well screen to stabilize the formation and help yield a less turbid ground-water sample.

A minimum 2-foot thick zone of bentonite was installed on top of the sand backfill to hydraulically separate the grouted section of the well from the screened interval. The borehole was grouted with a cement/bentonite grout to the ground surface. A steel protective flush-mounted cover and lockable interior cap were placed over each well.

The elevation of the top of the PVC casing, top of the exterior steel casing, and the ground surface elevation adjacent to the well were established using a level and rod. A known elevation such as a benchmark or a similar fixed object assigned a reference point elevation were used as a reference datum.

MONITORING WELL DEVELOPING PROCEDURES

Monitoring wells were developed to create an effective filter pack around the well screen, to remove fine particles near the borehole, and to assist in restoring the natural water quality of the aquifer in the vicinity of the well. Bailing or over pumping procedures were used to develop each well. A bailer, bladder pump or peristaltic pump were used to evacuate water in the well. The evacuated water was visually monitored for turbidity and field measured for pH, temperature and conductivity. Well development continued until the development/purge water is generally clear of suspended materials or sediments or the well purged dry. Well development equipment were decontaminated between wells using an Alconox and water solution, and a distilled water rinse as appropriate.

GROUND-WATER LEVEL MEASURING, WELL PURGING, AND GROUND-WATER SAMPLING PROCEDURES

Ground-water level measuring, well purging and ground-water sampling procedures used during the Phase II ESA are described in the following sections.

Ground-Water Level Measuring Procedures

The following procedures were performed to measure ground-water levels in monitoring wells at the site.

- Each well was marked with an easily identified permanent reference point surveyed to an accuracy of 0.01 feet. This reference point was used in obtaining ground-water level measurements. Surface elevations werecorrelated with existing wells on-site.

- The flush-mounted well covers were not fitted with vented well caps; therefore, the well caps for flush-mounted monitoring wells were removed and allowed to vent until static conditions are reached prior to water level gauging.

- Depth to ground water from the measuring point were measured using an electronic tape and recorded on a Monitoring Well Purging and Sampling Form. The measuring tape was cleaned using an Alconox and water solution, and a distilled water rinse.

- After determining the ground-water elevation, the total well depth was measured. The volume of water within the well and depth of the sediment within the well was calculated.

- The amount of sediment is determined from the difference between the constructed well depth and the depth at the time of measurement.

- Prior to subsequent use, parts of the measuring tape which were placed within the well was cleaned.

Well Evacuation/Purging Procedures for Ground Water

All wells were allowed to stabilize for at least 72 hours after development, prior to purging and sampling. Personnel will follow the procedures below as a prelude to collecting ground-water samples for field or laboratory analyses.

- Purging of wells and evacuation were performed at a rate that minimized excessive agitation of formation fluids.

- Purge water disposal alternatives were evaluated prior to performing developing and purging activities. Purged water was containerized in 55-gallon steel drums, which was staged on site in an area approved by AFRH

- Purging efficiency was demonstrated through temperature, pH, and specific conductance measurements. These measurements were obtained as soon as fluid recovery permits in low-yield wells and at a frequency of one per well volume in high-yield wells. A low-yield well is a well that purges to dryness before three well volumes of standing water is removed from it. Sample collection from low-yield wells will commence immediately following subject measurements provided that a second set of measurements is acquired following sample collection.

- Measurements of pH, temperature, specific conductance, dissolved oxygen (D.O.), redox potential (EH), time, well purging/evacuation procedures, and all other field measurements, parameters and conditions were recorded on the Monitoring Well Purging and Sampling Form.

- For wells which do not purge to dryness, between three and five well volumes of standing water were removed from the well prior to sampling. The actual volume needed to be purged was based on the stabilization of the indicator parameters pH, specific conductance and temperature. This volume was calculated by using the following formula:

$V = X\ 7.48\ gal/ft^3\ [(r_c^2 h_c) + n_e\ [(r_a^2 h_s)-(r_c^2 h_c)]]$

where: V = volume of water standing in annulus (gallons)

r_c = radius of well casing (feet)

h_c = vertical length of standing water in the well casing (feet)

n_e = effective porosity of sandpack material (dimensionless)

r_a = radius of annulus in which well is installed (feet)

h_s = vertical length of sandpack material (feet)

- If a well is purged to dryness, but recharged rapidly, evacuation rates were reduced to maintain a relatively constant water level in the well (i.e., match the purging rate to recharge rate of the well).

- Sampling and purging devices were thoroughly cleaned prior to each sampling event.

- Well purging will progress from areas least impacted by contaminants of concern to those areas most impacted; if known, in any case, background wells were purged first.

Field Analyses

The sampling team will record relevant information regarding well purging procedures on the Monitoring Well Purging and Sampling Form during and after well development and sampling. Physically and/or chemically unstable ground-water parameters such as temperature, pH, and specific conductance were evaluated in the field during and after well purging/evacuation activities and also recorded on the Monitoring Well Purging and Sampling Forms. In addition, redox potential (EH) and dissolved oxygen (DO) readings were measured in each well and recorded. Instrument calibration and cleaning were performed prior to taking measurements, according to manufacturers' specifications

Ground-Water Sampling

- Ground-water sampling was performed with manual bailing techniques or using a peristaltic pump immediately following well purging. Sample collection was performed in such a way as to minimize unnecessary agitation of the sample.

- Samples were of the grab type and were obtained with a bottom valve teflon bailer equipped with a bottom drainage device for decanting the sample.

- The bailer was lowered on a nylon line. Neither the bailer nor attendant line were allowed to contact the ground prior to sampling.

- Ground-water samples were collected and placed into separate laboratory-prepared containers. Sample containers were filled as completely as possible so as to minimize headspace or void space.
- Ground-water samples requiring dissolved metals analysis were field filtered using a 0.45 micron filter.

- Each ground-water sampling and measurement location was marked in the field logbook and on a map, sequentially according to type. Each sample container was marked with the type, number, a unique project number (used for all samples), project name and date. A chain-of-custody reflected these identifiers and the number of sample containers from each location. These same identifiers were shown on laboratory data reports. These identifiers are traceable from time of sampling to final data summary reports.

- The physical appearance of ground water observed during sampling was recorded.

- Ground-water sample containers were placed on ice, packaged, and delivered to the laboratory under chain-of-custody procedures and QA/QC procedures.

QUALITY ASSURANCE AND QUALITY CONTROL (QA/QC)

Introduction

The following Quality Assurance and Quality Control (QA/QC) procedures are provided for proposed sample collection activities at the site. Standard practices and procedures were utilized by all personnel

during field operations to ensure the collection of representative samples. Collection of representative samples depends upon the following:

- Ensuring that the sample collected is truly representative of the material or medium being sampled;
- Using proper sampling, sample handling, preservation, and quality control techniques;
- Properly identifying collected samples and documenting their collection in permanent field records;
- Maintaining sample chain-of-custody records; and,
- Protecting collected samples by properly packing and transporting (shipping) them to a laboratory for analysis.

Procedures for Maintaining Sample Control

- To provide for proper identification in the field and proper tracking in the laboratory, all samples must be labeled in a clear and consistent fashion.
- Sample containers were labeled in a legible fashion that should remain clear even when wet. Labels will, at minimum, exhibit the following information:

  Sample identification number

  Date and time of collection

  Analyses required

  Collector's name(s)

  Preservative used

  Project number

- A field notebook was maintained throughout the sampling and analysis period. The field notebook will provide documentation of procedures used, observations made, results obtained, and pertinent logistical information. Also to be documented are any deviations from procedures specified within this Work Plan. The field notebook, Monitoring Well Purging and Sampling Form, along with the chain-of-custody record must contain sufficient information to allow reconstruction of sample collection and handling procedures at a later time.
- Samples were shipped to the approved laboratory certified under chain-of-custody procedures described below

Chain-of-Custody Program

The chain-of-custody program will facilitate the tracking of sample possession and handling from field collection through laboratory analyses. The chain-of-custody program consists of the field notebook, sampling forms, field logs, sample labels, custody seals, and sample analysis request forms as well as a chain-of-custody record.

- Each sample must have a corresponding entry on a chain-of-custody record. The chain-of-custody record must contain sufficient information to allow reconstruction of sample collection and handling procedures at a later time. The Record will include:

  Site name

  Sample number

  Sample type

  Date and time of collection

  Number of containers

  Parameters (for which analyses are requested)

  Signature of sampler(s)

  Signature of persons involved in the chain of custody

  Condition of samples (upon arrival at laboratory)

  Dates of possession

  Well identification

- The chain-of-custody record entry for sampling at any sampling point is to be completed before sampling is initiated by the same sampling team at any other sampling point.

- In cases where samples leave the immediate control of the sampling team (i.e. shipment via a common carrier) the shipping container must be sealed.

- Samples anticipated to have high contaminant concentrations should be stored and shipped in a separate container. Laboratory personnel should reconcile information from various components of the chain-of-custody program. Any discrepancies among these records were resolved before analyses commence.

- Chain-of-custody was written in waterproof, non-erasable pen.

- Before shipment to laboratory sampler (who makes original entry) will correct errors on chain-of-custody by drawing a single line through the error and entering the correct information. Sampler will initial and date correction.

- After shipment, sampler will correct errors or discrepancies on chain of custody by sending a "Memo to File" as soon as error is discovered.

Sample Preservation and Sample Containers

General requirements state that all samples be cooled to 4° C and protected from light. Other specific requirements are:

- Samples collected for organic analyses are not to be filtered and no headspace is allowed in sample containers. Volatile organics have a maximum holding time of 14 days. Samples collected for volatile organic analysis shall be preserved with 4 drops of concentrated hydrochloric acid (HCL) per 40 ml vial and analysis shall be performed within 7 days after collection.

- Sample containers were provided by the laboratory. In general, sample containers were PTFE (teflon)-lined caps for organics analyses.

Sample Analysis Request Forms

A sample analysis request form will accompany samples to the laboratory and will contain a clear record of the following:

- Name of person receiving the samplesLaboratory sample number (if different from field number)
- Date of sample receipt
- Requested analyses
- Internal temperature of shipping vessel upon opening in the laboratory

Shipping

Samples that were shipped to the laboratory by independent means (e.g., air freight, UPS, etc.) were transported in shipping containers that are properly refrigerated and sealed to ensure sample integrity. Sample containers themselves will not have custody seals or any other tape on the lids. Two custody seals overlapping the lid and body of the cooler (on opposite sides of the cooler) were used. Custody seals will

be dated and signed by the sampler. Tight packaging material is to be provided around each sample container and any void around the "freezer pacs." The container is to be securely sealed, clearly labeled, and accompanied by a chain-of-custody record.

Field and Laboratory QA/QC

Volatile organic compounds can be detected in the parts per billion range; therefore, precautions must be exercised to prevent sample contamination by the sampling process itself. The following field and laboratory QA/QC procedures will contribute to the preservation of sample integrity:

- Sample collection will progress from areas least impacted by constituents of concern to those areas most impacted; if known; in any case, background samples were secured first.
- Each sample was collected using appropriately cleaned equipment.
- Trip blanks - were prepared by the laboratory charged with providing sample containers. Trip blanks were prepared with deionized or Type II reagent grade water, transported to the site, handled like other samples collected in the field, and returned to the laboratory for analysis. One trip blank per sampling event was prepared.
- Information about these samples was included in field notebooks.
- Decontamination procedures were employed.

A summary of the soil and ground water QA/QC parameters are included in Tables 1 and 2.

Post-Sampling Procedures

- The sampling area is to be left as close as possible to how it was found.
- All clean-up and security procedures shall be documented in the field notebook.
- Each ground water well is to be capped, locked, and secured before proceeding to the next well.
- Information in data files is to be updated at the termination of each sampling event.

APPENDIX B

BORING LOGS AND WELL COMPLETION DETAILS

MACTEC

BORING NO. **W46-1** SHEET **1** OF **2**

PROJECT **AFRH**

LOCATION **Washington, DC**

COORDINATES

SURFACE ELEVATION DATUM

PROJECT NO. **3552-06-0897**

LOGGED BY **BDG**

SAMPLE INFORMATION						STRATA	DESCRIPTION	WELL CONSTRUCTION DETAIL
DEPTH FEET	LAB SAMPLE	BLOW COUNTS	USCS	Recovery (inches)	PID			
			ASPHALT CONCRETE				6in of Asphalt 6in of Concrete	Locking Cap with flush-mount manhole cover
			CH				Probable FILL orange brown CLAY (CH) dry, no odor	
5		3-3 2		12	0			
							Probable FILL orange brown CLAY (CH) dry, no odor	
			CH					
10		3-7 10		8	0			
							Probable FILL orange-brown with gray mottled areas, CLAY (CH), dry, faint organic odor	Cement Grout: From 0.0 to 20.5' bgs 2.0" ID Sch 40 PVC casing: From 0.0 to 24.5' bgs
			CH					
15		7-11 13		18	0			
							Hard brittle orange and gray mottled silty CLAY (CL), dry, faint chemical odor	
			CL					
20		7-15 17		18	0			
							Stiff red CLAY (CL) dry, no odor	Bentonite Chips: 1/4" From 20.5' to 22.5' bgs
			CL					
25		4-7 12		18	0.5			
							Stiff gray silty SAND (SM), moist, no odor	
			SM					
30		4-10 10		12	1			
							Firm red-gray sandy CLAY (CL) dry, no odor	
			CL					
35		5-7 8		8	0.5			No. 2 Clean Silica Sand Filter Pack: From 22.5' to 45' bgs Slotted Screen: 2" ID Sch 40 PVC 0.010" From 24.5' to 44.5' bgs
			SM				Very hard orange-gray layered sandy SILT (ML) grading into a silty SAND (SM) at 40ft, faint odor, wet	
		13-17 41		18	0.5			

DRILLING CONTRACTOR **Mactec**

DRILLING METHOD **Hollow stem auger**

DRILLING EQUIPMENT **CME55**

DRILLING STARTED **8/25/06** ENDED **8/25/06**

REMARKS

See key sheet for symbols and abbreviations used above.

ENV2A AFRH GINT LOGS.GPJ LAEWNN03.GDT 9/7/06

MACTEC

BORING NO. **W46-1** SHEET **2** OF **2**

PROJECT **AFRH**

LOCATION **Washington, DC**

COORDINATES

SURFACE ELEVATION DATUM

PROJECT NO. **3552-06-0897**

LOGGED BY **BDG**

SAMPLE INFORMATION						STRATA	DESCRIPTION	WELL CONSTRUCTION DETAIL
DEPTH FEET	LAB SAMPLE	BLOW COUNTS	USCS	Recovery (inches)	PID			
		15-39 50/6	SP	18	0		Very dense gray-white fine to medium-grained SAND (SP), wet, no odor	
		8-10 17-17	SP	18	0		Very dense gray-white fine to medium-grained SAND (SP), wet, no odor	
45							Boring Terminated at 45 feet below ground surfance (bgs) on 8/25/06.	Length of End Cap: 0.5' Total Well Depth: 45' bgs

ENV2A AFRH GINT LOGS.GPJ LAEWNN03.GDT 9/7/06

MACTEC

BORING NO. **W48-1** SHEET 1 OF 1

PROJECT **AFRH**

LOCATION **Washington, DC**

COORDINATES

SURFACE ELEVATION DATUM

PROJECT NO. **3552-06-0897**

LOGGED BY **BDG**

DEPTH FEET	LAB SAMPLE	BLOW COUNTS	USCS	Recovery (inches)	PID	STRATA	DESCRIPTION	WELL CONSTRUCTION DETAIL
			GW				0-6in - Surficial gravel	Locking Cap with flush-mount manhole cover
			CL				Probable FILL, orange brown silty CLAY (CL) with trace gravel, dry, no odor	
5		2-4 8		12	0.5			Cement Grout: From 0.0 to 9.5' bgs
			CL				Top 4 in - Probable FILL, orange brown silty CLAY (CL) with trace gravel, dry, no odor	2.0" ID Sch 40 PVC casing: From 0.0 to 13.5' bgs
			SC				Bottom 4in Loose white clayey SAND (SC), dry, no odor	
10		2-4 6		8	0.5			
			CH				Stiff, tan-brown CLAY (CH), sandy in areas, moist, no odor	Bentonite Chips: 1/4" From 9.5' to 11.5' bgs
15		3-5 6		14	0.5			
			SC				Top 15in - Firm orange clayey SAND (SC), moist, no odor	
		4-5 7	CL	18	0.5		Basal 3in - Stiff gray and purple CLAY (CL) damp, no odor	
20			CL				Top 8in - Stiff gray and purple CLAY (CL) damp, no odor	No. 2 Clean Silica Sand Filter Pack: From 11.5' to 29' bgs Slotted Screen: 2" ID Sch 40 PVC 0.010" From 13.5' to 28.5' bgs
		4-6 10	CL	18	0.5		Bottom 10in - Very stiff orange sandy CLAY (CL) and clayey SAND (SC) mix moist, no odor	
25			SP				Very stiff orange sandy CLAY (CL) and clayey SAND (SC) mix moist, no odor - wet, no odor. Basal 3in - Firm, white SAND (SP)	
		3-10 13		18	0.5		Boring terminated at 29.5 feet below ground surface (bgs) on 8/27/06	Length of End Cap: 0.5' Total Well Depth: 29.5' bgs
							Bentonite seal added to the base of the boring from 29' to 29.5' bgs	

DRILLING CONTRACTOR **Mactec**

DRILLING METHOD **Hollow stem auger**

DRILLING EQUIPMENT **CME55**

DRILLING STARTED **8/27/06** ENDED **8/27/06**

REMARKS

See key sheet for symbols and abbreviations used above.

ENV2A AFRH GINT LOGS.GPJ LAEWNN03.GDT 9/7/06

MACTEC

BORING NO. **W75-1** SHEET 1 OF 3

PROJECT **AFRH**

LOCATION **Washington, DC**

COORDINATES

SURFACE ELEVATION DATUM

PROJECT NO. **3552-06-0897**

LOGGED BY **BDG**

DEPTH FEET	LAB SAMPLE	BLOW COUNTS	USCS	Recovery (inches)	PID	STRATA	DESCRIPTION	WELL CONSTRUCTION DETAIL
								Locking Cap with flush-mount manhole cover
			CL					
		3-1						
5		1		6	0		Firm red CLAY (CL), damp, no odor	
			CL					
		1-3						
10		4		12	0.5		Stiff orange-brown silty fine-grained SAND (SM) with trace gravel, damp, no odor - possible fill	
			SM					
		4-4						
15		7		6	0.5		Stiff red-brown CLAY (CL), dry, no odor, 6in fine-grained SAND (SP) interlayer - dry, faint hydrocarbon odor	
			CL					
		4-7						
20		8		18	0		Stiff red-brown CLAY (CL) with trace gravel, moist, no odor	
			CL					
		6-4						
25		6		3	0.5		Stiff red-brown CLAY (CH), gray mottled with iron staining, damp, no odor	
			CH					
		3-6						
30		8		18	0.5		Very stiff red-brown sandy CLAY (CL) grading into a silty CLAY (CL) with trace gravel grading into a basal tan to gray silty SAND (SM) dry, no odor	
			CL					
		2-7						
35		11-16		20	0		Firm tan-to gray fine-grained silty SAND (SM), dry, no odor	Cement Grout: From 0.0 to 69.0' bgs
			SM					2.0" ID Sch 40 PVC casing: From 0.0 to 73.0' bgs
		2-11						
		15-12		18	0			

DRILLING CONTRACTOR **Mactec**

DRILLING METHOD **Hollow stem auger**

DRILLING EQUIPMENT **CME55**

DRILLING STARTED **8/29/06** ENDED **8/29/06**

REMARKS

See key sheet for symbols and abbreviations used above.

ENV2A AFRH GINT LOGS.GPJ LAEWNN03.GDT 9/18/06

MACTEC

BORING NO. **W75-1** SHEET **2** OF **3**

PROJECT **AFRH**

LOCATION **Washington, DC**

COORDINATES

SURFACE ELEVATION DATUM

PROJECT NO. **3552-06-0897**

LOGGED BY **BDG**

SAMPLE INFORMATION						STRATA	DESCRIPTION	WELL CONSTRUCTION DETAIL
DEPTH FEET	LAB SAMPLE	BLOW COUNTS	USCS	Recovery (inches)	PID			
			SP				Dense beige to white fine-grained SAND (SP), dry, no odor	
		2-9 17-18		20	0			
45							Dense beige to white fine-grained SAND (SP), dry, no odor	
			SP					
		15-18 17-18		24	0			
50							Dense beige to white fine-grained SAND (SP), no odor, damp	
			SP					
		10-15 17-14		24	0			
55							Dense beige to white fine-grained SAND (SP), no odor, damp	
			SP					
		6-13 19-17	SP	24	0.5		Dense beige to white fine-grained SAND (SP), no odor, damp	
60								
		6-12 14-14		20	0.5			
65			SP				Firm beige to white coarse-grained SAND (SP), moist, no odor, basal silty CLAY (CL) with trace gravel	
		11-14 17-18		24	0.5			
70							Very stiff red-brown and gray mottled CLAY (CH) with a basal fine-to medium-grained SAND (SP), damp, no odor	Bentonite Chips: 1/4" From 69.0' to 71.0' bgs
			CH					
		8-9 10-12		24	0			
75							Hard red-brown and gray mottled CLAY (CH) damp, no odor, basal 8 inches-tan to red coarse-grained SAND (SP)	
			CH					
		6-7 16-30	SP	24	0.5		SAND (SP)	

DRILLING CONTRACTOR **Mactec**

DRILLING METHOD **Hollow stem auger**

DRILLING EQUIPMENT **CME55**

DRILLING STARTED **8/29/06** ENDED **8/29/06**

REMARKS

See key sheet for symbols and abbreviations used above.

ENV2A_AFRH GINT LOGS.GPJ LAEWNN03.GDT 9/18/06

MACTEC

BORING NO. **W75-1** SHEET **3** OF **3**

PROJECT **AFRH**

LOCATION **Washington, DC**

COORDINATES

SURFACE ELEVATION DATUM

PROJECT NO. **3552-06-0897**

LOGGED BY **BDG**

SAMPLE INFORMATION						STRATA	DESCRIPTION	WELL CONSTRUCTION DETAIL
DEPTH FEET	LAB SAMPLE	BLOW COUNTS	USCS	Recovery (inches)	PID			
			SP				Top 6 inches - Firm white SAND (SP)	
							Bottom: Very stiff white CLAY (CH) dry, no odor	
			CH					
		3-11 13-17		24	0.5			
85							Very hard white SILT (MH) moist, no odor	No. 2 Clean Silica Sand Filter Pack: From 71.0' to 98.5' bgs Slotted Screen: 2" ID Sch 40 PVC 0.010" From 73.0' to 98.0' bgs
			MH					
		11-21 50/5		14	0.5			
90							Very hard white SILT (MH) wet, no odor	
			MH					
		10-8 14-17		24	0.5			
95								
		50/0					Sample refusal at 98 feet below ground surface (bgs) on 8/29/2006. Boring terminated at 98 feet below ground surface (bgs) on 8/29/2006.	Length of End Cap: 0.5' Total Well Depth: 98.5' bgs

ENV2A AFRH GINT LOGS.GPJ LAEWNN03.GDT 9/18/06

MACTEC

BORING NO. **W76-1** SHEET **1** OF **3**

PROJECT **AFRH**

LOCATION **Washington, DC**

COORDINATES

SURFACE ELEVATION DATUM

PROJECT NO. **3552-06-0897**

LOGGED BY **BDG**

SAMPLE INFORMATION						STRATA	DESCRIPTION	WELL CONSTRUCTION DETAIL
DEPTH FEET	LAB SAMPLE	BLOW COUNTS	USCS	Recovery (inches)	PID			
			ASPHALT				4 inches of Asphalt	Locking Cap with flush-mount manhole cover
		4-14 15	CL	4	0.5		Probable fill brown silty CLAY (CL) with trace gravel, dry, no odor	
5							Probable fill brown silty CLAY (CL) with trace gravel, dry, no odor	
		5-6 5	CL	16	0.5			
10							Firm light brown CLAY (CH) with some silt, dry, no odor	
		3-3 4	CH	14	0.5			
15							Firm light brown CLAY (CH) with some silt, dry, no odor	
		2-4 5	CH	18	1			
20							Firm brown silty SAND (SM) with trace clay, moist, no odor	
		4-13 9	SM	18	0			
25							Very stiff brown CLAY (CL) dry, no odor	
		6-8 9	CL	18	0			
30							Very stiff brown CLAY (CL) dry, no odor	
		3-6 9	CL	18	0			Cement Grout: From 0.0 to 65.5' bgs
35							Top 10" - Very stiff brown CLAY (CL) dry, no odor	2.0" ID Sch 40 PVC casing: From 0.0 to 69.5' bgs
			CL				Bottom 6" - Firm white clayey SAND (SC), dry, no odor	
		3-3 12	SC	16	0			

DRILLING CONTRACTOR **Mactec**

DRILLING METHOD **Hollow stem auger**

DRILLING EQUIPMENT **CME55**

DRILLING STARTED **8/28/06** ENDED **8/28/06**

REMARKS

See key sheet for symbols and abbreviations used above.

ENV2A AFRH GINT LOGS.GPJ LAEWNN03.GDT 9/18/06

MACTEC

BORING NO. **W76-1** SHEET **2** OF **3**

PROJECT **AFRH**

LOCATION **Washington, DC**

COORDINATES

SURFACE ELEVATION DATUM

PROJECT NO. **3552-06-0897**

LOGGED BY **BDG**

SAMPLE INFORMATION						STRATA	DESCRIPTION	WELL CONSTRUCTION DETAIL
DEPTH FEET	LAB SAMPLE	BLOW COUNTS	USCS	Recovery (inches)	PID			
		2-8 8	CH	18	0		Mix of a very stiff white sandy CLAY (CH) and firm white clayey SAND (SC), dry, no odor	
45							Dense white medium-grained SAND (SP) damp, no odor	
		4-17 18	SP	18	0			
50							Dense white medium-grained SAND (SP) damp, no odor	
		12-14 15	SP	18	0			
55							Dense white medium-grained SAND (SP) damp, no odor	
		13-14 14	SP	18	0.5			
60							Dense white medium-grained SAND (SP) damp, no odor	
		3-13 16	SP	18	0			
65							Dense red, orange, and white medium-grained SAND (SP) damp, no odor	Bentonite Chips: 1/4" From 65.5' to 67.5' bgs
		14-15 15	SP	18	0			
70							Dense red, orange, and white medium-grained SAND (SP) damp, no odor	
		13-50/5	SP	11	0			
75							Top 6" - Dense red, orange, and white medium-grained SAND (SP) damp, no odor	No. 2 Clean Silica Sand Filter Pack: From 67.5' to 85.0' bgs Slotted Screen: 2" ID Sch 40 PVC 0.010" From 69.5' to 84.5' bgs
			SW				Middle 8" - gravelly SAND (SW)	
		3-16 11	CH	18	0		Bottom 4" - sandy CLAY (CH) moist, no odor	

DRILLING CONTRACTOR **Mactec**

DRILLING METHOD **Hollow stem auger**

DRILLING EQUIPMENT **CME55**

DRILLING STARTED **8/28/06** ENDED **8/28/06**

REMARKS

See key sheet for symbols and abbreviations used above.

ENV2A AFRH GINT LOGS.GPJ LAEWNN03.GDT 9/18/06

MACTEC

BORING NO. **W76-1** SHEET **3** OF **3**

PROJECT **AFRH**

LOCATION **Washington, DC**

COORDINATES

SURFACE ELEVATION DATUM

PROJECT NO. **3552-06-0897**

LOGGED BY **BDG**

SAMPLE INFORMATION						STRATA	DESCRIPTION	WELL CONSTRUCTION DETAIL
DEPTH FEET	LAB SAMPLE	BLOW COUNTS	USCS	Recovery (inches)	PID			
			GP				Top 10" - Loose fine-grained GRAVEL (GP) with some sand, wet, no odor	
			CH				Bottom 4" - CLAY (CH) with trace sand, moist	
		2-5 5		14	0.5			
85							Boring terminated at 85 feet below ground surface (bgs) on 8/28/06.	Length of End Cap: 0.5' Total Well Depth: 85.0' bgs

ENV2A AFRH GINT LOGS.GPJ LAEWNN03.GDT 9/18/06

MACTEC

BORING NO. **W77-1** SHEET 1 OF 3

PROJECT **AFRH**

LOCATION **Washington, DC**

COORDINATES

SURFACE ELEVATION DATUM

PROJECT NO. **3552-06-0897**

LOGGED BY **BDG**

DEPTH FEET	LAB SAMPLE	BLOW COUNTS	USCS	Recovery (inches)	PID	STRATA	DESCRIPTION	WELL CONSTRUCTION DETAIL
			ASPHALT				4in of Asphalt	Locking Cap with flush-mount manhole cover
			GW				4in of gravel	
			CL				Stiff orange-red CLAY (CL), dry, no odor, possible fill	
5		2-4 8		6	0.5			
			CL					
10		2-10 14		10	0.5			
			CL					
15		2-7 11		12	1		Stiff orange-red CLAY (CL), dry, no odor, possible fill with 3 inches of red and black medium-to coarse-grained sand	
			CL					
20		7-15 50/5		16	0.5		Stiff light brown fine sandy CLAY (CH) moist to wet at base, no odor	
			CH					
25		3-5 8	CH	18	0		Stiff light brown fine sandy CLAY (CH), moist, no odor	
		8-9 10-12		18	0		Dense light brown to gray fine-to medium-grained SAND (SP), damp, no odor	
			SP					
30		5-15 21		12	0.5		Firm brown silty SAND (SM) damp, no odor	
			SM					Cement Grout: From 0.0 to 65.5' bgs
35		2-3 18		8	0.5			2.0" ID Sch 40 PVC casing: From 0.0 to 69.5' bgs
			SM				Firm brown silty SAND (SM) damp, no odor becomes dark brown to black	
			SM				Bottom 5in - Dark brown to black silty SAND (SM), damp, no odor	
		23-50/5		10	0			

DRILLING CONTRACTOR **Mactec**

DRILLING METHOD **Hollow stem auger**

DRILLING EQUIPMENT **CME55**

DRILLING STARTED **8/26/06** ENDED **8/26/06**

REMARKS

See key sheet for symbols and abbreviations used above.

ENV2A AFRH GINT LOGS.GPJ LAEWNN03.GDT 9/18/06

MACTEC

BORING NO. **W77-1** SHEET **2** OF **3**

PROJECT **AFRH**

LOCATION **Washington, DC**

COORDINATES

SURFACE ELEVATION DATUM

PROJECT NO. **3552-06-0897**

LOGGED BY **BDG**

DEPTH FEET	LAB SAMPLE	BLOW COUNTS	USCS	Recovery (inches)	PID	STRATA	DESCRIPTION	WELL CONSTRUCTION DETAIL
			CH				Very stiff gray silty CLAY (CH) with trace sand, moist, no odor	
45		4-6 12		18	0			
			MH				Very stiff orange-gray layered sandy SILT (MH), damp, no odor	
50		4-8 16		18	0.5			
			SP				Dense white medium grained SAND (SP) dry, no odor	
55		9-21 21		18	1			
			SP					
60		33-50/5		11	0		Dense white medium grained SAND (SP) dry, no odor with trace clay	
			SP					
65		12-41 50/3		15	0		Dense white medium grained SAND (SP) dry, no odor	Bentonite Chips: 1/4" From 65.5' to 67.5' bgs
			SP					
70		39-50/5		11	0			
			SP					
75		6-50/5		11	0		Same as above with bottom 10 inches red-brown colored coarse-grained SAND (SP), moist, no odor	
			SP					
		5-12 46		16	0.5			No. 2 Clean Silica Sand Filter Pack: From 67.5' to 90.0' bgs

DRILLING CONTRACTOR **Mactec**

DRILLING METHOD **Hollow stem auger**

DRILLING EQUIPMENT **CME55**

DRILLING STARTED **8/26/06** ENDED **8/26/06**

REMARKS

See key sheet for symbols and abbreviations used above.

ENV2A_AFRH GINT LOGS.GPJ LAEWNN03.GDT 9/18/06

MACTEC

BORING NO. **W77-1** SHEET 3 OF 3

PROJECT **AFRH**

LOCATION **Washington, DC**

COORDINATES

SURFACE ELEVATION DATUM

PROJECT NO. **3552-06-0897**

LOGGED BY **BDG**

SAMPLE INFORMATION						STRATA	DESCRIPTION	WELL CONSTRUCTION DETAIL
DEPTH FEET	LAB SAMPLE	BLOW COUNTS	USCS	Recovery (inches)	PID			
			GP				Dense tan GRAVEL (GP) with trace coarse sand, wet, no odor	Slotted Screen: 2" ID Sch 40 PVC 0.010" From 69.5' to 89.5' bgs
		10-15 33		18	0			
85							Dense tan GRAVEL (GP) with trace coarse sand, wet, no odor with basal white silty CLAY (CH) at bottom of sample	
			GP					
		9-10 18	CH	18	0			
90							Boring terminated at 90 feet below ground surface (bgs) on 8/26/06	Length of End Cap: 0.5' Total Well Depth: 90.0' bgs

ENV2A AFRH GINT LOGS.GPJ LAEWNN03.GDT 9/18/06

MACTEC

BORING NO. **W78-1** SHEET 1 OF 3

PROJECT **AFRH**

LOCATION **Washington, DC**

COORDINATES

SURFACE ELEVATION DATUM

PROJECT NO. **3552-06-0897**

LOGGED BY **BDG**

DEPTH FEET	LAB SAMPLE	BLOW COUNTS	USCS	Recovery (inches)	PID	STRATA	DESCRIPTION	WELL CONSTRUCTION DETAIL
			ASPHALT				0-6 inches - Asphalt	Locking Cap with flush-mount manhole cover
			GC				6-8 inches - Gravel	
		11-4	SP				8-10 inches - possible fill orange brown SAND (SP) with trace gravel	
		5-4	CH	8	0.5			
		14-7					Stiff red brown silty CLAY (CH) moist, moderate unknown odor	
		7-8	CH	8	0.5			
5							Same CLAY as above, moderate to strong unknown odor	
							Stiff red and gray mottled CLAY (CL) dry, faint unknown odor	
			CL					
		5-6						
		6-5		3	0			
10							Hard orange brown CLAY (CL) with trace silty gravel, dry, no odor	
			CL					
		7-9						
		21-24		20	1			
15							Very stiff red brown CLAY (CH) with trace gravel, dry, no odor	
			CH					
		7-9						
		10-12		3	1			
20							Drill rig broke, no sample recovery, augering to 25 feet. Work stopped to fix rig. Restarted drilling on 9/6/06.	
		2		0				
25							Very stiff red CLAY (CH) with trace sand, no odor, moist	
			CH					
		7-7						
		10-12		20	0			
30							Very stuff red CLAY (CH), no odor, moist	
			CH					
		3-10						
		11-11		16	0.5			
35							Hard brown to orange brown CLAY (CH) moist, no odor	Cement Grout: From 0.0 to 70.5' bgs
			CH					2.0" ID Sch 40 PVC casing: From 0.0 to 74.5' bgs
		3-8						
		12-13		18	0.5			

DRILLING CONTRACTOR **Mactec**

DRILLING METHOD **Hollow stem auger**

DRILLING EQUIPMENT **CME55**

DRILLING STARTED **8/30/06** ENDED **9/6/06**

REMARKS **At 25ft bgs, drilling resumed on 9/6/2006**

See key sheet for symbols and abbreviations used above.

ENV2A AFRH GINT LOGS.GPJ LAEWNN03.GDT 9/18/06

MACTEC

BORING NO. **W78-1** SHEET **2** OF **3**

PROJECT **AFRH**

LOCATION **Washington, DC**

COORDINATES

SURFACE ELEVATION DATUM

PROJECT NO. **3552-06-0897**

LOGGED BY **BDG**

SAMPLE INFORMATION						STRATA	DESCRIPTION	WELL CONSTRUCTION DETAIL
DEPTH FEET	LAB SAMPLE	BLOW COUNTS	USCS	Recovery (inches)	PID			
45		2-7 10-14	CH	20	1		Hard gray CLAY (CH) with some black needle shaped sand sized fragments of possible organic material. Grades to-orange-brown-tan fine-grained SAND (SP)	
		4-17 25-33	SC	24	0		Very dense gray and white to orange and white mottled clayey SAND (SC), moist, no odor	
50							Very dense white, medium-to coarse-grained SAND (SP) with trace gravel, dry, no odor	
55		11-23 25-30	SP	10	0			
60		19-19 21-23	SP	22	0		Very dense white, red, and orange medium-to coarse-grained SAND (SP)	
65		WOH-3 20-28	SP	8	0.5			
70		4-15 16-18	SP	24	0.5		Very dense red and orange medium-to coarse-grained SAND (SP), moist, no odor	Bentonite Chips: 1/4" From 70.5' to 72.5' bgs
75		7-11 10-11	SP	12	0.5		Some gravel, damp to moist	
		20-50/5	SP	10	0.5			

DRILLING CONTRACTOR **Mactec**

DRILLING METHOD **Hollow stem auger**

DRILLING EQUIPMENT **CME55**

DRILLING STARTED **8/30/06** ENDED **9/6/06**

REMARKS **At 25ft bgs, drilling resumed on 9/6/2006**

See key sheet for symbols and abbreviations used above.

ENV2A AFRH GINT LOGS.GPJ LAEWNN03.GDT 9/18/06

MACTEC

BORING NO. **W78-1** SHEET 3 OF 3

PROJECT **AFRH**

LOCATION **Washington, DC**

COORDINATES

SURFACE ELEVATION DATUM

PROJECT NO. **3552-06-0897**

LOGGED BY **BDG**

SAMPLE INFORMATION						STRATA	DESCRIPTION	WELL CONSTRUCTION DETAIL
DEPTH FEET	LAB SAMPLE	BLOW COUNTS	USCS	Recovery (inches)	PID			
			CH				Hard gray-brown CLAY (CH), moist, no odor	No. 2 Clean Silica Sand Filter Pack: From 72.5' to 90.0' bgs Slotted Screen: 2" ID Sch 40 PVC 0.010" From 74.5' to 89.5' bgs
		7-11 15-18	SM	24	0.5		Silty SAND (SM), wet, no odor	
85							Very stiff dary gray to brown CLAY (CH) with some sand and silt, wet, no odor	
			CH					
		4-9 9-10		18				
90							Boring terminated at 90 feet below ground surface (bgs) on 9/6/2006.	Length of End Cap: 0.5' Total Well Depth: 90.0' bgs

Soil Boring and Hand Auger Logs

Building 46

Geoprobe Soil Boring Logs

Date	Soil Boring No.	Depth (feet bgs)	Soil Description-Stratigraphy	Screened Samples (feet bgs)	PID Results (ppm)
8/17/2006	G46-1	0-0.3	Asphalt	0-1.5	0.5
		0.3-0.8	Gravel and sand fill, dry, no odor	1.5-3	1.5
		0.8-1	Red sand and gravel fill with brick pieces, dry, no odor	3-4.5	6
		1-5	Orange-brown silty CLAY (CL) with trace gravel, fill material, dry, faint "moth ball" odor	4.5-6	14
		5-6	Orange-brown CLAY (CL) with red and black coarse sand and gravel, fill material, dry,	6-7.5	4
			strong naphthalene odor	7.5-9	5
		6-10	Orange-brown alluvial CLAY (CL) with trace gravel, dry, faint naphthalene odor	9-10.5	6
		10-11.5	Orange gravelly, alluvial SAND (SW), dry, moderate to strong naphthalene odor	10.5-12	19
		11.5-15	Orange and gray alluvial CLAY (CL) with trace gravel, moist, no odor	12-13.5	4
		15-16	Orange and gray alluvial CLAY (CL) with trace gravel, moist, faint naphthalene odor	13.5-15	4
		16-17.5	Coarse gravelly, alluvial SAND (SW), dry, no odor	15-16.5	5
		17.5-20	Orange alluvial CLAY (CL) with trace gravel, dry, no odor	16.5-18	2
		20-25	Orange alluvial CLAY (CL) with trace gravel, dry, faint naphthalene odor odor	18-19.5	1
			Boring terminated at 25 feet bgs	19.5-21	1.5
				21-22.5	2.5
				22.5-24	2.5
				24-25	2
8/17/2006	G46-2	0-0.25	Asphalt	0-1.5	3
		0.25-0.5	Gravel and sand fill, dry, no odor	1.5-3	2.5
		0.5-4	Orange brown silty CLAY (CL) fill with trace gravel, moist, no odor	3-4.5	2
		4-4.5	Sand, gravel, and brick fill, dry, no odor	4.5-6	2
		4.5-7.5	Tan-brown, silty, alluvial CLAY (CL), moist, no odor	6-7.5	1.5
		7.5-8	Green-brown, silty, alluvial CLAY (CL), moist, no odor	7.5-9	2.5
		8-10	Tan-orange alluvial CLAY (CL), moist, no odor	9-10.5	0.5
		10-13	Tan-orange alluvial CLAY (CL) grading into a gray alluvial CLAY (CL), moist, no odor	10.5-12	0.5
		13-23	Orange-brown, sandy, alluvial CLAY (CL) with trace gravel, dry, no odor	12-13.5	1.5
			Boring terminated at 23 feet bgs	13.5-15	1
				15-16.5	1
				16.5-18	1.5
				18-19.5	0.5
				19.5-21	1
				21-22.5	1.5
				22.5-23	2
8/17/2006	G46-3	0-0.5	Vegetation and loose topsoil	0-1.5	4
		0.5-2	Loose, tan, SILT (ML) fill, dry, no odor	1.5-3	2
		2-4	Friable, red, clayey SILT (ML) fill, dry, no odor	3-4.5	2.5
		4-15	Sand, gravel, and brick fill, dry, no odor	4.5-6	3
		15-16	Gray, hard, alluvial CLAY (CL), moist, no odor	6-7.5	2.5
		16-18	Red-gray alluvial CLAY (CL), dry, strong organic odor	7.5-9	1.5
		18-23	Red-gray alluvial CLAY (CL), dry, no odor	9-10.5	2
			Boring terminated at 23 feet bgs	10.5-12	2
				12-13.5	1.5
				13.5-15	1.5
				15-16.5	1
				16.5-18	4
				18-19.5	2
				19.5-21	2
				21-23	1.5

Building 48

Geoprobe Soil Boring Logs

Date	Soil Boring No.	Depth (feet bgs)	Soil Description-Stratigraphy	Screened Samples (feet bgs)	PID Results (ppm)
8/16/2006	G48-2	0-0.5	Asphalt	0-1	2
		0.5-1	Brown, gravel, sand and clay fill, dry, no odor	1-2	2
		1-2	Brown, gravel, sand and clay fill, dry, faint chemical odor	2-3	1.5
		2-3.5	Brown, gravel, sand and clay fill, dry, no odor	3-4	1.5
		3.5-4.5	Brown alluvial CLAY (CL), moist, no odor	4-5	1.5
			Boring terminated at 4.5 feet bgs on refusal material		
8/16/2006	G48-4	0-0.5	Asphalt	0-1	1.5
		0.5-1	Brown, gravel and sand fill, dry, no odor	1-2	1.5
		1-2	Brown, gravel, sand and clay fill, moist, no odor		
		2	Refusal at 2 feet		
			Boring terminated at 2 feet bgs on refusal material		
8/16/2006	G48-5	0-0.5	Asphalt	0-1	1.5
		0.5-0.8	Gravel	1-2	3.5
		0.8-1	Brown, gravel and clay fill, dry, organic odor	2-3	2
		1-3	Brown alluvial CLAY (CL) with trace gravel, moist, faint organic odor	3-3.5	1.5
		3-3.5	Brown alluvial CLAY (CL) with trace gravel, moist, no odor		
			Boring terminated at 3.5 feet bgs on refusal material		

Hand Auger Logs

Date	Soil Boring No.	Depth (feet bgs)	Soil Description-Stratigraphy	Screened Samples (feet bgs)	PID Results (ppm)
8/2/2006	H48-1	0-0.25	Topsoil and organic debris	0-1	3
		0.25-1.1	Brown, hard, mixture of sand, silt, and coarse gravel fill, very compact, dry, no odor		
			Refusal at 1.1 feet bgs, boring terminated on refusal material		
8/16/2006	H48-3	0-0.2	Vegetation and organic debris	0-1	0.5
		0.2-2.75	Brown SILT (ML) with trace clay, sand, and coarse gravel fill, dry, no odor	1-2	1
			Refusal at 2.75 feet bgs, boring terminated on refusal material	2-2.75	3

Building 69

Hand Auger Log

Date	Soil Boring No.	Thickness (feet)	Soil Description-Stratigraphy	Screened Samples (feet bgs)	PID Results (ppm)
8/3/2006	H69-1	0-0.5	Loose, gray sand and silt sized ash with trace gravel sized fragments, dry	NA	--

Building 75					
Geoprobe Soil Boring Logs					
Date	Soil Boring No.	Depth (feet bgs)	Soil Description-Stratigraphy	Screened Samples (feet bgs)	PID Results (ppm)
8/17/2006	G75-1	0-0.3	Asphalt	0-1.5	10
		0.3-0.8	Concrete	1.5-3	9
		0.8-1	Black, sandy, gravelly, alluvial CLAY (CL), dry, moderate to hydrocarbon odor	3-4.5	32
		1-5	Brown-red alluvial CLAY (CL) with trace sand and gravel, dry, moderate to very strong hydrocarbon odor	4.5-6	35
				6-7.5	6
		5-6	Green-gray alluvial CLAY (CL), dry, hydrocarbon odor	7.5-9	2
		6-8	Brown-tan alluvial CLAY (CL)with trace sand and gravel, dry, faint to no odor	9-10.5	1.5
		8-10	Red, hard, alluvial CLAY (CL) with trace gravel, dry, no odor	10.5-12	2
		10-14	Red-brown to orange-brown alluvial CLAY (CL) with some sand and gravel, dry, no odor	12-13.5	0.5
			Boring terminated at 14 feet bgs	13.5-14	1
8/17/2006	G75-2	0-0.3	Asphalt	0-1.5	10
		0.3-0.6	Gravel and sand fill, dry, no odor	1.5-3	14
		0.6-4	Brown, black, and red alluvial CLAY (CL) with some gravel, dry, moderate hydrocarbon odo	3-4.5	36
		4-4.5	Green-gray alluvial CLAY (CL), dry, hydrocarbon odor	4.5-6	20
		4.5-5	Orange-red alluvial CLAY (CL), dry, faint to moderate hydrocarbon odor	6-7.5	4
		5-6	Orange-red alluvial CLAY (CL)with a 2-inch sand and gravel layer having a moderate to strong hydrocarbon odor, dry	7.5-9	0.5
				9-10.5	8
		6-10	Orange-red alluvial CLAY (CL)with some gravel, dry, no odor	10.5-12	1
		10-10.5	Orange-red alluvial CLAY (CL) with trace gravel and a green-gray staining, dry, faint to moderate hydrocarbon odor	12-13.5	1.5
				13.5-14	1
		10.5-13	Orange alluvial CLAY (CL) with trace gravel, dry, no odor		
		13-14	Tan-orange sandy, gravelly, alluvial CLAY (CL), dry, faint to no odor		
			Boring terminated at 14 feet bgs		
8/17/2006	G75-3	0-0.25	Asphalt	0-1.5	1.5
		0.25-0.5	Gravel	1.5-3	14
		0.5-0.8	Red, brown, and black gravelly alluvial CLAY (CL), dry, moderate hydrocarbon odor	3-4.5	10
		0.8-4	Gray-green alluvial CLAY (CL) with trace travel, dry, moderate hydrocarbon odor	4.5-6	2
		4-4.6	Orange alluvial CLAY (CL) with trace gravel, dry, no odor	6-7.5	1.5
		4.6-5	Green-gray alluvial CLAY (CL), dry, moderate to strong hydrocarbon odor	7.5-9	2
		5-10	Red-orange, hard, alluvial CLAY (CL), dry, no odor	9-10.5	3
		10-14	Orange alluvial CLAY (CL) with trace gravel, dry, moderate hydrocarbon odor from 10 to 12.5 ft.	10.5-12	6
				12-13.5	2
			Boring terminated at 14 feet bgs	13.5-14	2
8/17/2006	G75-4	0-0.25	Asphalt	0-1.5	1.5
		0.25-0.6	Gravel	1.5-3	10
		0.6-1	Red-brown, sandy, silty, alluvial CLAY (CL), dry, no odor	3-4.5	4
		1-2	Gray-green sandy, alluvial CLAY (CL), dry, faint hydrocarbon odor	4.5-6	8
		2-5	Orange sandy alluvial SILT (ML) grading into a sandy alluvial CLAY (CL) to an alluvial CLAY (CL) at the base, dry, no odor	6-7.5	5
				7.5-9	5
		5-10	Orange alluvial CLAY (CL) with trace gravel, faint hydrocarbon odor at the top, no odor at the base, moist at 9ft.	9-10.5	2
				10.5-12	12
		10-12	Orange alluvial CLAY (CL) with trace gravel, moist, moderate hydrocarbon odor	12-13.5	4
		12-15	Orange alluvial CLAY (CL) with trace gravel, moist, no odor	13.5-15	2
			Boring terminated at 15 feet bgs		
Soil Knifing Boring Logs					
3/12/2007	SB01	2-3	Light brown fine silty CLAY (CL), dry, no odor. Apparent 6-8 inch diameter steel pipe at 3 feet.	2-3	0.5
3/12/2007	SB02	5-6	Light brown silty CLAY (CL), dry , no odor	5-6	0.5
3/12/2007	SB03	5-5.3	Light brown silty CLAY (CL) with trace gravel, and some rock, asphalt, and concrete fragments, dry, no odor	5-5.3	0
3/12/2007	SB04	5-6	Gray silty CLAY (CH), dry, moderate (old weathered) hydrocarbon odor	5-6	4
3/12/2007	SB05	5-6	Reddish orange gravelly CLAY (CL), damp, no odor	5-6	1
3/12/2007	SB06	5-6	Dark red brown to gray black silty CLAY (CL) with trace gravel, moist, faint hydrocarbon odor	5-6	2.5
Building 76					
Geoprobe Soil Boring Logs					
Date	Soil Boring No.	Depth (feet bgs)	Soil Description-Stratigraphy	Screened Samples (feet bgs)	PID Results (ppm)
8/16/2006	G76-1	0-0.5	Asphalt	0-1.5	2
		0.5-0.8	Gravel and sand fill, dry, no odor	1.5-3	1.5
		0.8-1.5	Red-brown alluvial CLAY (CL), dry, no odor	3-4.5	1.5
		1.5-4.5	Red-brown alluvial CLAY (CL) with trace gravel, dry, no odor	4.5-6	15
		4.5-6	Red-brown alluvial CLAY (CL) with trace gravel, dry, hydrocarbon odor	6-7.5	3
		6-10.5	Red-brown alluvial CLAY (CL) with trace gravel, dry, no odor	7.5-9	2.5
		10.5-12	Red-brown alluvial CLAY (CL) with trace gravel, dry, diesel fuel odor	9-10.5	2
		12-13.5	3 -inch gravel layer above a tan-red alluvial CLAY (CL) with some silt, dry, faint to no odor	10.5-12	20
		13.5-14	Red to orange alluvial CLAY (CL) with trace silt, dry, no odor	12-13.5	12
			Boring terminated at 14 feet bgs	13.5-14	2
8/16/2006	G76-2	0-0.3	Concrete	0-1.5	0
		0.3-0.6	Gravel	1.5-3	0
		0.6-4.5	Red-orange-brown mottled, hard, alluvial CLAY (CL) with trace gravel, dry, no odor	3-4.5	0.5
		4.5-9	Red-orange-brown mottled, hard, alluvial CLAY (CL), dry, no odor	4.5-6	0.5
		9-10	Red-orange-brown mottled, hard, alluvial CLAY (CL), greasy-oily feel, moderate metallic odor	6-7.5	1
				7.5-9	1.5
		10-13	Red-orange-brown mottled, hard, alluvial CLAY (CL), dry, moderate metallic/burnt odor	9-10.5	4
		13-14	Red-orange-brown mottled, hard, alluvial CLAY (CL), dry, no odor	10.5-12	6
			Boring terminated at 14 feet bgs	12-14	6
8/16/2006	G76-3	0-0.3	Concrete	0-1.5	0
		0.3-1	Gravel	1.5-3	0.5
		1-4.5	Red-brown alluvial CLAY (CL) with some gravel and trace black veins, dry, no odor	3-4.5	1
		4.5-6	Red, hard, alluvial CLAY (CL), dry, faint metallic odor	4.5-6	2
		6-7.5	Red, hard, alluvial CLAY (CL), greasy-oily feel, faint to moderate metallic odor	6-7.5	3
		7.5-9	Red, hard, alluvial CLAY (CL), greasy-oily feel, moderate metallic odor	7.5-9	5
		9-10.5	Red, hard, alluvial CLAY (CL), greasy-oily feel, strong metallic odor	9-10.5	6
		10.5-11	Red-brown alluvial CLAY (CL), dry, no odor	10.5-12	2
		11-14	Light orange-brown, sandy, alluvial CLAY (CL), dry, no odor	12-14	2
			Boring terminated at 14 feet bgs		

8/16/2006	G76-4	0-0.3	Concrete	0-1.5	0
		0.3-0.6	Gravel	1.5-3	1
		0.6-4.5	Brown alluvial CLAY (CL) with trace sand and gravel, dry, no odor	3-4.5	1
		4.5-7	Light brown alluvial CLAY (CL), moist, no odor	4.5-6	1
		7-8	Orange-brown alluvial CLAY (CL) with trace gravel, moist, faint diesel odor at base	6-7.5	1.5
		8-10	Red-brown, hard, alluvial CLAY (CL), dry, no odor	7.5-9	2
		10-14	Red-brown, hard, alluvial CLAY (CL) with some sand and silt, moist, no odor	9-10.5	1
			Boring terminated at 14 feet bgs	10.5-12	1
				12-14	0.5

Building 77					
Geoprobe Soil Boring Logs					
Date	Soil Boring No.	Depth (feet bgs)	Soil Description-Stratigraphy	Screened Samples (feet bgs)	PID Results (ppm)
8/16/2006	G77-1	0-0.3	Asphalt	0-1	0
		0.3-0.8	Orange mix of loose sand and gravel fill, dry, no odor	1-2	0.5
		0.8-5	Orange-red, hard, alluvial CLAY (CL), dry, no odor	2-3	0.5
			Boring terminated at 5 feet bgs	3-4	0.5
				4-5	0.5
8/16/2006	G77-2	0-0.4	Concrete	0-1	0.5
		0.4-0.6	Gravel	1-2	1.5
		0.6-1	Sand, gravel, and clay fill, dry, no odor	2-3	1.5
		1-3	Orange-red, mottled, alluvial CLAY (CL), dry, faint chemical odor	3-4	1
		3-5	Orange-red, mottled, alluvial CLAY (CL), dry, no odor	4-5	0
			Boring terminated at 5 feet bgs		
8/16/2006	G77-3	0-0.4	Concrete	0-1	1.5
		0.4-0.5	Gravel	1-2	1.5
		0.5-5	Red, hard, alluvial CLAY (CL), dry, no odor	2-3	1
			Boring terminated at 5 feet bgs	3-4	1.5
				4-5	1.5
8/16/2006	G77-4	0-0.4	Concrete	0-1	2
		0.4-0.6	Gravel	1-2	1.5
		0.6-2	Red-orange alluvial CLAY (CL), dry, faint chemical odor	2-3	1
		2-5	Red-orange alluvial CLAY (CL), dry, no odor	3-4	1
			Boring terminated at 5 feet bgs	4-5	1
8/16/2006	G77-5	0-0.3	Asphalt	0-1	0
		0.3-1	Orange mix of loose sand and gravel fill, dry, no odor	1-2	2
		1-5	Orange-red, hard, alluvial CLAY (CL) with trace gray veins, dry, no odor	2-3	1
			Boring terminated at 5 feet bgs	3-4	1
				4-5	0.5
8/16/2006	G77-6	0-0.3	Asphalt	0-1	4
		0.3-0.6	Orange mix of loose sand and gravel fill, dry, no odor	1-2	2.5
		0.6-1	Orange-red, hard, alluvial CLAY (CL), dry, moderate chemical odor	2-3	1
		1-2	Orange-red, hard, alluvial CLAY (CL), dry, faint chemical odor	3-4	1
		2-5	Orange-red, hard, alluvial CLAY (CL), dry, no odor	4-5	1
			Boring terminated at 5 feet bgs		
Building 78					
Hand Auger Logs					
Date	Soil Boring No.	Depth (feet bgs)	Soil Description-Stratigraphy	Screened Samples (feet bgs)	PID Results (ppm)
8/7/2006	H78-1	0-0.4	Concrete	0-1	0
		0.4-0.75	Gravel, wet at 1ft, no odor	1-2	0.5
		0.75-5	Red alluvial CLAY (CL) with trace silt, moist, no odor	2-3	1.5
			Boring terminated at 5 feet bgs	3-4	1.5
				4-5	2
8/7/2006	H78-2	0-2	Gravel, wet at 1.5ft, no odor	0-1	--
		2-5	Red alluvial CLAY (CH) wet, faint chemical odor	1-2	--
			Boring terminated at 5 feet bgs	2-3	1.5
				3-4	1
				4-5	1
8/7/2006	H78-3	0-2	Gravel, wet at 1ft, no odor	0-1	--
		2-3.3	Orange alluvial CLAY (CH) with some gravel and silt, wet, moderate chemical odor	1-2	--
		3.3-3.9	Gray-green alluvial CLAY (CH), with trace gravel, wet, moderate chemical odor	2-3	1.5
		3.9-5	Orange alluvial CLAY (CL) with trace gravel and silt, wet, moderate chemical odor	3-4	2
			Boring terminated at 5 feet bgs	4-5	2
8/3/2006	H78-4	0-0.25	Gravel	0-1	1.5
		0.25-0.8	Brown, sandy, alluvial CLAY (CL) with trace gravel, moist, no odor	1-2	3
		0.8-2	Orange, sandy, alluvial CLAY (CL) with trace gravel, moist, no odor	2-3	2
		2-3	Orange alluvial SAND (SM) overlying gray alluvial CLAY (CL) overlying red alluvial CLAY	3-4	3
			(CL), wet, faint chemical odor	4-5	2
		3-4.5	Varigated red, gray, and orange, alluvial CLAY (CL), moist, faint chemical odor		
			Boring terminated at 5 feet bgs		
8/7/2006	H78-5	0-0.3	Asphalt	0-1	1
		0.3-1.25	Gravel and sand fill, dry, no odor	1-2	2.5
		1.25-1.8	Red alluvial CLAY (CL), dry, faint chemical odor		
			Refusal at 1.8 feet bgs, boring terminated		
8/3/2006	H78-6	0-3	Gravel, wet at 1.5ft	0-1	--
		3-3.5	Orange alluvial SAND (SC) with some clay, wet, no odor	1-2	--
			Boring terminated at 3.5 feet bgs	2-3	--
				3-3.5	2

Notes:
Prepared/Date: BDG 8/22/06
Checked/Date: PJ 9/7/06

See Figures 5 and 6 for sample locations
Borings advanced using a direct-push geoprobe rig or stainless steel hand auger
PID - Photo ionization detector field headspace organic vapor reading
bgs - Below the ground surface
ppm - Parts per million
-- Sample interval not analyzed by PID
NA- Not applicable

APPENDIX C
LABORATORY ANALYTICAL REPORTS

TestAmerica
ANALYTICAL TESTING CORPORATION
2960 Foster Creighton Road Nashville, TN 37204 * 800-765-0980 * Fax 615-726-3404

March 22, 2007 10:17:12AM

Client: MACTEC Engineering & Consulting, Inc. (3740)
21740 Beaumeade Circle, Suite 150
Ashburn, VA 20147
Attn: Brent Chapman

Work Order: NQC1739
Project Name: AFRH
Project Nbr: [none]
P/O Nbr: APO# 78372
Date Received: 03/13/07

SAMPLE IDENTIFICATION	LAB NUMBER	COLLECTION DATE AND TIME
SB02	NQC1739-01	03/12/07 11:00
SB04	NQC1739-02	03/12/07 13:00
SB06	NQC1739-03	03/12/07 14:00
Trip (2)	NQC1739-04	03/12/07 00:01

An executed copy of the chain of custody, the project quality control data, and the sample receipt form are also included as an addendum to this report. If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-800-765-0980. Any opinions, if expressed, are outside the scope of the Laboratory's accreditation.
.

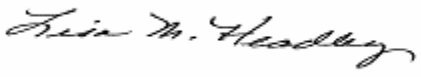
The Chain(s) of Custody, 2 pages, are included and are an integral part of this report.

These results relate only to the items tested. This report shall not be reproduced except in full and with permission of the laboratory.

Estimated uncertainity is available upon request.

This report has been electronically signed.

Report Approved By:



Lisa Headley

Senior Project Manager

TestAmerica
ANALYTICAL TESTING CORPORATION
2960 Foster Creighton Road Nashville, TN 37204 * 800-765-0980 * Fax 615-726-3404

Client	MACTEC Engineering & Consulting, Inc. (3740)	Work Order:	NQC1739
	21740 Beaumeade Circle, Suite 150	Project Name:	AFRH
	Ashburn, VA 20147	Project Number:	[none]
Attn	Brent Chapman	Received:	03/13/07 08:10

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NQC1739-01 (SB02 - Soil) Sampled: 03/12/07 11:00								
Extractable Petroleum Hydrocarbons								
Diesel	**5.60**		mg/kg	4.92	1	03/16/07 02:29	SW846 8015B	7032390
Surr: o-Terphenyl (32-132%)	*96 %*					*03/16/07 02:29*	*SW846 8015B*	*7032390*
Purgeable Petroleum Hydrocarbons								
GRO as Gasoline	ND		mg/kg	4.72	50	03/15/07 14:51	SW846 8015B	7032463
Surr: a,a,a-Trifluorotoluene (66-146%)	*104 %*					*03/15/07 14:51*	*SW846 8015B*	*7032463*
Sample ID: NQC1739-02RE1 (SB04 - Soil) Sampled: 03/12/07 13:00								
Extractable Petroleum Hydrocarbons								
Diesel	ND		mg/kg	4.90	1	03/16/07 09:09	SW846 8015B	7032390
Surr: o-Terphenyl (32-132%)	*49 %*					*03/16/07 09:09*	*SW846 8015B*	*7032390*
Purgeable Petroleum Hydrocarbons								
GRO as Gasoline	ND		mg/kg	4.87	50	03/15/07 15:24	SW846 8015B	7032463
Surr: a,a,a-Trifluorotoluene (66-146%)	*102 %*					*03/15/07 15:24*	*SW846 8015B*	*7032463*
Sample ID: NQC1739-03 (SB06 - Soil) Sampled: 03/12/07 14:00								
Extractable Petroleum Hydrocarbons								
Diesel	ND		mg/kg	4.88	1	03/16/07 02:46	SW846 8015B	7032390
Surr: o-Terphenyl (32-132%)	*90 %*					*03/16/07 02:46*	*SW846 8015B*	*7032390*
Purgeable Petroleum Hydrocarbons								
GRO as Gasoline	ND		mg/kg	4.98	50	03/15/07 15:56	SW846 8015B	7032463
Surr: a,a,a-Trifluorotoluene (66-146%)	*103 %*					*03/15/07 15:56*	*SW846 8015B*	*7032463*
Sample ID: NQC1739-04 (Trip (2) - Water) Sampled: 03/12/07 00:01								
Purgeable Petroleum Hydrocarbons								
GRO as Gasoline	ND		ug/L	100	1	03/18/07 21:45	SW846 8015B	7033211
Surr: a,a,a-Trifluorotoluene (44-152%)	*105 %*					*03/18/07 21:45*	*SW846 8015B*	*7033211*

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Client	MACTEC Engineering & Consulting, Inc. (3740)	Work Order:	NQC1739
	21740 Beaumeade Circle, Suite 150	Project Name:	AFRH
	Ashburn, VA 20147	Project Number:	[none]
Attn	Brent Chapman	Received:	03/13/07 08:10

SAMPLE EXTRACTION DATA

Parameter	Batch	Lab Number	Wt/Vol Extracted	Extracted Vol	Date	Analyst	Extraction Method
Extractable Petroleum Hydrocarbons							
SW846 8015B	7032390	NQC1739-01	25.39	1.00	03/14/07 09:00	BJM	EPA 3550B
SW846 8015B	7032390	NQC1739-02	25.53	1.00	03/14/07 09:00	BJM	EPA 3550B
SW846 8015B	7032390	NQC1739-02RE1	25.53	1.00	03/14/07 09:00	BJM	EPA 3550B
SW846 8015B	7032390	NQC1739-03	25.60	1.00	03/14/07 09:00	BJM	EPA 3550B
Purgeable Petroleum Hydrocarbons							
SW846 8015B	7032463	NQC1739-01	5.30	5.00	03/14/07 09:15	NKN	EPA 5035A (GC)
SW846 8015B	7032463	NQC1739-02	5.13	5.00	03/14/07 09:16	NKN	EPA 5035A (GC)
SW846 8015B	7032463	NQC1739-03	5.02	5.00	03/14/07 09:17	NKN	EPA 5035A (GC)

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Client	MACTEC Engineering & Consulting, Inc. (3740)	Work Order:	NQC1739
	21740 Beaumeade Circle, Suite 150	Project Name:	AFRH
	Ashburn, VA 20147	Project Number:	[none]
Attn	Brent Chapman	Received:	03/13/07 08:10

PROJECT QUALITY CONTROL DATA
Blank

Analyte	Blank Value	Q	Units	Q.C. Batch	Lab Number	Analyzed Date/Time
Extractable Petroleum Hydrocarbons						
7032390-BLK1						
Diesel	<2.00		mg/kg	7032390	7032390-BLK1	03/15/07 21:26
Surrogate: o-Terphenyl	101%			7032390	7032390-BLK1	03/15/07 21:26
Purgeable Petroleum Hydrocarbons						
7032463-BLK1						
GRO as Gasoline	2.00		mg/kg	7032463	7032463-BLK1	03/15/07 03:20
Surrogate: a,a,a-Trifluorotoluene	104%			7032463	7032463-BLK1	03/15/07 03:20
7033211-BLK1						
GRO as Gasoline	<43.0		ug/L	7033211	7033211-BLK1	03/18/07 21:20
Surrogate: a,a,a-Trifluorotoluene	102%			7033211	7033211-BLK1	03/18/07 21:20

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Client	MACTEC Engineering & Consulting, Inc. (3740)	Work Order:	NQC1739
	21740 Beaumeade Circle, Suite 150	Project Name:	AFRH
	Ashburn, VA 20147	Project Number:	[none]
Attn	Brent Chapman	Received:	03/13/07 08:10

PROJECT QUALITY CONTROL DATA
LCS

Analyte	Known Val.	Analyzed Val	Q	Units	% Rec.	Target Range	Batch	Analyzed Date/Time
Extractable Petroleum Hydrocarbons								
7032390-BS1								
Diesel	40.0	34.9		mg/kg	87%	41 - 141	7032390	03/15/07 21:43
Surrogate: o-Terphenyl	0.800	0.847			106%	32 - 132	7032390	03/15/07 21:43
Purgeable Petroleum Hydrocarbons								
7032463-BS1								
GRO as Gasoline	10.0	9.72		mg/kg	97%	76 - 117	7032463	03/15/07 18:40
Surrogate: a,a,a-Trifluorotoluene	30.0	44.2	Z2		147%	66 - 146	7032463	03/15/07 18:40
7033211-BS1								
GRO as Gasoline	1000	934		ug/L	93%	58 - 138	7033211	03/19/07 06:59
Surrogate: a,a,a-Trifluorotoluene	30.0	24.8			83%	44 - 152	7033211	03/19/07 06:59

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Client	MACTEC Engineering & Consulting, Inc. (3740)	Work Order:	NQC1739
	21740 Beaumeade Circle, Suite 150	Project Name:	AFRH
	Ashburn, VA 20147	Project Number:	[none]
Attn	Brent Chapman	Received:	03/13/07 08:10

PROJECT QUALITY CONTROL DATA

LCS Dup

Analyte	Orig. Val.	Duplicate	Q	Units	Spike Conc	% Rec.	Target Range	RPD	Limit	Batch	Sample Duplicated	Analyzed Date/Time
Purgeable Petroleum Hydrocarbons												
7032463-BSD1												
GRO as Gasoline		9.90		mg/kg	10.0	99%	76 - 117	2	22	7032463		03/15/07 19:15
Surrogate: a,a,a-Trifluorotoluene		45.3	Z2	ug/L	30.0	151%	66 - 146			7032463		03/15/07 19:15

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Client	MACTEC Engineering & Consulting, Inc. (3740)	Work Order:	NQC1739
	21740 Beaumeade Circle, Suite 150	Project Name:	AFRH
	Ashburn, VA 20147	Project Number:	[none]
Attn	Brent Chapman	Received:	03/13/07 08:10

PROJECT QUALITY CONTROL DATA
Matrix Spike

Analyte	Orig. Val.	MS Val	Q	Units	Spike Conc	% Rec.	Target Range	Batch	Sample Spiked	Analyzed Date/Time
Extractable Petroleum Hydrocarbons										
7032390-MS1										
Diesel	16.1	46.7		mg/kg	38.8	79%	24 - 133	7032390	NQC1596-02	03/15/07 22:00
Surrogate: o-Terphenyl		0.926		mg/kg	0.776	119%	32 - 132	7032390	NQC1596-02	03/15/07 22:00
Purgeable Petroleum Hydrocarbons										
7032463-MS1										
GRO as Gasoline	1.94	489		mg/kg	500	97%	64 - 130	7032463	NQC1759-01	03/15/07 17:34
Surrogate: a,a,a-Trifluorotoluene		44.3	Z2	ug/L	30.0	148%	66 - 146	7032463	NQC1759-01	03/15/07 17:34
7033211-MS1										
GRO as Gasoline	3580	4180		ug/L	1000	60%	34 - 201	7033211	NQC1558-01	03/19/07 06:09
Surrogate: a,a,a-Trifluorotoluene		25.7		ug/L	30.0	86%	44 - 152	7033211	NQC1558-01	03/19/07 06:09

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Client	MACTEC Engineering & Consulting, Inc. (3740)	Work Order:	NQC1739
	21740 Beaumeade Circle, Suite 150	Project Name:	AFRH
	Ashburn, VA 20147	Project Number:	[none]
Attn	Brent Chapman	Received:	03/13/07 08:10

PROJECT QUALITY CONTROL DATA

Matrix Spike Dup

Analyte	Orig. Val.	Duplicate	Q	Units	Spike Conc	% Rec.	Target Range	RPD	Limit	Batch	Sample Duplicated	Analyzed Date/Time
Extractable Petroleum Hydrocarbons												
7032390-MSD1												
Diesel	16.1	55.3		mg/kg	38.9	101%	24 - 133	17	50	7032390	NQC1596-02	03/15/07 22:17
Surrogate: o-Terphenyl		0.933		mg/kg	0.779	120%	32 - 132			7032390	NQC1596-02	03/15/07 22:17
Purgeable Petroleum Hydrocarbons												
7032463-MSD1												
GRO as Gasoline	1.94	514		mg/kg	500	102%	64 - 130	5	22	7032463	NQC1759-01	03/15/07 18:07
Surrogate: a,a,a-Trifluorotoluene		44.8	Z2	ug/L	30.0	149%	66 - 146			7032463	NQC1759-01	03/15/07 18:07
7033211-MSD1												
GRO as Gasoline	3580	4190		ug/L	1000	61%	34 - 201	0.2	28	7033211	NQC1558-01	03/19/07 06:34
Surrogate: a,a,a-Trifluorotoluene		25.6		ug/L	30.0	85%	44 - 152			7033211	NQC1558-01	03/19/07 06:34

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Client	MACTEC Engineering & Consulting, Inc. (3740)	Work Order:	NQC1739
	21740 Beaumeade Circle, Suite 150	Project Name:	AFRH
	Ashburn, VA 20147	Project Number:	[none]
Attn	Brent Chapman	Received:	03/13/07 08:10

DATA QUALIFIERS AND DEFINITIONS

Z2 Surrogate recovery was above the acceptance limits. Data not impacted.

ND Not detected at the reporting limit (or method detection limit if shown)

METHOD MODIFICATION NOTES

TestAmerica
ANALYTICAL TESTING CORPORATION

Nashville Division

COOLER RECEIPT FORM **BC#** NQC1739

Cooler Received/Opened On 03/13/2007 @ 0810

1. Indicate the Airbill Tracking Number (last 4 digits for Fedex only) and Name of Courier below: 2662

Fed-Ex

2. Temperature of representative sample or temperature blank when opened: 1-3 Degrees Celsius
(indicate IR Gun ID#)

Raynger ST

3. Were custody seals on outside of cooler? ..... (YES)...NO....NA

a. If yes, how many and where: 2 front | back

4. Were the seals intact, signed, and dated correctly? ..... (YES)...NO...NA

5. Were custody papers inside cooler? ..... (YES)...NO...NA

I certify that I opened the cooler and answered questions 1-5 (intial) ..... PM

6. Were custody seals on containers: YES (NO) and Intact YES NO (NA)

were these signed, and dated correctly? ..... YES...NO...(NA)

7. What kind of packing material used? (Bubblewrap) Peanuts Vermiculite Foam Insert

Plastic bag Paper Other_____ None

8. Cooling process: (Ice) Ice-pack Ice (direct contact) Dry ice Other None

9. Did all containers arrive in good condition (unbroken)? ..... (YES)..NO...NA

10. Were all container labels complete (#, date, signed, pres., etc)? ..... (YES)...NO...NA

11. Did all container labels and tags agree with custody papers? ..... (YES)...NO...NA

12. a. Were VOA vials received? ..... (YES)..NO...NA

b. Was there any observable head space present in any VOA vial? ..... YES..(NO)..NA

I certify that I unloaded the cooler and answered questions 6-12 (intial) I

13. a. On preserved bottles did the pH test strips suggest that preservation reached the correct pH level? YES...NO..(NA)

b. Did the bottle labels indicate that the correct preservatives were used ..... (YES)..NO...NA

If preservation in-house was needed, record standard ID of preservative used here_____

14. Was residual chlorine present? ..... YES...NO..(NA)

I certify that I checked for chlorine and pH as per SOP and answered questions 13-14 (intial) I

15. Were custody papers properly filled out (ink, signed, etc)? ..... (YES)...NO...NA

16. Did you sign the custody papers in the appropriate place? ..... (YES)...NO...NA

17. Were correct containers used for the analysis requested? ..... (YES)..NO...NA

18. Was sufficient amount of sample sent in each container? ..... (YES)...NO...NA

I certify that I entered this project into LIMS and answered questions 15-18 (intial) I

I certify that I attached a label with the unique LIMS number to each container (intial) I

19. Were there Non-Conformance issues at login YES (NO) Was a PIPE generated YES NO #_____

BIS = Broken in shipment
Cooler Receipt Form

Revised 3/9/06

Chain of Custody Record

SEVERN TRENT STL®

Severn Trent Laboratories, Inc.

STL-4124 (0901)

Client: Mactec	Project Manager: B. Chapman	Date: 3/12/07	Chain of Custody Number: 270161
Address: 2740 Regency Circle Ste 150	Telephone Number (Area Code)/Fax Number: 703-729-1416 / 703-858-1858	Lab Number:	Page 1 of 1
City: Ashburn; State: VA; Zip Code: 20147	Site Contact: B. Grosser	Lab Contact: J. Gambill	
Project Name and Location (State): AFRH (DC)	Carrier/Waybill Number:		
Contract/Purchase Order/Quote No.: Will Email			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis (Attach list if more space is needed)	Special Instructions/ Conditions of Receipt
SB02	3/12/07	1100				X	2						X X	-1
SB04	3/12/07	1300				X	2						X X	-2
SB06	3/12/07	1400				X	2						X X	-3
Trip (2)	3/12/07													-4

NQC1739
03/22/07 23:59

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☒ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	3/12/07	1600	1. Received By		
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By: J. Hinkle	3-13-07	0810

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

TestAmerica
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September 13, 2006

Client: MACTEC Engineering & Consulting, Inc. (3740)
21740 Beaumeade Circle, Suite 150
Ashburn, VA 20147
Attn: Brent Chapman

Work Order: NPH4237
Project Name: AFRH
Project Nbr: 3552-06-0897
P/O Nbr: APO# 65378
Date Received: 08/31/06

SAMPLE IDENTIFICATION	LAB NUMBER	COLLECTION DATE AND TIME
W48-1	NPH4237-01	08/30/06 11:45
W78-1 (1-3')	NPH4237-02	08/30/06 15:30
W78-1 (3-5')	NPH4237-03	08/30/06 15:35

An executed copy of the chain of custody, the project quality control data, and the sample receipt form are also included as an addendum to this report. If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-800-765-0980. Any opinions, if expressed, are outside the scope of the Laboratory's accredidation.

The Chain(s) of Custody, 2 pages, are included and are an integral part of this report.

Report Approved By:

Roxanne L. Connor

Roxanne Connor
Senior Project Manager

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Client MACTEC Engineering & Consulting, Inc. (3740)
21740 Beaumeade Circle, Suite 150
Ashburn, VA 20147
Attn Brent Chapman

Work Order: NPH4237
Project Name: AFRH
Project Number: 3552-06-0897
Received: 08/31/06 08:00

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NPH4237-01 (W48-1 - Ground Water) Sampled: 08/30/06 11:45								
Mercury by EPA Methods 7470A/7471A								
Mercury	ND		mg/L	0.000200	1	09/01/06 12:09	SW846 7470A	6090045
Organochlorine Pesticides by EPA Method 8081A								
Aldrin	ND		ug/L	0.0500	1	09/04/06 00:22	SW846 8081A	6090291
delta-BHC	ND		ug/L	0.0500	1	09/04/06 00:22	SW846 8081A	6090291
alpha-BHC	ND		ug/L	0.0500	1	09/04/06 00:22	SW846 8081A	6090291
beta-BHC	ND		ug/L	0.0500	1	09/04/06 00:22	SW846 8081A	6090291
gamma-BHC (Lindane)	ND		ug/L	0.0500	1	09/04/06 00:22	SW846 8081A	6090291
alpha-Chlordane	ND		ug/L	0.0500	1	09/04/06 00:22	SW846 8081A	6090291
gamma-Chlordane	ND		ug/L	0.0500	1	09/04/06 00:22	SW846 8081A	6090291
Chlordane	ND		ug/L	3.00	1	09/04/06 00:22	SW846 8081A	6090291
4,4'-DDD	ND		ug/L	0.0500	1	09/04/06 00:22	SW846 8081A	6090291
4,4'-DDE	ND		ug/L	0.0500	1	09/04/06 00:22	SW846 8081A	6090291
4,4'-DDT	ND		ug/L	0.0500	1	09/04/06 00:22	SW846 8081A	6090291
Dieldrin	ND		ug/L	0.0500	1	09/04/06 00:22	SW846 8081A	6090291
Endosulfan I	ND		ug/L	0.0500	1	09/04/06 00:22	SW846 8081A	6090291
Endosulfan II	ND		ug/L	0.0500	1	09/04/06 00:22	SW846 8081A	6090291
Endosulfan sulfate	ND		ug/L	0.0500	1	09/04/06 00:22	SW846 8081A	6090291
Endrin	ND		ug/L	0.0500	1	09/04/06 00:22	SW846 8081A	6090291
Endrin aldehyde	ND		ug/L	0.0500	1	09/04/06 00:22	SW846 8081A	6090291
Endrin ketone	ND		ug/L	0.0500	1	09/04/06 00:22	SW846 8081A	6090291
Heptachlor	ND		ug/L	0.0500	1	09/04/06 00:22	SW846 8081A	6090291
Heptachlor epoxide	ND		ug/L	0.0500	1	09/04/06 00:22	SW846 8081A	6090291
Methoxychlor	ND		ug/L	0.0500	1	09/04/06 00:22	SW846 8081A	6090291
Toxaphene	ND		ug/L	5.00	1	09/04/06 00:22	SW846 8081A	6090291
Surr: Tetrachloro-meta-xylene (58-117%)	*92 %*					*09/04/06 00:22*	*SW846 8081A*	*6090291*
Surr: Decachlorobiphenyl (22-115%)	*54 %*					*09/04/06 00:22*	*SW846 8081A*	*6090291*
Chlorinated Herbicides by EPA Method 8151A								
2,4-D	ND		ug/L	0.0971	1	09/07/06 03:36	SW846 8151A	6090016
Dalapon	ND		ug/L	0.971	1	09/07/06 03:36	SW846 8151A	6090016
2,4-DB	ND		ug/L	0.0971	1	09/07/06 03:36	SW846 8151A	6090016
Dicamba	ND		ug/L	0.0971	1	09/07/06 03:36	SW846 8151A	6090016
Dichloroprop	ND		ug/L	0.0971	1	09/07/06 03:36	SW846 8151A	6090016
Dinoseb	ND		ug/L	0.0971	1	09/07/06 03:36	SW846 8151A	6090016
MCPA	ND		ug/L	9.71	1	09/07/06 03:36	SW846 8151A	6090016
MCPP	ND		ug/L	9.71	1	09/07/06 03:36	SW846 8151A	6090016
4-Nitrophenol	ND		ug/L	0.0971	1	09/07/06 03:36	SW846 8151A	6090016
Pentachlorophenol	ND		ug/L	0.0971	1	09/07/06 03:36	SW846 8151A	6090016
Picloram	ND		ug/L	0.0971	1	09/07/06 03:36	SW846 8151A	6090016
2,4,5-T	ND		ug/L	0.0971	1	09/07/06 03:36	SW846 8151A	6090016
2,4,5-TP (Silvex)	ND		ug/L	0.0971	1	09/07/06 03:36	SW846 8151A	6090016
Surr: Dichloroacetic Acid (51-136%)	*69 %*					*09/07/06 03:36*	*SW846 8151A*	*6090016*
Total Metals								

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ent MACTEC Engineering & Consulting, Inc. (3740)
21740 Beaumeade Circle, Suite 150
Ashburn, VA 20147
n Brent Chapman

Work Order: NPH4237
Project Name: AFRH
Project Number: 3552-06-0897
Received: 08/31/06 08:00

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
mple ID: NPH4237-01 (W48-1 - Ground Water) - cont. Sampled: 08/30/06 11:45								
otal Metals - cont.								
rsenic	ND		mg/L	0.00500	1	09/09/06 00:53	SW 6020	6090084
arium	**0.0981**		mg/L	0.00100	1	09/09/06 00:53	SW 6020	6090084
admium	**0.000526**		mg/L	0.000200	1	09/09/06 00:53	SW 6020	6090084
hromium	**0.00290**		mg/L	0.00200	1	09/09/06 00:53	SW 6020	6090084
ead	**0.00222**		mg/L	0.00100	1	09/09/06 00:53	SW 6020	6090084
elenium	ND		mg/L	0.00500	1	09/09/06 00:53	SW 6020	6090084
ilver	ND		mg/L	0.000500	1	09/09/06 00:53	SW 6020	6090084
Sample ID: NPH4237-02 (W78-1 (1-3') - Soil) Sampled: 08/30/06 15:30								
Mercury by EPA Methods 7470A/7471A								
Mercury	ND		mg/kg wet	0.0963	1	09/01/06 15:16	SW846 7471A	6090043
Organochlorine Pesticides by EPA Method 8081A								
Aldrin	ND		mg/kg wet	0.00168	1	09/12/06 04:57	SW846 8081A	6091011
delta-BHC	ND		mg/kg wet	0.00168	1	09/12/06 04:57	SW846 8081A	6091011
alpha-BHC	ND		mg/kg wet	0.00168	1	09/12/06 04:57	SW846 8081A	6091011
beta-BHC	ND		mg/kg wet	0.00327	1	09/12/06 04:57	SW846 8081A	6091011
gamma-BHC (Lindane)	ND		mg/kg wet	0.00168	1	09/12/06 04:57	SW846 8081A	6091011
alpha-Chlordane	ND		mg/kg wet	0.00168	1	09/12/06 04:57	SW846 8081A	6091011
gamma-Chlordane	ND		mg/kg wet	0.00168	1	09/12/06 04:57	SW846 8081A	6091011
Chlordane	ND		mg/kg wet	0.0660	1	09/12/06 04:57	SW846 8081A	6091011
4,4'-DDD	ND		mg/kg wet	0.00168	1	09/12/06 04:57	SW846 8081A	6091011
4,4'-DDE	ND		mg/kg wet	0.00168	1	09/12/06 04:57	SW846 8081A	6091011
4,4'-DDT	ND		mg/kg wet	0.00168	1	09/12/06 04:57	SW846 8081A	6091011
Dieldrin	ND		mg/kg wet	0.00168	1	09/12/06 04:57	SW846 8081A	6091011
Endosulfan I	ND		mg/kg wet	0.00168	1	09/12/06 04:57	SW846 8081A	6091011
Endosulfan II	ND		mg/kg wet	0.00168	1	09/12/06 04:57	SW846 8081A	6091011
Endosulfan sulfate	ND		mg/kg wet	0.00168	1	09/12/06 04:57	SW846 8081A	6091011
Endrin	ND		mg/kg wet	0.00168	1	09/12/06 04:57	SW846 8081A	6091011
Endrin aldehyde	ND		mg/kg wet	0.00168	1	09/12/06 04:57	SW846 8081A	6091011
Endrin ketone	ND		mg/kg wet	0.00168	1	09/12/06 04:57	SW846 8081A	6091011
Heptachlor	ND		mg/kg wet	0.00327	1	09/12/06 04:57	SW846 8081A	6091011
Heptachlor epoxide	ND		mg/kg wet	0.0660	1	09/12/06 04:57	SW846 8081A	6091011
Methoxychlor	ND		mg/kg wet					
Toxaphene								
Surr: Tetrachloro-meta-xylene (63-132%)	*106 %*					*09/12/06 04:57*	*SW846 8081A*	*6091011*
Surr: Decachlorobiphenyl (39-108%)	*72 %*					*09/12/06 04:57*	*SW846 8081A*	*6091011*
Chlorinated Herbicides by EPA Method 8151A								
2,4-D	ND		mg/kg wet	0.0651	1	09/06/06 00:56	SW846 8151A	6090018
Dalapon	ND		mg/kg wet	0.163	1	09/06/06 00:56	SW846 8151A	6090018
2,4-DB	ND		mg/kg wet	0.0651	1	09/06/06 00:56	SW846 8151A	6090018
Dicamba	ND		mg/kg wet	0.0322	1	09/06/06 00:56	SW846 8151A	6090018
Dichloroprop	ND		mg/kg wet	0.0651	1	09/06/06 00:56	SW846 8151A	6090018
Dinoseb			mg/kg wet	0.0651	1	09/06/06 00:56	SW846 8151A	6090018

TestAmerica
ANALYTICAL TESTING CORPORATION
2960 Foster Creighton Road Nashville, TN 37204 * 800-765-0980 * Fax 615-726-3404

Client MACTEC Engineering & Consulting, Inc. (3740)
21740 Beaumeade Circle, Suite 150
Ashburn, VA 20147
Attn Brent Chapman

Work Order: NPH4237
Project Name: AFRH
Project Number: 3552-06-0897
Received: 08/31/06 08:00

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NPH4237-02 (W78-1 (1-3') - Soil) - cont. Sampled: 08/30/06 15:30								
Chlorinated Herbicides by EPA Method 8151A - cont.								
MCPA	ND		mg/kg wet	3.25	1	09/06/06 00:56	SW846 8151A	6090018
MCPP	ND		mg/kg wet	3.25	1	09/06/06 00:56	SW846 8151A	6090018
4-Nitrophenol	ND		mg/kg wet	0.0322	1	09/06/06 00:56	SW846 8151A	6090018
Pentachlorophenol	ND		mg/kg wet	0.0322	1	09/06/06 00:56	SW846 8151A	6090018
Picloram	ND		mg/kg wet	0.0322	1	09/06/06 00:56	SW846 8151A	6090018
2,4,5-T	ND		mg/kg wet	0.0322	1	09/06/06 00:56	SW846 8151A	6090018
2,4,5-TP (Silvex)	ND		mg/kg wet	0.0166	1	09/06/06 00:56	SW846 8151A	6090018
Surr: Dichloroacetic Acid (55-132%)	*150 %*	*Z2*				*09/06/06 00:56*	*SW846 8151A*	*6090018*
Total Metals								
Arsenic	ND		mg/kg wet	1.90	20	09/13/06 01:46	SW 6020	6090085
Barium	**28.5**		mg/kg wet	0.952	20	09/13/06 01:46	SW 6020	6090085
Cadmium	ND		mg/kg wet	0.952	20	09/13/06 01:46	SW 6020	6090085
Chromium	**16.6**		mg/kg wet	1.90	20	09/13/06 01:46	SW 6020	6090085
Lead	**9.07**		mg/kg wet	0.952	20	09/13/06 01:46	SW 6020	6090085
Selenium	ND		mg/kg wet	0.952	20	09/13/06 01:46	SW 6020	6090085
Silver	ND		mg/kg wet	0.476	20	09/13/06 01:46	SW 6020	6090085
Sample ID: NPH4237-03 (W78-1 (3-5') - Soil) Sampled: 08/30/06 15:35								
Mercury by EPA Methods 7470A/7471A								
Mercury	ND		mg/kg wet	0.0987	1	09/01/06 15:18	SW846 7471A	6090043
Organochlorine Pesticides by EPA Method 8081A								
Aldrin	ND		mg/kg wet	0.00170	1	09/12/06 05:26	SW846 8081A	6091011
delta-BHC	ND		mg/kg wet	0.00170	1	09/12/06 05:26	SW846 8081A	6091011
alpha-BHC	ND		mg/kg wet	0.00170	1	09/12/06 05:26	SW846 8081A	6091011
beta-BHC	ND		mg/kg wet	0.00330	1	09/12/06 05:26	SW846 8081A	6091011
gamma-BHC (Lindane)	ND		mg/kg wet	0.00170	1	09/12/06 05:26	SW846 8081A	6091011
alpha-Chlordane	ND		mg/kg wet	0.00170	1	09/12/06 05:26	SW846 8081A	6091011
gamma-Chlordane	ND		mg/kg wet	0.00170	1	09/12/06 05:26	SW846 8081A	6091011
Chlordane	ND		mg/kg wet	0.0667	1	09/12/06 05:26	SW846 8081A	6091011
4,4'-DDD	ND		mg/kg wet	0.00170	1	09/12/06 05:26	SW846 8081A	6091011
4,4'-DDE	ND		mg/kg wet	0.00170	1	09/12/06 05:26	SW846 8081A	6091011
4,4'-DDT	ND		mg/kg wet	0.00170	1	09/12/06 05:26	SW846 8081A	6091011
Dieldrin	ND		mg/kg wet	0.00170	1	09/12/06 05:26	SW846 8081A	6091011
Endosulfan I	ND		mg/kg wet	0.00170	1	09/12/06 05:26	SW846 8081A	6091011
Endosulfan II	ND		mg/kg wet	0.00170	1	09/12/06 05:26	SW846 8081A	6091011
Endosulfan sulfate	ND		mg/kg wet	0.00170	1	09/12/06 05:26	SW846 8081A	6091011
Endrin	ND		mg/kg wet	0.00170	1	09/12/06 05:26	SW846 8081A	6091011
Endrin aldehyde	ND		mg/kg wet	0.00170	1	09/12/06 05:26	SW846 8081A	6091011
Endrin ketone	ND		mg/kg wet	0.00170	1	09/12/06 05:26	SW846 8081A	6091011
Heptachlor	ND		mg/kg wet	0.00170	1	09/12/06 05:26	SW846 8081A	6091011
Heptachlor epoxide	ND		mg/kg wet	0.00170	1	09/12/06 05:26	SW846 8081A	6091011
Methoxychlor	ND		mg/kg wet	0.00330	1	09/12/06 05:26	SW846 8081A	6091011

estAmerica
ANALYTICAL TESTING CORPORATION
2960 Foster Creighton Road Nashville, TN 37204 * 800-765-0980 * Fax 615-726-3404

t MACTEC Engineering & Consulting, Inc. (3740)
21740 Beaumeade Circle, Suite 150
Ashburn, VA 20147
Brent Chapman

Work Order: NPH4237
Project Name: AFRH
Project Number: 3552-06-0897
Received: 08/31/06 08:00

ANALYTICAL REPORT

alyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
mple ID: NPH4237-03RE1 (W78-1 (3-5') - Soil) - cont. Sampled: 08/30/06 15:35								
rganochlorine Pesticides by EPA Method 8081A - cont.			mg/kg wet	0.0667	1	09/12/06 05:26	SW846 8081A	6091011
						09/12/06 05:26	*SW846 8081A*	*6091011*
xaphene	ND					*09/12/06 05:26*	*SW846 8081A*	*6091011*
rr: Tetrachloro-meta-xylene (63-132%)	*70 %*							
rr: Decachlorobiphenyl (39-108%)	*76 %*							
hlorinated Herbicides by EPA Method 8151A								
	ND		mg/kg wet	0.0656	1	09/06/06 01:28	SW846 8151A	6090018
4-D	ND		mg/kg wet	0.164	1	09/06/06 01:28	SW846 8151A	6090018
alapon	ND		mg/kg wet	0.0656	1	09/06/06 01:28	SW846 8151A	6090018
,4-DB	ND		mg/kg wet	0.0324	1	09/06/06 01:28	SW846 8151A	6090018
Dicamba	ND		mg/kg wet	0.0656	1	09/06/06 01:28	SW846 8151A	6090018
Dichloroprop	ND		mg/kg wet	0.0656	1	09/06/06 01:28	SW846 8151A	6090018
Dinoseb	ND		mg/kg wet	3.27	1	09/06/06 01:28	SW846 8151A	6090018
MCPA	ND		mg/kg wet	3.27	1	09/06/06 01:28	SW846 8151A	6090018
MCPP	ND		mg/kg wet	0.0324	1	09/06/06 01:28	SW846 8151A	6090018
4-Nitrophenol	ND		mg/kg wet	0.0324	1	09/06/06 01:28	SW846 8151A	6090018
Pentachlorophenol	ND		mg/kg wet	0.0324	1	09/06/06 01:28	SW846 8151A	6090018
Picloram	ND		mg/kg wet	0.0324	1	09/06/06 01:28	SW846 8151A	6090018
2,4,5-T	ND		mg/kg wet	0.0167	1	09/06/06 01:28	SW846 8151A	6090018
						09/06/06 01:28	*SW846 8151A*	*6090018*
2,4,5-TP (Silvex)	ND							
Surr: Dichloroacetic Acid (55-132%)	*100 %*							
Total Metals								
Arsenic	ND		mg/kg wet	1.92	20	09/13/06 01:51	SW 6020	6090085
Barium	**49.4**		mg/kg wet	0.962	20	09/13/06 01:51	SW 6020	6090085
Cadmium	ND		mg/kg wet	0.962	20	09/13/06 01:51	SW 6020	6090085
Chromium	**12.3**		mg/kg wet	1.92	20	09/13/06 01:51	SW 6020	6090085
Lead	**10.9**		mg/kg wet	0.962	20	09/13/06 01:51	SW 6020	6090085
Selenium	ND		mg/kg wet	0.962	20	09/13/06 01:51	SW 6020	6090085
Silver				0.481	20	09/13/06 01:51	SW 6020	6090085

TestAmerica
ANALYTICAL TESTING CORPORATION

Nashville Division

COOLER RECEIPT FORM BC# NPH4237

Cooler Received/Opened On: 8/31/2006 8:00

1. Indicate the Airbill Tracking Number (last 4 digits for Fedex only) and Name of Courier below: 7208

FED-EX

Temperature of representative sample or temperature blank when opened: 6.0 Degrees Celsius

(indicate IR Gun ID#)

101507

3. Were custody seals on outside of cooler?..... YES...NO...NA

a. If yes, how many and where: 1 Front

4. Were the seals intact, signed, and dated correctly?..... YES...NO...NA

5. Were custody papers inside cooler?..... YES...NO...NA

I certify that I opened the cooler and answered questions 1-5 (intial)..... WS

6. Were custody seals on containers: YES (NO) and Intact YES NO (NA)

were these signed, and dated correctly?..... YES...NO...(NA)

7. What kind of packing material used? (Bubblewrap) Peanuts Vermiculite Foam Insert

Plastic bag Paper Other_____ None

8. Cooling process: (Ice) Ice-pack Ice (direct contact) Dry ice Other None

9. Did all containers arrive in good condition (unbroken)?..... (YES)...NO...NA

10. Were all container labels complete (#, date, signed, pres., etc)?..... (YES)...NO...NA

11. Did all container labels and tags agree with custody papers?..... (YES)...NO...NA

12. a. Were VOA vials received?..... YES...(NO)...NA

b. Was there any observable head space present in any VOA vial?..... YES...NO...(NA)

I certify that I unloaded the cooler and answered questions 6-12 (intial)..... (W)

13. a. On preserved bottles did the pH test strips suggest that preservation reached the correct pH level? YES...NO...(NA)

b. Did the bottle labels indicate that the correct preservatives were used..... YES...NO...(NA)

If preservation in-house was needed, record standard ID of preservative used here_____

14. Was residual chlorine present?..... YES...NO...(NA)

I certify that I checked for chlorine and pH as per SOP and answered questions 13-14 (intial)..... (W)

15. Were custody papers properly filled out (ink, signed, etc)?..... (YES)...NO...NA

16. Did you sign the custody papers in the appropriate place?..... (YES)...NO...NA

17. Were correct containers used for the analysis requested?..... (YES)...NO...NA

18. Was sufficient amount of sample sent in each container?..... (YES)...NO...NA

I certify that I entered this project into LIMS and answered questions 15-18 (intial)..... (W)

I certify that I attached a label with the unique LIMS number to each container (intial)..... (W)

19. Were there Non-Conformance issues at login YES (NO) Was a PIPE generated YES (NO) #_____

NPH4237

09/07/06 23:59

TestAmerica ANALYTICAL TESTING CORPORATION

Nashville Division
2960 Foster Creighton
Nashville, TN 37204

Phone: 615-726-0177
Fax: 615-726-3404

To assist us in using the proper analytical methods, is this work being conducted for regulatory purposes?
Compliance Monitoring _____

Client Name: MACTEC Client #: _____
Address: 21740 Beaumeade Circle, suite 150
City/State/Zip Code: Ashburn, VA 20147
Project Manager: Brent Chapman
Telephone Number: 703-729-1416 Fax: 703-858-1858
Sampler Name: (Print Name) Aimee Cook & Ben Grosser
Sampler Signature:

Project Name: AFRH
Project #: 3652-06-0897 State: DC
Site/Location ID:
Report To: Brent Chapman
Invoice To:
Quote #: PO#:

TAT
X Standard
___ Rush (surcharges may apply)
Date Needed: 9-7-06
Fax Results: (Y) N

SAMPLE ID	Date Sampled	Time Sampled	G = Grab, C = Composite	Field Filtered	Matrix: SL - Sludge, DW - Drinking Water, GW - Groundwater, S - Soil/Solid, WW - Wastewater, Specify Other	Preservation & # of Containers: HNO_3	HCl	NaOH	H_2SO_4	Methanol	None	Other (Specify)	Analyze For: Pesticides 8081	herbicides 8151	RCRA Metals 6020/7471	herbicides - AC	QC Deliverables	REMARKS
W48-1	8/30/06	1145		Y	GW	2					2		X	X	X		___ None	NPH 4237-01
W78-1 (1-3')		1530	✓								3		X	X	X		___ Level 2 (Batch QC)	02
W78-1 (3-5')		1535	✓								3		X	X	X		___ Level 3	03
																	___ Level 4	
																	Other: _____	

Special Instructions:

LABORATORY COMMENTS:
Init Lab Temp:
Rec Lab Temp: 6.2c
Custody Seals: Y N N/A
Bottles Supplied by Test America: Y N
Method of Shipment:

Relinquished By: Aimee Cook	Date: 8/30/06	Time: 1800	Received By: FEDEX	Date:	Time:	
Relinquished By:	Date:	Time:	Received By:	Date:	Time:	
Relinquished By:	Date:	Time:	Received By:	Date: 8-31-06	Time: 0800	

TestAmerica
ANALYTICAL TESTING CORPORATION

Nashville Division

COOLER RECEIPT FORM

BC# NPH4081

Cooler Received/Opened On: 8/30/2006 8:00 7264

1. Indicate the Airbill Tracking Number (last 4 digits for Fedex only) and Name of Courier below: _____

FED-EX

Temperature of representative sample or temperature blank when opened: 3.4 Degrees Celsius

(indicate IR Gun ID#)

101507

3. Were custody seals on outside of cooler?..... YES...NO...NA

a. If yes, how many and where: 1 Front

4. Were the seals intact, signed, and dated correctly?..... YES...NO...NA

5. Were custody papers inside cooler?..... YES...NO...NA

I certify that I opened the cooler and answered questions 1-5 (intial)_____

6. Were custody seals on containers: YES NO and Intact YES NO NA

were these signed, and dated correctly?..... YES...NO...NA

7. What kind of packing material used? Bubblewrap Peanuts Vermiculite Foam Insert

Plastic bag Paper Other_____ None

8. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

9. Did all containers arrive in good condition (unbroken)?..... YES...NO...NA

10. Were all container labels complete (#, date, signed, pres., etc)?..... YES...NO...NA

11. Did all container labels and tags agree with custody papers?..... YES...NO...NA

12. a. Were VOA vials received?..... YES...NO...NA

b. Was there any observable head space present in any VOA vial?..... _____

I certify that I unloaded the cooler and answered questions 6-12 (intial)_____

13. a. On preserved bottles did the pH test strips suggest that preservation reached the correct pH level? YES...NO...NA

b. Did the bottle labels indicate that the correct preservatives were used..... YES...NO...NA

If preservation in-house was needed, record standard ID of preservative used here_____

14. Was residual chlorine present?..... YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 13-14 (intial)_____

15. Were custody papers properly filled out (Ink, signed, etc)?..... YES...NO...NA

16. Did you sign the custody papers in the appropriate place?..... YES...NO...NA

17. Were correct containers used for the analysis requested?..... YES...NO...NA

18. Was sufficient amount of sample sent in each container?..... _____

I certify that I entered this project into LIMS and answered questions 15-18 (intial)_____

I certify that I attached a label with the unique LIMS number to each container (intial)_____

19. Were there Non-Conformance issues at login YES NO Was a PIPE generated YES NO #_____

Revised 3/9/06

TestAmerica
ANALYTICAL TESTING CORPORATION

Nashville Division
2960 Foster Creighton
Nashville, TN 37204

Phone: 615-726-0177
Fax: 615-726-3404

To assist us in using the proper analytical methods, is this work being conducted for regulatory purposes?
Compliance Monitoring _____

NPH4081

09/06/06 23:59

Client Name: Mactec Client #: _____
Address: 2/740 Beaumeade Circle Ste 150
City/State/Zip Code: Ashburn, VA 20147
Project Manager: B. Chapman
Telephone Number: 703-729-1416 Fax: 703-858-1858
Sampler Name: (Print Name) Ben Gosser
Sampler Signature:

Project Name: AFRH
Project #: 35520688.97
Site/Location ID: _____ State: DC
Report To: B. Chapman
Invoice To: _____
Quote #: _____ PO#: _____

TAT
X Standard
___ Rush (surcharges may apply)
Date Needed: 9-6-06
Fax Results: (Y) N

SAMPLE ID	Date Sampled	Time Sampled	G = Grab, C = Composite	Field Filtered	Matrix: SL - Sludge DW - Drinking Water GW - Groundwater S - Soil/Solid WW - Wastewater Specify Other	Preservation & # of Containers: HNO_3	HCl	NaOH	H_2SO_4	Methanol	None	Other (Specify)	Analyze For: Pesticides 8081	Herbicides 8151	RCRA Metals 6020	TPH-GRO 8015m	TPH-DRO 8015m	VOCs 8260				QC Deliverables	REMARKS
W77-1	8-29-06	1600		Y	GW	2					2		X	X	X				01			None	Metals only filtered
W75-1(93-95)	8-29-06	1800	G		S						4					X	X	X	02			Level 2 (Batch QC)	
TB																			03			Level 3	
																						Level 4	
																						Other: _____	

Special Instructions:

LABORATORY COMMENTS:
Init Lab Temp:
Rec Lab Temp: 3.4
Custody Seals: Y N N/A
Bottles Supplied by Test America: Y N
Method of Shipment:

	Date:	Time:		Date:	Time:
Relinquished By:	8-29-06	1900	Received By:		
Relinquished By:			Received By:		
Relinquished By:			Received By:	9/1/06	800

726411

TestAmerica
ANALYTICAL TESTING CORPORATION
2960 Foster Creighton Road Nashville, TN 37204 * 800-765-0980 * Fax 615-726-3404

Client MACTEC Engineering & Consulting, Inc. (3740)
21740 Beaumeade Circle, Suite 150
Ashburn, VA 20147
Attn Brent Chapman

Work Order: NPH4081
Project Name: AFRH
Project Number: 3552060897
Received: 08/30/06 08:00

CERTIFICATION SUMMARY

Subcontracted Laboratories

TestAmerica - Dayton
3601 South Dixie Drive - Dayton, OH 45439
Analysis Performed: Subcontract - Outside1
Samples: NPH4081-01

TestAmerica
ANALYTICAL TESTING CORPORATION
2960 Foster Creighton Road Nashville, TN 37204 * 800-765-0980 * Fax 615-726-3404

Client	MACTEC Engineering & Consulting, Inc. (3740)	Work Order:	NPH4081
	21740 Beaumeade Circle, Suite 150	Project Name:	AFRH
	Ashburn, VA 20147	Project Number:	3552060897
Attn	Brent Chapman	Received:	08/30/06 08:00

CERTIFICATION SUMMARY

Subcontracted Laboratories

TestAmerica - Dayton

3601 South Dixie Drive - Dayton, OH 45439

Analysis Performed: Subcontract - Outside1

Samples: NPH4081-01

TestAmerica
ANALYTICAL TESTING CORPORATION

Nashville Division
2960 Foster Creighton
Nashville, TN 37204

Phone: 615-726-0177
Fax: 615-726-3404

To assist us in using the proper analytical methods, is this work being conducted for regulatory purposes?
Compliance Monitoring ______

NPH4081
09/06/06 23:59

Client Name: Mactec
Client #: ______
Address: 21740 Beaumeade Circle Ste 150
City/State/Zip Code: Ashburn, VA 20147
Project Manager: B. Chapman
Telephone Number: 703-729-1416   Fax: 703-858-1858
Sampler Name: (Print Name) Ben Grossler
Sampler Signature: [signature]

Project Name: AFRH
Project #: 3552060897
Site/Location ID: ______   State: OC
Report To: B. Chapman
Invoice To: ______
Quote #: ______   PO#: ______

TAT
X Standard
___ Rush (surcharges may apply)
Date Needed: 9-6-06
Fax Results: (Y) N

SAMPLE ID	Date Sampled	Time Sampled	G = Grab, C = Composite	Field Filtered	Matrix (SL - Sludge, DW - Drinking Water, GW - Groundwater, S - Soil/Solid, WW - Wastewater, Specify Other)	HNO_3	HCl	NaOH	H_2SO_4	Methanol	None	Other (Specify)	Pesticides 8081	Herbicides 8151	RCRA Metals 6020 7471	TPH-GRO 8015m	TPH-DRO 8015m	VOCs 8260					REMARKS
W77-1	8-29-06	1600		Y	GW	2					2		X	X	X					01			Metals only filtered
W75-1(93-95)	8-29-06	1800	G		S						4					X	X	X		02			
TB (4)																				03			

QC Deliverables
___ None
___ Level 2 (Batch QC)
___ Level 3
___ Level 4
Other: ______

Special Instructions:

Relinquished By	Date	Time	Received By	Date	Time
[signature]	8-29-06	1900			
			[signature]	8/30/06	800

LABORATORY COMMENTS:
Init Lab Temp:
Rec Lab Temp: 3.4
Custody Seals: Y N N/A
Bottles Supplied by Test America: Y N
Method of Shipment:

7260 Y

TestAmerica
ANALYTICAL TESTING CORPORATION
2960 Foster Creighton Road Nashville, TN 37204 * 800-765-0980 * Fax 615-726-3404

September 19, 2006

Client: MACTEC Engineering & Consulting, Inc. (3740)
21740 Beaumeade Circle, Suite 150
Ashburn, VA 20147
Attn: Brent Chapman

Work Order: NPI0939
Project Name: AFRH
Project Nbr: 3552-06-0897
P/O Nbr: APO# 65378
Date Received: 09/09/06

SAMPLE IDENTIFICATION	LAB NUMBER	COLLECTION DATE AND TIME
MW78-1	NPI0939-01	09/08/06 10:00

An executed copy of the chain of custody, the project quality control data, and the sample receipt form are also included as an addendum to this report. If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-800-765-0980. Any opinions, if expressed, are outside the scope of the Laboratory's accredidation.

The Chain(s) of Custody, 2 pages, are included and are an integral part of this report.

Report Approved By:

Roxanne L. Connor

Roxanne Connor
Senior Project Manager

TestAmerica
ANALYTICAL TESTING CORPORATION
2960 Foster Creighton Road Nashville, TN 37204 * 800-765-0980 * Fax 615-726-3404

Client	MACTEC Engineering & Consulting, Inc. (3740)	Work Order:	NPI0939
	21740 Beaumeade Circle, Suite 150	Project Name:	AFRH
	Ashburn, VA 20147	Project Number:	3552-06-0897
Attn	Brent Chapman	Received:	09/09/06 08:20

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NPI0939-01 (MW78-1 - Water) - cont. Sampled: 09/08/06 10:00								
Total Metals - cont.								
Arsenic	ND	M13	mg/L	0.0200	10	09/15/06 07:41	SW 6020	6090506
Barium	**0.306**	M13	mg/L	0.0100	10	09/15/06 07:41	SW 6020	6090506
Cadmium	**0.00323**	M13	mg/L	0.00200	10	09/15/06 07:41	SW 6020	6090506
Chromium	**0.0552**	M13	mg/L	0.0100	10	09/15/06 07:41	SW 6020	6090506
Lead	**0.0734**	M13	mg/L	0.00200	10	09/15/06 07:41	SW 6020	6090506
Selenium	ND	M13	mg/L	0.0100	10	09/15/06 07:41	SW 6020	6090506
Silver	ND	M13	mg/L	0.00100	10	09/15/06 07:41	SW 6020	6090506

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	21740 Beaumeade Circle, Suite 150	Project Name:	AFRH
	Ashburn, VA 20147	Project Number:	3552-06-0897
Attn	Brent Chapman	Received:	09/09/06 08:20

SAMPLE EXTRACTION DATA

Parameter	Batch	Lab Number	Wt/Vol Extracted	Extracted Vol	Date	Analyst	Extraction Method
DRAFT: Chlorinated Herbicides by EPA Method 8151A							
SW846 8151A	6091644	NPI0939-01	1060.00	10.00	09/12/06 09:45	KLG	EPA 8151A
SW846 8151A	6092298	NPI0939-01RE1	450.00	10.00	09/14/06 14:30	DRH	EPA 8151A
DRAFT: Mercury by EPA Methods 7470A/7471A							
SW846 7470A	6092092	NPI0939-01	30.00	30.00	09/13/06 09:42	LTB	EPA 7470
DRAFT: Organochlorine Pesticides by EPA Method 8081A							
SW846 8081A	6091641	NPI0939-01	500.00	5.00	09/11/06 16:15	KLG	EPA 3510C

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Client	MACTEC Engineering & Consulting, Inc. (3740)	Work Order:	NPI0939
	21740 Beaumeade Circle, Suite 150	Project Name:	AFRH
	Ashburn, VA 20147	Project Number:	3552-06-0897
Attn	Brent Chapman	Received:	09/09/06 08:20

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NPI0939-01 (MW78-1 - Water) Sampled: 09/08/06 10:00								
Mercury by EPA Methods 7470A/7471A								
Mercury	ND		mg/L	0.000200	1	09/13/06 17:50	SW846 7470A	6092092
Organochlorine Pesticides by EPA Method 8081A								
Aldrin	ND		ug/L	0.0500	1	09/14/06 02:42	SW846 8081A	6091641
delta-BHC	ND		ug/L	0.0500	1	09/14/06 02:42	SW846 8081A	6091641
alpha-BHC	ND		ug/L	0.0500	1	09/14/06 02:42	SW846 8081A	6091641
beta-BHC	ND		ug/L	0.0500	1	09/14/06 02:42	SW846 8081A	6091641
gamma-BHC (Lindane)	ND		ug/L	0.0500	1	09/14/06 02:42	SW846 8081A	6091641
alpha-Chlordane	ND		ug/L	0.0500	1	09/14/06 02:42	SW846 8081A	6091641
gamma-Chlordane	ND		ug/L	0.0500	1	09/14/06 02:42	SW846 8081A	6091641
Chlordane	ND		ug/L	3.00	1	09/14/06 02:42	SW846 8081A	6091641
4,4'-DDD	ND		ug/L	0.0500	1	09/14/06 02:42	SW846 8081A	6091641
4,4'-DDE	ND		ug/L	0.0500	1	09/14/06 02:42	SW846 8081A	6091641
4,4'-DDT	ND		ug/L	0.0500	1	09/14/06 02:42	SW846 8081A	6091641
Dieldrin	ND		ug/L	0.0500	1	09/14/06 02:42	SW846 8081A	6091641
Endosulfan I	ND		ug/L	0.0500	1	09/14/06 02:42	SW846 8081A	6091641
Endosulfan II	ND		ug/L	0.0500	1	09/14/06 02:42	SW846 8081A	6091641
Endosulfan sulfate	ND		ug/L	0.0500	1	09/14/06 02:42	SW846 8081A	6091641
Endrin	ND		ug/L	0.0500	1	09/14/06 02:42	SW846 8081A	6091641
Endrin aldehyde	ND		ug/L	0.0500	1	09/14/06 02:42	SW846 8081A	6091641
Endrin ketone	ND		ug/L	0.0500	1	09/14/06 02:42	SW846 8081A	6091641
Heptachlor	ND		ug/L	0.0500	1	09/14/06 02:42	SW846 8081A	6091641
Heptachlor epoxide	ND		ug/L	0.0500	1	09/14/06 02:42	SW846 8081A	6091641
Methoxychlor	ND		ug/L	0.0500	1	09/14/06 02:42	SW846 8081A	6091641
Toxaphene	ND		ug/L	5.00	1	09/14/06 02:42	SW846 8081A	6091641
Surr: Tetrachloro-meta-xylene (58-117%)	*104 %*					*09/14/06 02:42*	*SW846 8081A*	*6091641*
Surr: Decachlorobiphenyl (22-115%)	*58 %*					*09/14/06 02:42*	*SW846 8081A*	*6091641*
Chlorinated Herbicides by EPA Method 8151A								
2,4-D	ND		ug/L	0.222	1	09/15/06 21:44	SW846 8151A	6092298
Dalapon	ND		ug/L	2.22	1	09/15/06 21:44	SW846 8151A	6092298
2,4-DB	ND		ug/L	0.222	1	09/15/06 21:44	SW846 8151A	6092298
Dicamba	ND		ug/L	0.222	1	09/15/06 21:44	SW846 8151A	6092298
Dichloroprop	ND		ug/L	0.222	1	09/15/06 21:44	SW846 8151A	6092298
Dinoseb	ND		ug/L	0.222	1	09/15/06 21:44	SW846 8151A	6092298
MCPA	ND		ug/L	22.2	1	09/15/06 21:44	SW846 8151A	6092298
MCPP	ND		ug/L	22.2	1	09/15/06 21:44	SW846 8151A	6092298
4-Nitrophenol	ND		ug/L	0.222	1	09/15/06 21:44	SW846 8151A	6092298
Pentachlorophenol	ND		ug/L	0.222	1	09/15/06 21:44	SW846 8151A	6092298
Picloram	ND		ug/L	0.222	1	09/15/06 21:44	SW846 8151A	6092298
2,4,5-T	ND		ug/L	0.222	1	09/15/06 21:44	SW846 8151A	6092298
2,4,5-TP (Silvex)	ND		ug/L	0.222	1	09/15/06 21:44	SW846 8151A	6092298
Surr: Dichloroacetic Acid (51-136%)	*73 %*					*09/15/06 21:44*	*SW846 8151A*	*6092298*
Total Metals								

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AUG 24 2006

August 18, 2006

Client: MACTEC Engineering & Consulting, Inc. (3740)
21740 Beaumeade Circle, Suite 150
Ashburn, VA 20147
Attn: Brent Chapman

Work Order: NPH0652
Project Name: AFRH
Project Nbr: 3552060897
P/O Nbr: 62671
Date Received: 08/03/06

SAMPLE IDENTIFICATION	LAB NUMBER	COLLECTION DATE AND TIME
W72-1	NPH0652-01	08/02/06 08:00
W72-2	NPH0652-02	08/02/06 09:15
W72-3	NPH0652-03	08/02/06 10:30
H48-1 (0.25-1)	NPH0652-04	08/02/06 12:00
Trip Blank	NPH0652-05	08/02/06

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The Chain(s) of Custody, 8 pages, are included and are an integral part of this report.

These results relate only to the items tested. This report shall not be reproduced except in full and with permission of the laboratory.

Report Approved By:

Jessica Vickers

Jessica Vickers
Senior Project Manager

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ANALYTICAL TESTING CORPORATION
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Client MACTEC Engineering & Consulting, Inc. (3740)
21740 Beaumeade Circle, Suite 150
Ashburn, VA 20147
Attn Brent Chapman

Work Order: NPH0652
Project Name: AFRH
Project Number: 3552060897
Received: 08/03/06 08:00

ANALYTICAL REPORT

Sample ID: NPH0652-01 (W72-1 - Ground Water) Sampled: 08/02/06 08:00

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Acetone	ND		ug/L	50.0	1	08/12/06 04:08	SW846 8260B	6082044
Benzene	ND		ug/L	1.00	1	08/12/06 04:08	SW846 8260B	6082044
Bromobenzene	ND		ug/L	1.00	1	08/12/06 04:08	SW846 8260B	6082044
Bromochloromethane	ND		ug/L	1.00	1	08/12/06 04:08	SW846 8260B	6082044
Bromodichloromethane	ND		ug/L	1.00	1	08/12/06 04:08	SW846 8260B	6082044
Bromoform	ND		ug/L	1.00	1	08/12/06 04:08	SW846 8260B	6082044
Bromomethane	ND		ug/L	1.00	1	08/12/06 04:08	SW846 8260B	6082044
2-Butanone	ND		ug/L	50.0	1	08/12/06 04:08	SW846 8260B	6082044
sec-Butylbenzene	ND		ug/L	1.00	1	08/12/06 04:08	SW846 8260B	6082044
n-Butylbenzene	ND		ug/L	1.00	1	08/12/06 04:08	SW846 8260B	6082044
tert-Butylbenzene	ND		ug/L	1.00	1	08/12/06 04:08	SW846 8260B	6082044
Carbon disulfide	ND		ug/L	1.00	1	08/12/06 04:08	SW846 8260B	6082044
Carbon Tetrachloride	ND		ug/L	1.00	1	08/12/06 04:08	SW846 8260B	6082044
Chlorobenzene	ND		ug/L	1.00	1	08/12/06 04:08	SW846 8260B	6082044
Chlorodibromomethane	ND		ug/L	1.00	1	08/12/06 04:08	SW846 8260B	6082044
Chloroethane	ND		ug/L	1.00	1	08/12/06 04:08	SW846 8260B	6082044
Chloroform	ND		ug/L	1.00	1	08/12/06 04:08	SW846 8260B	6082044
Chloromethane	ND		ug/L	1.00	1	08/12/06 04:08	SW846 8260B	6082044
2-Chlorotoluene	ND		ug/L	1.00	1	08/12/06 04:08	SW846 8260B	6082044
4-Chlorotoluene	ND		ug/L	1.00	1	08/12/06 04:08	SW846 8260B	6082044
1,2-Dibromo-3-chloropropane	ND		ug/L	5.00	1	08/12/06 04:08	SW846 8260B	6082044
1,2-Dibromoethane (EDB)	ND		ug/L	1.00	1	08/12/06 04:08	SW846 8260B	6082044
Dibromomethane	ND		ug/L	1.00	1	08/12/06 04:08	SW846 8260B	6082044
1,4-Dichlorobenzene	ND		ug/L	1.00	1	08/12/06 04:08	SW846 8260B	6082044
1,3-Dichlorobenzene	ND		ug/L	1.00	1	08/12/06 04:08	SW846 8260B	6082044
1,2-Dichlorobenzene	ND		ug/L	1.00	1	08/12/06 04:08	SW846 8260B	6082044
Dichlorodifluoromethane	ND		ug/L	1.00	1	08/12/06 04:08	SW846 8260B	6082044
1,1-Dichloroethane	ND		ug/L	1.00	1	08/12/06 04:08	SW846 8260B	6082044
1,2-Dichloroethane	ND		ug/L	1.00	1	08/12/06 04:08	SW846 8260B	6082044
cis-1,2-Dichloroethene	**3.84**		ug/L	1.00	1	08/12/06 04:08	SW846 8260B	6082044
1,1-Dichloroethene	ND		ug/L	1.00	1	08/12/06 04:08	SW846 8260B	6082044
trans-1,2-Dichloroethene	ND		ug/L	1.00	1	08/12/06 04:08	SW846 8260B	6082044
1,3-Dichloropropane	ND		ug/L	1.00	1	08/12/06 04:08	SW846 8260B	6082044
1,2-Dichloropropane	ND		ug/L	1.00	1	08/12/06 04:08	SW846 8260B	6082044
2,2-Dichloropropane	ND		ug/L	1.00	1	08/12/06 04:08	SW846 8260B	6082044
cis-1,3-Dichloropropene	ND		ug/L	1.00	1	08/12/06 04:08	SW846 8260B	6082044
trans-1,3-Dichloropropene	ND		ug/L	1.00	1	08/12/06 04:08	SW846 8260B	6082044
1,1-Dichloropropene	ND		ug/L	1.00	1	08/12/06 04:08	SW846 8260B	6082044
Ethylbenzene	ND		ug/L	1.00	1	08/12/06 04:08	SW846 8260B	6082044
Hexachlorobutadiene	ND		ug/L	1.00	1	08/12/06 04:08	SW846 8260B	6082044
2-Hexanone	ND		ug/L	50.0	1	08/12/06 04:08	SW846 8260B	6082044
Isopropylbenzene	ND		ug/L	1.00	1	08/12/06 04:08	SW846 8260B	6082044
p-Isopropyltoluene	ND		ug/L	1.00	1	08/12/06 04:08	SW846 8260B	6082044

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Client MACTEC Engineering & Consulting, Inc. (3740)
21740 Beaumeade Circle, Suite 150
Ashburn, VA 20147
Attn Brent Chapman

Work Order: NPH0652
Project Name: AFRH
Project Number: 3552060897
Received: 08/03/06 08:00

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NPH0652-01 (W72-1 - Ground Water) - cont. Sampled: 08/02/06 08:00								
Volatile Organic Compounds by EPA Method 8260B - cont.								
Methyl tert-Butyl Ether	ND		ug/L	1.00	1	08/12/06 04:08	SW846 8260B	6082044
Methylene Chloride	ND		ug/L	5.00	1	08/12/06 04:08	SW846 8260B	6082044
4-Methyl-2-pentanone	ND		ug/L	50.0	1	08/12/06 04:08	SW846 8260B	6082044
Naphthalene	ND		ug/L	5.00	1	08/12/06 04:08	SW846 8260B	6082044
n-Propylbenzene	ND		ug/L	1.00	1	08/12/06 04:08	SW846 8260B	6082044
Styrene	ND		ug/L	1.00	1	08/12/06 04:08	SW846 8260B	6082044
1,1,1,2-Tetrachloroethane	ND		ug/L	1.00	1	08/12/06 04:08	SW846 8260B	6082044
1,1,2,2-Tetrachloroethane	ND		ug/L	1.00	1	08/12/06 04:08	SW846 8260B	6082044
Tetrachloroethene	**44.5**		ug/L	1.00	1	08/12/06 04:08	SW846 8260B	6082044
Toluene	ND		ug/L	1.00	1	08/12/06 04:08	SW846 8260B	6082044
1,2,3-Trichlorobenzene	ND		ug/L	2.00	1	08/12/06 04:08	SW846 8260B	6082044
1,2,4-Trichlorobenzene	ND		ug/L	2.00	1	08/12/06 04:08	SW846 8260B	6082044
1,1,2-Trichloroethane	ND		ug/L	1.00	1	08/12/06 04:08	SW846 8260B	6082044
1,1,1-Trichloroethane	ND		ug/L	1.00	1	08/12/06 04:08	SW846 8260B	6082044
Trichloroethene	**4.47**		ug/L	1.00	1	08/12/06 04:08	SW846 8260B	6082044
Trichlorofluoromethane	ND		ug/L	1.00	1	08/12/06 04:08	SW846 8260B	6082044
1,2,3-Trichloropropane	ND		ug/L	1.00	1	08/12/06 04:08	SW846 8260B	6082044
1,3,5-Trimethylbenzene	ND		ug/L	1.00	1	08/12/06 04:08	SW846 8260B	6082044
1,2,4-Trimethylbenzene	ND		ug/L	1.00	1	08/12/06 04:08	SW846 8260B	6082044
Vinyl chloride	ND		ug/L	1.00	1	08/12/06 04:08	SW846 8260B	6082044
Xylenes, total	ND		ug/L	3.00	1	08/12/06 04:08	SW846 8260B	6082044
Surr: 1,2-Dichloroethane-d4 (70-130%)	*106 %*					*08/12/06 04:08*	*SW846 8260B*	*6082044*
Surr: Dibromofluoromethane (79-122%)	*102 %*					*08/12/06 04:08*	*SW846 8260B*	*6082044*
Surr: Toluene-d8 (78-121%)	*101 %*					*08/12/06 04:08*	*SW846 8260B*	*6082044*
Surr: 4-Bromofluorobenzene (78-126%)	*103 %*					*08/12/06 04:08*	*SW846 8260B*	*6082044*
Extractable Petroleum Hydrocarbons								
Diesel	**331**	CF6	ug/L	94.3	1	08/09/06 21:41	SW846 8015B	6080981
Surr: o-Terphenyl (55-150%)	*48 %*	*Z6*				*08/09/06 21:41*	*SW846 8015B*	*6080981*
Purgeable Petroleum Hydrocarbons								
GRO as Gasoline	ND		ug/L	100	1	08/06/06 17:06	SW846 8015B	6081017
Surr: a,a,a-Trifluorotoluene (63-134%)	*83 %*					*08/06/06 17:06*	*SW846 8015B*	*6081017*

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Client MACTEC Engineering & Consulting, Inc. (3740)
21740 Beaumeade Circle, Suite 150
Ashburn, VA 20147
Attn Brent Chapman

Work Order: NPH0652
Project Name: AFRH
Project Number: 3552060897
Received: 08/03/06 08:00

ANALYTICAL REPORT

Sample ID: NPH0652-02 (W72-2 - Ground Water) Sampled: 08/02/06 09:15

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Acetone	ND		ug/L	50.0	1	08/12/06 04:33	SW846 8260B	6082044
Benzene	ND		ug/L	1.00	1	08/12/06 04:33	SW846 8260B	6082044
Bromobenzene	ND		ug/L	1.00	1	08/12/06 04:33	SW846 8260B	6082044
Bromochloromethane	ND		ug/L	1.00	1	08/12/06 04:33	SW846 8260B	6082044
Bromodichloromethane	ND		ug/L	1.00	1	08/12/06 04:33	SW846 8260B	6082044
Bromoform	ND		ug/L	1.00	1	08/12/06 04:33	SW846 8260B	6082044
Bromomethane	ND		ug/L	1.00	1	08/12/06 04:33	SW846 8260B	6082044
2-Butanone	ND		ug/L	50.0	1	08/12/06 04:33	SW846 8260B	6082044
sec-Butylbenzene	ND		ug/L	1.00	1	08/12/06 04:33	SW846 8260B	6082044
n-Butylbenzene	ND		ug/L	1.00	1	08/12/06 04:33	SW846 8260B	6082044
tert-Butylbenzene	ND		ug/L	1.00	1	08/12/06 04:33	SW846 8260B	6082044
Carbon disulfide	ND		ug/L	1.00	1	08/12/06 04:33	SW846 8260B	6082044
Carbon Tetrachloride	ND		ug/L	1.00	1	08/12/06 04:33	SW846 8260B	6082044
Chlorobenzene	ND		ug/L	1.00	1	08/12/06 04:33	SW846 8260B	6082044
Chlorodibromomethane	ND		ug/L	1.00	1	08/12/06 04:33	SW846 8260B	6082044
Chloroethane	ND		ug/L	1.00	1	08/12/06 04:33	SW846 8260B	6082044
Chloroform	ND		ug/L	1.00	1	08/12/06 04:33	SW846 8260B	6082044
Chloromethane	ND		ug/L	1.00	1	08/12/06 04:33	SW846 8260B	6082044
2-Chlorotoluene	ND		ug/L	1.00	1	08/12/06 04:33	SW846 8260B	6082044
4-Chlorotoluene	ND		ug/L	1.00	1	08/12/06 04:33	SW846 8260B	6082044
1,2-Dibromo-3-chloropropane	ND		ug/L	5.00	1	08/12/06 04:33	SW846 8260B	6082044
1,2-Dibromoethane (EDB)	ND		ug/L	1.00	1	08/12/06 04:33	SW846 8260B	6082044
Dibromomethane	ND		ug/L	1.00	1	08/12/06 04:33	SW846 8260B	6082044
1,4-Dichlorobenzene	ND		ug/L	1.00	1	08/12/06 04:33	SW846 8260B	6082044
1,3-Dichlorobenzene	ND		ug/L	1.00	1	08/12/06 04:33	SW846 8260B	6082044
1,2-Dichlorobenzene	ND		ug/L	1.00	1	08/12/06 04:33	SW846 8260B	6082044
Dichlorodifluoromethane	ND		ug/L	1.00	1	08/12/06 04:33	SW846 8260B	6082044
1,1-Dichloroethane	ND		ug/L	1.00	1	08/12/06 04:33	SW846 8260B	6082044
1,2-Dichloroethane	ND		ug/L	1.00	1	08/12/06 04:33	SW846 8260B	6082044
cis-1,2-Dichloroethene	ND		ug/L	1.00	1	08/12/06 04:33	SW846 8260B	6082044
1,1-Dichloroethene	ND		ug/L	1.00	1	08/12/06 04:33	SW846 8260B	6082044
trans-1,2-Dichloroethene	ND		ug/L	1.00	1	08/12/06 04:33	SW846 8260B	6082044
1,3-Dichloropropane	ND		ug/L	1.00	1	08/12/06 04:33	SW846 8260B	6082044
1,2-Dichloropropane	ND		ug/L	1.00	1	08/12/06 04:33	SW846 8260B	6082044
2,2-Dichloropropane	ND		ug/L	1.00	1	08/12/06 04:33	SW846 8260B	6082044
cis-1,3-Dichloropropene	ND		ug/L	1.00	1	08/12/06 04:33	SW846 8260B	6082044
trans-1,3-Dichloropropene	ND		ug/L	1.00	1	08/12/06 04:33	SW846 8260B	6082044
1,1-Dichloropropene	ND		ug/L	1.00	1	08/12/06 04:33	SW846 8260B	6082044
Ethylbenzene	ND		ug/L	1.00	1	08/12/06 04:33	SW846 8260B	6082044
Hexachlorobutadiene	ND		ug/L	1.00	1	08/12/06 04:33	SW846 8260B	6082044
2-Hexanone	ND		ug/L	50.0	1	08/12/06 04:33	SW846 8260B	6082044
Isopropylbenzene	ND		ug/L	1.00	1	08/12/06 04:33	SW846 8260B	6082044
p-Isopropyltoluene	ND		ug/L	1.00	1	08/12/06 04:33	SW846 8260B	6082044

TestAmerica
ANALYTICAL TESTING CORPORATION
2960 Foster Creighton Road Nashville, TN 37204 * 800-765-0980 * Fax 615-726-3404

Client MACTEC Engineering & Consulting, Inc. (3740)
21740 Beaumeade Circle, Suite 150
Ashburn, VA 20147
Attn Brent Chapman

Work Order: NPH0652
Project Name: AFRH
Project Number: 3552060897
Received: 08/03/06 08:00

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NPH0652-02 (W72-2 - Ground Water) - cont. Sampled: 08/02/06 09:15								
Volatile Organic Compounds by EPA Method 8260B - cont.								
Methyl tert-Butyl Ether	ND		ug/L	1.00	1	08/12/06 04:33	SW846 8260B	6082044
Methylene Chloride	ND		ug/L	5.00	1	08/12/06 04:33	SW846 8260B	6082044
4-Methyl-2-pentanone	ND		ug/L	50.0	1	08/12/06 04:33	SW846 8260B	6082044
Naphthalene	ND		ug/L	5.00	1	08/12/06 04:33	SW846 8260B	6082044
n-Propylbenzene	ND		ug/L	1.00	1	08/12/06 04:33	SW846 8260B	6082044
Styrene	ND		ug/L	1.00	1	08/12/06 04:33	SW846 8260B	6082044
1,1,1,2-Tetrachloroethane	ND		ug/L	1.00	1	08/12/06 04:33	SW846 8260B	6082044
1,1,2,2-Tetrachloroethane	ND		ug/L	1.00	1	08/12/06 04:33	SW846 8260B	6082044
Tetrachloroethene	ND		ug/L	1.00	1	08/12/06 04:33	SW846 8260B	6082044
Toluene	ND		ug/L	1.00	1	08/12/06 04:33	SW846 8260B	6082044
1,2,3-Trichlorobenzene	ND		ug/L	2.00	1	08/12/06 04:33	SW846 8260B	6082044
1,2,4-Trichlorobenzene	ND		ug/L	2.00	1	08/12/06 04:33	SW846 8260B	6082044
1,1,2-Trichloroethane	ND		ug/L	1.00	1	08/12/06 04:33	SW846 8260B	6082044
1,1,1-Trichloroethane	ND		ug/L	1.00	1	08/12/06 04:33	SW846 8260B	6082044
Trichloroethene	ND		ug/L	1.00	1	08/12/06 04:33	SW846 8260B	6082044
Trichlorofluoromethane	ND		ug/L	1.00	1	08/12/06 04:33	SW846 8260B	6082044
1,2,3-Trichloropropane	ND		ug/L	1.00	1	08/12/06 04:33	SW846 8260B	6082044
1,3,5-Trimethylbenzene	ND		ug/L	1.00	1	08/12/06 04:33	SW846 8260B	6082044
1,2,4-Trimethylbenzene	ND		ug/L	1.00	1	08/12/06 04:33	SW846 8260B	6082044
Vinyl chloride	ND		ug/L	1.00	1	08/12/06 04:33	SW846 8260B	6082044
Xylenes, total	ND		ug/L	3.00	1	08/12/06 04:33	SW846 8260B	6082044
Surr: 1,2-Dichloroethane-d4 (70-130%)	*105 %*					*08/12/06 04:33*	*SW846 8260B*	*6082044*
Surr: Dibromofluoromethane (79-122%)	*101 %*					*08/12/06 04:33*	*SW846 8260B*	*6082044*
Surr: Toluene-d8 (78-121%)	*100 %*					*08/12/06 04:33*	*SW846 8260B*	*6082044*
Surr: 4-Bromofluorobenzene (78-126%)	*102 %*					*08/12/06 04:33*	*SW846 8260B*	*6082044*
Extractable Petroleum Hydrocarbons								
Diesel	ND	CF6	ug/L	94.3	1	08/09/06 21:59	SW846 8015B	6080981
Surr: o-Terphenyl (55-150%)	*10 %*	*Z6*				*08/09/06 21:59*	*SW846 8015B*	*6080981*
Purgeable Petroleum Hydrocarbons								
GRO as Gasoline	ND		ug/L	100	1	08/06/06 17:32	SW846 8015B	6081017
Surr: a,a,a-Trifluorotoluene (63-134%)	*81 %*					*08/06/06 17:32*	*SW846 8015B*	*6081017*

TestAmerica
ANALYTICAL TESTING CORPORATION
2960 Foster Creighton Road Nashville, TN 37204 * 800-765-0980 * Fax 615-726-3404

Client MACTEC Engineering & Consulting, Inc. (3740)
21740 Beaumeade Circle, Suite 150
Ashburn, VA 20147
Attn Brent Chapman

Work Order: NPH0652
Project Name: AFRH
Project Number: 3552060897
Received: 08/03/06 08:00

ANALYTICAL REPORT

Sample ID: NPH0652-03 (W72-3 - Ground Water) Sampled: 08/02/06 10:30

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Acetone	ND		ug/L	50.0	1	08/12/06 04:58	SW846 8260B	6082044
Benzene	ND		ug/L	1.00	1	08/12/06 04:58	SW846 8260B	6082044
Bromobenzene	ND		ug/L	1.00	1	08/12/06 04:58	SW846 8260B	6082044
Bromochloromethane	ND		ug/L	1.00	1	08/12/06 04:58	SW846 8260B	6082044
Bromodichloromethane	ND		ug/L	1.00	1	08/12/06 04:58	SW846 8260B	6082044
Bromoform	ND		ug/L	1.00	1	08/12/06 04:58	SW846 8260B	6082044
Bromomethane	ND		ug/L	1.00	1	08/12/06 04:58	SW846 8260B	6082044
2-Butanone	ND		ug/L	50.0	1	08/12/06 04:58	SW846 8260B	6082044
sec-Butylbenzene	ND		ug/L	1.00	1	08/12/06 04:58	SW846 8260B	6082044
n-Butylbenzene	ND		ug/L	1.00	1	08/12/06 04:58	SW846 8260B	6082044
tert-Butylbenzene	ND		ug/L	1.00	1	08/12/06 04:58	SW846 8260B	6082044
Carbon disulfide	ND		ug/L	1.00	1	08/12/06 04:58	SW846 8260B	6082044
Carbon Tetrachloride	ND		ug/L	1.00	1	08/12/06 04:58	SW846 8260B	6082044
Chlorobenzene	ND		ug/L	1.00	1	08/12/06 04:58	SW846 8260B	6082044
Chlorodibromomethane	ND		ug/L	1.00	1	08/12/06 04:58	SW846 8260B	6082044
Chloroethane	ND		ug/L	1.00	1	08/12/06 04:58	SW846 8260B	6082044
Chloroform	ND		ug/L	1.00	1	08/12/06 04:58	SW846 8260B	6082044
Chloromethane	ND		ug/L	1.00	1	08/12/06 04:58	SW846 8260B	6082044
2-Chlorotoluene	ND		ug/L	1.00	1	08/12/06 04:58	SW846 8260B	6082044
4-Chlorotoluene	ND		ug/L	1.00	1	08/12/06 04:58	SW846 8260B	6082044
1,2-Dibromo-3-chloropropane	ND		ug/L	5.00	1	08/12/06 04:58	SW846 8260B	6082044
1,2-Dibromoethane (EDB)	ND		ug/L	1.00	1	08/12/06 04:58	SW846 8260B	6082044
Dibromomethane	ND		ug/L	1.00	1	08/12/06 04:58	SW846 8260B	6082044
1,4-Dichlorobenzene	ND		ug/L	1.00	1	08/12/06 04:58	SW846 8260B	6082044
1,3-Dichlorobenzene	ND		ug/L	1.00	1	08/12/06 04:58	SW846 8260B	6082044
1,2-Dichlorobenzene	ND		ug/L	1.00	1	08/12/06 04:58	SW846 8260B	6082044
Dichlorodifluoromethane	ND		ug/L	1.00	1	08/12/06 04:58	SW846 8260B	6082044
1,1-Dichloroethane	ND		ug/L	1.00	1	08/12/06 04:58	SW846 8260B	6082044
1,2-Dichloroethane	ND		ug/L	1.00	1	08/12/06 04:58	SW846 8260B	6082044
cis-1,2-Dichloroethene	ND		ug/L	1.00	1	08/12/06 04:58	SW846 8260B	6082044
1,1-Dichloroethene	ND		ug/L	1.00	1	08/12/06 04:58	SW846 8260B	6082044
trans-1,2-Dichloroethene	ND		ug/L	1.00	1	08/12/06 04:58	SW846 8260B	6082044
1,3-Dichloropropane	ND		ug/L	1.00	1	08/12/06 04:58	SW846 8260B	6082044
1,2-Dichloropropane	ND		ug/L	1.00	1	08/12/06 04:58	SW846 8260B	6082044
2,2-Dichloropropane	ND		ug/L	1.00	1	08/12/06 04:58	SW846 8260B	6082044
cis-1,3-Dichloropropene	ND		ug/L	1.00	1	08/12/06 04:58	SW846 8260B	6082044
trans-1,3-Dichloropropene	ND		ug/L	1.00	1	08/12/06 04:58	SW846 8260B	6082044
1,1-Dichloropropene	ND		ug/L	1.00	1	08/12/06 04:58	SW846 8260B	6082044
Ethylbenzene	ND		ug/L	1.00	1	08/12/06 04:58	SW846 8260B	6082044
Hexachlorobutadiene	ND		ug/L	1.00	1	08/12/06 04:58	SW846 8260B	6082044
2-Hexanone	ND		ug/L	50.0	1	08/12/06 04:58	SW846 8260B	6082044
Isopropylbenzene	ND		ug/L	1.00	1	08/12/06 04:58	SW846 8260B	6082044
p-Isopropyltoluene	ND		ug/L	1.00	1	08/12/06 04:58	SW846 8260B	6082044

Client MACTEC Engineering & Consulting, Inc. (3740)
21740 Beaumeade Circle, Suite 150
Ashburn, VA 20147
Attn Brent Chapman

Work Order: NPH0652
Project Name: AFRH
Project Number: 3552060897
Received: 08/03/06 08:00

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NPH0652-03 (W72-3 - Ground Water) - cont. Sampled: 08/02/06 10:30								
Volatile Organic Compounds by EPA Method 8260B - cont.								
Methyl tert-Butyl Ether	ND		ug/L	1.00	1	08/12/06 04:58	SW846 8260B	6082044
Methylene Chloride	ND		ug/L	5.00	1	08/12/06 04:58	SW846 8260B	6082044
4-Methyl-2-pentanone	ND		ug/L	50.0	1	08/12/06 04:58	SW846 8260B	6082044
Naphthalene	ND		ug/L	5.00	1	08/12/06 04:58	SW846 8260B	6082044
n-Propylbenzene	ND		ug/L	1.00	1	08/12/06 04:58	SW846 8260B	6082044
Styrene	ND		ug/L	1.00	1	08/12/06 04:58	SW846 8260B	6082044
1,1,1,2-Tetrachloroethane	ND		ug/L	1.00	1	08/12/06 04:58	SW846 8260B	6082044
1,1,2,2-Tetrachloroethane	ND		ug/L	1.00	1	08/12/06 04:58	SW846 8260B	6082044
Tetrachloroethene	ND		ug/L	1.00	1	08/12/06 04:58	SW846 8260B	6082044
Toluene	ND		ug/L	1.00	1	08/12/06 04:58	SW846 8260B	6082044
1,2,3-Trichlorobenzene	ND		ug/L	2.00	1	08/12/06 04:58	SW846 8260B	6082044
1,2,4-Trichlorobenzene	ND		ug/L	2.00	1	08/12/06 04:58	SW846 8260B	6082044
1,1,2-Trichloroethane	ND		ug/L	1.00	1	08/12/06 04:58	SW846 8260B	6082044
1,1,1-Trichloroethane	ND		ug/L	1.00	1	08/12/06 04:58	SW846 8260B	6082044
Trichloroethene	ND		ug/L	1.00	1	08/12/06 04:58	SW846 8260B	6082044
Trichlorofluoromethane	ND		ug/L	1.00	1	08/12/06 04:58	SW846 8260B	6082044
1,2,3-Trichloropropane	ND		ug/L	1.00	1	08/12/06 04:58	SW846 8260B	6082044
1,3,5-Trimethylbenzene	ND		ug/L	1.00	1	08/12/06 04:58	SW846 8260B	6082044
1,2,4-Trimethylbenzene	ND		ug/L	1.00	1	08/12/06 04:58	SW846 8260B	6082044
Vinyl chloride	ND		ug/L	1.00	1	08/12/06 04:58	SW846 8260B	6082044
Xylenes, total	ND		ug/L	3.00	1	08/12/06 04:58	SW846 8260B	6082044
Surr: 1,2-Dichloroethane-d4 (70-130%)	*107 %*					*08/12/06 04:58*	*SW846 8260B*	*6082044*
Surr: Dibromofluoromethane (79-122%)	*104 %*					*08/12/06 04:58*	*SW846 8260B*	*6082044*
Surr: Toluene-d8 (78-121%)	*100 %*					*08/12/06 04:58*	*SW846 8260B*	*6082044*
Surr: 4-Bromofluorobenzene (78-126%)	*105 %*					*08/12/06 04:58*	*SW846 8260B*	*6082044*
Extractable Petroleum Hydrocarbons								
Diesel	ND	CF6	ug/L	94.3	1	08/09/06 22:17	SW846 8015B	6080981
Surr: o-Terphenyl (55-150%)	*49 %*	*Z6*				*08/09/06 22:17*	*SW846 8015B*	*6080981*
Purgeable Petroleum Hydrocarbons								
GRO as Gasoline	ND		ug/L	100	1	08/06/06 17:59	SW846 8015B	6081017
Surr: a,a,a-Trifluorotoluene (63-134%)	*83 %*					*08/06/06 17:59*	*SW846 8015B*	*6081017*

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Client MACTEC Engineering & Consulting, Inc. (3740)
21740 Beaumeade Circle, Suite 150
Ashburn, VA 20147
Attn Brent Chapman

Work Order: NPH0652
Project Name: AFRH
Project Number: 3552060897
Received: 08/03/06 08:00

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NPH0652-04 (H48-1 (0.25-1) - Soil) Sampled: 08/02/06 12:00								
Mercury by EPA Methods 7470A/7471A								
Mercury	**0.460**		mg/kg	0.0990	1	08/11/06 14:57	SW846 7471A	6082192
Organochlorine Pesticides by EPA Method 8081A								
Aldrin	ND	RL1	mg/kg	0.00825	5	08/07/06 17:06	SW846 8081A	6080989
delta-BHC	ND	RL1	mg/kg	0.00825	5	08/07/06 17:06	SW846 8081A	6080989
alpha-BHC	ND	RL1	mg/kg	0.00825	5	08/07/06 17:06	SW846 8081A	6080989
beta-BHC	ND	RL1	mg/kg	0.0160	5	08/07/06 17:06	SW846 8081A	6080989
gamma-BHC (Lindane)	ND	RL1	mg/kg	0.00825	5	08/07/06 17:06	SW846 8081A	6080989
alpha-Chlordane	ND	RL1	mg/kg	0.00825	5	08/07/06 17:06	SW846 8081A	6080989
gamma-Chlordane	ND	RL1	mg/kg	0.00825	5	08/07/06 17:06	SW846 8081A	6080989
Chlordane	ND	RL1	mg/kg	0.324	5	08/07/06 17:06	SW846 8081A	6080989
4,4'-DDD	ND	RL1	mg/kg	0.00825	5	08/07/06 17:06	SW846 8081A	6080989
4,4'-DDE	ND	RL1	mg/kg	0.00825	5	08/07/06 17:06	SW846 8081A	6080989
4,4'-DDT	ND	RL1	mg/kg	0.00825	5	08/07/06 17:06	SW846 8081A	6080989
Dieldrin	ND	RL1	mg/kg	0.00825	5	08/07/06 17:06	SW846 8081A	6080989
Endosulfan I	ND	RL1	mg/kg	0.00825	5	08/07/06 17:06	SW846 8081A	6080989
Endosulfan II	ND	RL1	mg/kg	0.00825	5	08/07/06 17:06	SW846 8081A	6080989
Endosulfan sulfate	ND	RL1	mg/kg	0.00825	5	08/07/06 17:06	SW846 8081A	6080989
Endrin	ND	RL1	mg/kg	0.00825	5	08/07/06 17:06	SW846 8081A	6080989
Endrin aldehyde	ND	RL1	mg/kg	0.00825	5	08/07/06 17:06	SW846 8081A	6080989
Endrin ketone	ND	RL1	mg/kg	0.00825	5	08/07/06 17:06	SW846 8081A	6080989
Heptachlor	ND	RL1	mg/kg	0.00825	5	08/07/06 17:06	SW846 8081A	6080989
Heptachlor epoxide	ND	RL1	mg/kg	0.00825	5	08/07/06 17:06	SW846 8081A	6080989
Methoxychlor	ND	RL1	mg/kg	0.0160	5	08/07/06 17:06	SW846 8081A	6080989
Toxaphene	ND	RL1	mg/kg	0.324	5	08/07/06 17:06	SW846 8081A	6080989
Surr: Tetrachloro-meta-xylene (63-132%)	*90 %*					*08/07/06 17:06*	*SW846 8081A*	*6080989*
Surr: Decachlorobiphenyl (39-108%)	*120 %*	*Z5*				*08/07/06 17:06*	*SW846 8081A*	*6080989*
Chlorinated Herbicides by EPA Method 8151A								
2,4-D	ND		mg/kg	0.0666	1	08/15/06 21:02	SW846 8151A	6082467
Dalapon	ND		mg/kg	0.167	1	08/15/06 21:02	SW846 8151A	6082467
2,4-DB	ND		mg/kg	0.0666	1	08/15/06 21:02	SW846 8151A	6082467
Dicamba	ND		mg/kg	0.0330	1	08/15/06 21:02	SW846 8151A	6082467
Dichloroprop	ND		mg/kg	0.0666	1	08/15/06 21:02	SW846 8151A	6082467
Dinoseb	ND		mg/kg	0.0666	1	08/15/06 21:02	SW846 8151A	6082467
MCPA	ND		mg/kg	3.33	1	08/15/06 21:02	SW846 8151A	6082467
MCPP	ND		mg/kg	3.33	1	08/15/06 21:02	SW846 8151A	6082467
4-Nitrophenol	ND		mg/kg	0.0330	1	08/15/06 21:02	SW846 8151A	6082467
Pentachlorophenol	ND		mg/kg	0.0330	1	08/15/06 21:02	SW846 8151A	6082467
Picloram	ND		mg/kg	0.0330	1	08/15/06 21:02	SW846 8151A	6082467
2,4,5-T	ND		mg/kg	0.0330	1	08/15/06 21:02	SW846 8151A	6082467
2,4,5-TP (Silvex)	ND		mg/kg	0.0170	1	08/15/06 21:02	SW846 8151A	6082467
Surr: Dichloroacetic Acid (55-132%)	*77 %*					*08/15/06 21:02*	*SW846 8151A*	*6082467*

Arsenic, Barium, Cadmium, Chromium, Lead, Silver, Selenium by 6020.

Client MACTEC Engineering & Consulting, Inc. (3740)
21740 Beaumeade Circle, Suite 150
Ashburn, VA 20147
Attn Brent Chapman

Work Order: NPH0652
Project Name: AFRH
Project Number: 3552060897
Received: 08/03/06 08:00

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NPH0652-04 (H48-1 (0.25-1) - Soil) - cont. Sampled: 08/02/06 12:00								
Arsenic, Barium, Cadmium, Chromium, Lead, Silver, Selenium by 6020. - cont.								
See Attached Report								
Sample ID: NPH0652-05 (Trip Blank - Water) Sampled: 08/02/06								
Volatile Organic Compounds by EPA Method 8260B								
Acetone	ND		ug/L	50.0	1	08/11/06 23:56	SW846 8260B	6082044
Benzene	ND		ug/L	1.00	1	08/11/06 23:56	SW846 8260B	6082044
Bromobenzene	ND		ug/L	1.00	1	08/11/06 23:56	SW846 8260B	6082044
Bromochloromethane	ND		ug/L	1.00	1	08/11/06 23:56	SW846 8260B	6082044
Bromodichloromethane	ND		ug/L	1.00	1	08/11/06 23:56	SW846 8260B	6082044
Bromoform	ND		ug/L	1.00	1	08/11/06 23:56	SW846 8260B	6082044
Bromomethane	ND		ug/L	1.00	1	08/11/06 23:56	SW846 8260B	6082044
2-Butanone	ND		ug/L	50.0	1	08/11/06 23:56	SW846 8260B	6082044
sec-Butylbenzene	ND		ug/L	1.00	1	08/11/06 23:56	SW846 8260B	6082044
n-Butylbenzene	ND		ug/L	1.00	1	08/11/06 23:56	SW846 8260B	6082044
tert-Butylbenzene	ND		ug/L	1.00	1	08/11/06 23:56	SW846 8260B	6082044
Carbon disulfide	ND		ug/L	1.00	1	08/11/06 23:56	SW846 8260B	6082044
Carbon Tetrachloride	ND		ug/L	1.00	1	08/11/06 23:56	SW846 8260B	6082044
Chlorobenzene	ND		ug/L	1.00	1	08/11/06 23:56	SW846 8260B	6082044
Chlorodibromomethane	ND		ug/L	1.00	1	08/11/06 23:56	SW846 8260B	6082044
Chloroethane	ND		ug/L	1.00	1	08/11/06 23:56	SW846 8260B	6082044
Chloroform	ND		ug/L	1.00	1	08/11/06 23:56	SW846 8260B	6082044
Chloromethane	ND		ug/L	1.00	1	08/11/06 23:56	SW846 8260B	6082044
2-Chlorotoluene	ND		ug/L	1.00	1	08/11/06 23:56	SW846 8260B	6082044
4-Chlorotoluene	ND		ug/L	1.00	1	08/11/06 23:56	SW846 8260B	6082044
1,2-Dibromo-3-chloropropane	ND		ug/L	5.00	1	08/11/06 23:56	SW846 8260B	6082044
1,2-Dibromoethane (EDB)	ND		ug/L	1.00	1	08/11/06 23:56	SW846 8260B	6082044
Dibromomethane	ND		ug/L	1.00	1	08/11/06 23:56	SW846 8260B	6082044
1,4-Dichlorobenzene	ND		ug/L	1.00	1	08/11/06 23:56	SW846 8260B	6082044
1,3-Dichlorobenzene	ND		ug/L	1.00	1	08/11/06 23:56	SW846 8260B	6082044
1,2-Dichlorobenzene	ND		ug/L	1.00	1	08/11/06 23:56	SW846 8260B	6082044
Dichlorodifluoromethane	ND		ug/L	1.00	1	08/11/06 23:56	SW846 8260B	6082044
1,1-Dichloroethane	ND		ug/L	1.00	1	08/11/06 23:56	SW846 8260B	6082044
1,2-Dichloroethane	ND		ug/L	1.00	1	08/11/06 23:56	SW846 8260B	6082044
cis-1,2-Dichloroethene	ND		ug/L	1.00	1	08/11/06 23:56	SW846 8260B	6082044
1,1-Dichloroethene	ND		ug/L	1.00	1	08/11/06 23:56	SW846 8260B	6082044
trans-1,2-Dichloroethene	ND		ug/L	1.00	1	08/11/06 23:56	SW846 8260B	6082044
1,3-Dichloropropane	ND		ug/L	1.00	1	08/11/06 23:56	SW846 8260B	6082044
1,2-Dichloropropane	ND		ug/L	1.00	1	08/11/06 23:56	SW846 8260B	6082044
2,2-Dichloropropane	ND		ug/L	1.00	1	08/11/06 23:56	SW846 8260B	6082044
cis-1,3-Dichloropropene	ND		ug/L	1.00	1	08/11/06 23:56	SW846 8260B	6082044
trans-1,3-Dichloropropene	ND		ug/L	1.00	1	08/11/06 23:56	SW846 8260B	6082044
1,1-Dichloropropene	ND		ug/L	1.00	1	08/11/06 23:56	SW846 8260B	6082044
Ethylbenzene	ND		ug/L	1.00	1	08/11/06 23:56	SW846 8260B	6082044

TestAmerica
ANALYTICAL TESTING CORPORATION
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Client MACTEC Engineering & Consulting, Inc. (3740)
21740 Beaumeade Circle, Suite 150
Ashburn, VA 20147
Attn Brent Chapman

Work Order: NPH0652
Project Name: AFRH
Project Number: 3552060897
Received: 08/03/06 08:00

ANALYTICAL REPORT

Sample ID: NPH0652-05 (Trip Blank - Water) - cont. Sampled: 08/02/06

Volatile Organic Compounds by EPA Method 8260B - cont.

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Hexachlorobutadiene	ND		ug/L	1.00	1	08/11/06 23:56	SW846 8260B	6082044
2-Hexanone	ND		ug/L	50.0	1	08/11/06 23:56	SW846 8260B	6082044
Isopropylbenzene	ND		ug/L	1.00	1	08/11/06 23:56	SW846 8260B	6082044
p-Isopropyltoluene	ND		ug/L	1.00	1	08/11/06 23:56	SW846 8260B	6082044
Methyl tert-Butyl Ether	ND		ug/L	1.00	1	08/11/06 23:56	SW846 8260B	6082044
Methylene Chloride	ND		ug/L	5.00	1	08/11/06 23:56	SW846 8260B	6082044
4-Methyl-2-pentanone	ND		ug/L	50.0	1	08/11/06 23:56	SW846 8260B	6082044
Naphthalene	ND		ug/L	5.00	1	08/11/06 23:56	SW846 8260B	6082044
n-Propylbenzene	ND		ug/L	1.00	1	08/11/06 23:56	SW846 8260B	6082044
Styrene	ND		ug/L	1.00	1	08/11/06 23:56	SW846 8260B	6082044
1,1,1,2-Tetrachloroethane	ND		ug/L	1.00	1	08/11/06 23:56	SW846 8260B	6082044
1,1,2,2-Tetrachloroethane	ND		ug/L	1.00	1	08/11/06 23:56	SW846 8260B	6082044
Tetrachloroethene	ND		ug/L	1.00	1	08/11/06 23:56	SW846 8260B	6082044
Toluene	ND		ug/L	1.00	1	08/11/06 23:56	SW846 8260B	6082044
1,2,3-Trichlorobenzene	ND		ug/L	2.00	1	08/11/06 23:56	SW846 8260B	6082044
1,2,4-Trichlorobenzene	ND		ug/L	2.00	1	08/11/06 23:56	SW846 8260B	6082044
1,1,2-Trichloroethane	ND		ug/L	1.00	1	08/11/06 23:56	SW846 8260B	6082044
1,1,1-Trichloroethane	ND		ug/L	1.00	1	08/11/06 23:56	SW846 8260B	6082044
Trichloroethene	ND		ug/L	1.00	1	08/11/06 23:56	SW846 8260B	6082044
Trichlorofluoromethane	ND		ug/L	1.00	1	08/11/06 23:56	SW846 8260B	6082044
1,2,3-Trichloropropane	ND		ug/L	1.00	1	08/11/06 23:56	SW846 8260B	6082044
1,3,5-Trimethylbenzene	ND		ug/L	1.00	1	08/11/06 23:56	SW846 8260B	6082044
1,2,4-Trimethylbenzene	ND		ug/L	1.00	1	08/11/06 23:56	SW846 8260B	6082044
Vinyl chloride	ND		ug/L	1.00	1	08/11/06 23:56	SW846 8260B	6082044
Xylenes, total	ND		ug/L	3.00	1	08/11/06 23:56	SW846 8260B	6082044
Surr: 1,2-Dichloroethane-d4 (70-130%)	*105 %*					*08/11/06 23:56*	*SW846 8260B*	*6082044*
Surr: Dibromofluoromethane (79-122%)	*102 %*					*08/11/06 23:56*	*SW846 8260B*	*6082044*
Surr: Toluene-d8 (78-121%)	*102 %*					*08/11/06 23:56*	*SW846 8260B*	*6082044*
Surr: 4-Bromofluorobenzene (78-126%)	*105 %*					*08/11/06 23:56*	*SW846 8260B*	*6082044*

TestAmerica
ANALYTICAL TESTING CORPORATION
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TESTAMERICA ANALYTICAL/
TESTING CORPORATION
2960 Foster Creighton Dr.
Nashville, TN 37204

Job Number: 06.14672
Report Date: 08/16/2006

Enclosed are the Analytical and Quality Control Reports for the following samples submitted to TestAmerica for analysis:

Project: NPH0652

Sample Number	Sample Description	Date Taken	Date Received
216094	NPH0652-02	08/02/2006	08/11/2006

The Quality Control report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

TestAmerica certifies that the analytical results contained herein apply only to the specific samples analyzed. Reproduction of this report is permitted only in its entirety.

Enclosure

Project Management Approval

Dayton - 3601 South Dixie Drive, Dayton, OH 45439 937-294-6856/FAX:937-294-7816
Dundee (Chicago) - 1090 Rock Road Lane, Unit 11, Dundee, IL 60118 847-783-4960/FAX:847-783-4969
Indianapolis - 6964 Hillsdale Court, Indianapolis, IN 46250 317-842-4261/FAX:317-842-4286
Pontiac - 341 W. Walton Blvd, Pontiac, MI 48340 248-332-1940/FAX:248-332-5450

TestAmerica
ANALYTICAL TESTING CORPORATION
3601 South Dixie Drive • Dayton, OH 45439 • 937-294-6856 • Fax: 937-294-7816 • 800-572-9839

Analytical Report

TESTAMERICA ANALYTICAL/
TESTING CORPORATION
2960 Foster Creighton Dr.
Nashville, TN 37204

Job Number: 06.14672
Report Date: 08/16/2006

SAMPLE NO. 216094
SAMPLE DESCRIPTION NPH0652-02
DATE/TIME TAKEN 08/02/2006 12:00

	Result	Units	Reporting Limit	Flag	Run Date	Run Time	Prep Batch	Run Batch	Anal. Init.	Lab ID	Method Reference
ICPMS NONAQUEOUS	Complete		Complete		08/15/2006	08:47		696	ekh	DT	SW 6020
Arsenic, ICPMS	2.3	mg/Kg	<2.0		08/15/2006	08:47	510	8303	ekh	DT	SW 6020
Barium, ICPMS	55.0	mg/Kg	<0.98		08/15/2006	08:47	510	8288	ekh	DT	SW 6020
Cadmium, ICPMS	<0.98	mg/Kg	<0.98		08/15/2006	08:47	510	8357	ekh	DT	SW 6020
Chromium, ICPMS	16.8	mg/Kg	<2.0		08/15/2006	08:47	510	8208	ekh	DT	SW 6020
Lead, ICPMS	51.9	mg/Kg	<0.98	h	08/15/2006	08:56	510	8376	ekh	DT	SW 6020
Selenium, ICPMS	<0.98	mg/Kg	<0.98		08/15/2006	08:47	510	1923	ekh	DT	SW 6020 Mod
Silver, ICPMS	<0.5	mg/Kg	<0.5		08/15/2006	08:47	510	8095	ekh	DT	SW 6020
ICPMS Digestion, Nonaqueous	Complete		Complete		08/14/2006	13:00	510		jml	DT	SW 3050B

h - MSD recovery and RPD outside of control limits.

Lab ID: CH = Chicago (Dundee), DT = Dayton, IN = Indianapolis, PT = Pontiac, SUB = Subcontracted, CLT = Client Data

TestAmerica
ANALYTICAL TESTING CORPORATION

Nashville Division
2960 Foster Creighton
Nashville, TN 37204

Phone: 615-726-0177
Fax: 615-726-3404

To assist us in using the proper analytical methods, is this work being conducted for regulatory purposes?
Compliance Monitoring ______

Client Name: Mactec   Client #: ______
Address: 21740 Beaumeade Circle 150
City/State/Zip Code: Ashburn VA 20147
Project Manager: Brent Chapman
Telephone Number: 703-729-1416   Fax: 703-858-1858
Sampler Name: (Print Name) Ben Grosser
Sampler Signature: [signature]

Project Name: AFRH
Project #: 3532060897
Site/Location ID: AFRH   State: DC
Report To: Brent Chapman
Invoice To: ______
Quote #: ______   PO#: Will email #

TAT
X Standard
___ Rush (surcharges may apply)

Date Needed: ______

Fax Results: (Y) N

SAMPLE ID	Date Sampled	Time Sampled	G = Grab, C = Composite	Field Filtered	Matrix (SL - Sludge, DW - Drinking Water, GW - Groundwater, S - Soil/Solid, WW - Wastewater, Specify Other)	HNO_3	HCl	NaOH	H_2SO_4	Methanol	None	Other (Specify)	TPH-DRO 8015m	TPH-GRO 8015m	VOCs 8260	Pesticides 8081	Herbicides 8151	RCRA Metals 6020/7471					REMARKS
W72-1	8-2-06	800			GW		8						X	X	X				NPH0652-1				
W72-2	8-2-06	915			GW		8						X	X	X						2		
W72-3	8-2-06	1030			GW		8						X	X	X						3		
H48-1 (0.25-1)	8-2-06	1200			S		[illegible]				3					X	X	X			4		
																					5		

NPH0652
08/14/06 23:59

QC Deliverables
___ None
___ Level 2 (Batch QC)
___ Level 3
___ Level 4
Other: ______

Special Instructions:

Relinquished By: [signature]	Date: 8-2-06	Time: 1200	Received By: [signature] 8-3-06 8:00	Date: 4.9°	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

LABORATORY COMMENTS:
Init Lab Temp:
Rec Lab Temp:
Custody Seals: Y N N/A
Bottles Supplied by Test America: Y N
Method of Shipment:

TestAmerica
ANALYTICAL TESTING CORPORATION

Nashville Division

COOLER RECEIPT FORM **BC#** NPH0652

Cooler Received/Opened On 08/03/06 8:00

1. Indicate the Airbill Tracking Number (last 4 digits for Fedex only) and Name of Courier below: 9510

(Fed-Ex) UPS Velocity DHL Route Off-street Misc.

2. Temperature of representative sample or temperature blank when opened: 4.9 **Degrees Celsius**
(indicate IR Gun ID#)

NA A00466 A00750 A01124 100190 101282 (Raynger ST)

3. Were custody seals on outside of cooler?..... (YES)...NO....NA

a. If yes, how many and where: 1 Front / 1 Back

4. Were the seals intact, signed, and dated correctly?..... (YES)....NO...NA

5. Were custody papers inside cooler?..... (YES)...NO...NA

I certify that I opened the cooler and answered questions 1-5 (intial)..... IP

6. Were custody seals on containers: YES (NO) and Intact YES NO (NA)

were these signed, and dated correctly?..... YES...NO...(NA)

7. What kind of packing material used? (Bubblewrap) Peanuts Vermiculite Foam Insert

(Plastic bag) Paper Other_____ None

8. Cooling process: (Ice) Ice-pack Ice (direct contact) Dry ice Other None

9. Did all containers arrive in good condition (unbroken)?..... (YES)...NO...NA

10. Were all container labels complete (#, date, signed, pres., etc)?..... (YES)...NO...NA

11. Did all container labels and tags agree with custody papers?..... (YES)..NO...NA

12. a. Were VOA vials received?..... (YES)...NO...NA

b. Was there any observable head space present in any VOA vial?..... YES...NO...(NA)

I certify that I unloaded the cooler and answered questions 6-12 (intial)..... IP

13. a. On preserved bottles did the pH test strips suggest that preservation reached the correct pH level? YES...NO...(NA)

b. Did the bottle labels indicate that the correct preservatives were used..... (YES)...NO...NA

If preservation in-house was needed, record standard ID of preservative used here_____

14. Was residual chlorine present?..... YES...NO...(NA)

I certify that I checked for chlorine and pH as per SOP and answered questions 13-14 (intial)..... JVC

15. Were custody papers properly filled out (ink, signed, etc)?..... (YES)...NO...NA

16. Did you sign the custody papers in the appropriate place?..... (YES)...NO...NA

17. Were correct containers used for the analysis requested?..... (YES)...NO...NA

18. Was sufficient amount of sample sent in each container?..... (YES)...NO...NA

I certify that I entered this project into LIMS and answered questions 15-18 (intial)..... JVC

I certify that I attached a label with the unique LIMS number to each container (intial)..... JVC

19. Were there Non-Conformance issues at login YES (NO) Was a PIPE generated (YES) NO # 38728

BIS = Broken in shipment

TestAmerica
ANALYTICAL TESTING CORPORATION
2960 Foster Creighton Road Nashville, TN 37204 * 800-765-0980 * Fax 615-726-3404

August 21, 2006

Client: MACTEC Engineering & Consulting, Inc. (3740)
21740 Beaumeade Circle, Suite 150
Ashburn, VA 20147
Attn: Brent Chapman

Work Order: NPH0573
Project Name: AFRH
Project Nbr: 3552060897
P/O Nbr: 62671
Date Received: 08/04/06

SAMPLE IDENTIFICATION	LAB NUMBER	COLLECTION DATE AND TIME
H78-4 (1-2)	NPH0573-01	08/03/06 08:00
H78-6 (3-3.5)	NPH0573-02	08/03/06 09:50
H48-3 (2-2.75)	NPH0573-03	08/03/06 11:00
H69-1	NPH0573-04	08/03/06 13:00

An executed copy of the chain of custody, the project quality control data, and the sample receipt form are also included as an addendum to this report. If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-800-765-0980. Any opinions, if expressed, are outside the scope of the Laboratory's accredidation.

The Chain(s) of Custody, 9 pages, are included and are an integral part of this report.

These results relate only to the items tested. This report shall not be reproduced except in full and with permission of the laboratory.

Report Approved By:

Jessica Vickers
Senior Project Manager

TestAmerica
ANALYTICAL TESTING CORPORATION
2960 Foster Creighton Road Nashville, TN 37204 * 800-765-0980 * Fax 615-726-3404

Client MACTEC Engineering & Consulting, Inc. (3740)
21740 Beaumeade Circle, Suite 150
Ashburn, VA 20147
Attn Brent Chapman

Work Order: NPH0573
Project Name: AFRH
Project Number: 3552060897
Received: 08/04/06 08:00

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NPH0573-01 (H78-4 (1-2) - Soil) Sampled: 08/03/06 08:00								
Mercury by EPA Methods 7470A/7471A								
Mercury	ND		mg/kg	0.100	1	08/16/06 14:44	SW846 7471A	6082795
Organochlorine Pesticides by EPA Method 8081A								
Aldrin	ND		mg/kg	0.00168	1	08/07/06 15:10	SW846 8081A	6080989
delta-BHC	ND		mg/kg	0.00168	1	08/07/06 15:10	SW846 8081A	6080989
alpha-BHC	ND		mg/kg	0.00168	1	08/07/06 15:10	SW846 8081A	6080989
beta-BHC	ND		mg/kg	0.00326	1	08/07/06 15:10	SW846 8081A	6080989
gamma-BHC (Lindane)	ND		mg/kg	0.00168	1	08/07/06 15:10	SW846 8081A	6080989
alpha-Chlordane	ND		mg/kg	0.00168	1	08/07/06 15:10	SW846 8081A	6080989
gamma-Chlordane	ND		mg/kg	0.00168	1	08/07/06 15:10	SW846 8081A	6080989
Chlordane	ND		mg/kg	0.0659	1	08/07/06 15:10	SW846 8081A	6080989
4,4'-DDD	ND		mg/kg	0.00168	1	08/07/06 15:10	SW846 8081A	6080989
4,4'-DDE	ND		mg/kg	0.00168	1	08/07/06 15:10	SW846 8081A	6080989
4,4'-DDT	ND		mg/kg	0.00168	1	08/07/06 15:10	SW846 8081A	6080989
Dieldrin	ND		mg/kg	0.00168	1	08/07/06 15:10	SW846 8081A	6080989
Endosulfan I	ND		mg/kg	0.00168	1	08/07/06 15:10	SW846 8081A	6080989
Endosulfan II	ND		mg/kg	0.00168	1	08/07/06 15:10	SW846 8081A	6080989
Endosulfan sulfate	ND		mg/kg	0.00168	1	08/07/06 15:10	SW846 8081A	6080989
Endrin	ND		mg/kg	0.00168	1	08/07/06 15:10	SW846 8081A	6080989
Endrin aldehyde	ND		mg/kg	0.00168	1	08/07/06 15:10	SW846 8081A	6080989
Endrin ketone	ND		mg/kg	0.00168	1	08/07/06 15:10	SW846 8081A	6080989
Heptachlor	ND		mg/kg	0.00168	1	08/07/06 15:10	SW846 8081A	6080989
Heptachlor epoxide	ND		mg/kg	0.00168	1	08/07/06 15:10	SW846 8081A	6080989
Methoxychlor	ND		mg/kg	0.00326	1	08/07/06 15:10	SW846 8081A	6080989
Toxaphene	ND		mg/kg	0.0659	1	08/07/06 15:10	SW846 8081A	6080989
Surr: Tetrachloro-meta-xylene (63-132%)	*64 %*					*08/07/06 15:10*	*SW846 8081A*	*6080989*
Surr: Decachlorobiphenyl (39-108%)	*120 %*	*Z5*				*08/07/06 15:10*	*SW846 8081A*	*6080989*
Chlorinated Herbicides by EPA Method 8151A								
2,4-D	ND		mg/kg	0.0654	1	08/07/06 18:29	SW846 8151A	6080810
Dalapon	ND		mg/kg	0.164	1	08/07/06 18:29	SW846 8151A	6080810
2,4-DB	ND		mg/kg	0.0654	1	08/07/06 18:29	SW846 8151A	6080810
Dicamba	ND		mg/kg	0.0324	1	08/07/06 18:29	SW846 8151A	6080810
Dichloroprop	ND		mg/kg	0.0654	1	08/07/06 18:29	SW846 8151A	6080810
Dinoseb	ND		mg/kg	0.0654	1	08/07/06 18:29	SW846 8151A	6080810
MCPA	ND		mg/kg	3.26	1	08/07/06 18:29	SW846 8151A	6080810
MCPP	ND		mg/kg	3.26	1	08/07/06 18:29	SW846 8151A	6080810
4-Nitrophenol	ND		mg/kg	0.0324	1	08/07/06 18:29	SW846 8151A	6080810
Pentachlorophenol	ND		mg/kg	0.0324	1	08/07/06 18:29	SW846 8151A	6080810
Picloram	ND		mg/kg	0.0324	1	08/07/06 18:29	SW846 8151A	6080810
2,4,5-T	ND		mg/kg	0.0324	1	08/07/06 18:29	SW846 8151A	6080810
2,4,5-TP (Silvex)	ND		mg/kg	0.0167	1	08/07/06 18:29	SW846 8151A	6080810
Surr: Dichloroacetic Acid (55-132%)	*70 %*					*08/07/06 18:29*	*SW846 8151A*	*6080810*

Arsenic, Barium, Cadmium, Chromium, Lead, Silver, Selenium by 6020.

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Client MACTEC Engineering & Consulting, Inc. (3740)
21740 Beaumeade Circle, Suite 150
Ashburn, VA 20147
Attn Brent Chapman

Work Order: NPH0573
Project Name: AFRH
Project Number: 3552060897
Received: 08/04/06 08:00

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NPH0573-01 (H78-4 (1-2) - Soil) - cont. Sampled: 08/03/06 08:00								
Arsenic, Barium, Cadmium, Chromium, Lead, Silver, Selenium by 6020. - cont.								
See Attached Report								
Sample ID: NPH0573-02 (H78-6 (3-3.5) - Soil) Sampled: 08/03/06 09:50								
Mercury by EPA Methods 7470A/7471A								
Mercury	ND		mg/kg	0.101	1	08/16/06 14:51	SW846 7471A	6082795
Organochlorine Pesticides by EPA Method 8081A								
Aldrin	ND		mg/kg	0.00168	1	08/07/06 15:39	SW846 8081A	6080989
delta-BHC	ND		mg/kg	0.00168	1	08/07/06 15:39	SW846 8081A	6080989
alpha-BHC	ND		mg/kg	0.00168	1	08/07/06 15:39	SW846 8081A	6080989
beta-BHC	ND		mg/kg	0.00326	1	08/07/06 15:39	SW846 8081A	6080989
gamma-BHC (Lindane)	ND		mg/kg	0.00168	1	08/07/06 15:39	SW846 8081A	6080989
alpha-Chlordane	ND		mg/kg	0.00168	1	08/07/06 15:39	SW846 8081A	6080989
gamma-Chlordane	ND		mg/kg	0.00168	1	08/07/06 15:39	SW846 8081A	6080989
Chlordane	ND		mg/kg	0.0659	1	08/07/06 15:39	SW846 8081A	6080989
4,4'-DDD	ND		mg/kg	0.00168	1	08/07/06 15:39	SW846 8081A	6080989
4,4'-DDE	**0.00230**		mg/kg	0.00168	1	08/07/06 15:39	SW846 8081A	6080989
4,4'-DDT	ND		mg/kg	0.00168	1	08/07/06 15:39	SW846 8081A	6080989
Dieldrin	ND		mg/kg	0.00168	1	08/07/06 15:39	SW846 8081A	6080989
Endosulfan I	ND		mg/kg	0.00168	1	08/07/06 15:39	SW846 8081A	6080989
Endosulfan II	ND		mg/kg	0.00168	1	08/07/06 15:39	SW846 8081A	6080989
Endosulfan sulfate	ND		mg/kg	0.00168	1	08/07/06 15:39	SW846 8081A	6080989
Endrin	ND		mg/kg	0.00168	1	08/07/06 15:39	SW846 8081A	6080989
Endrin aldehyde	ND		mg/kg	0.00168	1	08/07/06 15:39	SW846 8081A	6080989
Endrin ketone	ND		mg/kg	0.00168	1	08/07/06 15:39	SW846 8081A	6080989
Heptachlor	ND		mg/kg	0.00168	1	08/07/06 15:39	SW846 8081A	6080989
Heptachlor epoxide	ND		mg/kg	0.00168	1	08/07/06 15:39	SW846 8081A	6080989
Methoxychlor	ND		mg/kg	0.00326	1	08/07/06 15:39	SW846 8081A	6080989
Toxaphene	ND		mg/kg	0.0659	1	08/07/06 15:39	SW846 8081A	6080989
Surr: Tetrachloro-meta-xylene (63-132%)	*70 %*					*08/07/06 15:39*	*SW846 8081A*	*6080989*
Surr: Decachlorobiphenyl (39-108%)	*98 %*					*08/07/06 15:39*	*SW846 8081A*	*6080989*
Chlorinated Herbicides by EPA Method 8151A								
2,4-D	ND		mg/kg	0.0657	1	08/07/06 19:01	SW846 8151A	6080810
Dalapon	ND		mg/kg	0.164	1	08/07/06 19:01	SW846 8151A	6080810
2,4-DB	ND		mg/kg	0.0657	1	08/07/06 19:01	SW846 8151A	6080810
Dicamba	ND		mg/kg	0.0325	1	08/07/06 19:01	SW846 8151A	6080810
Dichloroprop	ND		mg/kg	0.0657	1	08/07/06 19:01	SW846 8151A	6080810
Dinoseb	ND		mg/kg	0.0657	1	08/07/06 19:01	SW846 8151A	6080810
MCPA	ND		mg/kg	3.28	1	08/07/06 19:01	SW846 8151A	6080810
MCPP	ND		mg/kg	3.28	1	08/07/06 19:01	SW846 8151A	6080810
4-Nitrophenol	ND		mg/kg	0.0325	1	08/07/06 19:01	SW846 8151A	6080810
Pentachlorophenol	ND		mg/kg	0.0325	1	08/07/06 19:01	SW846 8151A	6080810
Picloram	ND		mg/kg	0.0325	1	08/07/06 19:01	SW846 8151A	6080810
2,4,5-T	ND		mg/kg	0.0325	1	08/07/06 19:01	SW846 8151A	6080810

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ANALYTICAL TESTING CORPORATION
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Client MACTEC Engineering & Consulting, Inc. (3740)
21740 Beaumeade Circle, Suite 150
Ashburn, VA 20147
Attn Brent Chapman

Work Order: NPH0573
Project Name: AFRH
Project Number: 3552060897
Received: 08/04/06 08:00

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NPH0573-02 (H78-6 (3-3.5) - Soil) - cont. Sampled: 08/03/06 09:50								
Chlorinated Herbicides by EPA Method 8151A - cont.								
2,4,5-TP (Silvex)	ND		mg/kg	0.0167	1	08/07/06 19:01	SW846 8151A	6080810
Surr: Dichloroacetic Acid (55-132%)	*62 %*					*08/07/06 19:01*	*SW846 8151A*	*6080810*
Arsenic, Barium, Cadmium, Chromium, Lead, Silver, Selenium by 6020.								
See Attached Report								
Sample ID: NPH0573-03 (H48-3 (2-2.75) - Soil) Sampled: 08/03/06 11:00								
Mercury by EPA Methods 7470A/7471A								
Mercury	**0.432**		mg/kg	0.100	1	08/16/06 14:53	SW846 7471A	6082795
Organochlorine Pesticides by EPA Method 8081A								
Aldrin	ND		mg/kg	0.00828	5	08/07/06 16:36	SW846 8081A	6080989
delta-BHC	ND		mg/kg	0.00828	5	08/07/06 16:36	SW846 8081A	6080989
alpha-BHC	ND		mg/kg	0.00828	5	08/07/06 16:36	SW846 8081A	6080989
beta-BHC	**0.0276**		mg/kg	0.0161	5	08/07/06 16:36	SW846 8081A	6080989
gamma-BHC (Lindane)	ND		mg/kg	0.00828	5	08/07/06 16:36	SW846 8081A	6080989
alpha-Chlordane	ND		mg/kg	0.00828	5	08/07/06 16:36	SW846 8081A	6080989
gamma-Chlordane	ND		mg/kg	0.00828	5	08/07/06 16:36	SW846 8081A	6080989
Chlordane	ND		mg/kg	0.325	5	08/07/06 16:36	SW846 8081A	6080989
4,4'-DDD	ND		mg/kg	0.00828	5	08/07/06 16:36	SW846 8081A	6080989
4,4'-DDE	ND		mg/kg	0.00828	5	08/07/06 16:36	SW846 8081A	6080989
4,4'-DDT	ND		mg/kg	0.00828	5	08/07/06 16:36	SW846 8081A	6080989
Dieldrin	ND		mg/kg	0.00828	5	08/07/06 16:36	SW846 8081A	6080989
Endosulfan I	ND		mg/kg	0.00828	5	08/07/06 16:36	SW846 8081A	6080989
Endosulfan II	ND		mg/kg	0.00828	5	08/07/06 16:36	SW846 8081A	6080989
Endosulfan sulfate	ND		mg/kg	0.00828	5	08/07/06 16:36	SW846 8081A	6080989
Endrin	ND		mg/kg	0.00828	5	08/07/06 16:36	SW846 8081A	6080989
Endrin aldehyde	ND		mg/kg	0.00828	5	08/07/06 16:36	SW846 8081A	6080989
Endrin ketone	ND		mg/kg	0.00828	5	08/07/06 16:36	SW846 8081A	6080989
Heptachlor	ND		mg/kg	0.00828	5	08/07/06 16:36	SW846 8081A	6080989
Heptachlor epoxide	ND		mg/kg	0.00828	5	08/07/06 16:36	SW846 8081A	6080989
Methoxychlor	**0.0520**	R1	mg/kg	0.0161	5	08/07/06 16:36	SW846 8081A	6080989
Toxaphene	ND		mg/kg	0.325	5	08/07/06 16:36	SW846 8081A	6080989
Surr: Tetrachloro-meta-xylene (63-132%)	*80 %*					*08/07/06 16:36*	*SW846 8081A*	*6080989*
Surr: Decachlorobiphenyl (39-108%)	*381 %*	*Z5*				*08/07/06 16:36*	*SW846 8081A*	*6080989*
Chlorinated Herbicides by EPA Method 8151A								
2,4-D	ND		mg/kg	0.0651	1	08/07/06 19:32	SW846 8151A	6080810
Dalapon	ND		mg/kg	0.163	1	08/07/06 19:32	SW846 8151A	6080810
2,4-DB	ND		mg/kg	0.0651	1	08/07/06 19:32	SW846 8151A	6080810
Dicamba	ND		mg/kg	0.0322	1	08/07/06 19:32	SW846 8151A	6080810
Dichloroprop	ND		mg/kg	0.0651	1	08/07/06 19:32	SW846 8151A	6080810
Dinoseb	ND		mg/kg	0.0651	1	08/07/06 19:32	SW846 8151A	6080810
MCPA	ND		mg/kg	3.25	1	08/07/06 19:32	SW846 8151A	6080810
MCPP	ND		mg/kg	3.25	1	08/07/06 19:32	SW846 8151A	6080810

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Client MACTEC Engineering & Consulting, Inc. (3740)
21740 Beaumeade Circle, Suite 150
Ashburn, VA 20147
Attn Brent Chapman

Work Order: NPH0573
Project Name: AFRH
Project Number: 3552060897
Received: 08/04/06 08:00

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NPH0573-03 (H48-3 (2-2.75) - Soil) - cont. Sampled: 08/03/06 11:00								
Chlorinated Herbicides by EPA Method 8151A - cont.								
4-Nitrophenol	ND		mg/kg	0.0322	1	08/07/06 19:32	SW846 8151A	6080810
Pentachlorophenol	ND		mg/kg	0.0322	1	08/07/06 19:32	SW846 8151A	6080810
Picloram	ND		mg/kg	0.0322	1	08/07/06 19:32	SW846 8151A	6080810
2,4,5-T	ND		mg/kg	0.0322	1	08/07/06 19:32	SW846 8151A	6080810
2,4,5-TP (Silvex)	ND		mg/kg	0.0166	1	08/07/06 19:32	SW846 8151A	6080810
Surr: Dichloroacetic Acid (55-132%)	*66 %*					*08/07/06 19:32*	*SW846 8151A*	*6080810*
Arsenic, Barium, Cadmium, Chromium, Lead, Silver, Selenium by 6020.								
See Attached Report								
Sample ID: NPH0573-04 (H69-1 - Soil) Sampled: 08/03/06 13:00								
General Chemistry Parameters								
Ignitability	**>200**		°F	80.0	1	08/09/06 14:16	ASTM D4982B	6081376
pH	**6.30**	HTI	pH Units	NA	1	08/09/06 14:18	SW846 9045C	6080840
Reactive Cyanide as Total	ND		mg/kg	20.00	1	08/08/06 16:19	SW846 9012A	6081162
Reactive Sulfide as Total	ND		mg/kg	100	1	08/07/06 17:20	SW846 9030B	6081163
TCLP Metals by 6000/7000 Series Methods								
Arsenic	ND		mg/L	0.100	1	08/07/06 13:20	V846 1311/601(	6081080
Barium	**0.250**		mg/L	0.100	1	08/07/06 13:20	V846 1311/601(	6081080
Cadmium	**0.382**		mg/L	0.0100	1	08/07/06 13:20	V846 1311/601(	6081080
Chromium	ND		mg/L	0.0500	1	08/07/06 13:20	V846 1311/601(	6081080
Lead	**13.3**		mg/L	0.0500	1	08/07/06 13:20	V846 1311/601(	6081080
Selenium	ND		mg/L	0.100	1	08/07/06 13:20	V846 1311/601(	6081080
Silver	ND		mg/L	0.0500	1	08/07/06 13:20	V846 1311/601(	6081080
Mercury	ND		mg/L	0.0100	1	08/07/06 14:32	V846 1311/747(	6081139
TCLP Chlorinated Herbicides by EPA Method 8151								
2,4-D	ND		mg/L	0.100	1	08/07/06 17:07	V846 1311/815	6081000
2,4,5-TP (Silvex)	ND		mg/L	0.0100	1	08/07/06 17:07	V846 1311/815	6081000
Surr: Dichloroacetic Acid (17-136%)	*47 %*					*08/07/06 17:07*	*V846 1311/815*	*6081000*
TCLP Volatile Organic Compounds by EPA Method 1311/8260B								
Vinyl chloride	ND		mg/L	0.0100	10	08/09/06 07:42	V846 1311/826(	6081325
1,1-Dichloroethene	ND		mg/L	0.0100	10	08/09/06 07:42	V846 1311/826(	6081325
1,2-Dichloroethane	ND		mg/L	0.0100	10	08/09/06 07:42	V846 1311/826(	6081325
2-Butanone	ND		mg/L	0.250	10	08/09/06 07:42	V846 1311/826(	6081325
Chloroform	ND		mg/L	0.0100	10	08/09/06 07:42	V846 1311/826(	6081325
Carbon Tetrachloride	ND		mg/L	0.0100	10	08/09/06 07:42	V846 1311/826(	6081325
Benzene	ND		mg/L	0.0100	10	08/09/06 07:42	V846 1311/826(	6081325
Trichloroethene	ND		mg/L	0.0100	10	08/09/06 07:42	V846 1311/826(	6081325
Tetrachloroethene	ND		mg/L	0.0100	10	08/09/06 07:42	V846 1311/826(	6081325
Chlorobenzene	ND		mg/L	0.0100	10	08/09/06 07:42	V846 1311/826(	6081325
Surr: 1,2-Dichloroethane-d4 (70-130%)	*104 %*					*08/09/06 07:42*	*V846 1311/826(	6081325*
Surr: Dibromofluoromethane (79-122%)	*106 %*					*08/09/06 07:42*	*V846 1311/826(	6081325*
Surr: Toluene-d8 (78-121%)	*104 %*					*08/09/06 07:42*	*V846 1311/826(	6081325*

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Client MACTEC Engineering & Consulting, Inc. (3740)
21740 Beaumeade Circle, Suite 150
Ashburn, VA 20147
Attn Brent Chapman

Work Order: NPH0573
Project Name: AFRH
Project Number: 3552060897
Received: 08/04/06 08:00

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NPH0573-04 (H69-1 - Soil) - cont. Sampled: 08/03/06 13:00								
TCLP Volatile Organic Compounds by EPA Method 1311/8260B - cont.								
Surr: 4-Bromofluorobenzene (78-126%)	*115 %*					*08/09/06 07:42*	*V846 1311/826*	*6081325*
TCLP Semivolatile Organic Compounds by EPA Method 1311/8270C								
Cresol(s)	ND		mg/L	0.0200	2	08/08/06 11:30	V846 1311/827	6080987
1,4-Dichlorobenzene	ND		mg/L	0.0200	2	08/08/06 11:30	V846 1311/827	6080987
2,4-Dinitrotoluene	ND		mg/L	0.0200	2	08/08/06 11:30	V846 1311/827	6080987
Hexachlorobenzene	ND		mg/L	0.0200	2	08/08/06 11:30	V846 1311/827	6080987
Hexachlorobutadiene	ND		mg/L	0.0200	2	08/08/06 11:30	V846 1311/827	6080987
Hexachloroethane	ND		mg/L	0.0200	2	08/08/06 11:30	V846 1311/827	6080987
Nitrobenzene	ND		mg/L	0.0200	2	08/08/06 11:30	V846 1311/827	6080987
Pentachlorophenol	ND		mg/L	0.0200	2	08/08/06 11:30	V846 1311/827	6080987
Pyridine	ND		mg/L	0.0200	2	08/08/06 11:30	V846 1311/827	6080987
2,4,6-Trichlorophenol	ND		mg/L	0.0200	2	08/08/06 11:30	V846 1311/827	6080987
2,4,5-Trichlorophenol	ND		mg/L	0.0200	2	08/08/06 11:30	V846 1311/827	6080987
Surr: Terphenyl-d14 (31-111%)	*77 %*					*08/08/06 11:30*	*V846 1311/827*	*6080987*
Surr: 2,4,6-Tribromophenol (32-118%)	*83 %*					*08/08/06 11:30*	*V846 1311/827*	*6080987*
Surr: Phenol-d5 (10-48%)	*53 %*	*Z2*				*08/08/06 11:30*	*V846 1311/827*	*6080987*
Surr: 2-Fluorobiphenyl (33-101%)	*69 %*					*08/08/06 11:30*	*V846 1311/827*	*6080987*
Surr: 2-Fluorophenol (10-64%)	*53 %*					*08/08/06 11:30*	*V846 1311/827*	*6080987*
Surr: Nitrobenzene-d5 (31-112%)	*72 %*					*08/08/06 11:30*	*V846 1311/827*	*6080987*
TCLP Pesticides by EPA Method 1311/8081A								
gamma-BHC (Lindane)	ND		mg/L	0.000500	1	08/09/06 18:39	V846 1311/808	6081330
Chlordane	ND		mg/L	0.000500	1	08/09/06 18:39	V846 1311/808	6081330
Endrin	ND		mg/L	0.000500	1	08/09/06 18:39	V846 1311/808	6081330
Heptachlor	ND		mg/L	0.000500	1	08/09/06 18:39	V846 1311/808	6081330
Heptachlor epoxide	ND		mg/L	0.000500	1	08/09/06 18:39	V846 1311/808	6081330
Methoxychlor	ND		mg/L	0.000500	1	08/09/06 18:39	V846 1311/808	6081330
Toxaphene	ND		mg/L	0.0100	1	08/09/06 18:39	V846 1311/808	6081330
Surr: Tetrachloro-meta-xylene (58-117%)	*87 %*					*08/09/06 18:39*	*V846 1311/808*	*6081330*
Surr: Decachlorobiphenyl (22-115%)	*112 %*					*08/09/06 18:39*	*V846 1311/808*	*6081330*

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TESTAMERICA ANALYTICAL/
TESTING CORPORATION
2960 Foster Creighton Dr.
Nashville, TN 37204

Job Number: 06.14754
Report Date: 08/21/2006

Enclosed are the Analytical and Quality Control Reports for the following samples submitted to TestAmerica for analysis:

Project: NPH0573

Sample Number	Sample Description	Date Taken	Date Received
216361	NPH0573-01	08/03/2006	08/15/2006
216362	NPH0573-02	08/03/2006	08/15/2006
216363	NPH0573-03	08/03/2006	08/15/2006

The Quality Control report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

TestAmerica certifies that the analytical results contained herein apply only to the specific samples analyzed. Reproduction of this report is permitted only in its entirety.

Enclosure

Project Management Approval

Dayton - 3601 South Dixie Drive, Dayton, OH 45439 937-294-6856/FAX:937-294-7816
Dundee (Chicago) - 1090 Rock Road Lane, Unit 11, Dundee, IL 60118 847-783-4960/FAX:847-783-4969
Indianapolis - 6964 Hillsdale Court, Indianapolis, IN 46250 317-842-4261/FAX:317-842-4286
Pontiac - 341 W. Walton Blvd, Pontiac, MI 48340 248-332-1940/FAX:248-332-5450

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Analytical Report

TESTAMERICA ANALYTICAL/
TESTING CORPORATION
2960 Foster Creighton Dr.
Nashville, TN 37204

Job Number: 06.14754
Report Date: 08/21/2006

SAMPLE NO. 216361 **SAMPLE DESCRIPTION** NPH0573-01 **DATE/TIME TAKEN** 08/03/2006 08:00

	Result	Units	Reporting Limit	Flag	Run Date	Run Time	Prep Batch	Run Batch	Anal. Init.	Lab ID	Method Reference
ICPMS NONAQUEOUS	Complete		Complete		08/18/2006	11:19		697	ekh	DT	SW 6020
Arsenic, ICPMS	<2.0	mg/Kg	<2.0	I	08/18/2006	11:29	511	8312	ekh	DT	SW 6020
Barium, ICPMS	42.8	mg/Kg	<0.98	h	08/18/2006	11:29	511	8297	ekh	DT	SW 6020
Cadmium, ICPMS	<0.96	mg/Kg	<0.96		08/18/2006	11:19	511	8366	ekh	DT	SW 6020
Chromium, ICPMS	11.8	mg/Kg	<2.0	h	08/18/2006	11:29	511	8217	ekh	DT	SW 6020
Lead, ICPMS	4.56	mg/Kg	<0.96		08/18/2006	11:19	511	8384	ekh	DT	SW 6020
Selenium, ICPMS	<0.98	mg/Kg	<0.98	I	08/18/2006	11:29	511	1932	ekh	DT	SW 6020 Mod
Silver, ICPMS	<0.5	mg/Kg	<0.5		08/18/2006	11:19	511	8103	ekh	DT	SW 6020
ICPMS Digestion, Nonaqueous	Complete		Complete		08/17/2006	09:00	511		jml	DT	SW 3050B

SAMPLE NO. 216362 **SAMPLE DESCRIPTION** NPH0573-02 **DATE/TIME TAKEN** 08/03/2006 09:50

	Result	Units	Reporting Limit	Flag	Run Date	Run Time	Prep Batch	Run Batch	Anal. Init.	Lab ID	Method Reference
ICPMS NONAQUEOUS	Complete		Complete		08/18/2006	12:00		697	ekh	DT	SW 6020
Arsenic, ICPMS	2.3	mg/Kg	<1.9		08/18/2006	12:00	511	8312	ekh	DT	SW 6020
Barium, ICPMS	33.1	mg/Kg	<0.93		08/18/2006	12:00	511	8297	ekh	DT	SW 6020
Cadmium, ICPMS	<0.93	mg/Kg	<0.93		08/18/2006	12:00	511	8366	ekh	DT	SW 6020
Chromium, ICPMS	20.6	mg/Kg	<1.9		08/18/2006	12:00	511	8217	ekh	DT	SW 6020
Lead, ICPMS	7.84	mg/Kg	<0.93		08/18/2006	12:00	511	8384	ekh	DT	SW 6020
Selenium, ICPMS	<0.93	mg/Kg	<0.93		08/18/2006	12:00	511	1932	ekh	DT	SW 6020 Mod
Silver, ICPMS	<0.5	mg/Kg	<0.5		08/18/2006	12:00	511	8103	ekh	DT	SW 6020
ICPMS Digestion, Nonaqueous	Complete		Complete		08/17/2006	09:00	511		jml	DT	SW 3050B

I - RPD, MS and MSD recovery outside of control limits.
h - MSD recovery and RPD outside of control limits.

Lab ID: CH = Chicago (Dundee), DT = Dayton, IN = Indianapolis, PT = Pontiac, SUB = Subcontracted, CLT = Client Data

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Analytical Report

TESTAMERICA ANALYTICAL/
TESTING CORPORATION
2960 Foster Creighton Dr.
Nashville, TN 37204

Job Number: 06.14754
Report Date: 08/21/2006

SAMPLE NO.	SAMPLE DESCRIPTION	DATE/TIME TAKEN
216363	NPH0573-03	08/03/2006 11:00

	Result	Units	Reporting Limit	Flag	Run Date	Run Time	Prep Batch	Run Batch	Anal. Init.	Lab ID	Method Reference
ICPMS NONAQUEOUS	Complete		Complete		08/18/2006	12:04		697	ekh	DT	SW 6020
Arsenic, ICPMS	<3.0	mg/Kg	<3.0	O	08/18/2006	12:04	511	8312	ekh	DT	SW 6020
Barium, ICPMS	50.0	mg/Kg	<0.95		08/18/2006	12:04	511	8297	ekh	DT	SW 6020
Cadmium, ICPMS	<0.95	mg/Kg	<0.95		08/18/2006	12:04	511	8366	ekh	DT	SW 6020
Chromium, ICPMS	12.1	mg/Kg	<1.9		08/18/2006	12:04	511	8217	ekh	DT	SW 6020
Lead, ICPMS	182	mg/Kg	<0.95		08/18/2006	12:04	511	8384	ekh	DT	SW 6020
Selenium, ICPMS	<0.95	mg/Kg	<0.95		08/18/2006	12:04	511	1932	ekh	DT	SW 6020 Mod
Silver, ICPMS	<0.5	mg/Kg	<0.5		08/18/2006	12:04	511	8103	ekh	DT	SW 6020
ICPMS Digestion, Nonaqueous	Complete		Complete		08/17/2006	09:00	511		jml	DT	SW 3050B

O - Elevated value due to sample matrix.

Lab ID: CH = Chicago (Dundee), DT = Dayton, IN = Indianapolis, PT = Pontiac, SUB = Subcontracted, CLT = Client Data

SUBCONTRACT ORDER

TestAmerica - Nashville, TN

NPH0573

SENDING LABORATORY:	**RECEIVING LABORATORY:**
TestAmerica - Nashville, TN	TestAmerica - Dayton, OH (8733)
2960 Foster Creighton Road	3601 South Dixie Drive
Nashville, TN 37204	Dayton, OH 45439
Phone: 800-765-0980	Phone :(800) 572-9839
Fax: 615-726-3404	Fax: (937) 294-7816
Project Manager: Jennifer Gambill	Project Location: Virginia

Analysis	Due	Expires	Comments
Sample ID: NPH0573-01 **Soil**		**Sampled: 08/03/06 08:00**	
Subcontract - Outside1	08/18/06 15:00	04/28/09 08:00	Arsenic, Barium, Cadmium, Chromium, Lead, Silver, Selenium by 6020.
Containers Supplied: 2 oz. Glass Jar (A)			
Sample ID: NPH0573-02 **Soil**		**Sampled: 08/03/06 09:50**	
Subcontract - Outside1	08/18/06 15:00	04/28/09 09:50	Arsenic, Barium, Cadmium, Chromium, Lead, Silver, Selenium by 6020.
Containers Supplied: 2 oz. Glass Jar (B)			
Sample ID: NPH0573-03 **Soil**		**Sampled: 08/03/06 11:00**	
Subcontract - Outside1	08/18/06 15:00	04/28/09 11:00	Arsenic, Barium, Cadmium, Chromium, Lead, Silver, Selenium by 6020.
Containers Supplied: 2 oz. Glass Jar (B)			

Released By	Date	Received By	Date
J. Gambill	14Aug06	D. Acker	8-15-06 0855

Fedex 672742060485

Temp 22.2 °/IC

1454-1.90

TestAmerica
ANALYTICAL TESTING CORPORATION

Nashville Division
2960 Foster Creighton
Nashville, TN 37204

Phone: 615-726-0177
Fax: 615-726-3404

To assist us in using the proper analytical methods, is this work being conducted for regulatory purposes?
Compliance Monitoring ____

Client Name: Mactec   Client #: ____
Address: 21740 Beaumeade Circle 150
City/State/Zip Code: Ashburn, VA 20147
Project Manager: Brent Chapman
Telephone Number: 703-729-1416   Fax: 703-858-1858
Sampler Name: (Print Name) Ben Grosser
Sampler Signature: [signature]

Project Name: AFRH
Project #: 3552060897
Site/Location ID: AFRH   State: DC
Report To: Brent Chapman
Invoice To: ____
Quote #: ____   PO#: Willemail

TAT: X Standard / ___ Rush (surcharges may apply)
Date Needed: ____
Fax Results: (Y) N

SAMPLE ID	Date Sampled	Time Sampled	G = Grab, C = Composite	Field Filtered	Matrix (SL - Sludge, DW - Drinking Water, GW - Groundwater, S - Soil/Solid, WW - Wastewater, Specify Other)	HNO_3	HCl	NaOH	H_2SO_4	Methanol	None	Other (Specify)	Pesticides 8081	Herbicides 8151	RCRA Metals 6020 7471	Full TCLP (VOCs, SVOCs, metals, pesticides, herbicides)	Hazardous waste parameters: ignitability, corrosivity + reactivity					REMARKS
H78-4 (1-2)	8-3-06	800	G		S						3		X	X	X		NO BG					Do not analyze
H78-6 (3-3.5)	8-3-06	930	G		S						3		X	X	X							H784 for Haz.
H48-3 (2-2.75)	8-3-06	1100	G		S						3		X	X	X							Waste Parameters.
H69-1	8-3-06	1300	C		S						3					X	X					BG
Trip Blank																						

-1
-2
-3
-4
-5

QC Deliverables: ___ None / ___ Level 2 (Batch QC) / ___ Level 3 / ___ Level 4 / Other: ____

NPH0573
08/15/06 23:59

Special Instructions:

Relinquished By	Date	Time	Received By	Date	Time
[signature]	8-3-06	1610			
			[signature]	8-4-06	0800

LABORATORY COMMENTS:
Init Lab Temp:
Rec Lab Temp: 3.2
Custody Seals: Y N N/A
Bottles Supplied by Test America: Y N
Method of Shipment:

TestAmerica
ANALYTICAL TESTING CORPORATION

Nashville Division

COOLER RECEIPT FORM

BC# NPH0573

Cooler Received/Opened On 8/4/06 8:00

1. Indicate the Airbill Tracking Number (last 4 digits for Fedex only) and Name of Courier below: 9520

(Fed-Ex) UPS Velocity DHL Route Off-street Misc.

2. Temperature of representative sample or temperature blank when opened: 3.2 Degrees Celsius
(indicate IR Gun ID#)

NA A00466 A00750 A01124 100190 101282 (102594)

3. Were custody seals on outside of cooler?..... (YES)....NO....NA

a. If yes, how many and where: 1 Front

4. Were the seals intact, signed, and dated correctly?..... (YES)...NO...NA

5. Were custody papers inside cooler?..... (YES)....NO...NA

I certify that I opened the cooler and answered questions 1-5 (intial)..... JR

6. Were custody seals on containers: YES (NO) and Intact YES NO (NA)

were these signed, and dated correctly?..... YES...NO...(NA)

7. What kind of packing material used? (Bubblewrap) Peanuts Vermiculite Foam Insert

Plastic bag Paper Other_____ None

8. Cooling process: (Ice) Ice-pack Ice (direct contact) Dry ice Other None

9. Did all containers arrive in good condition (unbroken)?..... (YES)..NO...NA

10. Were all container labels complete (#, date, signed, pres., etc)?..... (YES)...NO...NA

11. Did all container labels and tags agree with custody papers?..... (YES)...NO...NA

12. a. Were VOA vials received?..... (YES)..NO...NA

b. Was there any observable head space present in any VOA vial?..... YES...(NO)..NA

I certify that I unloaded the cooler and answered questions 6-12 (intial)..... JR

13. a. On preserved bottles did the pH test strips suggest that preservation reached the correct pH level? YES...NO...(NA)

b. Did the bottle labels indicate that the correct preservatives were used..... (YES)...NO...NA

If preservation in-house was needed, record standard ID of preservative used here_____

14. Was residual chlorine present?..... YES...NO...(NA)

I certify that I checked for chlorine and pH as per SOP and answered questions 13-14 (intial)..... JR

15. Were custody papers properly filled out (ink, signed, etc)?..... (YES)..NO...NA

16. Did you sign the custody papers in the appropriate place?..... (YES)....NO...NA

17. Were correct containers used for the analysis requested?..... (YES)...NO...NA

18. Was sufficient amount of sample sent in each container?..... (YES)...NO...NA

I certify that I entered this project into LIMS and answered questions 15-18 (intial)..... JR

I certify that I attached a label with the unique LIMS number to each container (intial)..... JR

19. Were there Non-Conformance issues at login YES (NO) Was a PIPE generated (YES) NO #_____

BIS = Broken in shipment

TestAmerica
ANALYTICAL TESTING CORPORATION
2960 Foster Creighton Road Nashville, TN 37204 * 800-765-0980 * Fax 615-726-3404

September 12, 2006

Client: MACTEC Engineering & Consulting, Inc. (3740)
21740 Beaumeade Circle, Suite 150
Ashburn, VA 20147
Attn: Brent Chapman

Work Order: NPH1108
Project Name: AFRH
Project Nbr: 3552060897
P/O Nbr: 65378
Date Received: 08/08/06

SAMPLE IDENTIFICATION	LAB NUMBER	COLLECTION DATE AND TIME
H78-3 (3-4)	NPH1108-01	08/07/06 09:30
H78-1 (1-2)	NPH1108-02	08/07/06 11:00
H78-5 (1-2)	NPH1108-03	08/07/06 13:20
H78-2 (2-3)	NPH1108-04	08/07/06 14:00

An executed copy of the chain of custody, the project quality control data, and the sample receipt form are also included as an addendum to this report. If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-800-765-0980. Any opinions, if expressed, are outside the scope of the Laboratory's accredidation.

The Chain(s) of Custody, 9 pages, are included and are an integral part of this report.

Report Approved By:

Roxanne L. Connor

Roxanne Connor
Senior Project Manager

TestAmerica
ANALYTICAL TESTING CORPORATION
2960 Foster Creighton Road Nashville, TN 37204 * 800-765-0980 * Fax 615-726-3404

Client	MACTEC Engineering & Consulting, Inc. (3740)	Work Order:	NPH1108
	21740 Beaumeade Circle, Suite 150	Project Name:	AFRH
	Ashburn, VA 20147	Project Number:	3552060897
Attn	Brent Chapman	Received:	08/08/06 07:50

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NPH1108-01 (H78-3 (3-4) - Soil) Sampled: 08/07/06 09:30								
Mercury by EPA Methods 7470A/7471A								
Mercury	ND		mg/kg	0.0984	1	08/11/06 14:59	SW846 7471A	6082192
Organochlorine Pesticides by EPA Method 8081A								
Aldrin	ND		mg/kg	0.00163	1	08/15/06 04:56	SW846 8081A	6082146
delta-BHC	ND		mg/kg	0.00163	1	08/15/06 04:56	SW846 8081A	6082146
alpha-BHC	ND		mg/kg	0.00163	1	08/15/06 04:56	SW846 8081A	6082146
beta-BHC	ND		mg/kg	0.00316	1	08/15/06 04:56	SW846 8081A	6082146
gamma-BHC (Lindane)	ND		mg/kg	0.00163	1	08/15/06 04:56	SW846 8081A	6082146
alpha-Chlordane	ND		mg/kg	0.00163	1	08/15/06 04:56	SW846 8081A	6082146
gamma-Chlordane	ND		mg/kg	0.00163	1	08/15/06 04:56	SW846 8081A	6082146
Chlordane	ND		mg/kg	0.0640	1	08/15/06 04:56	SW846 8081A	6082146
4,4'-DDD	ND		mg/kg	0.00163	1	08/15/06 04:56	SW846 8081A	6082146
4,4'-DDE	ND		mg/kg	0.00163	1	08/15/06 04:56	SW846 8081A	6082146
4,4'-DDT	ND		mg/kg	0.00163	1	08/15/06 04:56	SW846 8081A	6082146
Dieldrin	ND		mg/kg	0.00163	1	08/15/06 04:56	SW846 8081A	6082146
Endosulfan I	ND		mg/kg	0.00163	1	08/15/06 04:56	SW846 8081A	6082146
Endosulfan II	ND		mg/kg	0.00163	1	08/15/06 04:56	SW846 8081A	6082146
Endosulfan sulfate	ND		mg/kg	0.00163	1	08/15/06 04:56	SW846 8081A	6082146
Endrin	ND		mg/kg	0.00163	1	08/15/06 04:56	SW846 8081A	6082146
Endrin aldehyde	ND		mg/kg	0.00163	1	08/15/06 04:56	SW846 8081A	6082146
Endrin ketone	ND		mg/kg	0.00163	1	08/15/06 04:56	SW846 8081A	6082146
Heptachlor	ND		mg/kg	0.00163	1	08/15/06 04:56	SW846 8081A	6082146
Heptachlor epoxide	ND		mg/kg	0.00163	1	08/15/06 04:56	SW846 8081A	6082146
Methoxychlor	ND		mg/kg	0.00316	1	08/15/06 04:56	SW846 8081A	6082146
Toxaphene	ND		mg/kg	0.0640	1	08/15/06 04:56	SW846 8081A	6082146
Surr: Tetrachloro-meta-xylene (63-132%)	*68 %*					*08/15/06 04:56*	*SW846 8081A*	*6082146*
Surr: Decachlorobiphenyl (39-108%)	*96 %*					*08/15/06 04:56*	*SW846 8081A*	*6082146*
Chlorinated Herbicides by EPA Method 8151A								
2,4-D	ND		mg/kg	0.0649	1	08/15/06 21:33	SW846 8151A	6082467
Dalapon	ND		mg/kg	0.162	1	08/15/06 21:33	SW846 8151A	6082467
2,4-DB	ND		mg/kg	0.0649	1	08/15/06 21:33	SW846 8151A	6082467
Dicamba	ND		mg/kg	0.0321	1	08/15/06 21:33	SW846 8151A	6082467
Dichloroprop	ND		mg/kg	0.0649	1	08/15/06 21:33	SW846 8151A	6082467
Dinoseb	ND		mg/kg	0.0649	1	08/15/06 21:33	SW846 8151A	6082467
MCPA	ND		mg/kg	3.24	1	08/15/06 21:33	SW846 8151A	6082467
MCPP	ND		mg/kg	3.24	1	08/15/06 21:33	SW846 8151A	6082467
4-Nitrophenol	ND		mg/kg	0.0321	1	08/15/06 21:33	SW846 8151A	6082467
Pentachlorophenol	ND		mg/kg	0.0321	1	08/15/06 21:33	SW846 8151A	6082467
Picloram	ND		mg/kg	0.0321	1	08/15/06 21:33	SW846 8151A	6082467
2,4,5-T	ND		mg/kg	0.0321	1	08/15/06 21:33	SW846 8151A	6082467
2,4,5-TP (Silvex)	ND		mg/kg	0.0165	1	08/15/06 21:33	SW846 8151A	6082467
Surr: Dichloroacetic Acid (55-132%)	*77 %*					*08/15/06 21:33*	*SW846 8151A*	*6082467*

Arsenic, Barium, Cadmium, Chromium, Lead, Silver, Selenium by 6020.

Client	MACTEC Engineering & Consulting, Inc. (3740)	Work Order:	NPH1108
	21740 Beaumeade Circle, Suite 150	Project Name:	AFRH
	Ashburn, VA 20147	Project Number:	3552060897
Attn	Brent Chapman	Received:	08/08/06 07:50

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NPH1108-01 (H78-3 (3-4) - Soil) - cont. Sampled: 08/07/06 09:30								
Arsenic, Barium, Cadmium, Chromium, Lead, Silver, Selenium by 6020. - cont.								
See Attached Report								
Sample ID: NPH1108-02 (H78-1 (1-2) - Soil) Sampled: 08/07/06 11:00								
Mercury by EPA Methods 7470A/7471A								
Mercury	ND		mg/kg	0.0976	1	08/11/06 15:01	SW846 7471A	6082192
Organochlorine Pesticides by EPA Method 8081A								
Aldrin	ND		mg/kg	0.00168	1	08/15/06 05:25	SW846 8081A	6082146
delta-BHC	ND		mg/kg	0.00168	1	08/15/06 05:25	SW846 8081A	6082146
alpha-BHC	ND		mg/kg	0.00168	1	08/15/06 05:25	SW846 8081A	6082146
beta-BHC	ND		mg/kg	0.00326	1	08/15/06 05:25	SW846 8081A	6082146
gamma-BHC (Lindane)	ND		mg/kg	0.00168	1	08/15/06 05:25	SW846 8081A	6082146
alpha-Chlordane	ND		mg/kg	0.00168	1	08/15/06 05:25	SW846 8081A	6082146
gamma-Chlordane	ND		mg/kg	0.00168	1	08/15/06 05:25	SW846 8081A	6082146
Chlordane	ND		mg/kg	0.0658	1	08/15/06 05:25	SW846 8081A	6082146
4,4'-DDD	ND		mg/kg	0.00168	1	08/15/06 05:25	SW846 8081A	6082146
4,4'-DDE	ND		mg/kg	0.00168	1	08/15/06 05:25	SW846 8081A	6082146
4,4'-DDT	ND		mg/kg	0.00168	1	08/15/06 05:25	SW846 8081A	6082146
Dieldrin	ND		mg/kg	0.00168	1	08/15/06 05:25	SW846 8081A	6082146
Endosulfan I	ND		mg/kg	0.00168	1	08/15/06 05:25	SW846 8081A	6082146
Endosulfan II	ND		mg/kg	0.00168	1	08/15/06 05:25	SW846 8081A	6082146
Endosulfan sulfate	ND		mg/kg	0.00168	1	08/15/06 05:25	SW846 8081A	6082146
Endrin	ND		mg/kg	0.00168	1	08/15/06 05:25	SW846 8081A	6082146
Endrin aldehyde	ND		mg/kg	0.00168	1	08/15/06 05:25	SW846 8081A	6082146
Endrin ketone	ND		mg/kg	0.00168	1	08/15/06 05:25	SW846 8081A	6082146
Heptachlor	ND		mg/kg	0.00168	1	08/15/06 05:25	SW846 8081A	6082146
Heptachlor epoxide	ND		mg/kg	0.00168	1	08/15/06 05:25	SW846 8081A	6082146
Methoxychlor	**0.00329**	R10	mg/kg	0.00326	1	08/15/06 05:25	SW846 8081A	6082146
Toxaphene	ND		mg/kg	0.0658	1	08/15/06 05:25	SW846 8081A	6082146
Surr: Tetrachloro-meta-xylene (63-132%)	*70 %*					*08/15/06 05:25*	*SW846 8081A*	*6082146*
Surr: Decachlorobiphenyl (39-108%)	*123 %*	*Z5*				*08/15/06 05:25*	*SW846 8081A*	*6082146*
Chlorinated Herbicides by EPA Method 8151A								
2,4-D	ND		mg/kg	0.0656	1	08/15/06 22:04	SW846 8151A	6082467
Dalapon	ND		mg/kg	0.164	1	08/15/06 22:04	SW846 8151A	6082467
2,4-DB	ND		mg/kg	0.0656	1	08/15/06 22:04	SW846 8151A	6082467
Dicamba	ND		mg/kg	0.0325	1	08/15/06 22:04	SW846 8151A	6082467
Dichloroprop	ND		mg/kg	0.0656	1	08/15/06 22:04	SW846 8151A	6082467
Dinoseb	ND		mg/kg	0.0656	1	08/15/06 22:04	SW846 8151A	6082467
MCPA	ND		mg/kg	3.28	1	08/15/06 22:04	SW846 8151A	6082467
MCPP	ND		mg/kg	3.28	1	08/15/06 22:04	SW846 8151A	6082467
4-Nitrophenol	ND		mg/kg	0.0325	1	08/15/06 22:04	SW846 8151A	6082467
Pentachlorophenol	ND		mg/kg	0.0325	1	08/15/06 22:04	SW846 8151A	6082467
Picloram	ND		mg/kg	0.0325	1	08/15/06 22:04	SW846 8151A	6082467
2,4,5-T	ND		mg/kg	0.0325	1	08/15/06 22:04	SW846 8151A	6082467

Client	MACTEC Engineering & Consulting, Inc. (3740)	Work Order:	NPH1108
	21740 Beaumeade Circle, Suite 150	Project Name:	AFRH
	Ashburn, VA 20147	Project Number:	3552060897
Attn	Brent Chapman	Received:	08/08/06 07:50

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NPH1108-02 (H78-1 (1-2) - Soil) - cont. Sampled: 08/07/06 11:00								
Chlorinated Herbicides by EPA Method 8151A - cont.								
2,4,5-TP (Silvex)	ND		mg/kg	0.0167	1	08/15/06 22:04	SW846 8151A	6082467
Surr: Dichloroacetic Acid (55-132%)	*73 %*					*08/15/06 22:04*	*SW846 8151A*	*6082467*
Arsenic, Barium, Cadmium, Chromium, Lead, Silver, Selenium by 6020.								
See Attached Report								
Sample ID: NPH1108-03 (H78-5 (1-2) - Soil) Sampled: 08/07/06 13:20								
Mercury by EPA Methods 7470A/7471A								
Mercury	ND		mg/kg	0.0984	1	08/11/06 15:03	SW846 7471A	6082192
Organochlorine Pesticides by EPA Method 8081A								
Aldrin	ND		mg/kg	0.00168	1	08/15/06 05:54	SW846 8081A	6082146
delta-BHC	ND		mg/kg	0.00168	1	08/15/06 05:54	SW846 8081A	6082146
alpha-BHC	ND		mg/kg	0.00168	1	08/15/06 05:54	SW846 8081A	6082146
beta-BHC	ND		mg/kg	0.00327	1	08/15/06 05:54	SW846 8081A	6082146
gamma-BHC (Lindane)	ND		mg/kg	0.00168	1	08/15/06 05:54	SW846 8081A	6082146
alpha-Chlordane	ND		mg/kg	0.00168	1	08/15/06 05:54	SW846 8081A	6082146
gamma-Chlordane	ND		mg/kg	0.00168	1	08/15/06 05:54	SW846 8081A	6082146
Chlordane	ND		mg/kg	0.0661	1	08/15/06 05:54	SW846 8081A	6082146
4,4'-DDD	ND		mg/kg	0.00168	1	08/15/06 05:54	SW846 8081A	6082146
4,4'-DDE	ND		mg/kg	0.00168	1	08/15/06 05:54	SW846 8081A	6082146
4,4'-DDT	ND		mg/kg	0.00168	1	08/15/06 05:54	SW846 8081A	6082146
Dieldrin	ND		mg/kg	0.00168	1	08/15/06 05:54	SW846 8081A	6082146
Endosulfan I	ND		mg/kg	0.00168	1	08/15/06 05:54	SW846 8081A	6082146
Endosulfan II	ND		mg/kg	0.00168	1	08/15/06 05:54	SW846 8081A	6082146
Endosulfan sulfate	ND		mg/kg	0.00168	1	08/15/06 05:54	SW846 8081A	6082146
Endrin	ND		mg/kg	0.00168	1	08/15/06 05:54	SW846 8081A	6082146
Endrin aldehyde	ND		mg/kg	0.00168	1	08/15/06 05:54	SW846 8081A	6082146
Endrin ketone	ND		mg/kg	0.00168	1	08/15/06 05:54	SW846 8081A	6082146
Heptachlor	ND		mg/kg	0.00168	1	08/15/06 05:54	SW846 8081A	6082146
Heptachlor epoxide	ND		mg/kg	0.00168	1	08/15/06 05:54	SW846 8081A	6082146
Methoxychlor	ND		mg/kg	0.00327	1	08/15/06 05:54	SW846 8081A	6082146
Toxaphene	ND		mg/kg	0.0661	1	08/15/06 05:54	SW846 8081A	6082146
Surr: Tetrachloro-meta-xylene (63-132%)	*54 %*	*Z5*				*08/15/06 05:54*	*SW846 8081A*	*6082146*
Surr: Decachlorobiphenyl (39-108%)	*80 %*					*08/15/06 05:54*	*SW846 8081A*	*6082146*
Chlorinated Herbicides by EPA Method 8151A								
2,4-D	ND		mg/kg	0.0651	1	08/15/06 22:35	SW846 8151A	6082467
Dalapon	ND		mg/kg	0.163	1	08/15/06 22:35	SW846 8151A	6082467
2,4-DB	ND		mg/kg	0.0651	1	08/15/06 22:35	SW846 8151A	6082467
Dicamba	ND		mg/kg	0.0322	1	08/15/06 22:35	SW846 8151A	6082467
Dichloroprop	ND		mg/kg	0.0651	1	08/15/06 22:35	SW846 8151A	6082467
Dinoseb	ND		mg/kg	0.0651	1	08/15/06 22:35	SW846 8151A	6082467
MCPA	ND		mg/kg	3.25	1	08/15/06 22:35	SW846 8151A	6082467
MCPP	ND		mg/kg	3.25	1	08/15/06 22:35	SW846 8151A	6082467

Client	MACTEC Engineering & Consulting, Inc. (3740)	Work Order:	NPH1108
	21740 Beaumeade Circle, Suite 150	Project Name:	AFRH
	Ashburn, VA 20147	Project Number:	3552060897
Attn	Brent Chapman	Received:	08/08/06 07:50

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NPH1108-03 (H78-5 (1-2) - Soil) - cont. Sampled: 08/07/06 13:20								
Chlorinated Herbicides by EPA Method 8151A - cont.								
4-Nitrophenol	ND		mg/kg	0.0322	1	08/15/06 22:35	SW846 8151A	6082467
Pentachlorophenol	ND		mg/kg	0.0322	1	08/15/06 22:35	SW846 8151A	6082467
Picloram	ND		mg/kg	0.0322	1	08/15/06 22:35	SW846 8151A	6082467
2,4,5-T	ND		mg/kg	0.0322	1	08/15/06 22:35	SW846 8151A	6082467
2,4,5-TP (Silvex)	ND		mg/kg	0.0166	1	08/15/06 22:35	SW846 8151A	6082467
Surr: Dichloroacetic Acid (55-132%)	*79 %*					*08/15/06 22:35*	*SW846 8151A*	*6082467*
Arsenic, Barium, Cadmium, Chromium, Lead, Silver, Selenium by 6020.								
See Attached Report								
Sample ID: NPH1108-04 (H78-2 (2-3) - Soil) Sampled: 08/07/06 14:00								
Mercury by EPA Methods 7470A/7471A								
Mercury	ND		mg/kg	0.101	1	08/11/06 15:06	SW846 7471A	6082192
Organochlorine Pesticides by EPA Method 8081A								
Aldrin	ND		mg/kg	0.00167	1	08/14/06 00:14	SW846 8081A	6082146
delta-BHC	ND		mg/kg	0.00167	1	08/14/06 00:14	SW846 8081A	6082146
alpha-BHC	ND		mg/kg	0.00167	1	08/14/06 00:14	SW846 8081A	6082146
beta-BHC	ND		mg/kg	0.00324	1	08/14/06 00:14	SW846 8081A	6082146
gamma-BHC (Lindane)	ND		mg/kg	0.00167	1	08/14/06 00:14	SW846 8081A	6082146
alpha-Chlordane	ND		mg/kg	0.00167	1	08/14/06 00:14	SW846 8081A	6082146
gamma-Chlordane	ND		mg/kg	0.00167	1	08/14/06 00:14	SW846 8081A	6082146
Chlordane	ND		mg/kg	0.0654	1	08/14/06 00:14	SW846 8081A	6082146
4,4'-DDD	ND		mg/kg	0.00167	1	08/14/06 00:14	SW846 8081A	6082146
4,4'-DDE	ND		mg/kg	0.00167	1	08/14/06 00:14	SW846 8081A	6082146
4,4'-DDT	ND		mg/kg	0.00167	1	08/14/06 00:14	SW846 8081A	6082146
Dieldrin	ND		mg/kg	0.00167	1	08/14/06 00:14	SW846 8081A	6082146
Endosulfan I	ND		mg/kg	0.00167	1	08/14/06 00:14	SW846 8081A	6082146
Endosulfan II	ND		mg/kg	0.00167	1	08/14/06 00:14	SW846 8081A	6082146
Endosulfan sulfate	ND		mg/kg	0.00167	1	08/14/06 00:14	SW846 8081A	6082146
Endrin	ND		mg/kg	0.00167	1	08/14/06 00:14	SW846 8081A	6082146
Endrin aldehyde	ND		mg/kg	0.00167	1	08/14/06 00:14	SW846 8081A	6082146
Endrin ketone	ND		mg/kg	0.00167	1	08/14/06 00:14	SW846 8081A	6082146
Heptachlor	ND		mg/kg	0.00167	1	08/14/06 00:14	SW846 8081A	6082146
Heptachlor epoxide	ND		mg/kg	0.00167	1	08/14/06 00:14	SW846 8081A	6082146
Methoxychlor	ND		mg/kg	0.00324	1	08/14/06 00:14	SW846 8081A	6082146
Toxaphene	ND		mg/kg	0.0654	1	08/14/06 00:14	SW846 8081A	6082146
Surr: Tetrachloro-meta-xylene (63-132%)	*52 %*	*Z5*				*08/14/06 00:14*	*SW846 8081A*	*6082146*
Surr: Decachlorobiphenyl (39-108%)	*88 %*					*08/14/06 00:14*	*SW846 8081A*	*6082146*
Chlorinated Herbicides by EPA Method 8151A								
2,4-D	ND		mg/kg	0.0665	1	08/15/06 23:36	SW846 8151A	6082467
Dalapon	ND		mg/kg	0.166	1	08/15/06 23:36	SW846 8151A	6082467
2,4-DB	ND		mg/kg	0.0665	1	08/15/06 23:36	SW846 8151A	6082467
Dicamba	ND		mg/kg	0.0329	1	08/15/06 23:36	SW846 8151A	6082467

TestAmerica
ANALYTICAL TESTING CORPORATION
2960 Foster Creighton Road Nashville, TN 37204 * 800-765-0980 * Fax 615-726-3404

Client	MACTEC Engineering & Consulting, Inc. (3740)	Work Order:	NPH1108
	21740 Beaumeade Circle, Suite 150	Project Name:	AFRH
	Ashburn, VA 20147	Project Number:	3552060897
Attn	Brent Chapman	Received:	08/08/06 07:50

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NPH1108-04 (H78-2 (2-3) - Soil) - cont. Sampled: 08/07/06 14:00								
Chlorinated Herbicides by EPA Method 8151A - cont.								
Dichloroprop	ND		mg/kg	0.0665	1	08/15/06 23:36	SW846 8151A	6082467
Dinoseb	ND		mg/kg	0.0665	1	08/15/06 23:36	SW846 8151A	6082467
MCPA	ND		mg/kg	3.32	1	08/15/06 23:36	SW846 8151A	6082467
MCPP	ND		mg/kg	3.32	1	08/15/06 23:36	SW846 8151A	6082467
4-Nitrophenol	ND		mg/kg	0.0329	1	08/15/06 23:36	SW846 8151A	6082467
Pentachlorophenol	ND		mg/kg	0.0329	1	08/15/06 23:36	SW846 8151A	6082467
Picloram	ND		mg/kg	0.0329	1	08/15/06 23:36	SW846 8151A	6082467
2,4,5-T	ND		mg/kg	0.0329	1	08/15/06 23:36	SW846 8151A	6082467
2,4,5-TP (Silvex)	ND		mg/kg	0.0169	1	08/15/06 23:36	SW846 8151A	6082467
Surr: Dichloroacetic Acid (55-132%)	*67 %*					*08/15/06 23:36*	*SW846 8151A*	*6082467*

Arsenic, Barium, Cadmium, Chromium, Lead, Silver, Selenium by 6020.

See Attached Report

TestAmerica
ANALYTICAL TESTING CORPORATION
3601 South Dixie Drive • Dayton, OH 45439 • 937-294-6856 • Fax: 937-294-7816 • 800-572-9839

Job Number: 06.14670
Report Date: 09/11/2006

TESTAMERICA ANALYTICAL/
TESTING CORPORATION
2960 Foster Creighton Dr.
Nashville, TN 37204

Enclosed are the Analytical and Quality Control Reports for the following samples submitted to TestAmerica for analysis:

Project: NPH1108

Sample Number	Sample Description	Date Taken	Date Received
216089	NPH1108-01	08/07/2006	08/11/2006
216090	NPH1108-02	08/07/2006	08/11/2006
216091	NPH1108-03	08/07/2006	08/11/2006
216092	NPH1108-04	08/07/2006	08/11/2006

The Quality Control report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

TestAmerica certifies that the analytical results contained herein apply only to the specific samples analyzed. Reproduction of this report is permitted only in its entirety.

Enclosure

Project Management Approval

TestAmerica
ANALYTICAL TESTING CORPORATION
3601 South Dixie Drive • Dayton, OH 45439 • 937-294-6856 • Fax: 937-294-7816 • 800-572-9839

Analytical Report

TESTAMERICA ANALYTICAL/
TESTING CORPORATION
2960 Foster Creighton Dr.
Nashville, TN 37204

Job Number: 06.14670
Report Date: 09/11/2006

SAMPLE NO. 216089 **SAMPLE DESCRIPTION** NPH1108-01 **DATE/TIME TAKEN** 08/07/2006 09:30

	Result	Units	Reporting Limit	Flag	Run Date	Run Time	Prep Batch	Run Batch	Anal. Init.	Lab ID	Method Reference
ICPMS NONAQUEOUS	Complete		Complete		08/15/2006	09:01		696	ekh	DT	SW 6020
Arsenic, ICPMS	<1.9	mg/Kg	<1.9		08/15/2006	09:01	510	8303	ekh	DT	SW 6020
Barium, ICPMS	34.9	mg/Kg	<0.94		08/15/2006	09:01	510	8288	ekh	DT	SW 6020
Cadmium, ICPMS	<0.94	mg/Kg	<0.94		08/15/2006	09:01	510	8357	ekh	DT	SW 6020
Chromium, ICPMS	8.4	mg/Kg	<1.9		08/15/2006	09:01	510	8208	ekh	DT	SW 6020
Lead, ICPMS	11.1	mg/Kg	<0.94		08/15/2006	09:01	510	8376	ekh	DT	SW 6020
Selenium, ICPMS	<0.94	mg/Kg	<0.94		08/15/2006	09:01	510	1923	ekh	DT	SW 6020 Mod
Silver, ICPMS	<0.5	mg/Kg	<0.5		08/15/2006	09:01	510	8095	ekh	DT	SW 6020
ICPMS Digestion, Nonaqueous	Complete		Complete		08/14/2006	13:00	510		jml	DT	SW 3050B

SAMPLE NO. 216090 **SAMPLE DESCRIPTION** NPH1108-02 **DATE/TIME TAKEN** 08/07/2006 11:00

	Result	Units	Reporting Limit	Flag	Run Date	Run Time	Prep Batch	Run Batch	Anal. Init.	Lab ID	Method Reference
ICPMS NONAQUEOUS	Complete		Complete		08/15/2006	09:06		696	ekh	DT	SW 6020
Arsenic, ICPMS	<2.0	mg/Kg	<2.0		08/15/2006	09:06	510	8303	ekh	DT	SW 6020
Barium, ICPMS	21.4	mg/Kg	<1.0		08/15/2006	09:06	510	8288	ekh	DT	SW 6020
Cadmium, ICPMS	<1.0	mg/Kg	<1.0		08/15/2006	09:06	510	8357	ekh	DT	SW 6020
Chromium, ICPMS	5.2	mg/Kg	<2.0		08/15/2006	09:06	510	8208	ekh	DT	SW 6020
Lead, ICPMS	7.3	mg/Kg	<1.0		08/15/2006	09:06	510	8376	ekh	DT	SW 6020
Selenium, ICPMS	<1.0	mg/Kg	<1.0		08/15/2006	09:06	510	1923	ekh	DT	SW 6020 Mod
Silver, ICPMS	<0.5	mg/Kg	<0.5		08/15/2006	09:06	510	8095	ekh	DT	SW 6020
ICPMS Digestion, Nonaqueous	Complete		Complete		08/14/2006	13:00	510		jml	DT	SW 3050B

Lab ID: CH = Chicago (Dundee), DT = Dayton, IN = Indianapolis, PT = Pontiac, SUB = Subcontracted, CLT = Client Data

TestAmerica
ANALYTICAL TESTING CORPORATION
3601 South Dixie Drive • Dayton, OH 45439 • 937-294-6856 • Fax: 937-294-7816 • 800-572-9839

Analytical Report

TESTAMERICA ANALYTICAL/
TESTING CORPORATION
2960 Foster Creighton Dr.
Nashville, TN 37204

Job Number: 06.14670
Report Date: 09/11/2006

SAMPLE NO. 216091 **SAMPLE DESCRIPTION** NPH1108-03 **DATE/TIME TAKEN** 08/07/2006 13:20

	Result	Units	Reporting Limit	Flag	Run Date	Run Time	Prep Batch	Run Batch	Anal. Init.	Lab ID	Method Reference
ICPMS NONAQUEOUS	Complete		Complete		08/15/2006	09:13		696	ekh	DT	SW 6020
Arsenic, ICPMS	<1.9	mg/Kg	<1.9		08/15/2006	09:13	510	8303	ekh	DT	SW 6020
Barium, ICPMS	11.8	mg/Kg	<0.97		08/15/2006	09:13	510	8288	ekh	DT	SW 6020
Cadmium, ICPMS	<0.97	mg/Kg	<0.97		08/15/2006	09:13	510	8357	ekh	DT	SW 6020
Chromium, ICPMS	10.0	mg/Kg	<1.9		08/15/2006	09:13	510	8208	ekh	DT	SW 6020
Lead, ICPMS	2.66	mg/Kg	<0.97		08/15/2006	09:13	510	8376	ekh	DT	SW 6020
Selenium, ICPMS	<0.97	mg/Kg	<0.97		08/15/2006	09:13	510	1923	ekh	DT	SW 6020 Mod
Silver, ICPMS	<0.5	mg/Kg	<0.5		08/15/2006	09:13	510	8095	ekh	DT	SW 6020
ICPMS Digestion, Nonaqueous	Complete		Complete		08/14/2006	13:00	510		jml	DT	SW 3050B

SAMPLE NO. 216092 **SAMPLE DESCRIPTION** NPH1108-04 **DATE/TIME TAKEN** 08/07/2006 13:20

	Result	Units	Reporting Limit	Flag	Run Date	Run Time	Prep Batch	Run Batch	Anal. Init.	Lab ID	Method Reference
ICPMS NONAQUEOUS	Complete		Complete		09/07/2006	18:32		706	ekh	DT	SW 6020
Arsenic, ICPMS	<2.0	mg/Kg	<2.0	I	09/07/2006	18:32	517	8354	ekh	DT	SW 6020
Barium, ICPMS	14.1	mg/Kg	<1.0		09/07/2006	18:32	517	8339	ekh	DT	SW 6020
Cadmium, ICPMS	<1.0	mg/Kg	<1.0		09/07/2006	18:32	517	8407	ekh	DT	SW 6020
Chromium, ICPMS	14.3	mg/Kg	<2.0		09/07/2006	18:32	517	8259	ekh	DT	SW 6020
Lead, ICPMS	6.6	mg/Kg	<1.0		09/07/2006	18:32	517	8424	ekh	DT	SW 6020
Selenium, ICPMS	<2.0	mg/Kg	<2.0	O	09/07/2006	18:32	517	1973	ekh	DT	SW 6020 Mod
Silver, ICPMS	<0.5	mg/Kg	<0.5		09/07/2006	18:32	517	8145	ekh	DT	SW 6020
ICPMS Digestion, Nonaqueous	Complete		Complete		09/06/2006		517		mja	DT	SW 3050B

I - RPD, MS and MSD recovery outside of control limits.
O - Elevated value due to sample matrix.

Lab ID: CH = Chicago (Dundee), DT = Dayton, IN = Indianapolis, PT = Pontiac, SUB = Subcontracted, CLT = Client Data

NPH1108

08/17/06 23:59

TestAmerica ANALYTICAL TESTING CORPORATION

Nashville Division
2960 Foster Creighton
Nashville, TN 37204

Phone: 615-726-0177
Fax: 615-726-3404

To assist us in using the proper analytical methods, is this work being conducted for regulatory purposes?
Compliance Monitoring _____

Client Name: Mactec Client #: _____
Address: 2170 Rexmark Circle Ste 156
City/State/Zip Code: Ashburn, VA 20147
Project Manager: Brent Chapman
Telephone Number: 703-729-1416 Fax: 703-858-1858
Sampler Name: (Print Name) Ben Grosser
Sampler Signature:

Project Name: AFRH
Project #: 3552060897
Site/Location ID: AFRH State: DC
Report To: B. Chapman
Invoice To: _____
Quote #: _____ PO#: 65378

TAT
X Standard
___ Rush (surcharges may apply)
Date Needed: _____
Fax Results: (Y) N

SAMPLE ID	Date Sampled	Time Sampled	G = Grab, C = Composite	Field Filtered	Matrix: SL - Sludge, DW - Drinking Water, GW - Groundwater, S - Soil/Solid, WW - Wastewater, Specify Other	Preservation & # of Containers: HNO_3	HCl	NaOH	H_2SO_4	Methanol	None	Other (Specify)	Analyze For: Pesticides 8081	Herbicides 8151	RCRA Metals 6020 7471	QC Deliverables	REMARKS
H78-3 (3-4)	8-7-06	930	G		S						3		X	X	X		NPH1108-01
H78-1 (1-2)	8-7-06	1100	G		S						3		X	X	X		02
H78-5 (1-2)	8-7-06	1320	G		S						3		X	X	X		03
H78-2 (2-3)	8-7-06	1400	G		S						3		X	X	X		04

QC Deliverables
___ None
___ Level 2 (Batch QC)
___ Level 3
___ Level 4
Other: _____

Special Instructions:

	Date:	Time:		Date:	Time:
Relinquished By:	8-7-06	1700	Received By:		
Relinquished By:			Received By:		
Relinquished By:			Received By:	8-8-06	0750

LABORATORY COMMENTS:
Init Lab Temp:
Rec Lab Temp: 17c
Custody Seals: Y N N/A
Bottles Supplied by Test America: Y N
Method of Shipment:

TestAmerica
ANALYTICAL TESTING CORPORATION

Nashville Division

COOLER RECEIPT FORM BC# NPH1108

Cooler Received/Opened On: August 8, 2006 @ 07:50

1. Indicate the Airbill Tracking Number (last 4 digits for Fedex only) and Name of Courier below: 9553

(Fed-Ex) UPS Velocity DHL Route Off-street Misc.

2. Temperature of representative sample or temperature blank when opened: 1.7 Degrees Celsius
(indicate IR Gun ID#)

NA A00466 A00750 (A01124) 100190 101282 Raynger ST

3. Were custody seals on outside of cooler?..... (YES)...NO...NA

a. If yes, how many and where: 2 FRONT & BACK

4. Were the seals intact, signed, and dated correctly?..... (YES)...NO...NA

5. Were custody papers inside cooler?..... (YES)...NO...NA

I certify that I opened the cooler and answered questions 1-5 (intial)..... [initials]

6. Were custody seals on containers: YES (NO) and Intact YES NO (NA)

were these signed, and dated correctly?..... (YES)...NO...NA

7. What kind of packing material used? (Bubblewrap) Peanuts Vermiculite Foam Insert

Plastic bag Paper Other_____ None

8. Cooling process: (Ice) Ice-pack Ice (direct contact) Dry ice Other None

9. Did all containers arrive in good condition (unbroken)?..... (YES)...NO...NA

10. Were all container labels complete (#, date, signed, pres., etc)?..... (YES)...NO...NA

11. Did all container labels and tags agree with custody papers?..... (YES)...NO...NA

12. a. Were VOA vials received?..... YES...(NO)...NA

b. Was there any observable head space present in any VOA vial?..... YES...NO...(NA)

I certify that I unloaded the cooler and answered questions 6-12 (intial)..... [initials]

13. a. On preserved bottles did the pH test strips suggest that preservation reached the correct pH level? YES...NO...(NA)

b. Did the bottle labels indicate that the correct preservatives were used..... YES...NO...(NA)

If preservation in-house was needed, record standard ID of preservative used here_____

14. Was residual chlorine present?..... YES...NO...(NA)

I certify that I checked for chlorine and pH as per SOP and answered questions 13-14 (intial)..... [initials]

15. Were custody papers properly filled out (ink, signed, etc)?..... (YES)...NO...NA

16. Did you sign the custody papers in the appropriate place?..... (YES)...NO...NA

17. Were correct containers used for the analysis requested?..... (YES)...NO...NA

18. Was sufficient amount of sample sent in each container?..... (YES)...NO...NA

I certify that I entered this project into LIMS and answered questions 15-18 (intial)..... [initials]

I certify that I attached a label with the unique LIMS number to each container (intial)..... [initials]

19. Were there Non-Conformance issues at login YES (NO) Was a PIPE generated YES (NO) #_____

BIS = Broken in shipment

TestAmerica
ANALYTICAL TESTING CORPORATION
2960 Foster Creighton Road Nashville, TN 37204 * 800-765-0980 * Fax 615-726-3404

Client MACTEC Engineering & Consulting, Inc. (3740)
21740 Beaumeade Circle, Suite 150
Ashburn, VA 20147
Attn Brent Chapman

Work Order: NPH2446
Project Name: AFRH
Project Number: 3552060897
Received: 08/17/06 08:00

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NPH2446-01 (G76-4 (7.5-9) - Soil) Sampled: 08/16/06 11:30								
Polychlorinated Biphenyls by EPA Method 8082								
PCB-1016	ND		mg/kg	0.0331	1	08/26/06 21:01	SW846 8082	6084003
PCB-1221	ND		mg/kg	0.0331	1	08/26/06 21:01	SW846 8082	6084003
PCB-1232	ND		mg/kg	0.0331	1	08/26/06 21:01	SW846 8082	6084003
PCB-1242	ND		mg/kg	0.0331	1	08/26/06 21:01	SW846 8082	6084003
PCB-1248	ND		mg/kg	0.0331	1	08/26/06 21:01	SW846 8082	6084003
PCB-1254	ND		mg/kg	0.0331	1	08/26/06 21:01	SW846 8082	6084003
PCB-1260	ND		mg/kg	0.0331	1	08/26/06 21:01	SW846 8082	6084003
Surr: Tetrachloro-meta-xylene (63-132%)	*51 %*	*Z6*				*08/26/06 21:01*	*SW846 8082*	*6084003*
Surr: Decachlorobiphenyl (39-108%)	*74 %*					*08/26/06 21:01*	*SW846 8082*	*6084003*
Semivolatile Organic Compounds by EPA Method 8270C								
Acenaphthene	ND		mg/kg	0.325	1	08/19/06 22:48	SW846 8270C	6083593
Acenaphthylene	ND		mg/kg	0.325	1	08/19/06 22:48	SW846 8270C	6083593
Anthracene	ND		mg/kg	0.325	1	08/19/06 22:48	SW846 8270C	6083593
Benzo (a) anthracene	ND		mg/kg	0.325	1	08/19/06 22:48	SW846 8270C	6083593
Benzo (a) pyrene	ND		mg/kg	0.325	1	08/19/06 22:48	SW846 8270C	6083593
Benzo (b) fluoranthene	ND		mg/kg	0.325	1	08/19/06 22:48	SW846 8270C	6083593
Benzo (g,h,i) perylene	ND		mg/kg	0.325	1	08/19/06 22:48	SW846 8270C	6083593
Benzo (k) fluoranthene	ND		mg/kg	0.325	1	08/19/06 22:48	SW846 8270C	6083593
4-Bromophenyl phenyl ether	ND		mg/kg	0.325	1	08/19/06 22:48	SW846 8270C	6083593
Butyl benzyl phthalate	ND		mg/kg	0.325	1	08/19/06 22:48	SW846 8270C	6083593
Carbazole	ND		mg/kg	0.325	1	08/19/06 22:48	SW846 8270C	6083593
4-Chloro-3-methylphenol	ND		mg/kg	0.325	1	08/19/06 22:48	SW846 8270C	6083593
4-Chloroaniline	ND		mg/kg	0.325	1	08/19/06 22:48	SW846 8270C	6083593
Bis(2-chloroethoxy)methane	ND		mg/kg	0.325	1	08/19/06 22:48	SW846 8270C	6083593
Bis(2-chloroethyl)ether	ND		mg/kg	0.325	1	08/19/06 22:48	SW846 8270C	6083593
Bis(2-chloroisopropyl)ether	ND		mg/kg	0.325	1	08/19/06 22:48	SW846 8270C	6083593
2-Chloronaphthalene	ND		mg/kg	0.325	1	08/19/06 22:48	SW846 8270C	6083593
2-Chlorophenol	ND		mg/kg	0.325	1	08/19/06 22:48	SW846 8270C	6083593
4-Chlorophenyl phenyl ether	ND		mg/kg	0.325	1	08/19/06 22:48	SW846 8270C	6083593
Chrysene	ND		mg/kg	0.325	1	08/19/06 22:48	SW846 8270C	6083593
Dibenz (a,h) anthracene	ND		mg/kg	0.325	1	08/19/06 22:48	SW846 8270C	6083593
Dibenzofuran	ND		mg/kg	0.325	1	08/19/06 22:48	SW846 8270C	6083593
Di-n-butyl phthalate	ND		mg/kg	0.325	1	08/19/06 22:48	SW846 8270C	6083593
1,4-Dichlorobenzene	ND		mg/kg	0.325	1	08/19/06 22:48	SW846 8270C	6083593
1,2-Dichlorobenzene	ND		mg/kg	0.325	1	08/19/06 22:48	SW846 8270C	6083593
1,3-Dichlorobenzene	ND		mg/kg	0.325	1	08/19/06 22:48	SW846 8270C	6083593
3,3'-Dichlorobenzidine	ND		mg/kg	0.651	1	08/19/06 22:48	SW846 8270C	6083593
2,4-Dichlorophenol	ND		mg/kg	0.325	1	08/19/06 22:48	SW846 8270C	6083593
Diethyl phthalate	ND		mg/kg	0.325	1	08/19/06 22:48	SW846 8270C	6083593
2,4-Dimethylphenol	ND		mg/kg	0.325	1	08/19/06 22:48	SW846 8270C	6083593
Dimethyl phthalate	ND		mg/kg	0.325	1	08/19/06 22:48	SW846 8270C	6083593
4,6-Dinitro-2-methylphenol	ND		mg/kg	0.813	1	08/19/06 22:48	SW846 8270C	6083593
2,4-Dinitrophenol	ND		mg/kg	0.813	1	08/19/06 22:48	SW846 8270C	6083593

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Client MACTEC Engineering & Consulting, Inc. (3740)
21740 Beaumeade Circle, Suite 150
Ashburn, VA 20147
Attn Brent Chapman

Work Order: NPH2446
Project Name: AFRH
Project Number: 3552060897
Received: 08/17/06 08:00

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NPH2446-01 (G76-4 (7.5-9) - Soil) - cont. Sampled: 08/16/06 11:30								
Semivolatile Organic Compounds by EPA Method 8270C - cont.								
2,6-Dinitrotoluene	ND		mg/kg	0.325	1	08/19/06 22:48	SW846 8270C	6083593
2,4-Dinitrotoluene	ND		mg/kg	0.325	1	08/19/06 22:48	SW846 8270C	6083593
Di-n-octyl phthalate	ND		mg/kg	0.325	1	08/19/06 22:48	SW846 8270C	6083593
Bis(2-ethylhexyl)phthalate	ND		mg/kg	0.325	1	08/19/06 22:48	SW846 8270C	6083593
Fluoranthene	ND		mg/kg	0.325	1	08/19/06 22:48	SW846 8270C	6083593
Fluorene	ND		mg/kg	0.325	1	08/19/06 22:48	SW846 8270C	6083593
Hexachlorobenzene	ND		mg/kg	0.325	1	08/19/06 22:48	SW846 8270C	6083593
Hexachlorobutadiene	ND		mg/kg	0.325	1	08/19/06 22:48	SW846 8270C	6083593
Hexachlorocyclopentadiene	ND		mg/kg	0.325	1	08/19/06 22:48	SW846 8270C	6083593
Hexachloroethane	ND		mg/kg	0.325	1	08/19/06 22:48	SW846 8270C	6083593
Indeno (1,2,3-cd) pyrene	ND		mg/kg	0.325	1	08/19/06 22:48	SW846 8270C	6083593
Isophorone	ND		mg/kg	0.325	1	08/19/06 22:48	SW846 8270C	6083593
2-Methylnaphthalene	ND		mg/kg	0.325	1	08/19/06 22:48	SW846 8270C	6083593
2-Methylphenol	ND		mg/kg	0.325	1	08/19/06 22:48	SW846 8270C	6083593
3/4-Methylphenol	ND		mg/kg	0.325	1	08/19/06 22:48	SW846 8270C	6083593
Naphthalene	ND		mg/kg	0.325	1	08/19/06 22:48	SW846 8270C	6083593
3-Nitroaniline	ND		mg/kg	0.813	1	08/19/06 22:48	SW846 8270C	6083593
2-Nitroaniline	ND		mg/kg	0.813	1	08/19/06 22:48	SW846 8270C	6083593
4-Nitroaniline	ND		mg/kg	0.813	1	08/19/06 22:48	SW846 8270C	6083593
Nitrobenzene	ND		mg/kg	0.325	1	08/19/06 22:48	SW846 8270C	6083593
4-Nitrophenol	ND		mg/kg	0.813	1	08/19/06 22:48	SW846 8270C	6083593
2-Nitrophenol	ND		mg/kg	0.325	1	08/19/06 22:48	SW846 8270C	6083593
N-Nitrosodiphenylamine	ND		mg/kg	0.325	1	08/19/06 22:48	SW846 8270C	6083593
N-Nitrosodi-n-propylamine	ND		mg/kg	0.325	1	08/19/06 22:48	SW846 8270C	6083593
Pentachlorophenol	ND		mg/kg	0.813	1	08/19/06 22:48	SW846 8270C	6083593
Phenanthrene	ND		mg/kg	0.325	1	08/19/06 22:48	SW846 8270C	6083593
Phenol	ND		mg/kg	0.325	1	08/19/06 22:48	SW846 8270C	6083593
Pyrene	ND		mg/kg	0.325	1	08/19/06 22:48	SW846 8270C	6083593
1,2,4-Trichlorobenzene	ND		mg/kg	0.325	1	08/19/06 22:48	SW846 8270C	6083593
1-Methylnaphthalene	ND		mg/kg	0.325	1	08/19/06 22:48	SW846 8270C	6083593
2,4,6-Trichlorophenol	ND		mg/kg	0.325	1	08/19/06 22:48	SW846 8270C	6083593
2,4,5-Trichlorophenol	ND		mg/kg	0.813	1	08/19/06 22:48	SW846 8270C	6083593
Surr: Terphenyl-d14 (41-117%)	*77 %*					*08/19/06 22:48*	*SW846 8270C*	*6083593*
Surr: 2,4,6-Tribromophenol (21-125%)	*74 %*					*08/19/06 22:48*	*SW846 8270C*	*6083593*
Surr: Phenol-d5 (33-109%)	*61 %*					*08/19/06 22:48*	*SW846 8270C*	*6083593*
Surr: 2-Fluorobiphenyl (35-106%)	*59 %*					*08/19/06 22:48*	*SW846 8270C*	*6083593*
Surr: 2-Fluorophenol (26-105%)	*57 %*					*08/19/06 22:48*	*SW846 8270C*	*6083593*
Surr: Nitrobenzene-d5 (10-153%)	*61 %*					*08/19/06 22:48*	*SW846 8270C*	*6083593*
Extractable Petroleum Hydrocarbons								
Diesel	**5.73**		mg/kg	4.91	1	08/21/06 21:08	SW846 8015B	6083590
Surr: o-Terphenyl (56-143%)	*74 %*					*08/21/06 21:08*	*SW846 8015B*	*6083590*

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Client MACTEC Engineering & Consulting, Inc. (3740)
21740 Beaumeade Circle, Suite 150
Ashburn, VA 20147
Attn Brent Chapman

Work Order: NPH2446
Project Name: AFRH
Project Number: 3552060897
Received: 08/17/06 08:00

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NPH2446-02 (G48-2 (1-2) - Soil) Sampled: 08/16/06 09:15								
Mercury by EPA Methods 7470A/7471A								
Mercury	ND		mg/kg	0.0976	1	08/23/06 14:25	SW846 7471A	6084215
Organochlorine Pesticides by EPA Method 8081A								
Aldrin	ND		mg/kg	0.00167	1	08/29/06 20:09	SW846 8081A	6084002
delta-BHC	ND		mg/kg	0.00167	1	08/29/06 20:09	SW846 8081A	6084002
alpha-BHC	ND		mg/kg	0.00167	1	08/29/06 20:09	SW846 8081A	6084002
beta-BHC	ND		mg/kg	0.00325	1	08/29/06 20:09	SW846 8081A	6084002
gamma-BHC (Lindane)	ND		mg/kg	0.00167	1	08/29/06 20:09	SW846 8081A	6084002
alpha-Chlordane	ND		mg/kg	0.00167	1	08/29/06 20:09	SW846 8081A	6084002
gamma-Chlordane	ND		mg/kg	0.00167	1	08/29/06 20:09	SW846 8081A	6084002
Chlordane	ND		mg/kg	0.0657	1	08/29/06 20:09	SW846 8081A	6084002
4,4'-DDD	ND		mg/kg	0.00167	1	08/29/06 20:09	SW846 8081A	6084002
4,4'-DDE	ND		mg/kg	0.00167	1	08/29/06 20:09	SW846 8081A	6084002
4,4'-DDT	ND		mg/kg	0.00167	1	08/29/06 20:09	SW846 8081A	6084002
Dieldrin	ND		mg/kg	0.00167	1	08/29/06 20:09	SW846 8081A	6084002
Endosulfan I	ND		mg/kg	0.00167	1	08/29/06 20:09	SW846 8081A	6084002
Endosulfan II	ND		mg/kg	0.00167	1	08/29/06 20:09	SW846 8081A	6084002
Endosulfan sulfate	ND		mg/kg	0.00167	1	08/29/06 20:09	SW846 8081A	6084002
Endrin	ND		mg/kg	0.00167	1	08/29/06 20:09	SW846 8081A	6084002
Endrin aldehyde	ND		mg/kg	0.00167	1	08/29/06 20:09	SW846 8081A	6084002
Endrin ketone	ND		mg/kg	0.00167	1	08/29/06 20:09	SW846 8081A	6084002
Heptachlor	ND		mg/kg	0.00167	1	08/29/06 20:09	SW846 8081A	6084002
Heptachlor epoxide	ND		mg/kg	0.00167	1	08/29/06 20:09	SW846 8081A	6084002
Methoxychlor	ND		mg/kg	0.00325	1	08/29/06 20:09	SW846 8081A	6084002
Toxaphene	ND		mg/kg	0.0657	1	08/29/06 20:09	SW846 8081A	6084002
Surr: Tetrachloro-meta-xylene (63-132%)	*94 %*					*08/29/06 20:09*	*SW846 8081A*	*6084002*
Surr: Decachlorobiphenyl (39-108%)	*92 %*					*08/29/06 20:09*	*SW846 8081A*	*6084002*
Chlorinated Herbicides by EPA Method 8151A								
2,4-D	ND		mg/kg	0.0667	1	08/30/06 22:00	SW846 8151A	6085510
Dalapon	ND		mg/kg	0.167	1	08/30/06 22:00	SW846 8151A	6085510
2,4-DB	ND		mg/kg	0.0667	1	08/30/06 22:00	SW846 8151A	6085510
Dicamba	ND		mg/kg	0.0330	1	08/30/06 22:00	SW846 8151A	6085510
Dichloroprop	ND		mg/kg	0.0667	1	08/30/06 22:00	SW846 8151A	6085510
Dinoseb	ND		mg/kg	0.0667	1	08/30/06 22:00	SW846 8151A	6085510
MCPA	ND		mg/kg	3.33	1	08/30/06 22:00	SW846 8151A	6085510
MCPP	ND		mg/kg	3.33	1	08/30/06 22:00	SW846 8151A	6085510
4-Nitrophenol	ND		mg/kg	0.0330	1	08/30/06 22:00	SW846 8151A	6085510
Pentachlorophenol	ND		mg/kg	0.0330	1	08/30/06 22:00	SW846 8151A	6085510
Picloram	ND		mg/kg	0.0330	1	08/30/06 22:00	SW846 8151A	6085510
2,4,5-T	ND		mg/kg	0.0330	1	08/30/06 22:00	SW846 8151A	6085510
2,4,5-TP (Silvex)	ND		mg/kg	0.0170	1	08/30/06 22:00	SW846 8151A	6085510
Surr: Dichloroacetic Acid (55-132%)	*	*CF6, ZX*				*08/30/06 22:00*	*SW846 8151A*	*6085510*
As, Ba, Cd, Cr, Pb, Se, Ag by 6020								

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Client MACTEC Engineering & Consulting, Inc. (3740)
21740 Beaumeade Circle, Suite 150
Ashburn, VA 20147
Attn Brent Chapman

Work Order: NPH2446
Project Name: AFRH
Project Number: 3552060897
Received: 08/17/06 08:00

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NPH2446-02 (G48-2 (1-2) - Soil) - cont. Sampled: 08/16/06 09:15								
As, Ba, Cd, Cr, Pb, Se, Ag by 6020 - cont.								
See Attached Report								
Sample ID: NPH2446-03 (G48-4 (1-2) - Soil) Sampled: 08/16/06 09:30								
Mercury by EPA Methods 7470A/7471A								
Mercury	**0.137**		mg/kg	0.0971	1	08/23/06 14:27	SW846 7471A	6084215
Organochlorine Pesticides by EPA Method 8081A								
Aldrin	ND		mg/kg	0.00837	5	08/29/06 20:38	SW846 8081A	6084002
delta-BHC	ND		mg/kg	0.00837	5	08/29/06 20:38	SW846 8081A	6084002
alpha-BHC	ND		mg/kg	0.00837	5	08/29/06 20:38	SW846 8081A	6084002
beta-BHC	ND		mg/kg	0.0162	5	08/29/06 20:38	SW846 8081A	6084002
gamma-BHC (Lindane)	ND		mg/kg	0.00837	5	08/29/06 20:38	SW846 8081A	6084002
alpha-Chlordane	ND		mg/kg	0.00837	5	08/29/06 20:38	SW846 8081A	6084002
gamma-Chlordane	ND		mg/kg	0.00837	5	08/29/06 20:38	SW846 8081A	6084002
Chlordane	ND		mg/kg	0.328	5	08/29/06 20:38	SW846 8081A	6084002
4,4'-DDD	ND		mg/kg	0.00837	5	08/29/06 20:38	SW846 8081A	6084002
4,4'-DDE	ND		mg/kg	0.00837	5	08/29/06 20:38	SW846 8081A	6084002
4,4'-DDT	ND		mg/kg	0.00837	5	08/29/06 20:38	SW846 8081A	6084002
Dieldrin	ND		mg/kg	0.00837	5	08/29/06 20:38	SW846 8081A	6084002
Endosulfan I	ND		mg/kg	0.00837	5	08/29/06 20:38	SW846 8081A	6084002
Endosulfan II	ND		mg/kg	0.00837	5	08/29/06 20:38	SW846 8081A	6084002
Endosulfan sulfate	ND		mg/kg	0.00837	5	08/29/06 20:38	SW846 8081A	6084002
Endrin	ND		mg/kg	0.00837	5	08/29/06 20:38	SW846 8081A	6084002
Endrin aldehyde	ND		mg/kg	0.00837	5	08/29/06 20:38	SW846 8081A	6084002
Endrin ketone	ND		mg/kg	0.00837	5	08/29/06 20:38	SW846 8081A	6084002
Heptachlor	ND		mg/kg	0.00837	5	08/29/06 20:38	SW846 8081A	6084002
Heptachlor epoxide	ND		mg/kg	0.00837	5	08/29/06 20:38	SW846 8081A	6084002
Methoxychlor	ND		mg/kg	0.0162	5	08/29/06 20:38	SW846 8081A	6084002
Toxaphene	ND		mg/kg	0.328	5	08/29/06 20:38	SW846 8081A	6084002
Surr: Tetrachloro-meta-xylene (63-132%)	*130 %*					*08/29/06 20:38*	*SW846 8081A*	*6084002*
Surr: Decachlorobiphenyl (39-108%)	*110 %*	*Z3*				*08/29/06 20:38*	*SW846 8081A*	*6084002*
Chlorinated Herbicides by EPA Method 8151A								
2,4-D	ND		mg/kg	0.0665	1	08/28/06 12:15	SW846 8151A	6084743
Dalapon	ND		mg/kg	0.167	1	08/28/06 12:15	SW846 8151A	6084743
2,4-DB	ND		mg/kg	0.0665	1	08/28/06 12:15	SW846 8151A	6084743
Dicamba	ND		mg/kg	0.0329	1	08/28/06 12:15	SW846 8151A	6084743
Dichloroprop	ND		mg/kg	0.0665	1	08/28/06 12:15	SW846 8151A	6084743
Dinoseb	ND		mg/kg	0.0665	1	08/28/06 12:15	SW846 8151A	6084743
MCPA	ND		mg/kg	3.32	1	08/28/06 12:15	SW846 8151A	6084743
MCPP	ND		mg/kg	3.32	1	08/28/06 12:15	SW846 8151A	6084743
4-Nitrophenol	ND		mg/kg	0.0329	1	08/28/06 12:15	SW846 8151A	6084743
Pentachlorophenol	ND		mg/kg	0.0329	1	08/28/06 12:15	SW846 8151A	6084743
Picloram	ND		mg/kg	0.0329	1	08/28/06 12:15	SW846 8151A	6084743
2,4,5-T	ND		mg/kg	0.0329	1	08/28/06 12:15	SW846 8151A	6084743

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Client MACTEC Engineering & Consulting, Inc. (3740)
21740 Beaumeade Circle, Suite 150
Ashburn, VA 20147
Attn Brent Chapman

Work Order: NPH2446
Project Name: AFRH
Project Number: 3552060897
Received: 08/17/06 08:00

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NPH2446-03RE1 (G48-4 (1-2) - Soil) - cont. Sampled: 08/16/06 09:30								
Chlorinated Herbicides by EPA Method 8151A - cont.								
2,4,5-TP (Silvex)	ND		mg/kg	0.0170	1	08/28/06 12:15	SW846 8151A	6084743
Surr: Dichloroacetic Acid (55-132%)	*44 %*	*CF6, ZX*				*08/28/06 12:15*	*SW846 8151A*	*6084743*
As, Ba, Cd, Cr, Pb, Se, Ag by 6020								
See Attached Report								
Sample ID: NPH2446-04 (G48-5 (1-2) - Soil) Sampled: 08/16/06 09:45								
Mercury by EPA Methods 7470A/7471A								
Mercury	ND		mg/kg	0.0984	1	08/23/06 14:29	SW846 7471A	6084215
Organochlorine Pesticides by EPA Method 8081A								
Aldrin	ND		mg/kg	0.00166	1	08/29/06 21:07	SW846 8081A	6084002
delta-BHC	ND		mg/kg	0.00166	1	08/29/06 21:07	SW846 8081A	6084002
alpha-BHC	ND		mg/kg	0.00166	1	08/29/06 21:07	SW846 8081A	6084002
beta-BHC	ND		mg/kg	0.00323	1	08/29/06 21:07	SW846 8081A	6084002
gamma-BHC (Lindane)	ND		mg/kg	0.00166	1	08/29/06 21:07	SW846 8081A	6084002
alpha-Chlordane	ND		mg/kg	0.00166	1	08/29/06 21:07	SW846 8081A	6084002
gamma-Chlordane	ND		mg/kg	0.00166	1	08/29/06 21:07	SW846 8081A	6084002
Chlordane	ND		mg/kg	0.0653	1	08/29/06 21:07	SW846 8081A	6084002
4,4'-DDD	ND		mg/kg	0.00166	1	08/29/06 21:07	SW846 8081A	6084002
4,4'-DDE	ND		mg/kg	0.00166	1	08/29/06 21:07	SW846 8081A	6084002
4,4'-DDT	ND		mg/kg	0.00166	1	08/29/06 21:07	SW846 8081A	6084002
Dieldrin	ND		mg/kg	0.00166	1	08/29/06 21:07	SW846 8081A	6084002
Endosulfan I	ND		mg/kg	0.00166	1	08/29/06 21:07	SW846 8081A	6084002
Endosulfan II	ND		mg/kg	0.00166	1	08/29/06 21:07	SW846 8081A	6084002
Endosulfan sulfate	ND		mg/kg	0.00166	1	08/29/06 21:07	SW846 8081A	6084002
Endrin	ND		mg/kg	0.00166	1	08/29/06 21:07	SW846 8081A	6084002
Endrin aldehyde	ND		mg/kg	0.00166	1	08/29/06 21:07	SW846 8081A	6084002
Endrin ketone	ND		mg/kg	0.00166	1	08/29/06 21:07	SW846 8081A	6084002
Heptachlor	ND		mg/kg	0.00166	1	08/29/06 21:07	SW846 8081A	6084002
Heptachlor epoxide	ND		mg/kg	0.00166	1	08/29/06 21:07	SW846 8081A	6084002
Methoxychlor	ND		mg/kg	0.00323	1	08/29/06 21:07	SW846 8081A	6084002
Toxaphene	ND		mg/kg	0.0653	1	08/29/06 21:07	SW846 8081A	6084002
Surr: Tetrachloro-meta-xylene (63-132%)	*126 %*					*08/29/06 21:07*	*SW846 8081A*	*6084002*
Surr: Decachlorobiphenyl (39-108%)	*98 %*					*08/29/06 21:07*	*SW846 8081A*	*6084002*
Chlorinated Herbicides by EPA Method 8151A								
2,4-D	ND		mg/kg	0.0667	1	08/28/06 12:46	SW846 8151A	6084743
Dalapon	ND		mg/kg	0.167	1	08/28/06 12:46	SW846 8151A	6084743
2,4-DB	ND		mg/kg	0.0667	1	08/28/06 12:46	SW846 8151A	6084743
Dicamba	ND		mg/kg	0.0330	1	08/28/06 12:46	SW846 8151A	6084743
Dichloroprop	ND		mg/kg	0.0667	1	08/28/06 12:46	SW846 8151A	6084743
Dinoseb	ND		mg/kg	0.0667	1	08/28/06 12:46	SW846 8151A	6084743
MCPA	ND		mg/kg	3.33	1	08/28/06 12:46	SW846 8151A	6084743
MCPP	ND		mg/kg	3.33	1	08/28/06 12:46	SW846 8151A	6084743

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Ashburn, VA 20147
Attn Brent Chapman

Work Order: NPH2446
Project Name: AFRH
Project Number: 3552060897
Received: 08/17/06 08:00

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NPH2446-04RE1 (G48-5 (1-2) - Soil) - cont. Sampled: 08/16/06 09:45								
Chlorinated Herbicides by EPA Method 8151A - cont.								
4-Nitrophenol	ND		mg/kg	0.0330	1	08/28/06 12:46	SW846 8151A	6084743
Pentachlorophenol	ND		mg/kg	0.0330	1	08/28/06 12:46	SW846 8151A	6084743
Picloram	ND		mg/kg	0.0330	1	08/28/06 12:46	SW846 8151A	6084743
2,4,5-T	ND		mg/kg	0.0330	1	08/28/06 12:46	SW846 8151A	6084743
2,4,5-TP (Silvex)	ND		mg/kg	0.0170	1	08/28/06 12:46	SW846 8151A	6084743
Surr: Dichloroacetic Acid (55-132%)	*10 %*	*CF6, ZX*				*08/28/06 12:46*	*SW846 8151A*	*6084743*
As, Ba, Cd, Cr, Pb, Se, Ag by 6020								
See Attached Report								
Sample ID: NPH2446-05 (G76-1 (10.5-12) - Soil) Sampled: 08/16/06 10:30								
Polychlorinated Biphenyls by EPA Method 8082								
PCB-1016	ND		mg/kg	0.0328	1	08/26/06 21:23	SW846 8082	6084003
PCB-1221	ND		mg/kg	0.0328	1	08/26/06 21:23	SW846 8082	6084003
PCB-1232	ND		mg/kg	0.0328	1	08/26/06 21:23	SW846 8082	6084003
PCB-1242	ND		mg/kg	0.0328	1	08/26/06 21:23	SW846 8082	6084003
PCB-1248	ND		mg/kg	0.0328	1	08/26/06 21:23	SW846 8082	6084003
PCB-1254	ND		mg/kg	0.0328	1	08/26/06 21:23	SW846 8082	6084003
PCB-1260	ND		mg/kg	0.0328	1	08/26/06 21:23	SW846 8082	6084003
Surr: Tetrachloro-meta-xylene (63-132%)	*65 %*					*08/26/06 21:23*	*SW846 8082*	*6084003*
Surr: Decachlorobiphenyl (39-108%)	*86 %*					*08/26/06 21:23*	*SW846 8082*	*6084003*
Semivolatile Organic Compounds by EPA Method 8270C								
Acenaphthene	ND		mg/kg	0.332	1	08/19/06 23:51	SW846 8270C	6083593
Acenaphthylene	ND		mg/kg	0.332	1	08/19/06 23:51	SW846 8270C	6083593
Anthracene	ND		mg/kg	0.332	1	08/19/06 23:51	SW846 8270C	6083593
Benzo (a) anthracene	ND		mg/kg	0.332	1	08/19/06 23:51	SW846 8270C	6083593
Benzo (a) pyrene	ND		mg/kg	0.332	1	08/19/06 23:51	SW846 8270C	6083593
Benzo (b) fluoranthene	ND		mg/kg	0.332	1	08/19/06 23:51	SW846 8270C	6083593
Benzo (g,h,i) perylene	ND		mg/kg	0.332	1	08/19/06 23:51	SW846 8270C	6083593
Benzo (k) fluoranthene	ND		mg/kg	0.332	1	08/19/06 23:51	SW846 8270C	6083593
4-Bromophenyl phenyl ether	ND		mg/kg	0.332	1	08/19/06 23:51	SW846 8270C	6083593
Butyl benzyl phthalate	ND		mg/kg	0.332	1	08/19/06 23:51	SW846 8270C	6083593
Carbazole	ND		mg/kg	0.332	1	08/19/06 23:51	SW846 8270C	6083593
4-Chloro-3-methylphenol	ND		mg/kg	0.332	1	08/19/06 23:51	SW846 8270C	6083593
4-Chloroaniline	ND		mg/kg	0.332	1	08/19/06 23:51	SW846 8270C	6083593
Bis(2-chloroethoxy)methane	ND		mg/kg	0.332	1	08/19/06 23:51	SW846 8270C	6083593
Bis(2-chloroethyl)ether	ND		mg/kg	0.332	1	08/19/06 23:51	SW846 8270C	6083593
Bis(2-chloroisopropyl)ether	ND		mg/kg	0.332	1	08/19/06 23:51	SW846 8270C	6083593
2-Chloronaphthalene	ND		mg/kg	0.332	1	08/19/06 23:51	SW846 8270C	6083593
2-Chlorophenol	ND		mg/kg	0.332	1	08/19/06 23:51	SW846 8270C	6083593
4-Chlorophenyl phenyl ether	ND		mg/kg	0.332	1	08/19/06 23:51	SW846 8270C	6083593
Chrysene	ND		mg/kg	0.332	1	08/19/06 23:51	SW846 8270C	6083593
Dibenz (a,h) anthracene	ND		mg/kg	0.332	1	08/19/06 23:51	SW846 8270C	6083593
Dibenzofuran	ND		mg/kg	0.332	1	08/19/06 23:51	SW846 8270C	6083593

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Client MACTEC Engineering & Consulting, Inc. (3740)
21740 Beaumeade Circle, Suite 150
Ashburn, VA 20147
Attn Brent Chapman

Work Order: NPH2446
Project Name: AFRH
Project Number: 3552060897
Received: 08/17/06 08:00

ANALYTICAL REPORT

Sample ID: NPH2446-05 (G76-1 (10.5-12) - Soil) - cont. Sampled: 08/16/06 10:30

Semivolatile Organic Compounds by EPA Method 8270C - cont.

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Di-n-butyl phthalate	ND		mg/kg	0.332	1	08/19/06 23:51	SW846 8270C	6083593
1,4-Dichlorobenzene	ND		mg/kg	0.332	1	08/19/06 23:51	SW846 8270C	6083593
1,2-Dichlorobenzene	ND		mg/kg	0.332	1	08/19/06 23:51	SW846 8270C	6083593
1,3-Dichlorobenzene	ND		mg/kg	0.332	1	08/19/06 23:51	SW846 8270C	6083593
3,3'-Dichlorobenzidine	ND		mg/kg	0.665	1	08/19/06 23:51	SW846 8270C	6083593
2,4-Dichlorophenol	ND		mg/kg	0.332	1	08/19/06 23:51	SW846 8270C	6083593
Diethyl phthalate	ND		mg/kg	0.332	1	08/19/06 23:51	SW846 8270C	6083593
2,4-Dimethylphenol	ND		mg/kg	0.332	1	08/19/06 23:51	SW846 8270C	6083593
Dimethyl phthalate	ND		mg/kg	0.332	1	08/19/06 23:51	SW846 8270C	6083593
4,6-Dinitro-2-methylphenol	ND		mg/kg	0.830	1	08/19/06 23:51	SW846 8270C	6083593
2,4-Dinitrophenol	ND		mg/kg	0.830	1	08/19/06 23:51	SW846 8270C	6083593
2,6-Dinitrotoluene	ND		mg/kg	0.332	1	08/19/06 23:51	SW846 8270C	6083593
2,4-Dinitrotoluene	ND		mg/kg	0.332	1	08/19/06 23:51	SW846 8270C	6083593
Di-n-octyl phthalate	ND		mg/kg	0.332	1	08/19/06 23:51	SW846 8270C	6083593
Bis(2-ethylhexyl)phthalate	ND		mg/kg	0.332	1	08/19/06 23:51	SW846 8270C	6083593
Fluoranthene	ND		mg/kg	0.332	1	08/19/06 23:51	SW846 8270C	6083593
Fluorene	ND		mg/kg	0.332	1	08/19/06 23:51	SW846 8270C	6083593
Hexachlorobenzene	ND		mg/kg	0.332	1	08/19/06 23:51	SW846 8270C	6083593
Hexachlorobutadiene	ND		mg/kg	0.332	1	08/19/06 23:51	SW846 8270C	6083593
Hexachlorocyclopentadiene	ND		mg/kg	0.332	1	08/19/06 23:51	SW846 8270C	6083593
Hexachloroethane	ND		mg/kg	0.332	1	08/19/06 23:51	SW846 8270C	6083593
Indeno (1,2,3-cd) pyrene	ND		mg/kg	0.332	1	08/19/06 23:51	SW846 8270C	6083593
Isophorone	ND		mg/kg	0.332	1	08/19/06 23:51	SW846 8270C	6083593
2-Methylnaphthalene	ND		mg/kg	0.332	1	08/19/06 23:51	SW846 8270C	6083593
2-Methylphenol	ND		mg/kg	0.332	1	08/19/06 23:51	SW846 8270C	6083593
3/4-Methylphenol	ND		mg/kg	0.332	1	08/19/06 23:51	SW846 8270C	6083593
Naphthalene	ND		mg/kg	0.332	1	08/19/06 23:51	SW846 8270C	6083593
3-Nitroaniline	ND		mg/kg	0.830	1	08/19/06 23:51	SW846 8270C	6083593
2-Nitroaniline	ND		mg/kg	0.830	1	08/19/06 23:51	SW846 8270C	6083593
4-Nitroaniline	ND		mg/kg	0.830	1	08/19/06 23:51	SW846 8270C	6083593
Nitrobenzene	ND		mg/kg	0.332	1	08/19/06 23:51	SW846 8270C	6083593
4-Nitrophenol	ND		mg/kg	0.830	1	08/19/06 23:51	SW846 8270C	6083593
2-Nitrophenol	ND		mg/kg	0.332	1	08/19/06 23:51	SW846 8270C	6083593
N-Nitrosodiphenylamine	ND		mg/kg	0.332	1	08/19/06 23:51	SW846 8270C	6083593
N-Nitrosodi-n-propylamine	ND		mg/kg	0.332	1	08/19/06 23:51	SW846 8270C	6083593
Pentachlorophenol	ND		mg/kg	0.830	1	08/19/06 23:51	SW846 8270C	6083593
Phenanthrene	ND		mg/kg	0.332	1	08/19/06 23:51	SW846 8270C	6083593
Phenol	ND		mg/kg	0.332	1	08/19/06 23:51	SW846 8270C	6083593
Pyrene	ND		mg/kg	0.332	1	08/19/06 23:51	SW846 8270C	6083593
1,2,4-Trichlorobenzene	ND		mg/kg	0.332	1	08/19/06 23:51	SW846 8270C	6083593
1-Methylnaphthalene	ND		mg/kg	0.332	1	08/19/06 23:51	SW846 8270C	6083593
2,4,6-Trichlorophenol	ND		mg/kg	0.332	1	08/19/06 23:51	SW846 8270C	6083593
2,4,5-Trichlorophenol	ND		mg/kg	0.830	1	08/19/06 23:51	SW846 8270C	6083593
Surr: Terphenyl-d14 (41-117%)	*81 %*					*08/19/06 23:51*	*SW846 8270C*	*6083593*

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Client MACTEC Engineering & Consulting, Inc. (3740)
21740 Beaumeade Circle, Suite 150
Ashburn, VA 20147
Attn Brent Chapman

Work Order: NPH2446
Project Name: AFRH
Project Number: 3552060897
Received: 08/17/06 08:00

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NPH2446-05 (G76-1 (10.5-12) - Soil) - cont. Sampled: 08/16/06 10:30								
Semivolatile Organic Compounds by EPA Method 8270C - cont.								
Surr: 2,4,6-Tribromophenol (21-125%)	*72 %*					*08/19/06 23:51*	*SW846 8270C*	*6083593*
Surr: Phenol-d5 (33-109%)	*65 %*					*08/19/06 23:51*	*SW846 8270C*	*6083593*
Surr: 2-Fluorobiphenyl (35-106%)	*66 %*					*08/19/06 23:51*	*SW846 8270C*	*6083593*
Surr: 2-Fluorophenol (26-105%)	*53 %*					*08/19/06 23:51*	*SW846 8270C*	*6083593*
Surr: Nitrobenzene-d5 (10-153%)	*65 %*					*08/19/06 23:51*	*SW846 8270C*	*6083593*
Extractable Petroleum Hydrocarbons								
Diesel	**9.75**		mg/kg	4.97	1	08/22/06 09:08	SW846 8015B	6083590
Surr: o-Terphenyl (56-143%)	*65 %*					*08/22/06 09:08*	*SW846 8015B*	*6083590*
Sample ID: NPH2446-06 (G77-3 (0-1) - Soil) Sampled: 08/16/06 08:00								
Mercury by EPA Methods 7470A/7471A								
Mercury	ND		mg/kg	0.0969	1	08/23/06 14:31	SW846 7471A	6084215
Organochlorine Pesticides by EPA Method 8081A								
Aldrin	ND		mg/kg	0.00169	1	08/29/06 21:36	SW846 8081A	6084002
delta-BHC	ND		mg/kg	0.00169	1	08/29/06 21:36	SW846 8081A	6084002
alpha-BHC	ND		mg/kg	0.00169	1	08/29/06 21:36	SW846 8081A	6084002
beta-BHC	ND		mg/kg	0.00327	1	08/29/06 21:36	SW846 8081A	6084002
gamma-BHC (Lindane)	ND		mg/kg	0.00169	1	08/29/06 21:36	SW846 8081A	6084002
alpha-Chlordane	ND		mg/kg	0.00169	1	08/29/06 21:36	SW846 8081A	6084002
gamma-Chlordane	ND		mg/kg	0.00169	1	08/29/06 21:36	SW846 8081A	6084002
Chlordane	ND		mg/kg	0.0662	1	08/29/06 21:36	SW846 8081A	6084002
4,4'-DDD	ND		mg/kg	0.00169	1	08/29/06 21:36	SW846 8081A	6084002
4,4'-DDE	ND		mg/kg	0.00169	1	08/29/06 21:36	SW846 8081A	6084002
4,4'-DDT	ND		mg/kg	0.00169	1	08/29/06 21:36	SW846 8081A	6084002
Dieldrin	ND		mg/kg	0.00169	1	08/29/06 21:36	SW846 8081A	6084002
Endosulfan I	ND		mg/kg	0.00169	1	08/29/06 21:36	SW846 8081A	6084002
Endosulfan II	ND		mg/kg	0.00169	1	08/29/06 21:36	SW846 8081A	6084002
Endosulfan sulfate	ND		mg/kg	0.00169	1	08/29/06 21:36	SW846 8081A	6084002
Endrin	ND		mg/kg	0.00169	1	08/29/06 21:36	SW846 8081A	6084002
Endrin aldehyde	ND		mg/kg	0.00169	1	08/29/06 21:36	SW846 8081A	6084002
Endrin ketone	ND		mg/kg	0.00169	1	08/29/06 21:36	SW846 8081A	6084002
Heptachlor	ND		mg/kg	0.00169	1	08/29/06 21:36	SW846 8081A	6084002
Heptachlor epoxide	ND		mg/kg	0.00169	1	08/29/06 21:36	SW846 8081A	6084002
Methoxychlor	ND		mg/kg	0.00327	1	08/29/06 21:36	SW846 8081A	6084002
Toxaphene	ND		mg/kg	0.0662	1	08/29/06 21:36	SW846 8081A	6084002
Surr: Tetrachloro-meta-xylene (63-132%)	*90 %*					*08/29/06 21:36*	*SW846 8081A*	*6084002*
Surr: Decachlorobiphenyl (39-108%)	*96 %*					*08/29/06 21:36*	*SW846 8081A*	*6084002*
Chlorinated Herbicides by EPA Method 8151A								
2,4-D	ND		mg/kg	0.0651	1	08/30/06 22:30	SW846 8151A	6085510
Dalapon	ND		mg/kg	0.163	1	08/30/06 22:30	SW846 8151A	6085510
2,4-DB	ND		mg/kg	0.0651	1	08/30/06 22:30	SW846 8151A	6085510
Dicamba	ND		mg/kg	0.0322	1	08/30/06 22:30	SW846 8151A	6085510
Dichloroprop	ND		mg/kg	0.0651	1	08/30/06 22:30	SW846 8151A	6085510

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Client MACTEC Engineering & Consulting, Inc. (3740)
21740 Beaumeade Circle, Suite 150
Ashburn, VA 20147
Attn Brent Chapman

Work Order: NPH2446
Project Name: AFRH
Project Number: 3552060897
Received: 08/17/06 08:00

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NPH2446-06RE2 (G77-3 (0-1) - Soil) - cont. Sampled: 08/16/06 08:00								
Chlorinated Herbicides by EPA Method 8151A - cont.								
Dinoseb	ND		mg/kg	0.0651	1	08/30/06 22:30	SW846 8151A	6085510
MCPA	ND		mg/kg	3.25	1	08/30/06 22:30	SW846 8151A	6085510
MCPP	ND		mg/kg	3.25	1	08/30/06 22:30	SW846 8151A	6085510
4-Nitrophenol	ND		mg/kg	0.0322	1	08/30/06 22:30	SW846 8151A	6085510
Pentachlorophenol	ND		mg/kg	0.0322	1	08/30/06 22:30	SW846 8151A	6085510
Picloram	ND		mg/kg	0.0322	1	08/30/06 22:30	SW846 8151A	6085510
2,4,5-T	ND		mg/kg	0.0322	1	08/30/06 22:30	SW846 8151A	6085510
2,4,5-TP (Silvex)	ND		mg/kg	0.0166	1	08/30/06 22:30	SW846 8151A	6085510
Surr: Dichloroacetic Acid (55-132%)	*	*CF6, ZX*				*08/30/06 22:30*	*SW846 8151A*	*6085510*
As, Ba, Cd, Cr, Pb, Se, Ag by 6020								
See Attached Report								
Sample ID: NPH2446-07 (G77-2 (1-2) - Soil) Sampled: 08/16/06 08:15								
Mercury by EPA Methods 7470A/7471A								
Mercury	ND		mg/kg	0.0984	1	08/23/06 14:33	SW846 7471A	6084215
Organochlorine Pesticides by EPA Method 8081A								
Aldrin	ND		mg/kg	0.00165	1	08/29/06 22:05	SW846 8081A	6084002
delta-BHC	ND		mg/kg	0.00165	1	08/29/06 22:05	SW846 8081A	6084002
alpha-BHC	ND		mg/kg	0.00165	1	08/29/06 22:05	SW846 8081A	6084002
beta-BHC	ND		mg/kg	0.00321	1	08/29/06 22:05	SW846 8081A	6084002
gamma-BHC (Lindane)	ND		mg/kg	0.00165	1	08/29/06 22:05	SW846 8081A	6084002
alpha-Chlordane	ND		mg/kg	0.00165	1	08/29/06 22:05	SW846 8081A	6084002
gamma-Chlordane	ND		mg/kg	0.00165	1	08/29/06 22:05	SW846 8081A	6084002
Chlordane	ND		mg/kg	0.0649	1	08/29/06 22:05	SW846 8081A	6084002
4,4'-DDD	ND		mg/kg	0.00165	1	08/29/06 22:05	SW846 8081A	6084002
4,4'-DDE	ND		mg/kg	0.00165	1	08/29/06 22:05	SW846 8081A	6084002
4,4'-DDT	ND		mg/kg	0.00165	1	08/29/06 22:05	SW846 8081A	6084002
Dieldrin	ND		mg/kg	0.00165	1	08/29/06 22:05	SW846 8081A	6084002
Endosulfan I	ND		mg/kg	0.00165	1	08/29/06 22:05	SW846 8081A	6084002
Endosulfan II	ND		mg/kg	0.00165	1	08/29/06 22:05	SW846 8081A	6084002
Endosulfan sulfate	ND		mg/kg	0.00165	1	08/29/06 22:05	SW846 8081A	6084002
Endrin	ND		mg/kg	0.00165	1	08/29/06 22:05	SW846 8081A	6084002
Endrin aldehyde	ND		mg/kg	0.00165	1	08/29/06 22:05	SW846 8081A	6084002
Endrin ketone	ND		mg/kg	0.00165	1	08/29/06 22:05	SW846 8081A	6084002
Heptachlor	ND		mg/kg	0.00165	1	08/29/06 22:05	SW846 8081A	6084002
Heptachlor epoxide	ND		mg/kg	0.00165	1	08/29/06 22:05	SW846 8081A	6084002
Methoxychlor	ND		mg/kg	0.00321	1	08/29/06 22:05	SW846 8081A	6084002
Toxaphene	ND		mg/kg	0.0649	1	08/29/06 22:05	SW846 8081A	6084002
Surr: Tetrachloro-meta-xylene (63-132%)	*122 %*					*08/29/06 22:05*	*SW846 8081A*	*6084002*
Surr: Decachlorobiphenyl (39-108%)	*98 %*					*08/29/06 22:05*	*SW846 8081A*	*6084002*
Chlorinated Herbicides by EPA Method 8151A								
2,4-D	ND		mg/kg	0.0663	1	08/28/06 13:48	SW846 8151A	6084743

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Client MACTEC Engineering & Consulting, Inc. (3740)
21740 Beaumeade Circle, Suite 150
Ashburn, VA 20147
Attn Brent Chapman

Work Order: NPH2446
Project Name: AFRH
Project Number: 3552060897
Received: 08/17/06 08:00

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NPH2446-07RE1 (G77-2 (1-2) - Soil) - cont. Sampled: 08/16/06 08:15								
Chlorinated Herbicides by EPA Method 8151A - cont.								
Dalapon	ND		mg/kg	0.166	1	08/28/06 13:48	SW846 8151A	6084743
2,4-DB	ND		mg/kg	0.0663	1	08/28/06 13:48	SW846 8151A	6084743
Dicamba	ND		mg/kg	0.0328	1	08/28/06 13:48	SW846 8151A	6084743
Dichloroprop	ND		mg/kg	0.0663	1	08/28/06 13:48	SW846 8151A	6084743
Dinoseb	ND		mg/kg	0.0663	1	08/28/06 13:48	SW846 8151A	6084743
MCPA	ND		mg/kg	3.31	1	08/28/06 13:48	SW846 8151A	6084743
MCPP	ND		mg/kg	3.31	1	08/28/06 13:48	SW846 8151A	6084743
4-Nitrophenol	ND		mg/kg	0.0328	1	08/28/06 13:48	SW846 8151A	6084743
Pentachlorophenol	ND		mg/kg	0.0328	1	08/28/06 13:48	SW846 8151A	6084743
Picloram	ND		mg/kg	0.0328	1	08/28/06 13:48	SW846 8151A	6084743
2,4,5-T	ND		mg/kg	0.0328	1	08/28/06 13:48	SW846 8151A	6084743
2,4,5-TP (Silvex)	ND		mg/kg	0.0169	1	08/28/06 13:48	SW846 8151A	6084743
Surr: Dichloroacetic Acid (55-132%)	*32 %*	*CF6, ZX*				*08/28/06 13:48*	*SW846 8151A*	*6084743*
As, Ba, Cd, Cr, Pb, Se, Ag by 6020								
See Attached Report								
Sample ID: NPH2446-08 (G77-4 (0-1) - Soil) Sampled: 08/16/06 08:30								
Mercury by EPA Methods 7470A/7471A								
Mercury	ND		mg/kg	0.0969	1	08/21/06 16:10	SW846 7471A	6083616
Organochlorine Pesticides by EPA Method 8081A								
Aldrin	ND		mg/kg	0.00169	1	08/29/06 22:34	SW846 8081A	6084002
delta-BHC	ND		mg/kg	0.00169	1	08/29/06 22:34	SW846 8081A	6084002
alpha-BHC	ND		mg/kg	0.00169	1	08/29/06 22:34	SW846 8081A	6084002
beta-BHC	ND		mg/kg	0.00327	1	08/29/06 22:34	SW846 8081A	6084002
gamma-BHC (Lindane)	ND		mg/kg	0.00169	1	08/29/06 22:34	SW846 8081A	6084002
alpha-Chlordane	ND		mg/kg	0.00169	1	08/29/06 22:34	SW846 8081A	6084002
gamma-Chlordane	ND		mg/kg	0.00169	1	08/29/06 22:34	SW846 8081A	6084002
Chlordane	ND		mg/kg	0.0661	1	08/29/06 22:34	SW846 8081A	6084002
4,4'-DDD	ND		mg/kg	0.00169	1	08/29/06 22:34	SW846 8081A	6084002
4,4'-DDE	ND		mg/kg	0.00169	1	08/29/06 22:34	SW846 8081A	6084002
4,4'-DDT	ND		mg/kg	0.00169	1	08/29/06 22:34	SW846 8081A	6084002
Dieldrin	ND		mg/kg	0.00169	1	08/29/06 22:34	SW846 8081A	6084002
Endosulfan I	ND		mg/kg	0.00169	1	08/29/06 22:34	SW846 8081A	6084002
Endosulfan II	ND		mg/kg	0.00169	1	08/29/06 22:34	SW846 8081A	6084002
Endosulfan sulfate	ND		mg/kg	0.00169	1	08/29/06 22:34	SW846 8081A	6084002
Endrin	ND		mg/kg	0.00169	1	08/29/06 22:34	SW846 8081A	6084002
Endrin aldehyde	ND		mg/kg	0.00169	1	08/29/06 22:34	SW846 8081A	6084002
Endrin ketone	ND		mg/kg	0.00169	1	08/29/06 22:34	SW846 8081A	6084002
Heptachlor	ND		mg/kg	0.00169	1	08/29/06 22:34	SW846 8081A	6084002
Heptachlor epoxide	ND		mg/kg	0.00169	1	08/29/06 22:34	SW846 8081A	6084002
Methoxychlor	ND		mg/kg	0.00327	1	08/29/06 22:34	SW846 8081A	6084002
Toxaphene	ND		mg/kg	0.0661	1	08/29/06 22:34	SW846 8081A	6084002
Surr: Tetrachloro-meta-xylene (63-132%)	*92 %*					*08/29/06 22:34*	*SW846 8081A*	*6084002*

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Client MACTEC Engineering & Consulting, Inc. (3740)
21740 Beaumeade Circle, Suite 150
Ashburn, VA 20147
Attn Brent Chapman

Work Order: NPH2446
Project Name: AFRH
Project Number: 3552060897
Received: 08/17/06 08:00

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NPH2446-08 (G77-4 (0-1) - Soil) - cont. Sampled: 08/16/06 08:30								
Organochlorine Pesticides by EPA Method 8081A - cont.								
Surr: Decachlorobiphenyl (39-108%)	*96 %*					*08/29/06 22:34*	*SW846 8081A*	*6084002*
Chlorinated Herbicides by EPA Method 8151A								
2,4-D	ND		mg/kg	0.0667	1	08/28/06 14:19	SW846 8151A	6084743
Dalapon	ND		mg/kg	0.167	1	08/28/06 14:19	SW846 8151A	6084743
2,4-DB	ND		mg/kg	0.0667	1	08/28/06 14:19	SW846 8151A	6084743
Dicamba	ND		mg/kg	0.0330	1	08/28/06 14:19	SW846 8151A	6084743
Dichloroprop	ND		mg/kg	0.0667	1	08/28/06 14:19	SW846 8151A	6084743
Dinoseb	ND		mg/kg	0.0667	1	08/28/06 14:19	SW846 8151A	6084743
MCPA	ND		mg/kg	3.33	1	08/28/06 14:19	SW846 8151A	6084743
MCPP	ND		mg/kg	3.33	1	08/28/06 14:19	SW846 8151A	6084743
4-Nitrophenol	ND		mg/kg	0.0330	1	08/28/06 14:19	SW846 8151A	6084743
Pentachlorophenol	ND		mg/kg	0.0330	1	08/28/06 14:19	SW846 8151A	6084743
Picloram	ND		mg/kg	0.0330	1	08/28/06 14:19	SW846 8151A	6084743
2,4,5-T	ND		mg/kg	0.0330	1	08/28/06 14:19	SW846 8151A	6084743
2,4,5-TP (Silvex)	ND		mg/kg	0.0170	1	08/28/06 14:19	SW846 8151A	6084743
Surr: Dichloroacetic Acid (55-132%)	*49 %*	*CF6, ZX*				*08/28/06 14:19*	*SW846 8151A*	*6084743*
As, Ba, Cd, Cr, Pb, Se, Ag by 6020								
See Attached Report								
Sample ID: NPH2446-09 (G77-5 (1-2) - Soil) Sampled: 08/16/06 07:15								
Mercury by EPA Methods 7470A/7471A								
Mercury	ND		mg/kg	0.0993	1	08/21/06 16:16	SW846 7471A	6083616
Organochlorine Pesticides by EPA Method 8081A								
Aldrin	ND		mg/kg	0.00169	1	08/29/06 23:03	SW846 8081A	6084002
delta-BHC	ND		mg/kg	0.00169	1	08/29/06 23:03	SW846 8081A	6084002
alpha-BHC	ND		mg/kg	0.00169	1	08/29/06 23:03	SW846 8081A	6084002
beta-BHC	ND		mg/kg	0.00327	1	08/29/06 23:03	SW846 8081A	6084002
gamma-BHC (Lindane)	ND		mg/kg	0.00169	1	08/29/06 23:03	SW846 8081A	6084002
alpha-Chlordane	ND		mg/kg	0.00169	1	08/29/06 23:03	SW846 8081A	6084002
gamma-Chlordane	ND		mg/kg	0.00169	1	08/29/06 23:03	SW846 8081A	6084002
Chlordane	ND		mg/kg	0.0661	1	08/29/06 23:03	SW846 8081A	6084002
4,4'-DDD	ND		mg/kg	0.00169	1	08/29/06 23:03	SW846 8081A	6084002
4,4'-DDE	ND		mg/kg	0.00169	1	08/29/06 23:03	SW846 8081A	6084002
4,4'-DDT	ND		mg/kg	0.00169	1	08/29/06 23:03	SW846 8081A	6084002
Dieldrin	ND		mg/kg	0.00169	1	08/29/06 23:03	SW846 8081A	6084002
Endosulfan I	ND		mg/kg	0.00169	1	08/29/06 23:03	SW846 8081A	6084002
Endosulfan II	ND		mg/kg	0.00169	1	08/29/06 23:03	SW846 8081A	6084002
Endosulfan sulfate	ND		mg/kg	0.00169	1	08/29/06 23:03	SW846 8081A	6084002
Endrin	ND		mg/kg	0.00169	1	08/29/06 23:03	SW846 8081A	6084002
Endrin aldehyde	ND		mg/kg	0.00169	1	08/29/06 23:03	SW846 8081A	6084002
Endrin ketone	ND		mg/kg	0.00169	1	08/29/06 23:03	SW846 8081A	6084002
Heptachlor	ND		mg/kg	0.00169	1	08/29/06 23:03	SW846 8081A	6084002

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Ashburn, VA 20147
Attn Brent Chapman

Work Order: NPH2446
Project Name: AFRH
Project Number: 3552060897
Received: 08/17/06 08:00

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NPH2446-09 (G77-5 (1-2) - Soil) - cont. Sampled: 08/16/06 07:15								
Organochlorine Pesticides by EPA Method 8081A - cont.								
Heptachlor epoxide	ND		mg/kg	0.00169	1	08/29/06 23:03	SW846 8081A	6084002
Methoxychlor	ND		mg/kg	0.00327	1	08/29/06 23:03	SW846 8081A	6084002
Toxaphene	ND		mg/kg	0.0661	1	08/29/06 23:03	SW846 8081A	6084002
Surr: Tetrachloro-meta-xylene (63-132%)	*92 %*					*08/29/06 23:03*	*SW846 8081A*	*6084002*
Surr: Decachlorobiphenyl (39-108%)	*86 %*					*08/29/06 23:03*	*SW846 8081A*	*6084002*
Chlorinated Herbicides by EPA Method 8151A								
2,4-D	ND		mg/kg	0.0664	1	08/28/06 14:50	SW846 8151A	6084743
Dalapon	ND		mg/kg	0.166	1	08/28/06 14:50	SW846 8151A	6084743
2,4-DB	ND		mg/kg	0.0664	1	08/28/06 14:50	SW846 8151A	6084743
Dicamba	ND		mg/kg	0.0329	1	08/28/06 14:50	SW846 8151A	6084743
Dichloroprop	ND		mg/kg	0.0664	1	08/28/06 14:50	SW846 8151A	6084743
Dinoseb	ND		mg/kg	0.0664	1	08/28/06 14:50	SW846 8151A	6084743
MCPA	ND		mg/kg	3.32	1	08/28/06 14:50	SW846 8151A	6084743
MCPP	ND		mg/kg	3.32	1	08/28/06 14:50	SW846 8151A	6084743
4-Nitrophenol	ND		mg/kg	0.0329	1	08/28/06 14:50	SW846 8151A	6084743
Pentachlorophenol	ND		mg/kg	0.0329	1	08/28/06 14:50	SW846 8151A	6084743
Picloram	ND		mg/kg	0.0329	1	08/28/06 14:50	SW846 8151A	6084743
2,4,5-T	ND		mg/kg	0.0329	1	08/28/06 14:50	SW846 8151A	6084743
2,4,5-TP (Silvex)	ND		mg/kg	0.0169	1	08/28/06 14:50	SW846 8151A	6084743
Surr: Dichloroacetic Acid (55-132%)	*53 %*	*CF6, ZX*				*08/28/06 14:50*	*SW846 8151A*	*6084743*
As, Ba, Cd, Cr, Pb, Se, Ag by 6020								
See Attached Report								
Sample ID: NPH2446-10 (G77-6 (0-1) - Soil) Sampled: 08/16/06 07:30								
Mercury by EPA Methods 7470A/7471A								
Mercury	ND		mg/kg	0.0990	1	08/21/06 16:18	SW846 7471A	6083616
Organochlorine Pesticides by EPA Method 8081A								
Aldrin	ND		mg/kg	0.00168	1	08/29/06 23:32	SW846 8081A	6084002
delta-BHC	ND		mg/kg	0.00168	1	08/29/06 23:32	SW846 8081A	6084002
alpha-BHC	ND		mg/kg	0.00168	1	08/29/06 23:32	SW846 8081A	6084002
beta-BHC	ND		mg/kg	0.00325	1	08/29/06 23:32	SW846 8081A	6084002
gamma-BHC (Lindane)	ND		mg/kg	0.00168	1	08/29/06 23:32	SW846 8081A	6084002
alpha-Chlordane	ND		mg/kg	0.00168	1	08/29/06 23:32	SW846 8081A	6084002
gamma-Chlordane	ND		mg/kg	0.00168	1	08/29/06 23:32	SW846 8081A	6084002
Chlordane	ND		mg/kg	0.0657	1	08/29/06 23:32	SW846 8081A	6084002
4,4'-DDD	ND		mg/kg	0.00168	1	08/29/06 23:32	SW846 8081A	6084002
4,4'-DDE	ND		mg/kg	0.00168	1	08/29/06 23:32	SW846 8081A	6084002
4,4'-DDT	ND		mg/kg	0.00168	1	08/29/06 23:32	SW846 8081A	6084002
Dieldrin	ND		mg/kg	0.00168	1	08/29/06 23:32	SW846 8081A	6084002
Endosulfan I	ND		mg/kg	0.00168	1	08/29/06 23:32	SW846 8081A	6084002
Endosulfan II	ND		mg/kg	0.00168	1	08/29/06 23:32	SW846 8081A	6084002
Endosulfan sulfate	ND		mg/kg	0.00168	1	08/29/06 23:32	SW846 8081A	6084002

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Ashburn, VA 20147
Attn Brent Chapman

Work Order: NPH2446
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Project Number: 3552060897
Received: 08/17/06 08:00

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NPH2446-10 (G77-6 (0-1) - Soil) - cont. Sampled: 08/16/06 07:30								
Organochlorine Pesticides by EPA Method 8081A - cont.								
Endrin	ND		mg/kg	0.00168	1	08/29/06 23:32	SW846 8081A	6084002
Endrin aldehyde	ND		mg/kg	0.00168	1	08/29/06 23:32	SW846 8081A	6084002
Endrin ketone	ND		mg/kg	0.00168	1	08/29/06 23:32	SW846 8081A	6084002
Heptachlor	ND		mg/kg	0.00168	1	08/29/06 23:32	SW846 8081A	6084002
Heptachlor epoxide	ND		mg/kg	0.00168	1	08/29/06 23:32	SW846 8081A	6084002
Methoxychlor	ND		mg/kg	0.00325	1	08/29/06 23:32	SW846 8081A	6084002
Toxaphene	ND		mg/kg	0.0657	1	08/29/06 23:32	SW846 8081A	6084002
Surr: Tetrachloro-meta-xylene (63-132%)	*126 %*					*08/29/06 23:32*	*SW846 8081A*	*6084002*
Surr: Decachlorobiphenyl (39-108%)	*102 %*					*08/29/06 23:32*	*SW846 8081A*	*6084002*
Chlorinated Herbicides by EPA Method 8151A								
2,4-D	ND		mg/kg	0.0645	1	08/30/06 23:01	SW846 8151A	6085510
Dalapon	ND		mg/kg	0.162	1	08/30/06 23:01	SW846 8151A	6085510
2,4-DB	ND		mg/kg	0.0645	1	08/30/06 23:01	SW846 8151A	6085510
Dicamba	ND		mg/kg	0.0319	1	08/30/06 23:01	SW846 8151A	6085510
Dichloroprop	ND		mg/kg	0.0645	1	08/30/06 23:01	SW846 8151A	6085510
Dinoseb	ND		mg/kg	0.0645	1	08/30/06 23:01	SW846 8151A	6085510
MCPA	ND		mg/kg	3.22	1	08/30/06 23:01	SW846 8151A	6085510
MCPP	ND		mg/kg	3.22	1	08/30/06 23:01	SW846 8151A	6085510
4-Nitrophenol	ND		mg/kg	0.0319	1	08/30/06 23:01	SW846 8151A	6085510
Pentachlorophenol	ND		mg/kg	0.0319	1	08/30/06 23:01	SW846 8151A	6085510
Picloram	ND		mg/kg	0.0319	1	08/30/06 23:01	SW846 8151A	6085510
2,4,5-T	ND		mg/kg	0.0319	1	08/30/06 23:01	SW846 8151A	6085510
2,4,5-TP (Silvex)	ND		mg/kg	0.0165	1	08/30/06 23:01	SW846 8151A	6085510
Surr: Dichloroacetic Acid (55-132%)	*17 %*	*CF6, ZX*				*08/30/06 23:01*	*SW846 8151A*	*6085510*
As, Ba, Cd, Cr, Pb, Se, Ag by 6020								
See Attached Report								
Sample ID: NPH2446-11 (G77-1 (1-2) - Soil) Sampled: 08/16/06 07:45								
Mercury by EPA Methods 7470A/7471A								
Mercury	ND		mg/kg	0.0987	1	08/21/06 16:21	SW846 7471A	6083616
Organochlorine Pesticides by EPA Method 8081A								
Aldrin	ND		mg/kg	0.00167	1	08/23/06 14:22	SW846 8081A	6083597
delta-BHC	ND		mg/kg	0.00167	1	08/23/06 14:22	SW846 8081A	6083597
alpha-BHC	ND		mg/kg	0.00167	1	08/23/06 14:22	SW846 8081A	6083597
beta-BHC	ND		mg/kg	0.00324	1	08/23/06 14:22	SW846 8081A	6083597
gamma-BHC (Lindane)	ND		mg/kg	0.00167	1	08/23/06 14:22	SW846 8081A	6083597
alpha-Chlordane	ND		mg/kg	0.00167	1	08/23/06 14:22	SW846 8081A	6083597
gamma-Chlordane	ND		mg/kg	0.00167	1	08/23/06 14:22	SW846 8081A	6083597
Chlordane	ND		mg/kg	0.0655	1	08/23/06 14:22	SW846 8081A	6083597
4,4'-DDD	ND		mg/kg	0.00167	1	08/23/06 14:22	SW846 8081A	6083597
4,4'-DDE	ND		mg/kg	0.00167	1	08/23/06 14:22	SW846 8081A	6083597
4,4'-DDT	ND		mg/kg	0.00167	1	08/23/06 14:22	SW846 8081A	6083597

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Attn Brent Chapman

Work Order: NPH2446
Project Name: AFRH
Project Number: 3552060897
Received: 08/17/06 08:00

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NPH2446-11 (G77-1 (1-2) - Soil) - cont. Sampled: 08/16/06 07:45								
Organochlorine Pesticides by EPA Method 8081A - cont.								
Dieldrin	ND		mg/kg	0.00167	1	08/23/06 14:22	SW846 8081A	6083597
Endosulfan I	ND		mg/kg	0.00167	1	08/23/06 14:22	SW846 8081A	6083597
Endosulfan II	ND		mg/kg	0.00167	1	08/23/06 14:22	SW846 8081A	6083597
Endosulfan sulfate	ND		mg/kg	0.00167	1	08/23/06 14:22	SW846 8081A	6083597
Endrin	ND		mg/kg	0.00167	1	08/23/06 14:22	SW846 8081A	6083597
Endrin aldehyde	ND		mg/kg	0.00167	1	08/23/06 14:22	SW846 8081A	6083597
Endrin ketone	ND		mg/kg	0.00167	1	08/23/06 14:22	SW846 8081A	6083597
Heptachlor	ND		mg/kg	0.00167	1	08/23/06 14:22	SW846 8081A	6083597
Heptachlor epoxide	ND		mg/kg	0.00167	1	08/23/06 14:22	SW846 8081A	6083597
Methoxychlor	ND		mg/kg	0.00324	1	08/23/06 14:22	SW846 8081A	6083597
Toxaphene	ND		mg/kg	0.0655	1	08/23/06 14:22	SW846 8081A	6083597
Surr: Tetrachloro-meta-xylene (63-132%)	*66 %*					*08/23/06 14:22*	*SW846 8081A*	*6083597*
Surr: Decachlorobiphenyl (39-108%)	*74 %*					*08/23/06 14:22*	*SW846 8081A*	*6083597*
Chlorinated Herbicides by EPA Method 8151A								
2,4-D	ND		mg/kg	0.0661	1	08/27/06 13:55	SW846 8151A	6084743
Dalapon	ND		mg/kg	0.166	1	08/27/06 13:55	SW846 8151A	6084743
2,4-DB	ND		mg/kg	0.0661	1	08/27/06 13:55	SW846 8151A	6084743
Dicamba	ND		mg/kg	0.0327	1	08/27/06 13:55	SW846 8151A	6084743
Dichloroprop	ND		mg/kg	0.0661	1	08/27/06 13:55	SW846 8151A	6084743
Dinoseb	ND		mg/kg	0.0661	1	08/27/06 13:55	SW846 8151A	6084743
MCPA	ND		mg/kg	3.30	1	08/27/06 13:55	SW846 8151A	6084743
MCPP	ND		mg/kg	3.30	1	08/27/06 13:55	SW846 8151A	6084743
4-Nitrophenol	ND		mg/kg	0.0327	1	08/27/06 13:55	SW846 8151A	6084743
Pentachlorophenol	ND		mg/kg	0.0327	1	08/27/06 13:55	SW846 8151A	6084743
Picloram	ND		mg/kg	0.0327	1	08/27/06 13:55	SW846 8151A	6084743
2,4,5-T	ND		mg/kg	0.0327	1	08/27/06 13:55	SW846 8151A	6084743
2,4,5-TP (Silvex)	ND		mg/kg	0.0168	1	08/27/06 13:55	SW846 8151A	6084743
Surr: Dichloroacetic Acid (55-132%)	*89 %*					*08/27/06 13:55*	*SW846 8151A*	*6084743*
As, Ba, Cd, Cr, Pb, Se, Ag by 6020								
See Attached Report								
Sample ID: NPH2446-12 (G76-3 (9-10.5) - Soil) Sampled: 08/16/06 13:00								
Polychlorinated Biphenyls by EPA Method 8082								
PCB-1016	ND		mg/kg	0.0331	1	08/26/06 22:32	SW846 8082	6084003
PCB-1221	ND		mg/kg	0.0331	1	08/26/06 22:32	SW846 8082	6084003
PCB-1232	ND		mg/kg	0.0331	1	08/26/06 22:32	SW846 8082	6084003
PCB-1242	ND		mg/kg	0.0331	1	08/26/06 22:32	SW846 8082	6084003
PCB-1248	ND		mg/kg	0.0331	1	08/26/06 22:32	SW846 8082	6084003
PCB-1254	ND		mg/kg	0.0331	1	08/26/06 22:32	SW846 8082	6084003
PCB-1260	ND		mg/kg	0.0331	1	08/26/06 22:32	SW846 8082	6084003
Surr: Tetrachloro-meta-xylene (63-132%)	*53 %*	*Z6*				*08/26/06 22:32*	*SW846 8082*	*6084003*
Surr: Decachlorobiphenyl (39-108%)	*53 %*					*08/26/06 22:32*	*SW846 8082*	*6084003*

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ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NPH2446-12 (G76-3 (9-10.5) - Soil) - cont. Sampled: 08/16/06 13:00								
Semivolatile Organic Compounds by EPA Method 8270C								
Acenaphthene	ND		mg/kg	0.322	1	08/19/06 23:09	SW846 8270C	6083593
Acenaphthylene	ND		mg/kg	0.322	1	08/19/06 23:09	SW846 8270C	6083593
Anthracene	ND		mg/kg	0.322	1	08/19/06 23:09	SW846 8270C	6083593
Benzo (a) anthracene	ND		mg/kg	0.322	1	08/19/06 23:09	SW846 8270C	6083593
Benzo (a) pyrene	ND		mg/kg	0.322	1	08/19/06 23:09	SW846 8270C	6083593
Benzo (b) fluoranthene	ND		mg/kg	0.322	1	08/19/06 23:09	SW846 8270C	6083593
Benzo (g,h,i) perylene	ND		mg/kg	0.322	1	08/19/06 23:09	SW846 8270C	6083593
Benzo (k) fluoranthene	ND		mg/kg	0.322	1	08/19/06 23:09	SW846 8270C	6083593
4-Bromophenyl phenyl ether	ND		mg/kg	0.322	1	08/19/06 23:09	SW846 8270C	6083593
Butyl benzyl phthalate	**0.643**		mg/kg	0.322	1	08/19/06 23:09	SW846 8270C	6083593
Carbazole	ND		mg/kg	0.322	1	08/19/06 23:09	SW846 8270C	6083593
4-Chloro-3-methylphenol	ND		mg/kg	0.322	1	08/19/06 23:09	SW846 8270C	6083593
4-Chloroaniline	ND		mg/kg	0.322	1	08/19/06 23:09	SW846 8270C	6083593
Bis(2-chloroethoxy)methane	ND		mg/kg	0.322	1	08/19/06 23:09	SW846 8270C	6083593
Bis(2-chloroethyl)ether	ND		mg/kg	0.322	1	08/19/06 23:09	SW846 8270C	6083593
Bis(2-chloroisopropyl)ether	ND		mg/kg	0.322	1	08/19/06 23:09	SW846 8270C	6083593
2-Chloronaphthalene	ND		mg/kg	0.322	1	08/19/06 23:09	SW846 8270C	6083593
2-Chlorophenol	ND		mg/kg	0.322	1	08/19/06 23:09	SW846 8270C	6083593
4-Chlorophenyl phenyl ether	ND		mg/kg	0.322	1	08/19/06 23:09	SW846 8270C	6083593
Chrysene	ND		mg/kg	0.322	1	08/19/06 23:09	SW846 8270C	6083593
Dibenz (a,h) anthracene	ND		mg/kg	0.322	1	08/19/06 23:09	SW846 8270C	6083593
Dibenzofuran	ND		mg/kg	0.322	1	08/19/06 23:09	SW846 8270C	6083593
Di-n-butyl phthalate	ND		mg/kg	0.322	1	08/19/06 23:09	SW846 8270C	6083593
1,4-Dichlorobenzene	ND		mg/kg	0.322	1	08/19/06 23:09	SW846 8270C	6083593
1,2-Dichlorobenzene	ND		mg/kg	0.322	1	08/19/06 23:09	SW846 8270C	6083593
1,3-Dichlorobenzene	ND		mg/kg	0.322	1	08/19/06 23:09	SW846 8270C	6083593
3,3'-Dichlorobenzidine	ND		mg/kg	0.645	1	08/19/06 23:09	SW846 8270C	6083593
2,4-Dichlorophenol	ND		mg/kg	0.322	1	08/19/06 23:09	SW846 8270C	6083593
Diethyl phthalate	ND		mg/kg	0.322	1	08/19/06 23:09	SW846 8270C	6083593
2,4-Dimethylphenol	ND		mg/kg	0.322	1	08/19/06 23:09	SW846 8270C	6083593
Dimethyl phthalate	ND		mg/kg	0.322	1	08/19/06 23:09	SW846 8270C	6083593
4,6-Dinitro-2-methylphenol	ND		mg/kg	0.806	1	08/19/06 23:09	SW846 8270C	6083593
2,4-Dinitrophenol	ND		mg/kg	0.806	1	08/19/06 23:09	SW846 8270C	6083593
2,6-Dinitrotoluene	ND		mg/kg	0.322	1	08/19/06 23:09	SW846 8270C	6083593
2,4-Dinitrotoluene	ND		mg/kg	0.322	1	08/19/06 23:09	SW846 8270C	6083593
Di-n-octyl phthalate	ND		mg/kg	0.322	1	08/19/06 23:09	SW846 8270C	6083593
Bis(2-ethylhexyl)phthalate	ND		mg/kg	0.322	1	08/19/06 23:09	SW846 8270C	6083593
Fluoranthene	ND		mg/kg	0.322	1	08/19/06 23:09	SW846 8270C	6083593
Fluorene	ND		mg/kg	0.322	1	08/19/06 23:09	SW846 8270C	6083593
Hexachlorobenzene	ND		mg/kg	0.322	1	08/19/06 23:09	SW846 8270C	6083593
Hexachlorobutadiene	ND		mg/kg	0.322	1	08/19/06 23:09	SW846 8270C	6083593
Hexachlorocyclopentadiene	ND		mg/kg	0.322	1	08/19/06 23:09	SW846 8270C	6083593
Hexachloroethane	ND		mg/kg	0.322	1	08/19/06 23:09	SW846 8270C	6083593

TestAmerica
ANALYTICAL TESTING CORPORATION
2960 Foster Creighton Road Nashville, TN 37204 * 800-765-0980 * Fax 615-726-3404

Client MACTEC Engineering & Consulting, Inc. (3740)
21740 Beaumeade Circle, Suite 150
Ashburn, VA 20147
Attn Brent Chapman

Work Order: NPH2446
Project Name: AFRH
Project Number: 3552060897
Received: 08/17/06 08:00

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NPH2446-12 (G76-3 (9-10.5) - Soil) - cont. Sampled: 08/16/06 13:00								
Semivolatile Organic Compounds by EPA Method 8270C - cont.								
Indeno (1,2,3-cd) pyrene	ND		mg/kg	0.322	1	08/19/06 23:09	SW846 8270C	6083593
Isophorone	ND		mg/kg	0.322	1	08/19/06 23:09	SW846 8270C	6083593
2-Methylnaphthalene	ND		mg/kg	0.322	1	08/19/06 23:09	SW846 8270C	6083593
2-Methylphenol	ND		mg/kg	0.322	1	08/19/06 23:09	SW846 8270C	6083593
3/4-Methylphenol	ND		mg/kg	0.322	1	08/19/06 23:09	SW846 8270C	6083593
Naphthalene	ND		mg/kg	0.322	1	08/19/06 23:09	SW846 8270C	6083593
3-Nitroaniline	ND		mg/kg	0.806	1	08/19/06 23:09	SW846 8270C	6083593
2-Nitroaniline	ND		mg/kg	0.806	1	08/19/06 23:09	SW846 8270C	6083593
4-Nitroaniline	ND		mg/kg	0.806	1	08/19/06 23:09	SW846 8270C	6083593
Nitrobenzene	ND		mg/kg	0.322	1	08/19/06 23:09	SW846 8270C	6083593
4-Nitrophenol	ND		mg/kg	0.806	1	08/19/06 23:09	SW846 8270C	6083593
2-Nitrophenol	ND		mg/kg	0.322	1	08/19/06 23:09	SW846 8270C	6083593
N-Nitrosodiphenylamine	ND		mg/kg	0.322	1	08/19/06 23:09	SW846 8270C	6083593
N-Nitrosodi-n-propylamine	ND		mg/kg	0.322	1	08/19/06 23:09	SW846 8270C	6083593
Pentachlorophenol	ND		mg/kg	0.806	1	08/19/06 23:09	SW846 8270C	6083593
Phenanthrene	ND		mg/kg	0.322	1	08/19/06 23:09	SW846 8270C	6083593
Phenol	ND		mg/kg	0.322	1	08/19/06 23:09	SW846 8270C	6083593
Pyrene	ND		mg/kg	0.322	1	08/19/06 23:09	SW846 8270C	6083593
1,2,4-Trichlorobenzene	ND		mg/kg	0.322	1	08/19/06 23:09	SW846 8270C	6083593
1-Methylnaphthalene	ND		mg/kg	0.322	1	08/19/06 23:09	SW846 8270C	6083593
2,4,6-Trichlorophenol	ND		mg/kg	0.322	1	08/19/06 23:09	SW846 8270C	6083593
2,4,5-Trichlorophenol	ND		mg/kg	0.806	1	08/19/06 23:09	SW846 8270C	6083593
Surr: Terphenyl-d14 (41-117%)	*68 %*					*08/19/06 23:09*	*SW846 8270C*	*6083593*
Surr: 2,4,6-Tribromophenol (21-125%)	*75 %*					*08/19/06 23:09*	*SW846 8270C*	*6083593*
Surr: Phenol-d5 (33-109%)	*64 %*					*08/19/06 23:09*	*SW846 8270C*	*6083593*
Surr: 2-Fluorobiphenyl (35-106%)	*61 %*					*08/19/06 23:09*	*SW846 8270C*	*6083593*
Surr: 2-Fluorophenol (26-105%)	*57 %*					*08/19/06 23:09*	*SW846 8270C*	*6083593*
Surr: Nitrobenzene-d5 (10-153%)	*60 %*					*08/19/06 23:09*	*SW846 8270C*	*6083593*
Extractable Petroleum Hydrocarbons								
Diesel	**1420**		mg/kg	246	50	08/22/06 09:24	SW846 8015B	6083590
Surr: o-Terphenyl (56-143%)	*	*Z3*				*08/22/06 09:24*	*SW846 8015B*	*6083590*
Sample ID: NPH2446-13 (G76-2 (12-13.5) - Soil) Sampled: 08/16/06 13:40								
Polychlorinated Biphenyls by EPA Method 8082								
PCB-1016	ND		mg/kg	0.0328	1	08/26/06 22:55	SW846 8082	6084003
PCB-1221	ND		mg/kg	0.0328	1	08/26/06 22:55	SW846 8082	6084003
PCB-1232	ND		mg/kg	0.0328	1	08/26/06 22:55	SW846 8082	6084003
PCB-1242	ND		mg/kg	0.0328	1	08/26/06 22:55	SW846 8082	6084003
PCB-1248	ND		mg/kg	0.0328	1	08/26/06 22:55	SW846 8082	6084003
PCB-1254	ND		mg/kg	0.0328	1	08/26/06 22:55	SW846 8082	6084003
PCB-1260	ND		mg/kg	0.0328	1	08/26/06 22:55	SW846 8082	6084003
Surr: Tetrachloro-meta-xylene (63-132%)	*45 %*	*Z6*				*08/26/06 22:55*	*SW846 8082*	*6084003*
Surr: Decachlorobiphenyl (39-108%)	*47 %*					*08/26/06 22:55*	*SW846 8082*	*6084003*

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Client MACTEC Engineering & Consulting, Inc. (3740)
21740 Beaumeade Circle, Suite 150
Ashburn, VA 20147
Attn Brent Chapman

Work Order: NPH2446
Project Name: AFRH
Project Number: 3552060897
Received: 08/17/06 08:00

ANALYTICAL REPORT

Sample ID: NPH2446-13 (G76-2 (12-13.5) - Soil) - cont. Sampled: 08/16/06 13:40

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Acenaphthene	ND		mg/kg	0.322	1	08/19/06 23:30	SW846 8270C	6083593
Acenaphthylene	ND		mg/kg	0.322	1	08/19/06 23:30	SW846 8270C	6083593
Anthracene	ND		mg/kg	0.322	1	08/19/06 23:30	SW846 8270C	6083593
Benzo (a) anthracene	ND		mg/kg	0.322	1	08/19/06 23:30	SW846 8270C	6083593
Benzo (a) pyrene	ND		mg/kg	0.322	1	08/19/06 23:30	SW846 8270C	6083593
Benzo (b) fluoranthene	ND		mg/kg	0.322	1	08/19/06 23:30	SW846 8270C	6083593
Benzo (g,h,i) perylene	ND		mg/kg	0.322	1	08/19/06 23:30	SW846 8270C	6083593
Benzo (k) fluoranthene	ND		mg/kg	0.322	1	08/19/06 23:30	SW846 8270C	6083593
4-Bromophenyl phenyl ether	ND		mg/kg	0.322	1	08/19/06 23:30	SW846 8270C	6083593
Butyl benzyl phthalate	ND		mg/kg	0.322	1	08/19/06 23:30	SW846 8270C	6083593
Carbazole	ND		mg/kg	0.322	1	08/19/06 23:30	SW846 8270C	6083593
4-Chloro-3-methylphenol	ND		mg/kg	0.322	1	08/19/06 23:30	SW846 8270C	6083593
4-Chloroaniline	ND		mg/kg	0.322	1	08/19/06 23:30	SW846 8270C	6083593
Bis(2-chloroethoxy)methane	ND		mg/kg	0.322	1	08/19/06 23:30	SW846 8270C	6083593
Bis(2-chloroethyl)ether	ND		mg/kg	0.322	1	08/19/06 23:30	SW846 8270C	6083593
Bis(2-chloroisopropyl)ether	ND		mg/kg	0.322	1	08/19/06 23:30	SW846 8270C	6083593
2-Chloronaphthalene	ND		mg/kg	0.322	1	08/19/06 23:30	SW846 8270C	6083593
2-Chlorophenol	ND		mg/kg	0.322	1	08/19/06 23:30	SW846 8270C	6083593
4-Chlorophenyl phenyl ether	ND		mg/kg	0.322	1	08/19/06 23:30	SW846 8270C	6083593
Chrysene	ND		mg/kg	0.322	1	08/19/06 23:30	SW846 8270C	6083593
Dibenz (a,h) anthracene	ND		mg/kg	0.322	1	08/19/06 23:30	SW846 8270C	6083593
Dibenzofuran	ND		mg/kg	0.322	1	08/19/06 23:30	SW846 8270C	6083593
Di-n-butyl phthalate	ND		mg/kg	0.322	1	08/19/06 23:30	SW846 8270C	6083593
1,4-Dichlorobenzene	ND		mg/kg	0.322	1	08/19/06 23:30	SW846 8270C	6083593
1,2-Dichlorobenzene	ND		mg/kg	0.322	1	08/19/06 23:30	SW846 8270C	6083593
1,3-Dichlorobenzene	ND		mg/kg	0.322	1	08/19/06 23:30	SW846 8270C	6083593
3,3'-Dichlorobenzidine	ND		mg/kg	0.645	1	08/19/06 23:30	SW846 8270C	6083593
2,4-Dichlorophenol	ND		mg/kg	0.322	1	08/19/06 23:30	SW846 8270C	6083593
Diethyl phthalate	ND		mg/kg	0.322	1	08/19/06 23:30	SW846 8270C	6083593
2,4-Dimethylphenol	ND		mg/kg	0.322	1	08/19/06 23:30	SW846 8270C	6083593
Dimethyl phthalate	ND		mg/kg	0.322	1	08/19/06 23:30	SW846 8270C	6083593
4,6-Dinitro-2-methylphenol	ND		mg/kg	0.806	1	08/19/06 23:30	SW846 8270C	6083593
2,4-Dinitrophenol	ND		mg/kg	0.806	1	08/19/06 23:30	SW846 8270C	6083593
2,6-Dinitrotoluene	ND		mg/kg	0.322	1	08/19/06 23:30	SW846 8270C	6083593
2,4-Dinitrotoluene	ND		mg/kg	0.322	1	08/19/06 23:30	SW846 8270C	6083593
Di-n-octyl phthalate	ND		mg/kg	0.322	1	08/19/06 23:30	SW846 8270C	6083593
Bis(2-ethylhexyl)phthalate	ND		mg/kg	0.322	1	08/19/06 23:30	SW846 8270C	6083593
Fluoranthene	ND		mg/kg	0.322	1	08/19/06 23:30	SW846 8270C	6083593
Fluorene	ND		mg/kg	0.322	1	08/19/06 23:30	SW846 8270C	6083593
Hexachlorobenzene	ND		mg/kg	0.322	1	08/19/06 23:30	SW846 8270C	6083593
Hexachlorobutadiene	ND		mg/kg	0.322	1	08/19/06 23:30	SW846 8270C	6083593
Hexachlorocyclopentadiene	ND		mg/kg	0.322	1	08/19/06 23:30	SW846 8270C	6083593
Hexachloroethane	ND		mg/kg	0.322	1	08/19/06 23:30	SW846 8270C	6083593

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Client MACTEC Engineering & Consulting, Inc. (3740)
21740 Beaumeade Circle, Suite 150
Ashburn, VA 20147
Attn Brent Chapman

Work Order: NPH2446
Project Name: AFRH
Project Number: 3552060897
Received: 08/17/06 08:00

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NPH2446-13 (G76-2 (12-13.5) - Soil) - cont. Sampled: 08/16/06 13:40								
Semivolatile Organic Compounds by EPA Method 8270C - cont.								
ndeno (1,2,3-cd) pyrene	ND		mg/kg	0.322	1	08/19/06 23:30	SW846 8270C	6083593
sophorone	ND		mg/kg	0.322	1	08/19/06 23:30	SW846 8270C	6083593
2-Methylnaphthalene	ND		mg/kg	0.322	1	08/19/06 23:30	SW846 8270C	6083593
2-Methylphenol	ND		mg/kg	0.322	1	08/19/06 23:30	SW846 8270C	6083593
3/4-Methylphenol	ND		mg/kg	0.322	1	08/19/06 23:30	SW846 8270C	6083593
Naphthalene	ND		mg/kg	0.322	1	08/19/06 23:30	SW846 8270C	6083593
3-Nitroaniline	ND		mg/kg	0.806	1	08/19/06 23:30	SW846 8270C	6083593
2-Nitroaniline	ND		mg/kg	0.806	1	08/19/06 23:30	SW846 8270C	6083593
4-Nitroaniline	ND		mg/kg	0.806	1	08/19/06 23:30	SW846 8270C	6083593
Nitrobenzene	ND		mg/kg	0.322	1	08/19/06 23:30	SW846 8270C	6083593
4-Nitrophenol	ND		mg/kg	0.806	1	08/19/06 23:30	SW846 8270C	6083593
2-Nitrophenol	ND		mg/kg	0.322	1	08/19/06 23:30	SW846 8270C	6083593
N-Nitrosodiphenylamine	ND		mg/kg	0.322	1	08/19/06 23:30	SW846 8270C	6083593
N-Nitrosodi-n-propylamine	ND		mg/kg	0.322	1	08/19/06 23:30	SW846 8270C	6083593
Pentachlorophenol	ND		mg/kg	0.806	1	08/19/06 23:30	SW846 8270C	6083593
Phenanthrene	ND		mg/kg	0.322	1	08/19/06 23:30	SW846 8270C	6083593
Phenol	ND		mg/kg	0.322	1	08/19/06 23:30	SW846 8270C	6083593
Pyrene	ND		mg/kg	0.322	1	08/19/06 23:30	SW846 8270C	6083593
1,2,4-Trichlorobenzene	ND		mg/kg	0.322	1	08/19/06 23:30	SW846 8270C	6083593
1-Methylnaphthalene	ND		mg/kg	0.322	1	08/19/06 23:30	SW846 8270C	6083593
2,4,6-Trichlorophenol	ND		mg/kg	0.322	1	08/19/06 23:30	SW846 8270C	6083593
2,4,5-Trichlorophenol	ND		mg/kg	0.806	1	08/19/06 23:30	SW846 8270C	6083593
Surr: Terphenyl-d14 (41-117%)	*60 %*					*08/19/06 23:30*	*SW846 8270C*	*6083593*
Surr: 2,4,6-Tribromophenol (21-125%)	*78 %*					*08/19/06 23:30*	*SW846 8270C*	*6083593*
Surr: Phenol-d5 (33-109%)	*61 %*					*08/19/06 23:30*	*SW846 8270C*	*6083593*
Surr: 2-Fluorobiphenyl (35-106%)	*65 %*					*08/19/06 23:30*	*SW846 8270C*	*6083593*
Surr: 2-Fluorophenol (26-105%)	*53 %*					*08/19/06 23:30*	*SW846 8270C*	*6083593*
Surr: Nitrobenzene-d5 (10-153%)	*58 %*					*08/19/06 23:30*	*SW846 8270C*	*6083593*
Extractable Petroleum Hydrocarbons								
Diesel	**449**		mg/kg	247	50	08/22/06 09:40	SW846 8015B	6083590
Surr: o-Terphenyl (56-143%)	*	*Z3*				*08/22/06 09:40*	*SW846 8015B*	*6083590*

TestAmerica
ANALYTICAL TESTING CORPORATION
3601 South Dixie Drive • Dayton, OH 45439 • 937-294-6856 • Fax: 937-294-7816 • 800-572-9839

Jennifer Gambill
TESTAMERICA ANALYTICAL/
TESTING CORPORATION
2960 Foster Creighton Dr.
Nashville, TN 37204

Job Number: 06.15015
Report Date: 08/29/2006

Enclosed are the Analytical and Quality Control Reports for the following samples submitted to TestAmerica for analysis:

Project: NPH2446

Sample Number	Sample Description	Date Taken	Date Received
217064	NPH2446-02	08/16/2006	08/19/2006
217065	NPH2446-03	08/16/2006	08/19/2006
217066	NPH2446-04	08/16/2006	08/19/2006
217067	NPH2446-06	08/16/2006	08/19/2006
217068	NPH2446-07	08/16/2006	08/19/2006
217069	NPH2446-08	08/16/2006	08/19/2006
217070	NPH2446-09	08/16/2006	08/19/2006
217071	NPH2446-10	08/16/2006	08/19/2006
217072	NPH2446-11	08/16/2006	08/19/2006

The Quality Control report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

TestAmerica certifies that the analytical results contained herein apply only to the specific samples analyzed. Reproduction of this report is permitted only in its entirety.

Enclosure

Project Management Approval

TestAmerica
ANALYTICAL TESTING CORPORATION
3601 South Dixie Drive • Dayton, OH 45439 • 937-294-6856 • Fax: 937-294-7816 • 800-572-9839

Analytical Report

Jennifer Gambill
TESTAMERICA ANALYTICAL/
TESTING CORPORATION
2960 Foster Creighton Dr.
Nashville, TN 37204

Job Number: 06.15015
Report Date: 08/29/2006

SAMPLE NO. 217064 **SAMPLE DESCRIPTION** NPH2446-02 **DATE/TIME TAKEN** 08/16/2006 09:15

	Result	Units	Reporting Limit	Flag	Run Date	Run Time	Prep Batch	Run Batch	Anal. Init.	Lab ID	Method Reference
ICPMS NONAQUEOUS	Complete		Complete		08/25/2006	22:09		702	ekh	DT	SW 6020
Arsenic, ICPMS	2.4	mg/Kg	<2.0		08/25/2006	22:09	514	8331	ekh	DT	SW 6020
Barium, ICPMS	73.2	mg/Kg	<0.99		08/25/2006	22:09	514	8316	ekh	DT	SW 6020
Cadmium, ICPMS	1.73	mg/Kg	<0.99		08/25/2006	22:09	514	8385	ekh	DT	SW 6020
Chromium, ICPMS	7.3	mg/Kg	<2.0		08/25/2006	22:09	514	8236	ekh	DT	SW 6020
Lead, ICPMS	158	mg/Kg	<0.99	h	08/25/2006	22:09	514	8402	ekh	DT	SW 6020
Selenium, ICPMS	<2.0	mg/Kg	<2.0		08/25/2006	22:09	514	1951	ekh	DT	SW 6020 Mod
Silver, ICPMS	<0.5	mg/Kg	<0.5		08/25/2006	22:09	514	8122	ekh	DT	SW 6020
ICPMS Digestion, Nonaqueous	Complete		Complete		08/22/2006		514		mja	DT	SW 3050B

SAMPLE NO. 217065 **SAMPLE DESCRIPTION** NPH2446-03 **DATE/TIME TAKEN** 08/16/2006 09:30

	Result	Units	Reporting Limit	Flag	Run Date	Run Time	Prep Batch	Run Batch	Anal. Init.	Lab ID	Method Reference
ICPMS NONAQUEOUS	Complete		Complete		08/25/2006	23:18		702	ekh	DT	SW 6020
Arsenic, ICPMS	6.7	mg/Kg	<2.0		08/25/2006	23:18	514	8331	ekh	DT	SW 6020
Barium, ICPMS	44.6	mg/Kg	<1.0		08/25/2006	23:18	514	8316	ekh	DT	SW 6020
Cadmium, ICPMS	1.1	mg/Kg	<1.0		08/25/2006	23:18	514	8385	ekh	DT	SW 6020
Chromium, ICPMS	8.6	mg/Kg	<2.0		08/25/2006	23:18	514	8236	ekh	DT	SW 6020
Lead, ICPMS	127	mg/Kg	<1.0		08/25/2006	23:18	514	8402	ekh	DT	SW 6020
Selenium, ICPMS	<3.0	mg/Kg	<3.0		08/25/2006	23:18	514	1951	ekh	DT	SW 6020 Mod
Silver, ICPMS	<0.5	mg/Kg	<0.5		08/25/2006	23:18	514	8122	ekh	DT	SW 6020
ICPMS Digestion, Nonaqueous	Complete		Complete		08/22/2006		514		mja	DT	SW 3050B

h - MSD recovery and RPD outside of control limits.

Lab ID: CH = Chicago (Dundee), DT = Dayton, IN = Indianapolis, PT = Pontiac, SUB = Subcontracted, CLT = Client Data

TestAmerica
ANALYTICAL TESTING CORPORATION
3601 South Dixie Drive • Dayton, OH 45439 • 937-294-6856 • Fax: 937-294-7816 • 800-572-9839

Analytical Report

Jennifer Gambill
TESTAMERICA ANALYTICAL/
TESTING CORPORATION
2960 Foster Creighton Dr.
Nashville, TN 37204

Job Number: 06.15015
Report Date: 08/29/2006

SAMPLE NO. 217066 **SAMPLE DESCRIPTION** NPH2446-04 **DATE/TIME TAKEN** 08/16/2006 09:45

	Result	Units	Reporting Limit	Flag	Run Date	Run Time	Prep Batch	Run Batch	Anal. Init.	Lab ID	Method Reference
ICPMS NONAQUEOUS	Complete		Complete		08/25/2006	23:23		702	ekh	DT	SW 6020
Arsenic, ICPMS	<2.0	mg/Kg	<2.0		08/25/2006	23:23	514	8331	ekh	DT	SW 6020
Barium, ICPMS	33.3	mg/Kg	<0.98		08/25/2006	23:23	514	8316	ekh	DT	SW 6020
Cadmium, ICPMS	<0.98	mg/Kg	<0.98		08/25/2006	23:23	514	8385	ekh	DT	SW 6020
Chromium, ICPMS	8.8	mg/Kg	<2.0		08/25/2006	23:23	514	8236	ekh	DT	SW 6020
Lead, ICPMS	68.7	mg/Kg	<0.98		08/25/2006	23:23	514	8402	ekh	DT	SW 6020
Selenium, ICPMS	<0.98	mg/Kg	<0.98		08/25/2006	23:23	514	1951	ekh	DT	SW 6020 Mod
Silver, ICPMS	<0.5	mg/Kg	<0.5		08/25/2006	23:23	514	8122	ekh	DT	SW 6020
ICPMS Digestion, Nonaqueous	Complete		Complete		08/22/2006		514		mja	DT	SW 3050B

SAMPLE NO. 217067 **SAMPLE DESCRIPTION** NPH2446-06 **DATE/TIME TAKEN** 08/16/2006 08:00

	Result	Units	Reporting Limit	Flag	Run Date	Run Time	Prep Batch	Run Batch	Anal. Init.	Lab ID	Method Reference
ICPMS NONAQUEOUS	Complete		Complete		08/28/2006	18:13		703	ekh	DT	SW 6020
Arsenic, ICPMS	<1.9	mg/Kg	<1.9		08/28/2006	18:13	514	8335	ekh	DT	SW 6020
Barium, ICPMS	17.2	mg/Kg	<0.96		08/28/2006	18:13	514	8320	ekh	DT	SW 6020
Cadmium, ICPMS	<0.96	mg/Kg	<0.96		08/28/2006	18:13	514	8389	ekh	DT	SW 6020
Chromium, ICPMS	14.0	mg/Kg	<1.9		08/28/2006	18:13	514	8240	ekh	DT	SW 6020
Lead, ICPMS	8.54	mg/Kg	<0.96		08/28/2006	18:13	514	8406	ekh	DT	SW 6020
Selenium, ICPMS	<0.96	mg/Kg	<0.96		08/28/2006	18:13	514	1955	ekh	DT	SW 6020 Mod
Silver, ICPMS	<0.5	mg/Kg	<0.5		08/28/2006	18:13	514	8126	ekh	DT	SW 6020
ICPMS Digestion, Nonaqueous	Complete		Complete		08/22/2006		514		mja	DT	SW 3050B

Lab ID: CH = Chicago (Dundee), DT = Dayton, IN = Indianapolis, PT = Pontiac, SUB = Subcontracted, CLT = Client Data

TestAmerica
ANALYTICAL TESTING CORPORATION
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Analytical Report

Jennifer Gambill
TESTAMERICA ANALYTICAL/
TESTING CORPORATION
2960 Foster Creighton Dr.
Nashville, TN 37204

Job Number: 06.15015
Report Date: 08/29/2006

SAMPLE NO. 217068 **SAMPLE DESCRIPTION** NPH2446-07 **DATE/TIME TAKEN** 08/16/2006 08:15

	Result	Units	Reporting Limit	Flag	Run Date	Run Time	Prep Batch	Run Batch	Anal. Init.	Lab ID	Method Reference
ICPMS NONAQUEOUS	Complete		Complete		08/28/2006	18:18		703	ekh	DT	SW 6020
Arsenic, ICPMS	<1.9	mg/Kg	<1.9		08/28/2006	18:18	514	8335	ekh	DT	SW 6020
Barium, ICPMS	14.0	mg/Kg	<0.96		08/28/2006	18:18	514	8320	ekh	DT	SW 6020
Cadmium, ICPMS	<0.96	mg/Kg	<0.96		08/28/2006	18:18	514	8389	ekh	DT	SW 6020
Chromium, ICPMS	11.9	mg/Kg	<1.9		08/28/2006	18:18	514	8240	ekh	DT	SW 6020
Lead, ICPMS	5.59	mg/Kg	<0.96		08/28/2006	18:18	514	8406	ekh	DT	SW 6020
Selenium, ICPMS	<0.96	mg/Kg	<0.96		08/28/2006	18:18	514	1955	ekh	DT	SW 6020 Mod
Silver, ICPMS	<0.5	mg/Kg	<0.5		08/28/2006	18:18	514	8126	ekh	DT	SW 6020
ICPMS Digestion, Nonaqueous	Complete		Complete		08/22/2006		514		mja	DT	SW 3050B

SAMPLE NO. 217069 **SAMPLE DESCRIPTION** NPH2446-08 **DATE/TIME TAKEN** 08/16/2006 08:30

	Result	Units	Reporting Limit	Flag	Run Date	Run Time	Prep Batch	Run Batch	Anal. Init.	Lab ID	Method Reference
ICPMS NONAQUEOUS	Complete		Complete		08/28/2006	18:23		703	ekh	DT	SW 6020
Arsenic, ICPMS	<2.0	mg/Kg	<2.0		08/28/2006	18:23	514	8335	ekh	DT	SW 6020
Barium, ICPMS	18.6	mg/Kg	<0.98		08/28/2006	18:23	514	8320	ekh	DT	SW 6020
Cadmium, ICPMS	<0.98	mg/Kg	<0.98		08/28/2006	18:23	514	8389	ekh	DT	SW 6020
Chromium, ICPMS	17.6	mg/Kg	<2.0		08/28/2006	18:23	514	8240	ekh	DT	SW 6020
Lead, ICPMS	8.13	mg/Kg	<0.98		08/28/2006	18:23	514	8406	ekh	DT	SW 6020
Selenium, ICPMS	<0.98	mg/Kg	<0.98		08/28/2006	18:23	514	1955	ekh	DT	SW 6020 Mod
Silver, ICPMS	<0.5	mg/Kg	<0.5		08/28/2006	18:23	514	8126	ekh	DT	SW 6020
ICPMS Digestion, Nonaqueous	Complete		Complete		08/22/2006		514		mja	DT	SW 3050B

Lab ID: CH = Chicago (Dundee), DT = Dayton, IN = Indianapolis, PT = Pontiac, SUB = Subcontracted, CLT = Client Data

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Analytical Report

Jennifer Gambill
TESTAMERICA ANALYTICAL/
TESTING CORPORATION
2960 Foster Creighton Dr.
Nashville, TN 37204

Job Number: 06.15015
Report Date: 08/29/2006

SAMPLE NO. 217070 **SAMPLE DESCRIPTION** NPH2446-09 **DATE/TIME TAKEN** 08/16/2006 07:15

	Result	Units	Reporting Limit	Flag	Run Date	Run Time	Prep Batch	Run Batch	Anal. Init.	Lab ID	Method Reference
ICPMS NONAQUEOUS	Complete		Complete		08/28/2006	18:27		703	ekh	DT	SW 6020
Arsenic, ICPMS	<1.9	mg/Kg	<1.9		08/28/2006	18:27	514	8335	ekh	DT	SW 6020
Barium, ICPMS	15.8	mg/Kg	<0.93		08/28/2006	18:27	514	8320	ekh	DT	SW 6020
Cadmium, ICPMS	<0.93	mg/Kg	<0.93		08/28/2006	18:27	514	8389	ekh	DT	SW 6020
Chromium, ICPMS	14.6	mg/Kg	<1.9		08/28/2006	18:27	514	8240	ekh	DT	SW 6020
Lead, ICPMS	8.04	mg/Kg	<0.93		08/28/2006	18:27	514	8406	ekh	DT	SW 6020
Selenium, ICPMS	<0.93	mg/Kg	<0.93		08/28/2006	18:27	514	1955	ekh	DT	SW 6020 Mod
Silver, ICPMS	<0.5	mg/Kg	<0.5		08/28/2006	18:27	514	8126	ekh	DT	SW 6020
ICPMS Digestion, Nonaqueous	Complete		Complete		08/22/2006		514		mja	DT	SW 3050B

SAMPLE NO. 217071 **SAMPLE DESCRIPTION** NPH2446-10 **DATE/TIME TAKEN** 08/16/2006 07:30

	Result	Units	Reporting Limit	Flag	Run Date	Run Time	Prep Batch	Run Batch	Anal. Init.	Lab ID	Method Reference
ICPMS NONAQUEOUS	Complete		Complete		08/28/2006	18:32		703	ekh	DT	SW 6020
Arsenic, ICPMS	<2.0	mg/Kg	<2.0		08/28/2006	18:32	514	8335	ekh	DT	SW 6020
Barium, ICPMS	22.6	mg/Kg	<1.0		08/28/2006	18:32	514	8320	ekh	DT	SW 6020
Cadmium, ICPMS	<1.0	mg/Kg	<1.0		08/28/2006	18:32	514	8389	ekh	DT	SW 6020
Chromium, ICPMS	15.0	mg/Kg	<2.0		08/28/2006	18:32	514	8240	ekh	DT	SW 6020
Lead, ICPMS	8.9	mg/Kg	<1.0		08/28/2006	18:32	514	8406	ekh	DT	SW 6020
Selenium, ICPMS	<1.0	mg/Kg	<1.0		08/28/2006	18:32	514	1955	ekh	DT	SW 6020 Mod
Silver, ICPMS	<0.5	mg/Kg	<0.5		08/28/2006	18:32	514	8126	ekh	DT	SW 6020
ICPMS Digestion, Nonaqueous	Complete		Complete		08/22/2006		514		mja	DT	SW 3050B

Lab ID: CH = Chicago (Dundee), DT = Dayton, IN = Indianapolis, PT = Pontiac, SUB = Subcontracted, CLT = Client Data

TestAmerica
ANALYTICAL TESTING CORPORATION
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Analytical Report

Jennifer Gambill
TESTAMERICA ANALYTICAL/
TESTING CORPORATION
2960 Foster Creighton Dr.
Nashville, TN 37204

Job Number: 06.15015
Report Date: 08/29/2006

SAMPLE NO. 217072
SAMPLE DESCRIPTION NPH2446-11
DATE/TIME TAKEN 08/16/2006 07:45

	Result	Units	Reporting Limit	Flag	Run Date	Run Time	Prep Batch	Run Batch	Anal. Init.	Lab ID	Method Reference
ICPMS NONAQUEOUS	Complete		Complete		08/28/2006	18:40		703	ekh	DT	SW 6020
Arsenic, ICPMS	<1.9	mg/Kg	<1.9		08/28/2006	18:40	514	8335	ekh	DT	SW 6020
Barium, ICPMS	16.3	mg/Kg	<0.96		08/28/2006	18:40	514	8320	ekh	DT	SW 6020
Cadmium, ICPMS	<0.96	mg/Kg	<0.96		08/28/2006	18:40	514	8389	ekh	DT	SW 6020
Chromium, ICPMS	22.8	mg/Kg	<1.9		08/28/2006	18:40	514	8240	ekh	DT	SW 6020
Lead, ICPMS	10.2	mg/Kg	<0.96		08/28/2006	18:40	514	8406	ekh	DT	SW 6020
Selenium, ICPMS	<0.96	mg/Kg	<0.96		08/28/2006	18:40	514	1955	ekh	DT	SW 6020 Mod
Silver, ICPMS	<0.5	mg/Kg	<0.5		08/28/2006	18:40	514	8126	ekh	DT	SW 6020
ICPMS Digestion, Nonaqueous	Complete		Complete		08/22/2006		514		mja	DT	SW 3050B

Lab ID: CH = Chicago (Dundee), DT = Dayton, IN = Indianapolis, PT = Pontiac, SUB = Subcontracted, CLT = Client Data

NPH2446

08/31/06 23:59

TestAmerica ANALYTICAL TESTING CORPORATION

Nashville Division
2960 Foster Creighton
Nashville, TN 37204

Phone: 615-726-0177
Fax: 615-726-3404

To assist us in using the proper analytical methods, is this work being conducted for regulatory purposes?
Compliance Monitoring ________

Client Name: Mactec Client #: ________

Address: 21740 Beaumeade Circle Ste 150

City/State/Zip Code: Ashburn, VA 20147

Project Manager: B. Chapman

Telephone Number: 703-729-1416 Fax: 703-858-1358

Sampler Name: (Print Name) Ben Grosser

Sampler Signature: [signature]

Project Name: AFRH

Project #: 3532060897

Site/Location ID: AFRH State: DC

Report To: B. Chapman

Invoice To: ________

Quote #: ________ PO#: 65378

TAT: X Standard ___ Rush (surcharges may apply)

Date Needed: ________

Fax Results: (Y) N

QC Deliverables: ___ None ___ Level 2 (Batch QC) ___ Level 3 ___ Level 4 Other: ______

SAMPLE ID	Date Sampled	Time Sampled	G = Grab, C = Composite	Field Filtered	Matrix (SL - Sludge, DW - Drinking Water, GW - Groundwater, S - Soil/Solid, WW - Wastewater, Specify Other)	HNO_3	HCl	NaOH	H_2SO_4	Methanol	None	Other (Specify)	Pesticides 8081	Herbicides 8151	RCRA Metals 6020 7471	TPH-DRO 8015	SVOCs 8270	PCBs 8082					REMARKS
G76-4(7.5-9)	8-16-06	1130	G		S						3					X	X	X					NPH2446-01
G48-2(1-2)		915	G		S						3		X	X	X								02
G48-4(1-2)		930	G		S						3		X	X	X								03
G48-5(1-2)		945	G		S						3		X	X	X								04
G76-1(10.5-12)		1030	G		S						3					X	X	X					05
~~G76~~ G77-3(0-1)		800	G		S						3		X	X	X								06
G77-2(1-2)		815	G		S						3		X	X	+								07
G77-4(0-1)		830	G		S						3		X	X	X								08
G77-5(1-2)		715	G		S						3		X	X	X								09
G77-6(0-1)		730	G		S						3		X	X	X								10

Special Instructions:

Relinquished By	Date	Time	Received By	Date	Time
[signature]	8-16-06	1700			
			[signature]	8-17-06	0800

LABORATORY COMMENTS:

Init Lab Temp:

Rec Lab Temp: 2.6°

Custody Seals: Y N N/A

Bottles Supplied by Test America: Y N

Method of Shipment:

TestAmerica
ANALYTICAL TESTING CORPORATION

Nashville Division
2960 Foster Creighton
Nashville, TN 37204

Phone: 615-726-0177
Fax: 615-726-3404

To assist us in using the proper analytical methods, is this work being conducted for regulatory purposes?
Compliance Monitoring ______

Client Name: Mactec Client #: ______
Address: 21740 Beaumeade Circle Ste 150
City/State/Zip Code: Ashburn VA 20147
Project Manager: B. Chapman
Telephone Number: 703-729-1416 Fax: 703-858-1858
Sampler Name: (Print Name) Ben Grosser
Sampler Signature: [signature]

Project Name: AFRH
Project #: 3552060897
Site/Location ID: AFRH State: DC
Report To: B. Chapman
Invoice To: ______
Quote #: ______ PO#: 65378

TAT
X Standard
__ Rush (surcharges may apply)

Date Needed: ______

Fax Results: (Y) N

QC Deliverables
__ None
__ Level 2 (Batch QC)
__ Level 3
__ Level 4
Other: ______

Matrix: SL - Sludge, DW - Drinking Water, GW - Groundwater, S - Soil/Solid, WW - Wastewater, Specify Other

SAMPLE ID	Date Sampled	Time Sampled	G = Grab, C = Composite	Field Filtered	Matrix	HNO_3	HCl	NaOH	H_2SO_4	Methanol	None	Other (Specify)	Pesticides 8081	Herbicides 8151	RCRA Metals 6010/7471	TPH-DRO 8015	SVOCs 8270	PCBs 8082				REMARKS
677-1 (1-2)	8-16-06	745	G		S						3		X	X	X							2446-11
676-3 (9-10.5)	↓	1300	G		S						3					X	X	X				12
676-2 (12-13.5)	↓	1340	G		S						3					X	X	X				13
Trip (1)																						14
Temp (1)																						

Special Instructions:

Relinquished By	Date	Time	Received By	Date	Time
[signature]	8-16-06	1700			
			(W)	8-17-06	0800

LABORATORY COMMENTS:
Init Lab Temp:
Rec Lab Temp: 2.6c
Custody Seals: Y N N/A
Bottles Supplied by Test America: Y N
Method of Shipment:

TestAmerica
ANALYTICAL TESTING CORPORATION

Nashville Division

COOLER RECEIPT FORM BC# NPH2446

Cooler Received/Opened On August 17, 2006 @ 0800

1. Indicate the Airbill Tracking Number (last 4 digits for Fedex only) and Name of Courier below: 2296

(Fedex) UPS Velocity DHL Route Off-street Misc.

2. Temperature of representative sample or temperature blank when opened: 2.6 Degrees Celsius
(indicate IR Gun ID#)

NA A00466 (A00750) A01124 100190 101282 Raynger ST

3. Were custody seals on outside of cooler?..... (YES)...NO....NA

a. If yes, how many and where: 1 (front) 1 (back)

4. Were the seals intact, signed, and dated correctly?..... (YES)...NO...NA

5. Were custody papers inside cooler?..... (YES)...NO...NA

I certify that I opened the cooler and answered questions 1-5 (intial)..... JL

6. Were custody seals on containers: YES (NO) and Intact YES NO (NA)

were these signed, and dated correctly?..... YES...NO...(NA)

7. What kind of packing material used? (Bubblewrap) Peanuts Vermiculite Foam Insert

Plastic bag Paper Other_____ None

8. Cooling process: (Ice) Ice-pack Ice (direct contact) Dry ice Other None

9. Did all containers arrive in good condition (unbroken)?..... (YES)..NO...NA

10. Were all container labels complete (#, date, signed, pres., etc)?..... (YES)..NO...NA

11. Did all container labels and tags agree with custody papers?..... (YES)..NO...NA

12. a. Were VOA vials received?..... YES...(NO)..NA

b. Was there any observable head space present in any VOA vial?..... YES...NO...(NA)

I certify that I unloaded the cooler and answered questions 6-12 (intial)..... JW

13. a. On preserved bottles did the pH test strips suggest that preservation reached the correct pH level? YES...NO...(NA)

b. Did the bottle labels indicate that the correct preservatives were used..... (YES)..NO...NA

If preservation in-house was needed, record standard ID of preservative used here_____

14. Was residual chlorine present?..... YES...NO...(NA)

I certify that I checked for chlorine and pH as per SOP and answered questions 13-14 (intial)..... JW

15. Were custody papers properly filled out (ink, signed, etc)?..... (YES)...NO...NA

16. Did you sign the custody papers in the appropriate place?..... (YES)...NO...NA

17. Were correct containers used for the analysis requested?..... (YES)..NO...NA

18. Was sufficient amount of sample sent in each container?..... (YES)..NO...NA

I certify that I entered this project into LIMS and answered questions 15-18 (intial)..... JW

I certify that I attached a label with the unique LIMS number to each container (intial)..... JW

19. Were there Non-Conformance issues at login YES (NO) Was a PIPE generated YES (NO) #_____

BIS = Broken in shipment

TestAmerica
ANALYTICAL TESTING CORPORATION
2960 Foster Creighton Road Nashville, TN 37204 * 800-765-0980 * Fax 615-726-3404

September 05, 2006

Client: MACTEC Engineering & Consulting, Inc. (3740)
21740 Beaumeade Circle, Suite 150
Ashburn, VA 20147
Attn: Brent Chapman

Work Order: NPH2665
Project Name: AFRH
Project Nbr: 3552060897
P/O Nbr: 65378
Date Received: 08/18/06

SAMPLE IDENTIFICATION	LAB NUMBER	COLLECTION DATE AND TIME
G75-4(10.5-12)	NPH2665-01	08/17/06 07:30
G75-3(1.5-3)	NPH2665-02	08/17/06 08:15
G75-2(3-4.5)	NPH2665-03	08/17/06 08:45
G75-1(4.5-6)	NPH2665-04	08/17/06 09:05
G46-1(10.5-12)	NPH2665-05	08/17/06 10:00
G46-1(24-25)	NPH2665-06	08/17/06 10:30
G46-2(0-1.5)	NPH2665-07	08/17/06 12:00
G46-3(16.5-18)	NPH2665-08	08/17/06 13:00

An executed copy of the chain of custody, the project quality control data, and the sample receipt form are also included as an addendum to this report. If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-800-765-0980. Any opinions, if expressed, are outside the scope of the Laboratory's accredidation.

The Chain(s) of Custody, 2 pages, are included and are an integral part of this report.

These results relate only to the items tested. This report shall not be reproduced except in full and with permission of the laboratory.

Report Approved By:

Roxanne L. Connor

Roxanne Connor
Senior Project Manager

TestAmerica
ANALYTICAL TESTING CORPORATION
2960 Foster Creighton Road Nashville, TN 37204 * 800-765-0980 * Fax 615-726-3404

Client: MACTEC Engineering & Consulting, Inc. (3740)
21740 Beaumeade Circle, Suite 150
Ashburn, VA 20147
Attn: Brent Chapman

Work Order: NPH2665
Project Name: AFRH
Project Number: 3552060897
Received: 08/18/06 08:00

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NPH2665-01 (G75-4(10.5-12) - Soil) Sampled: 08/17/06 07:30								
Volatile Organic Compounds by EPA Method 8260B								
Acetone	ND		mg/kg	0.050	1	08/26/06 15:21	SW846 8260B	6085096
Benzene	ND		mg/kg	0.002	1	08/26/06 15:21	SW846 8260B	6085096
Bromobenzene	ND		mg/kg	0.002	1	08/26/06 15:21	SW846 8260B	6085096
Bromochloromethane	ND		mg/kg	0.002	1	08/26/06 15:21	SW846 8260B	6085096
Bromodichloromethane	ND		mg/kg	0.002	1	08/26/06 15:21	SW846 8260B	6085096
Bromoform	ND		mg/kg	0.002	1	08/26/06 15:21	SW846 8260B	6085096
Bromomethane	ND		mg/kg	0.002	1	08/26/06 15:21	SW846 8260B	6085096
2-Butanone	ND		mg/kg	0.050	1	08/26/06 15:21	SW846 8260B	6085096
sec-Butylbenzene	ND		mg/kg	0.002	1	08/26/06 15:21	SW846 8260B	6085096
n-Butylbenzene	ND		mg/kg	0.002	1	08/26/06 15:21	SW846 8260B	6085096
tert-Butylbenzene	ND		mg/kg	0.002	1	08/26/06 15:21	SW846 8260B	6085096
Carbon disulfide	ND		mg/kg	0.005	1	08/26/06 15:21	SW846 8260B	6085096
Carbon Tetrachloride	ND		mg/kg	0.002	1	08/26/06 15:21	SW846 8260B	6085096
Chlorobenzene	ND		mg/kg	0.002	1	08/26/06 15:21	SW846 8260B	6085096
Chlorodibromomethane	ND		mg/kg	0.002	1	08/26/06 15:21	SW846 8260B	6085096
Chloroethane	ND		mg/kg	0.005	1	08/26/06 15:21	SW846 8260B	6085096
Chloroform	ND		mg/kg	0.002	1	08/26/06 15:21	SW846 8260B	6085096
Chloromethane	ND		mg/kg	0.002	1	08/26/06 15:21	SW846 8260B	6085096
2-Chlorotoluene	ND		mg/kg	0.002	1	08/26/06 15:21	SW846 8260B	6085096
4-Chlorotoluene	ND		mg/kg	0.002	1	08/26/06 15:21	SW846 8260B	6085096
1,2-Dibromo-3-chloropropane	ND		mg/kg	0.005	1	08/26/06 15:21	SW846 8260B	6085096
1,2-Dibromoethane (EDB)	ND		mg/kg	0.002	1	08/26/06 15:21	SW846 8260B	6085096
Dibromomethane	ND		mg/kg	0.002	1	08/26/06 15:21	SW846 8260B	6085096
1,4-Dichlorobenzene	ND		mg/kg	0.002	1	08/26/06 15:21	SW846 8260B	6085096
1,3-Dichlorobenzene	ND		mg/kg	0.002	1	08/26/06 15:21	SW846 8260B	6085096
1,2-Dichlorobenzene	ND		mg/kg	0.002	1	08/26/06 15:21	SW846 8260B	6085096
Dichlorodifluoromethane	ND		mg/kg	0.002	1	08/26/06 15:21	SW846 8260B	6085096
1,1-Dichloroethane	ND		mg/kg	0.002	1	08/26/06 15:21	SW846 8260B	6085096
1,2-Dichloroethane	ND		mg/kg	0.002	1	08/26/06 15:21	SW846 8260B	6085096
cis-1,2-Dichloroethene	ND		mg/kg	0.002	1	08/26/06 15:21	SW846 8260B	6085096
1,1-Dichloroethene	ND		mg/kg	0.002	1	08/26/06 15:21	SW846 8260B	6085096
trans-1,2-Dichloroethene	ND		mg/kg	0.002	1	08/26/06 15:21	SW846 8260B	6085096
1,3-Dichloropropane	ND		mg/kg	0.002	1	08/26/06 15:21	SW846 8260B	6085096
1,2-Dichloropropane	ND		mg/kg	0.002	1	08/26/06 15:21	SW846 8260B	6085096
2,2-Dichloropropane	ND		mg/kg	0.002	1	08/26/06 15:21	SW846 8260B	6085096
cis-1,3-Dichloropropene	ND		mg/kg	0.002	1	08/26/06 15:21	SW846 8260B	6085096
trans-1,3-Dichloropropene	ND		mg/kg	0.002	1	08/26/06 15:21	SW846 8260B	6085096
1,1-Dichloropropene	ND		mg/kg	0.002	1	08/26/06 15:21	SW846 8260B	6085096
Ethylbenzene	ND		mg/kg	0.002	1	08/26/06 15:21	SW846 8260B	6085096
Hexachlorobutadiene	ND		mg/kg	0.005	1	08/26/06 15:21	SW846 8260B	6085096
2-Hexanone	ND		mg/kg	0.050	1	08/26/06 15:21	SW846 8260B	6085096
Isopropylbenzene	ND		mg/kg	0.002	1	08/26/06 15:21	SW846 8260B	6085096
p-Isopropyltoluene	ND		mg/kg	0.002	1	08/26/06 15:21	SW846 8260B	6085096

Client: MACTEC Engineering & Consulting, Inc. (3740)
21740 Beaumeade Circle, Suite 150
Ashburn, VA 20147
Attn: Brent Chapman

Work Order: NPH2665
Project Name: AFRH
Project Number: 3552060897
Received: 08/18/06 08:00

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NPH2665-01 (G75-4(10.5-12) - Soil) - cont. Sampled: 08/17/06 07:30								
Volatile Organic Compounds by EPA Method 8260B - cont.								
Methyl tert-Butyl Ether	ND		mg/kg	0.002	1	08/26/06 15:21	SW846 8260B	6085096
Methylene Chloride	ND		mg/kg	0.010	1	08/26/06 15:21	SW846 8260B	6085096
4-Methyl-2-pentanone	ND		mg/kg	0.050	1	08/26/06 15:21	SW846 8260B	6085096
Naphthalene	ND		mg/kg	0.005	1	08/26/06 15:21	SW846 8260B	6085096
n-Propylbenzene	ND		mg/kg	0.002	1	08/26/06 15:21	SW846 8260B	6085096
Styrene	ND		mg/kg	0.002	1	08/26/06 15:21	SW846 8260B	6085096
1,1,1,2-Tetrachloroethane	ND		mg/kg	0.002	1	08/26/06 15:21	SW846 8260B	6085096
1,1,2,2-Tetrachloroethane	ND		mg/kg	0.002	1	08/26/06 15:21	SW846 8260B	6085096
Tetrachloroethene	ND		mg/kg	0.002	1	08/26/06 15:21	SW846 8260B	6085096
Toluene	ND		mg/kg	0.002	1	08/26/06 15:21	SW846 8260B	6085096
1,2,3-Trichlorobenzene	ND		mg/kg	0.002	1	08/26/06 15:21	SW846 8260B	6085096
1,2,4-Trichlorobenzene	ND		mg/kg	0.002	1	08/26/06 15:21	SW846 8260B	6085096
1,1,2-Trichloroethane	ND		mg/kg	0.005	1	08/26/06 15:21	SW846 8260B	6085096
1,1,1-Trichloroethane	ND		mg/kg	0.002	1	08/26/06 15:21	SW846 8260B	6085096
Trichloroethene	ND		mg/kg	0.002	1	08/26/06 15:21	SW846 8260B	6085096
Trichlorofluoromethane	ND		mg/kg	0.002	1	08/26/06 15:21	SW846 8260B	6085096
1,2,3-Trichloropropane	ND		mg/kg	0.002	1	08/26/06 15:21	SW846 8260B	6085096
1,3,5-Trimethylbenzene	ND		mg/kg	0.002	1	08/26/06 15:21	SW846 8260B	6085096
1,2,4-Trimethylbenzene	ND		mg/kg	0.002	1	08/26/06 15:21	SW846 8260B	6085096
Vinyl chloride	ND		mg/kg	0.002	1	08/26/06 15:21	SW846 8260B	6085096
Xylenes, total	ND		mg/kg	0.005	1	08/26/06 15:21	SW846 8260B	6085096
Surr: 1,2-Dichloroethane-d4 (72-125%)	*95 %*					*08/26/06 15:21*	*SW846 8260B*	*6085096*
Surr: Dibromofluoromethane (73-124%)	*98 %*					*08/26/06 15:21*	*SW846 8260B*	*6085096*
Surr: Toluene-d8 (80-124%)	*103 %*					*08/26/06 15:21*	*SW846 8260B*	*6085096*
Surr: 4-Bromofluorobenzene (25-185%)	*112 %*					*08/26/06 15:21*	*SW846 8260B*	*6085096*
Extractable Petroleum Hydrocarbons								
Diesel	ND		mg/kg	49.8	10	08/30/06 00:08	SW846 8015B	6085659
Surr: o-Terphenyl (56-143%)	*	*Z3*				*08/30/06 00:08*	*SW846 8015B*	*6085659*
Purgeable Petroleum Hydrocarbons								
GRO as Gasoline	ND		mg/kg	5.00	50	08/23/06 13:58	SW846 8015B	6084012
Surr: a,a,a-Trifluorotoluene (56-145%)	*110 %*					*08/23/06 13:58*	*SW846 8015B*	*6084012*
Sample ID: NPH2665-02 (G75-3(1.5-3) - Soil) Sampled: 08/17/06 08:15								
Volatile Organic Compounds by EPA Method 8260B								
Acetone	**0.093**		mg/kg	0.050	1	08/26/06 15:52	SW846 8260B	6085096
Benzene	ND		mg/kg	0.002	1	08/26/06 15:52	SW846 8260B	6085096
Bromobenzene	ND		mg/kg	0.002	1	08/26/06 15:52	SW846 8260B	6085096
Bromochloromethane	ND		mg/kg	0.002	1	08/26/06 15:52	SW846 8260B	6085096
Bromodichloromethane	ND		mg/kg	0.002	1	08/26/06 15:52	SW846 8260B	6085096
Bromoform	ND		mg/kg	0.002	1	08/26/06 15:52	SW846 8260B	6085096
Bromomethane	ND		mg/kg	0.002	1	08/26/06 15:52	SW846 8260B	6085096
2-Butanone	ND		mg/kg	0.050	1	08/26/06 15:52	SW846 8260B	6085096
sec-Butylbenzene	ND		mg/kg	0.002	1	08/26/06 15:52	SW846 8260B	6085096

TestAmerica
ANALYTICAL TESTING CORPORATION
2960 Foster Creighton Road Nashville, TN 37204 * 800-765-0980 * Fax 615-726-3404

Client: MACTEC Engineering & Consulting, Inc. (3740)
21740 Beaumeade Circle, Suite 150
Ashburn, VA 20147
Attn: Brent Chapman

Work Order: NPH2665
Project Name: AFRH
Project Number: 3552060897
Received: 08/18/06 08:00

ANALYTICAL REPORT

Sample ID: NPH2665-02 (G75-3(1.5-3) - Soil) - cont. Sampled: 08/17/06 08:15

Volatile Organic Compounds by EPA Method 8260B - cont.

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
n-Butylbenzene	ND		mg/kg	0.002	1	08/26/06 15:52	SW846 8260B	6085096
tert-Butylbenzene	ND		mg/kg	0.002	1	08/26/06 15:52	SW846 8260B	6085096
Carbon disulfide	**0.016**		mg/kg	0.005	1	08/26/06 15:52	SW846 8260B	6085096
Carbon Tetrachloride	ND		mg/kg	0.002	1	08/26/06 15:52	SW846 8260B	6085096
Chlorobenzene	ND		mg/kg	0.002	1	08/26/06 15:52	SW846 8260B	6085096
Chlorodibromomethane	ND		mg/kg	0.002	1	08/26/06 15:52	SW846 8260B	6085096
Chloroethane	ND		mg/kg	0.005	1	08/26/06 15:52	SW846 8260B	6085096
Chloroform	ND		mg/kg	0.002	1	08/26/06 15:52	SW846 8260B	6085096
Chloromethane	ND		mg/kg	0.002	1	08/26/06 15:52	SW846 8260B	6085096
2-Chlorotoluene	ND		mg/kg	0.002	1	08/26/06 15:52	SW846 8260B	6085096
4-Chlorotoluene	ND		mg/kg	0.002	1	08/26/06 15:52	SW846 8260B	6085096
1,2-Dibromo-3-chloropropane	ND		mg/kg	0.005	1	08/26/06 15:52	SW846 8260B	6085096
1,2-Dibromoethane (EDB)	ND		mg/kg	0.002	1	08/26/06 15:52	SW846 8260B	6085096
Dibromomethane	ND		mg/kg	0.002	1	08/26/06 15:52	SW846 8260B	6085096
1,4-Dichlorobenzene	ND		mg/kg	0.002	1	08/26/06 15:52	SW846 8260B	6085096
1,3-Dichlorobenzene	ND		mg/kg	0.002	1	08/26/06 15:52	SW846 8260B	6085096
1,2-Dichlorobenzene	ND		mg/kg	0.002	1	08/26/06 15:52	SW846 8260B	6085096
Dichlorodifluoromethane	ND		mg/kg	0.002	1	08/26/06 15:52	SW846 8260B	6085096
1,1-Dichloroethane	ND		mg/kg	0.002	1	08/26/06 15:52	SW846 8260B	6085096
1,2-Dichloroethane	ND		mg/kg	0.002	1	08/26/06 15:52	SW846 8260B	6085096
cis-1,2-Dichloroethene	ND		mg/kg	0.002	1	08/26/06 15:52	SW846 8260B	6085096
1,1-Dichloroethene	ND		mg/kg	0.002	1	08/26/06 15:52	SW846 8260B	6085096
trans-1,2-Dichloroethene	ND		mg/kg	0.002	1	08/26/06 15:52	SW846 8260B	6085096
1,3-Dichloropropane	ND		mg/kg	0.002	1	08/26/06 15:52	SW846 8260B	6085096
1,2-Dichloropropane	ND		mg/kg	0.002	1	08/26/06 15:52	SW846 8260B	6085096
2,2-Dichloropropane	ND		mg/kg	0.002	1	08/26/06 15:52	SW846 8260B	6085096
cis-1,3-Dichloropropene	ND		mg/kg	0.002	1	08/26/06 15:52	SW846 8260B	6085096
trans-1,3-Dichloropropene	ND		mg/kg	0.002	1	08/26/06 15:52	SW846 8260B	6085096
1,1-Dichloropropene	ND		mg/kg	0.002	1	08/26/06 15:52	SW846 8260B	6085096
Ethylbenzene	ND		mg/kg	0.002	1	08/26/06 15:52	SW846 8260B	6085096
Hexachlorobutadiene	ND		mg/kg	0.005	1	08/26/06 15:52	SW846 8260B	6085096
2-Hexanone	ND		mg/kg	0.050	1	08/26/06 15:52	SW846 8260B	6085096
Isopropylbenzene	ND		mg/kg	0.002	1	08/26/06 15:52	SW846 8260B	6085096
p-Isopropyltoluene	ND		mg/kg	0.002	1	08/26/06 15:52	SW846 8260B	6085096
Methyl tert-Butyl Ether	ND		mg/kg	0.002	1	08/26/06 15:52	SW846 8260B	6085096
Methylene Chloride	ND		mg/kg	0.010	1	08/26/06 15:52	SW846 8260B	6085096
4-Methyl-2-pentanone	ND		mg/kg	0.050	1	08/26/06 15:52	SW846 8260B	6085096
Naphthalene	ND		mg/kg	0.005	1	08/26/06 15:52	SW846 8260B	6085096
n-Propylbenzene	ND		mg/kg	0.002	1	08/26/06 15:52	SW846 8260B	6085096
Styrene	ND		mg/kg	0.002	1	08/26/06 15:52	SW846 8260B	6085096
1,1,1,2-Tetrachloroethane	ND		mg/kg	0.002	1	08/26/06 15:52	SW846 8260B	6085096
1,1,2,2-Tetrachloroethane	ND		mg/kg	0.002	1	08/26/06 15:52	SW846 8260B	6085096
Tetrachloroethene	ND		mg/kg	0.002	1	08/26/06 15:52	SW846 8260B	6085096

Client: MACTEC Engineering & Consulting, Inc. (3740)
21740 Beaumeade Circle, Suite 150
Ashburn, VA 20147
Attn: Brent Chapman

Work Order: NPH2665
Project Name: AFRH
Project Number: 3552060897
Received: 08/18/06 08:00

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NPH2665-02 (G75-3(1.5-3) - Soil) - cont. Sampled: 08/17/06 08:15								
Volatile Organic Compounds by EPA Method 8260B - cont.								
Toluene	ND		mg/kg	0.002	1	08/26/06 15:52	SW846 8260B	6085096
1,2,3-Trichlorobenzene	ND		mg/kg	0.002	1	08/26/06 15:52	SW846 8260B	6085096
1,2,4-Trichlorobenzene	ND		mg/kg	0.002	1	08/26/06 15:52	SW846 8260B	6085096
1,1,2-Trichloroethane	ND		mg/kg	0.005	1	08/26/06 15:52	SW846 8260B	6085096
1,1,1-Trichloroethane	ND		mg/kg	0.002	1	08/26/06 15:52	SW846 8260B	6085096
Trichloroethene	ND		mg/kg	0.002	1	08/26/06 15:52	SW846 8260B	6085096
Trichlorofluoromethane	ND		mg/kg	0.002	1	08/26/06 15:52	SW846 8260B	6085096
1,2,3-Trichloropropane	ND		mg/kg	0.002	1	08/26/06 15:52	SW846 8260B	6085096
1,3,5-Trimethylbenzene	ND		mg/kg	0.002	1	08/26/06 15:52	SW846 8260B	6085096
1,2,4-Trimethylbenzene	ND		mg/kg	0.002	1	08/26/06 15:52	SW846 8260B	6085096
Vinyl chloride	ND		mg/kg	0.002	1	08/26/06 15:52	SW846 8260B	6085096
Xylenes, total	ND		mg/kg	0.005	1	08/26/06 15:52	SW846 8260B	6085096
Surr: 1,2-Dichloroethane-d4 (72-125%)	*100 %*					*08/26/06 15:52*	*SW846 8260B*	*6085096*
Surr: Dibromofluoromethane (73-124%)	*98 %*					*08/26/06 15:52*	*SW846 8260B*	*6085096*
Surr: Toluene-d8 (80-124%)	*101 %*					*08/26/06 15:52*	*SW846 8260B*	*6085096*
Surr: 4-Bromofluorobenzene (25-185%)	*107 %*					*08/26/06 15:52*	*SW846 8260B*	*6085096*
Extractable Petroleum Hydrocarbons								
Diesel	ND		mg/kg	4.79	1	08/30/06 00:27	SW846 8015B	6085659
Surr: o-Terphenyl (56-143%)	*87 %*					*08/30/06 00:27*	*SW846 8015B*	*6085659*
Purgeable Petroleum Hydrocarbons								
GRO as Gasoline	**10.9**		mg/kg	4.95	50	08/23/06 14:41	SW846 8015B	6084012
Surr: a,a,a-Trifluorotoluene (56-145%)	*103 %*					*08/23/06 14:41*	*SW846 8015B*	*6084012*
Sample ID: NPH2665-03 (G75-2(3-4.5) - Soil) Sampled: 08/17/06 08:45								
Volatile Organic Compounds by EPA Method 8260B								
Acetone	**0.090**		mg/kg	0.050	1	08/26/06 16:23	SW846 8260B	6085096
Benzene	ND		mg/kg	0.002	1	08/26/06 16:23	SW846 8260B	6085096
Bromobenzene	ND		mg/kg	0.002	1	08/26/06 16:23	SW846 8260B	6085096
Bromochloromethane	ND		mg/kg	0.002	1	08/26/06 16:23	SW846 8260B	6085096
Bromodichloromethane	ND		mg/kg	0.002	1	08/26/06 16:23	SW846 8260B	6085096
Bromoform	ND		mg/kg	0.002	1	08/26/06 16:23	SW846 8260B	6085096
Bromomethane	ND		mg/kg	0.002	1	08/26/06 16:23	SW846 8260B	6085096
2-Butanone	ND		mg/kg	0.050	1	08/26/06 16:23	SW846 8260B	6085096
sec-Butylbenzene	ND		mg/kg	0.002	1	08/26/06 16:23	SW846 8260B	6085096
n-Butylbenzene	ND		mg/kg	0.002	1	08/26/06 16:23	SW846 8260B	6085096
tert-Butylbenzene	ND		mg/kg	0.002	1	08/26/06 16:23	SW846 8260B	6085096
Carbon disulfide	ND		mg/kg	0.005	1	08/26/06 16:23	SW846 8260B	6085096
Carbon Tetrachloride	ND		mg/kg	0.002	1	08/26/06 16:23	SW846 8260B	6085096
Chlorobenzene	ND		mg/kg	0.002	1	08/26/06 16:23	SW846 8260B	6085096
Chlorodibromomethane	ND		mg/kg	0.002	1	08/26/06 16:23	SW846 8260B	6085096
Chloroethane	ND		mg/kg	0.005	1	08/26/06 16:23	SW846 8260B	6085096
Chloroform	ND		mg/kg	0.002	1	08/26/06 16:23	SW846 8260B	6085096
Chloromethane	ND		mg/kg	0.002	1	08/26/06 16:23	SW846 8260B	6085096

Client: MACTEC Engineering & Consulting, Inc. (3740)
21740 Beaumeade Circle, Suite 150
Ashburn, VA 20147
Attn: Brent Chapman

Work Order: NPH2665
Project Name: AFRH
Project Number: 3552060897
Received: 08/18/06 08:00

ANALYTICAL REPORT

Sample ID: NPH2665-03 (G75-2(3-4.5) - Soil) - cont. Sampled: 08/17/06 08:45

Volatile Organic Compounds by EPA Method 8260B - cont.

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
2-Chlorotoluene	ND		mg/kg	0.002	1	08/26/06 16:23	SW846 8260B	6085096
4-Chlorotoluene	ND		mg/kg	0.002	1	08/26/06 16:23	SW846 8260B	6085096
1,2-Dibromo-3-chloropropane	ND		mg/kg	0.005	1	08/26/06 16:23	SW846 8260B	6085096
1,2-Dibromoethane (EDB)	ND		mg/kg	0.002	1	08/26/06 16:23	SW846 8260B	6085096
Dibromomethane	ND		mg/kg	0.002	1	08/26/06 16:23	SW846 8260B	6085096
1,4-Dichlorobenzene	ND		mg/kg	0.002	1	08/26/06 16:23	SW846 8260B	6085096
1,3-Dichlorobenzene	ND		mg/kg	0.002	1	08/26/06 16:23	SW846 8260B	6085096
1,2-Dichlorobenzene	ND		mg/kg	0.002	1	08/26/06 16:23	SW846 8260B	6085096
Dichlorodifluoromethane	ND		mg/kg	0.002	1	08/26/06 16:23	SW846 8260B	6085096
1,1-Dichloroethane	ND		mg/kg	0.002	1	08/26/06 16:23	SW846 8260B	6085096
1,2-Dichloroethane	ND		mg/kg	0.002	1	08/26/06 16:23	SW846 8260B	6085096
cis-1,2-Dichloroethene	ND		mg/kg	0.002	1	08/26/06 16:23	SW846 8260B	6085096
1,1-Dichloroethene	ND		mg/kg	0.002	1	08/26/06 16:23	SW846 8260B	6085096
trans-1,2-Dichloroethene	ND		mg/kg	0.002	1	08/26/06 16:23	SW846 8260B	6085096
1,3-Dichloropropane	ND		mg/kg	0.002	1	08/26/06 16:23	SW846 8260B	6085096
1,2-Dichloropropane	ND		mg/kg	0.002	1	08/26/06 16:23	SW846 8260B	6085096
2,2-Dichloropropane	ND		mg/kg	0.002	1	08/26/06 16:23	SW846 8260B	6085096
cis-1,3-Dichloropropene	ND		mg/kg	0.002	1	08/26/06 16:23	SW846 8260B	6085096
trans-1,3-Dichloropropene	ND		mg/kg	0.002	1	08/26/06 16:23	SW846 8260B	6085096
1,1-Dichloropropene	ND		mg/kg	0.002	1	08/26/06 16:23	SW846 8260B	6085096
Ethylbenzene	ND		mg/kg	0.002	1	08/26/06 16:23	SW846 8260B	6085096
Hexachlorobutadiene	ND		mg/kg	0.005	1	08/26/06 16:23	SW846 8260B	6085096
2-Hexanone	ND		mg/kg	0.050	1	08/26/06 16:23	SW846 8260B	6085096
Isopropylbenzene	ND		mg/kg	0.002	1	08/26/06 16:23	SW846 8260B	6085096
p-Isopropyltoluene	ND		mg/kg	0.002	1	08/26/06 16:23	SW846 8260B	6085096
Methyl tert-Butyl Ether	ND		mg/kg	0.002	1	08/26/06 16:23	SW846 8260B	6085096
Methylene Chloride	ND		mg/kg	0.010	1	08/26/06 16:23	SW846 8260B	6085096
4-Methyl-2-pentanone	ND		mg/kg	0.050	1	08/26/06 16:23	SW846 8260B	6085096
Naphthalene	ND		mg/kg	0.005	1	08/26/06 16:23	SW846 8260B	6085096
n-Propylbenzene	ND		mg/kg	0.002	1	08/26/06 16:23	SW846 8260B	6085096
Styrene	ND		mg/kg	0.002	1	08/26/06 16:23	SW846 8260B	6085096
1,1,1,2-Tetrachloroethane	ND		mg/kg	0.002	1	08/26/06 16:23	SW846 8260B	6085096
1,1,2,2-Tetrachloroethane	ND		mg/kg	0.002	1	08/26/06 16:23	SW846 8260B	6085096
Tetrachloroethene	ND		mg/kg	0.002	1	08/26/06 16:23	SW846 8260B	6085096
Toluene	ND		mg/kg	0.002	1	08/26/06 16:23	SW846 8260B	6085096
1,2,3-Trichlorobenzene	ND		mg/kg	0.002	1	08/26/06 16:23	SW846 8260B	6085096
1,2,4-Trichlorobenzene	ND		mg/kg	0.002	1	08/26/06 16:23	SW846 8260B	6085096
1,1,2-Trichloroethane	ND		mg/kg	0.005	1	08/26/06 16:23	SW846 8260B	6085096
1,1,1-Trichloroethane	ND		mg/kg	0.002	1	08/26/06 16:23	SW846 8260B	6085096
Trichloroethene	ND		mg/kg	0.002	1	08/26/06 16:23	SW846 8260B	6085096
Trichlorofluoromethane	ND		mg/kg	0.002	1	08/26/06 16:23	SW846 8260B	6085096
1,2,3-Trichloropropane	ND		mg/kg	0.002	1	08/26/06 16:23	SW846 8260B	6085096
1,3,5-Trimethylbenzene	ND		mg/kg	0.002	1	08/26/06 16:23	SW846 8260B	6085096

Client: MACTEC Engineering & Consulting, Inc. (3740)
21740 Beaumeade Circle, Suite 150
Ashburn, VA 20147
Attn: Brent Chapman

Work Order: NPH2665
Project Name: AFRH
Project Number: 3552060897
Received: 08/18/06 08:00

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NPH2665-03 (G75-2(3-4.5) - Soil) - cont. Sampled: 08/17/06 08:45								
Volatile Organic Compounds by EPA Method 8260B - cont.								
1,2,4-Trimethylbenzene	ND		mg/kg	0.002	1	08/26/06 16:23	SW846 8260B	6085096
Vinyl chloride	ND		mg/kg	0.002	1	08/26/06 16:23	SW846 8260B	6085096
Xylenes, total	ND		mg/kg	0.005	1	08/26/06 16:23	SW846 8260B	6085096
Surr: 1,2-Dichloroethane-d4 (72-125%)	*98 %*					*08/26/06 16:23*	*SW846 8260B*	*6085096*
Surr: Dibromofluoromethane (73-124%)	*99 %*					*08/26/06 16:23*	*SW846 8260B*	*6085096*
Surr: Toluene-d8 (80-124%)	*102 %*					*08/26/06 16:23*	*SW846 8260B*	*6085096*
Surr: 4-Bromofluorobenzene (25-185%)	*106 %*					*08/26/06 16:23*	*SW846 8260B*	*6085096*
Extractable Petroleum Hydrocarbons								
Diesel	ND		mg/kg	4.98	1	08/30/06 00:47	SW846 8015B	6085659
Surr: o-Terphenyl (56-143%)	*82 %*					*08/30/06 00:47*	*SW846 8015B*	*6085659*
Purgeable Petroleum Hydrocarbons								
GRO as Gasoline	ND		mg/kg	4.96	50	08/23/06 15:23	SW846 8015B	6084012
Surr: a,a,a-Trifluorotoluene (56-145%)	*104 %*					*08/23/06 15:23*	*SW846 8015B*	*6084012*
Sample ID: NPH2665-04 (G75-1(4.5-6) - Soil) Sampled: 08/17/06 09:05								
Volatile Organic Compounds by EPA Method 8260B								
Acetone	**0.095**		mg/kg	0.050	1	08/26/06 16:54	SW846 8260B	6085096
Benzene	**0.002**		mg/kg	0.002	1	08/26/06 16:54	SW846 8260B	6085096
Bromobenzene	ND		mg/kg	0.002	1	08/26/06 16:54	SW846 8260B	6085096
Bromochloromethane	ND		mg/kg	0.002	1	08/26/06 16:54	SW846 8260B	6085096
Bromodichloromethane	ND		mg/kg	0.002	1	08/26/06 16:54	SW846 8260B	6085096
Bromoform	ND		mg/kg	0.002	1	08/26/06 16:54	SW846 8260B	6085096
Bromomethane	ND		mg/kg	0.002	1	08/26/06 16:54	SW846 8260B	6085096
2-Butanone	ND		mg/kg	0.050	1	08/26/06 16:54	SW846 8260B	6085096
sec-Butylbenzene	ND		mg/kg	0.002	1	08/26/06 16:54	SW846 8260B	6085096
n-Butylbenzene	ND		mg/kg	0.002	1	08/26/06 16:54	SW846 8260B	6085096
tert-Butylbenzene	ND		mg/kg	0.002	1	08/26/06 16:54	SW846 8260B	6085096
Carbon disulfide	**0.010**		mg/kg	0.005	1	08/26/06 16:54	SW846 8260B	6085096
Carbon Tetrachloride	ND		mg/kg	0.002	1	08/26/06 16:54	SW846 8260B	6085096
Chlorobenzene	ND		mg/kg	0.002	1	08/26/06 16:54	SW846 8260B	6085096
Chlorodibromomethane	ND		mg/kg	0.002	1	08/26/06 16:54	SW846 8260B	6085096
Chloroethane	ND		mg/kg	0.005	1	08/26/06 16:54	SW846 8260B	6085096
Chloroform	ND		mg/kg	0.002	1	08/26/06 16:54	SW846 8260B	6085096
Chloromethane	ND		mg/kg	0.002	1	08/26/06 16:54	SW846 8260B	6085096
2-Chlorotoluene	ND		mg/kg	0.002	1	08/26/06 16:54	SW846 8260B	6085096
4-Chlorotoluene	ND		mg/kg	0.002	1	08/26/06 16:54	SW846 8260B	6085096
1,2-Dibromo-3-chloropropane	ND		mg/kg	0.005	1	08/26/06 16:54	SW846 8260B	6085096
1,2-Dibromoethane (EDB)	ND		mg/kg	0.002	1	08/26/06 16:54	SW846 8260B	6085096
Dibromomethane	ND		mg/kg	0.002	1	08/26/06 16:54	SW846 8260B	6085096
1,4-Dichlorobenzene	ND		mg/kg	0.002	1	08/26/06 16:54	SW846 8260B	6085096
1,3-Dichlorobenzene	ND		mg/kg	0.002	1	08/26/06 16:54	SW846 8260B	6085096
1,2-Dichlorobenzene	ND		mg/kg	0.002	1	08/26/06 16:54	SW846 8260B	6085096
Dichlorodifluoromethane	ND		mg/kg	0.002	1	08/26/06 16:54	SW846 8260B	6085096

Client	MACTEC Engineering & Consulting, Inc. (3740)	Work Order:	NPH2665
	21740 Beaumeade Circle, Suite 150	Project Name:	AFRH
	Ashburn, VA 20147	Project Number:	3552060897
Attn	Brent Chapman	Received:	08/18/06 08:00

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NPH2665-04 (G75-1(4.5-6) - Soil) - cont. Sampled: 08/17/06 09:05								
Volatile Organic Compounds by EPA Method 8260B - cont.								
1,1-Dichloroethane	ND		mg/kg	0.002	1	08/26/06 16:54	SW846 8260B	6085096
1,2-Dichloroethane	ND		mg/kg	0.002	1	08/26/06 16:54	SW846 8260B	6085096
cis-1,2-Dichloroethene	ND		mg/kg	0.002	1	08/26/06 16:54	SW846 8260B	6085096
1,1-Dichloroethene	ND		mg/kg	0.002	1	08/26/06 16:54	SW846 8260B	6085096
trans-1,2-Dichloroethene	ND		mg/kg	0.002	1	08/26/06 16:54	SW846 8260B	6085096
1,3-Dichloropropane	ND		mg/kg	0.002	1	08/26/06 16:54	SW846 8260B	6085096
1,2-Dichloropropane	ND		mg/kg	0.002	1	08/26/06 16:54	SW846 8260B	6085096
2,2-Dichloropropane	ND		mg/kg	0.002	1	08/26/06 16:54	SW846 8260B	6085096
cis-1,3-Dichloropropene	ND		mg/kg	0.002	1	08/26/06 16:54	SW846 8260B	6085096
trans-1,3-Dichloropropene	ND		mg/kg	0.002	1	08/26/06 16:54	SW846 8260B	6085096
1,1-Dichloropropene	ND		mg/kg	0.002	1	08/26/06 16:54	SW846 8260B	6085096
Ethylbenzene	ND		mg/kg	0.002	1	08/26/06 16:54	SW846 8260B	6085096
Hexachlorobutadiene	ND		mg/kg	0.005	1	08/26/06 16:54	SW846 8260B	6085096
2-Hexanone	ND		mg/kg	0.050	1	08/26/06 16:54	SW846 8260B	6085096
Isopropylbenzene	ND		mg/kg	0.002	1	08/26/06 16:54	SW846 8260B	6085096
p-Isopropyltoluene	ND		mg/kg	0.002	1	08/26/06 16:54	SW846 8260B	6085096
Methyl tert-Butyl Ether	ND		mg/kg	0.002	1	08/26/06 16:54	SW846 8260B	6085096
Methylene Chloride	ND		mg/kg	0.010	1	08/26/06 16:54	SW846 8260B	6085096
4-Methyl-2-pentanone	ND		mg/kg	0.050	1	08/26/06 16:54	SW846 8260B	6085096
Naphthalene	ND		mg/kg	0.005	1	08/26/06 16:54	SW846 8260B	6085096
n-Propylbenzene	ND		mg/kg	0.002	1	08/26/06 16:54	SW846 8260B	6085096
Styrene	ND		mg/kg	0.002	1	08/26/06 16:54	SW846 8260B	6085096
1,1,1,2-Tetrachloroethane	ND		mg/kg	0.002	1	08/26/06 16:54	SW846 8260B	6085096
1,1,2,2-Tetrachloroethane	ND		mg/kg	0.002	1	08/26/06 16:54	SW846 8260B	6085096
Tetrachloroethene	ND		mg/kg	0.002	1	08/26/06 16:54	SW846 8260B	6085096
Toluene	ND		mg/kg	0.002	1	08/26/06 16:54	SW846 8260B	6085096
1,2,3-Trichlorobenzene	ND		mg/kg	0.002	1	08/26/06 16:54	SW846 8260B	6085096
1,2,4-Trichlorobenzene	ND		mg/kg	0.002	1	08/26/06 16:54	SW846 8260B	6085096
1,1,2-Trichloroethane	ND		mg/kg	0.005	1	08/26/06 16:54	SW846 8260B	6085096
1,1,1-Trichloroethane	ND		mg/kg	0.002	1	08/26/06 16:54	SW846 8260B	6085096
Trichloroethene	ND		mg/kg	0.002	1	08/26/06 16:54	SW846 8260B	6085096
Trichlorofluoromethane	ND		mg/kg	0.002	1	08/26/06 16:54	SW846 8260B	6085096
1,2,3-Trichloropropane	ND		mg/kg	0.002	1	08/26/06 16:54	SW846 8260B	6085096
1,3,5-Trimethylbenzene	ND		mg/kg	0.002	1	08/26/06 16:54	SW846 8260B	6085096
1,2,4-Trimethylbenzene	ND		mg/kg	0.002	1	08/26/06 16:54	SW846 8260B	6085096
Vinyl chloride	ND		mg/kg	0.002	1	08/26/06 16:54	SW846 8260B	6085096
Xylenes, total	ND		mg/kg	0.005	1	08/26/06 16:54	SW846 8260B	6085096
Surr: 1,2-Dichloroethane-d4 (72-125%)	*99 %*					*08/26/06 16:54*	*SW846 8260B*	*6085096*
Surr: Dibromofluoromethane (73-124%)	*99 %*					*08/26/06 16:54*	*SW846 8260B*	*6085096*
Surr: Toluene-d8 (80-124%)	*99 %*					*08/26/06 16:54*	*SW846 8260B*	*6085096*
Surr: 4-Bromofluorobenzene (25-185%)	*103 %*					*08/26/06 16:54*	*SW846 8260B*	*6085096*
Extractable Petroleum Hydrocarbons								
Diesel	ND		mg/kg	4.86	1	08/30/06 01:07	SW846 8015B	6085659

Client	MACTEC Engineering & Consulting, Inc. (3740)	Work Order:	NPH2665
	21740 Beaumeade Circle, Suite 150	Project Name:	AFRH
	Ashburn, VA 20147	Project Number:	3552060897
Attn	Brent Chapman	Received:	08/18/06 08:00

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NPH2665-04RE1 (G75-1(4.5-6) - Soil) - cont. Sampled: 08/17/06 09:05								
Extractable Petroleum Hydrocarbons - cont.								
Surr: o-Terphenyl (56-143%)	*85 %*					*08/30/06 01:07*	*SW846 8015B*	*6085659*
Purgeable Petroleum Hydrocarbons								
GRO as Gasoline	ND		mg/kg	5.01	50	08/23/06 16:06	SW846 8015B	6084012
Surr: a,a,a-Trifluorotoluene (56-145%)	*104 %*					*08/23/06 16:06*	*SW846 8015B*	*6084012*
Sample ID: NPH2665-05 (G46-1(10.5-12) - Soil) Sampled: 08/17/06 10:00								
Volatile Organic Compounds by EPA Method 8260B								
Acetone	ND		mg/kg	0.050	1	08/26/06 17:25	SW846 8260B	6085096
Benzene	ND		mg/kg	0.002	1	08/26/06 17:25	SW846 8260B	6085096
Bromobenzene	ND		mg/kg	0.002	1	08/26/06 17:25	SW846 8260B	6085096
Bromochloromethane	ND		mg/kg	0.002	1	08/26/06 17:25	SW846 8260B	6085096
Bromodichloromethane	ND		mg/kg	0.002	1	08/26/06 17:25	SW846 8260B	6085096
Bromoform	ND		mg/kg	0.002	1	08/26/06 17:25	SW846 8260B	6085096
Bromomethane	ND		mg/kg	0.002	1	08/26/06 17:25	SW846 8260B	6085096
2-Butanone	ND		mg/kg	0.050	1	08/26/06 17:25	SW846 8260B	6085096
sec-Butylbenzene	ND		mg/kg	0.002	1	08/26/06 17:25	SW846 8260B	6085096
n-Butylbenzene	ND		mg/kg	0.002	1	08/26/06 17:25	SW846 8260B	6085096
tert-Butylbenzene	ND		mg/kg	0.002	1	08/26/06 17:25	SW846 8260B	6085096
Carbon disulfide	**0.005**		mg/kg	0.005	1	08/26/06 17:25	SW846 8260B	6085096
Carbon Tetrachloride	ND		mg/kg	0.002	1	08/26/06 17:25	SW846 8260B	6085096
Chlorobenzene	ND		mg/kg	0.002	1	08/26/06 17:25	SW846 8260B	6085096
Chlorodibromomethane	ND		mg/kg	0.002	1	08/26/06 17:25	SW846 8260B	6085096
Chloroethane	ND		mg/kg	0.005	1	08/26/06 17:25	SW846 8260B	6085096
Chloroform	ND		mg/kg	0.002	1	08/26/06 17:25	SW846 8260B	6085096
Chloromethane	ND		mg/kg	0.002	1	08/26/06 17:25	SW846 8260B	6085096
2-Chlorotoluene	ND		mg/kg	0.002	1	08/26/06 17:25	SW846 8260B	6085096
4-Chlorotoluene	ND		mg/kg	0.002	1	08/26/06 17:25	SW846 8260B	6085096
1,2-Dibromo-3-chloropropane	ND		mg/kg	0.005	1	08/26/06 17:25	SW846 8260B	6085096
1,2-Dibromoethane (EDB)	ND		mg/kg	0.002	1	08/26/06 17:25	SW846 8260B	6085096
Dibromomethane	ND		mg/kg	0.002	1	08/26/06 17:25	SW846 8260B	6085096
1,4-Dichlorobenzene	ND		mg/kg	0.002	1	08/26/06 17:25	SW846 8260B	6085096
1,3-Dichlorobenzene	ND		mg/kg	0.002	1	08/26/06 17:25	SW846 8260B	6085096
1,2-Dichlorobenzene	ND		mg/kg	0.002	1	08/26/06 17:25	SW846 8260B	6085096
Dichlorodifluoromethane	ND		mg/kg	0.002	1	08/26/06 17:25	SW846 8260B	6085096
1,1-Dichloroethane	ND		mg/kg	0.002	1	08/26/06 17:25	SW846 8260B	6085096
1,2-Dichloroethane	ND		mg/kg	0.002	1	08/26/06 17:25	SW846 8260B	6085096
cis-1,2-Dichloroethene	ND		mg/kg	0.002	1	08/26/06 17:25	SW846 8260B	6085096
1,1-Dichloroethene	ND		mg/kg	0.002	1	08/26/06 17:25	SW846 8260B	6085096
trans-1,2-Dichloroethene	ND		mg/kg	0.002	1	08/26/06 17:25	SW846 8260B	6085096
1,3-Dichloropropane	ND		mg/kg	0.002	1	08/26/06 17:25	SW846 8260B	6085096
1,2-Dichloropropane	ND		mg/kg	0.002	1	08/26/06 17:25	SW846 8260B	6085096
2,2-Dichloropropane	ND		mg/kg	0.002	1	08/26/06 17:25	SW846 8260B	6085096
cis-1,3-Dichloropropene	ND		mg/kg	0.002	1	08/26/06 17:25	SW846 8260B	6085096

Client	MACTEC Engineering & Consulting, Inc. (3740)	Work Order:	NPH2665
	21740 Beaumeade Circle, Suite 150	Project Name:	AFRH
	Ashburn, VA 20147	Project Number:	3552060897
Attn	Brent Chapman	Received:	08/18/06 08:00

ANALYTICAL REPORT

Sample ID: NPH2665-05 (G46-1(10.5-12) - Soil) - cont. Sampled: 08/17/06 10:00

Volatile Organic Compounds by EPA Method 8260B - cont.

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
trans-1,3-Dichloropropene	ND		mg/kg	0.002	1	08/26/06 17:25	SW846 8260B	6085096
1,1-Dichloropropene	ND		mg/kg	0.002	1	08/26/06 17:25	SW846 8260B	6085096
Ethylbenzene	ND		mg/kg	0.002	1	08/26/06 17:25	SW846 8260B	6085096
Hexachlorobutadiene	ND		mg/kg	0.005	1	08/26/06 17:25	SW846 8260B	6085096
2-Hexanone	ND		mg/kg	0.050	1	08/26/06 17:25	SW846 8260B	6085096
Isopropylbenzene	ND		mg/kg	0.002	1	08/26/06 17:25	SW846 8260B	6085096
p-Isopropyltoluene	ND		mg/kg	0.002	1	08/26/06 17:25	SW846 8260B	6085096
Methyl tert-Butyl Ether	ND		mg/kg	0.002	1	08/26/06 17:25	SW846 8260B	6085096
Methylene Chloride	ND		mg/kg	0.010	1	08/26/06 17:25	SW846 8260B	6085096
4-Methyl-2-pentanone	ND		mg/kg	0.050	1	08/26/06 17:25	SW846 8260B	6085096
Naphthalene	**1.82**		mg/kg	0.250	50	08/28/06 14:01	SW846 8260B	6083477
n-Propylbenzene	ND		mg/kg	0.002	1	08/26/06 17:25	SW846 8260B	6085096
Styrene	ND		mg/kg	0.002	1	08/26/06 17:25	SW846 8260B	6085096
1,1,1,2-Tetrachloroethane	ND		mg/kg	0.002	1	08/26/06 17:25	SW846 8260B	6085096
1,1,2,2-Tetrachloroethane	ND		mg/kg	0.002	1	08/26/06 17:25	SW846 8260B	6085096
Tetrachloroethene	ND		mg/kg	0.002	1	08/26/06 17:25	SW846 8260B	6085096
Toluene	ND		mg/kg	0.002	1	08/26/06 17:25	SW846 8260B	6085096
1,2,3-Trichlorobenzene	ND		mg/kg	0.002	1	08/26/06 17:25	SW846 8260B	6085096
1,2,4-Trichlorobenzene	ND		mg/kg	0.002	1	08/26/06 17:25	SW846 8260B	6085096
1,1,2-Trichloroethane	ND		mg/kg	0.005	1	08/26/06 17:25	SW846 8260B	6085096
1,1,1-Trichloroethane	ND		mg/kg	0.002	1	08/26/06 17:25	SW846 8260B	6085096
Trichloroethene	ND		mg/kg	0.002	1	08/26/06 17:25	SW846 8260B	6085096
Trichlorofluoromethane	ND		mg/kg	0.002	1	08/26/06 17:25	SW846 8260B	6085096
1,2,3-Trichloropropane	ND		mg/kg	0.002	1	08/26/06 17:25	SW846 8260B	6085096
1,3,5-Trimethylbenzene	ND		mg/kg	0.002	1	08/26/06 17:25	SW846 8260B	6085096
1,2,4-Trimethylbenzene	**0.002**		mg/kg	0.002	1	08/26/06 17:25	SW846 8260B	6085096
Vinyl chloride	ND		mg/kg	0.002	1	08/26/06 17:25	SW846 8260B	6085096
Xylenes, total	ND		mg/kg	0.005	1	08/26/06 17:25	SW846 8260B	6085096
Surr: 1,2-Dichloroethane-d4 (72-125%)	*100 %*					*08/26/06 17:25*	*SW846 8260B*	*6085096*
Surr: 1,2-Dichloroethane-d4 (72-125%)	*93 %*					*08/28/06 14:01*	*SW846 8260B*	*6083477*
Surr: Dibromofluoromethane (73-124%)	*99 %*					*08/26/06 17:25*	*SW846 8260B*	*6085096*
Surr: Dibromofluoromethane (73-124%)	*96 %*					*08/28/06 14:01*	*SW846 8260B*	*6083477*
Surr: Toluene-d8 (80-124%)	*102 %*					*08/26/06 17:25*	*SW846 8260B*	*6085096*
Surr: Toluene-d8 (80-124%)	*101 %*					*08/28/06 14:01*	*SW846 8260B*	*6083477*
Surr: 4-Bromofluorobenzene (25-185%)	*105 %*					*08/26/06 17:25*	*SW846 8260B*	*6085096*
Surr: 4-Bromofluorobenzene (25-185%)	*102 %*					*08/28/06 14:01*	*SW846 8260B*	*6083477*

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Client MACTEC Engineering & Consulting, Inc. (3740)
21740 Beaumeade Circle, Suite 150
Ashburn, VA 20147
Attn Brent Chapman

Work Order: NPH4081
Project Name: AFRH
Project Number: 3552060897
Received: 08/30/06 08:00

ANALYTICAL REPORT

Sample ID: NPH4081-03 (TB - Water) - cont. Sampled: 08/29/06 00:01

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Acetone	ND		ug/L	50.0	1	09/04/06 21:52	SW846 8260B	6090237
Benzene	ND		ug/L	1.00	1	09/04/06 21:52	SW846 8260B	6090237
Bromobenzene	ND		ug/L	1.00	1	09/04/06 21:52	SW846 8260B	6090237
Bromochloromethane	ND		ug/L	1.00	1	09/04/06 21:52	SW846 8260B	6090237
Bromodichloromethane	ND		ug/L	1.00	1	09/04/06 21:52	SW846 8260B	6090237
Bromoform	ND		ug/L	1.00	1	09/04/06 21:52	SW846 8260B	6090237
Bromomethane	ND		ug/L	1.00	1	09/04/06 21:52	SW846 8260B	6090237
2-Butanone	ND		ug/L	50.0	1	09/04/06 21:52	SW846 8260B	6090237
sec-Butylbenzene	ND		ug/L	1.00	1	09/04/06 21:52	SW846 8260B	6090237
n-Butylbenzene	ND		ug/L	1.00	1	09/04/06 21:52	SW846 8260B	6090237
tert-Butylbenzene	ND		ug/L	1.00	1	09/04/06 21:52	SW846 8260B	6090237
Carbon disulfide	ND		ug/L	1.00	1	09/04/06 21:52	SW846 8260B	6090237
Carbon Tetrachloride	ND		ug/L	1.00	1	09/04/06 21:52	SW846 8260B	6090237
Chlorobenzene	ND		ug/L	1.00	1	09/04/06 21:52	SW846 8260B	6090237
Chlorodibromomethane	ND		ug/L	1.00	1	09/04/06 21:52	SW846 8260B	6090237
Chloroethane	ND		ug/L	1.00	1	09/04/06 21:52	SW846 8260B	6090237
Chloroform	ND		ug/L	1.00	1	09/04/06 21:52	SW846 8260B	6090237
Chloromethane	ND		ug/L	1.00	1	09/04/06 21:52	SW846 8260B	6090237
2-Chlorotoluene	ND		ug/L	1.00	1	09/04/06 21:52	SW846 8260B	6090237
4-Chlorotoluene	ND		ug/L	1.00	1	09/04/06 21:52	SW846 8260B	6090237
1,2-Dibromo-3-chloropropane	ND		ug/L	5.00	1	09/04/06 21:52	SW846 8260B	6090237
1,2-Dibromoethane (EDB)	ND		ug/L	1.00	1	09/04/06 21:52	SW846 8260B	6090237
Dibromomethane	ND		ug/L	1.00	1	09/04/06 21:52	SW846 8260B	6090237
1,4-Dichlorobenzene	ND		ug/L	1.00	1	09/04/06 21:52	SW846 8260B	6090237
1,3-Dichlorobenzene	ND		ug/L	1.00	1	09/04/06 21:52	SW846 8260B	6090237
1,2-Dichlorobenzene	ND		ug/L	1.00	1	09/04/06 21:52	SW846 8260B	6090237
Dichlorodifluoromethane	ND		ug/L	1.00	1	09/04/06 21:52	SW846 8260B	6090237
1,1-Dichloroethane	ND		ug/L	1.00	1	09/04/06 21:52	SW846 8260B	6090237
1,2-Dichloroethane	ND		ug/L	1.00	1	09/04/06 21:52	SW846 8260B	6090237
cis-1,2-Dichloroethene	ND		ug/L	1.00	1	09/04/06 21:52	SW846 8260B	6090237
1,1-Dichloroethene	ND		ug/L	1.00	1	09/04/06 21:52	SW846 8260B	6090237
trans-1,2-Dichloroethene	ND		ug/L	1.00	1	09/04/06 21:52	SW846 8260B	6090237
1,3-Dichloropropane	ND		ug/L	1.00	1	09/04/06 21:52	SW846 8260B	6090237
1,2-Dichloropropane	ND		ug/L	1.00	1	09/04/06 21:52	SW846 8260B	6090237
2,2-Dichloropropane	ND		ug/L	1.00	1	09/04/06 21:52	SW846 8260B	6090237
cis-1,3-Dichloropropene	ND		ug/L	1.00	1	09/04/06 21:52	SW846 8260B	6090237
trans-1,3-Dichloropropene	ND		ug/L	1.00	1	09/04/06 21:52	SW846 8260B	6090237
1,1-Dichloropropene	ND		ug/L	1.00	1	09/04/06 21:52	SW846 8260B	6090237
Ethylbenzene	ND		ug/L	1.00	1	09/04/06 21:52	SW846 8260B	6090237
Hexachlorobutadiene	ND		ug/L	1.00	1	09/04/06 21:52	SW846 8260B	6090237
2-Hexanone	ND		ug/L	50.0	1	09/04/06 21:52	SW846 8260B	6090237
Isopropylbenzene	ND		ug/L	1.00	1	09/04/06 21:52	SW846 8260B	6090237
p-Isopropyltoluene	ND		ug/L	1.00	1	09/04/06 21:52	SW846 8260B	6090237

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Client MACTEC Engineering & Consulting, Inc. (3740)
21740 Beaumeade Circle, Suite 150
Ashburn, VA 20147
Attn Brent Chapman

Work Order: NPH4081
Project Name: AFRH
Project Number: 3552060897
Received: 08/30/06 08:00

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NPH4081-03 (TB - Water) - cont. Sampled: 08/29/06 00:01								
Volatile Organic Compounds by EPA Method 8260B - cont.								
Methyl tert-Butyl Ether	ND		ug/L	1.00	1	09/04/06 21:52	SW846 8260B	6090237
Methylene Chloride	ND		ug/L	5.00	1	09/04/06 21:52	SW846 8260B	6090237
4-Methyl-2-pentanone	ND		ug/L	50.0	1	09/04/06 21:52	SW846 8260B	6090237
Naphthalene	ND		ug/L	5.00	1	09/04/06 21:52	SW846 8260B	6090237
n-Propylbenzene	ND		ug/L	1.00	1	09/04/06 21:52	SW846 8260B	6090237
Styrene	ND		ug/L	1.00	1	09/04/06 21:52	SW846 8260B	6090237
1,1,1,2-Tetrachloroethane	ND		ug/L	1.00	1	09/04/06 21:52	SW846 8260B	6090237
1,1,2,2-Tetrachloroethane	ND		ug/L	1.00	1	09/04/06 21:52	SW846 8260B	6090237
Tetrachloroethene	ND		ug/L	1.00	1	09/04/06 21:52	SW846 8260B	6090237
Toluene	ND		ug/L	1.00	1	09/04/06 21:52	SW846 8260B	6090237
1,2,3-Trichlorobenzene	ND		ug/L	2.00	1	09/04/06 21:52	SW846 8260B	6090237
1,2,4-Trichlorobenzene	ND		ug/L	2.00	1	09/04/06 21:52	SW846 8260B	6090237
1,1,2-Trichloroethane	ND		ug/L	1.00	1	09/04/06 21:52	SW846 8260B	6090237
1,1,1-Trichloroethane	ND		ug/L	1.00	1	09/04/06 21:52	SW846 8260B	6090237
Trichloroethene	ND		ug/L	1.00	1	09/04/06 21:52	SW846 8260B	6090237
Trichlorofluoromethane	ND		ug/L	1.00	1	09/04/06 21:52	SW846 8260B	6090237
1,2,3-Trichloropropane	ND		ug/L	1.00	1	09/04/06 21:52	SW846 8260B	6090237
1,3,5-Trimethylbenzene	ND		ug/L	1.00	1	09/04/06 21:52	SW846 8260B	6090237
1,2,4-Trimethylbenzene	ND		ug/L	1.00	1	09/04/06 21:52	SW846 8260B	6090237
Vinyl chloride	ND		ug/L	1.00	1	09/04/06 21:52	SW846 8260B	6090237
Xylenes, total	ND		ug/L	3.00	1	09/04/06 21:52	SW846 8260B	6090237
Surr: 1,2-Dichloroethane-d4 (70-130%)	*103 %*					*09/04/06 21:52*	*SW846 8260B*	*6090237*
Surr: Dibromofluoromethane (79-122%)	*107 %*					*09/04/06 21:52*	*SW846 8260B*	*6090237*
Surr: Toluene-d8 (78-121%)	*113 %*					*09/04/06 21:52*	*SW846 8260B*	*6090237*
Surr: 4-Bromofluorobenzene (78-126%)	*104 %*					*09/04/06 21:52*	*SW846 8260B*	*6090237*

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March 22, 2007 10:17:12AM

Client: MACTEC Engineering & Consulting, Inc. (3740)
21740 Beaumeade Circle, Suite 150
Ashburn, VA 20147
Attn: Brent Chapman

Work Order: NQC1739
Project Name: AFRH
Project Nbr: [none]
P/O Nbr: APO# 78372
Date Received: 03/13/07

SAMPLE IDENTIFICATION	LAB NUMBER	COLLECTION DATE AND TIME
SB02	NQC1739-01	03/12/07 11:00
SB04	NQC1739-02	03/12/07 13:00
SB06	NQC1739-03	03/12/07 14:00
Trip (2)	NQC1739-04	03/12/07 00:01

An executed copy of the chain of custody, the project quality control data, and the sample receipt form are also included as an addendum to this report. If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-800-765-0980. Any opinions, if expressed, are outside the scope of the Laboratory's accreditation.
.

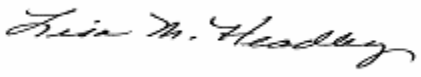
The Chain(s) of Custody, 2 pages, are included and are an integral part of this report.

These results relate only to the items tested. This report shall not be reproduced except in full and with permission of the laboratory.

Estimated uncertainity is available upon request.

This report has been electronically signed.

Report Approved By:



Lisa Headley

Senior Project Manager

TestAmerica
ANALYTICAL TESTING CORPORATION
2960 Foster Creighton Road Nashville, TN 37204 * 800-765-0980 * Fax 615-726-3404

Client	MACTEC Engineering & Consulting, Inc. (3740)	Work Order:	NQC1739
	21740 Beaumeade Circle, Suite 150	Project Name:	AFRH
	Ashburn, VA 20147	Project Number:	[none]
Attn	Brent Chapman	Received:	03/13/07 08:10

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NQC1739-01 (SB02 - Soil) Sampled: 03/12/07 11:00								
Extractable Petroleum Hydrocarbons								
Diesel	**5.60**		mg/kg	4.92	1	03/16/07 02:29	SW846 8015B	7032390
Surr: o-Terphenyl (32-132%)	*96 %*					*03/16/07 02:29*	*SW846 8015B*	*7032390*
Purgeable Petroleum Hydrocarbons								
GRO as Gasoline	ND		mg/kg	4.72	50	03/15/07 14:51	SW846 8015B	7032463
Surr: a,a,a-Trifluorotoluene (66-146%)	*104 %*					*03/15/07 14:51*	*SW846 8015B*	*7032463*
Sample ID: NQC1739-02RE1 (SB04 - Soil) Sampled: 03/12/07 13:00								
Extractable Petroleum Hydrocarbons								
Diesel	ND		mg/kg	4.90	1	03/16/07 09:09	SW846 8015B	7032390
Surr: o-Terphenyl (32-132%)	*49 %*					*03/16/07 09:09*	*SW846 8015B*	*7032390*
Purgeable Petroleum Hydrocarbons								
GRO as Gasoline	ND		mg/kg	4.87	50	03/15/07 15:24	SW846 8015B	7032463
Surr: a,a,a-Trifluorotoluene (66-146%)	*102 %*					*03/15/07 15:24*	*SW846 8015B*	*7032463*
Sample ID: NQC1739-03 (SB06 - Soil) Sampled: 03/12/07 14:00								
Extractable Petroleum Hydrocarbons								
Diesel	ND		mg/kg	4.88	1	03/16/07 02:46	SW846 8015B	7032390
Surr: o-Terphenyl (32-132%)	*90 %*					*03/16/07 02:46*	*SW846 8015B*	*7032390*
Purgeable Petroleum Hydrocarbons								
GRO as Gasoline	ND		mg/kg	4.98	50	03/15/07 15:56	SW846 8015B	7032463
Surr: a,a,a-Trifluorotoluene (66-146%)	*103 %*					*03/15/07 15:56*	*SW846 8015B*	*7032463*
Sample ID: NQC1739-04 (Trip (2) - Water) Sampled: 03/12/07 00:01								
Purgeable Petroleum Hydrocarbons								
GRO as Gasoline	ND		ug/L	100	1	03/18/07 21:45	SW846 8015B	7033211
Surr: a,a,a-Trifluorotoluene (44-152%)	*105 %*					*03/18/07 21:45*	*SW846 8015B*	*7033211*

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Client	MACTEC Engineering & Consulting, Inc. (3740)	Work Order:	NQC1739
	21740 Beaumeade Circle, Suite 150	Project Name:	AFRH
	Ashburn, VA 20147	Project Number:	[none]
Attn	Brent Chapman	Received:	03/13/07 08:10

SAMPLE EXTRACTION DATA

Parameter	Batch	Lab Number	Wt/Vol Extracted	Extracted Vol	Date	Analyst	Extraction Method
Extractable Petroleum Hydrocarbons							
SW846 8015B	7032390	NQC1739-01	25.39	1.00	03/14/07 09:00	BJM	EPA 3550B
SW846 8015B	7032390	NQC1739-02	25.53	1.00	03/14/07 09:00	BJM	EPA 3550B
SW846 8015B	7032390	NQC1739-02RE1	25.53	1.00	03/14/07 09:00	BJM	EPA 3550B
SW846 8015B	7032390	NQC1739-03	25.60	1.00	03/14/07 09:00	BJM	EPA 3550B
Purgeable Petroleum Hydrocarbons							
SW846 8015B	7032463	NQC1739-01	5.30	5.00	03/14/07 09:15	NKN	EPA 5035A (GC)
SW846 8015B	7032463	NQC1739-02	5.13	5.00	03/14/07 09:16	NKN	EPA 5035A (GC)
SW846 8015B	7032463	NQC1739-03	5.02	5.00	03/14/07 09:17	NKN	EPA 5035A (GC)

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Client	MACTEC Engineering & Consulting, Inc. (3740)	Work Order:	NQC1739
	21740 Beaumeade Circle, Suite 150	Project Name:	AFRH
	Ashburn, VA 20147	Project Number:	[none]
Attn	Brent Chapman	Received:	03/13/07 08:10

PROJECT QUALITY CONTROL DATA
Blank

Analyte	Blank Value	Q	Units	Q.C. Batch	Lab Number	Analyzed Date/Time
Extractable Petroleum Hydrocarbons						
7032390-BLK1						
Diesel	<2.00		mg/kg	7032390	7032390-BLK1	03/15/07 21:26
Surrogate: o-Terphenyl	101%			7032390	7032390-BLK1	03/15/07 21:26
Purgeable Petroleum Hydrocarbons						
7032463-BLK1						
GRO as Gasoline	2.00		mg/kg	7032463	7032463-BLK1	03/15/07 03:20
Surrogate: a,a,a-Trifluorotoluene	104%			7032463	7032463-BLK1	03/15/07 03:20
7033211-BLK1						
GRO as Gasoline	<43.0		ug/L	7033211	7033211-BLK1	03/18/07 21:20
Surrogate: a,a,a-Trifluorotoluene	102%			7033211	7033211-BLK1	03/18/07 21:20

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Client	MACTEC Engineering & Consulting, Inc. (3740)	Work Order:	NQC1739
	21740 Beaumeade Circle, Suite 150	Project Name:	AFRH
	Ashburn, VA 20147	Project Number:	[none]
Attn	Brent Chapman	Received:	03/13/07 08:10

PROJECT QUALITY CONTROL DATA
LCS

Analyte	Known Val.	Analyzed Val	Q	Units	% Rec.	Target Range	Batch	Analyzed Date/Time
Extractable Petroleum Hydrocarbons								
7032390-BS1								
Diesel	40.0	34.9		mg/kg	87%	41 - 141	7032390	03/15/07 21:43
Surrogate: o-Terphenyl	0.800	0.847			106%	32 - 132	7032390	03/15/07 21:43
Purgeable Petroleum Hydrocarbons								
7032463-BS1								
GRO as Gasoline	10.0	9.72		mg/kg	97%	76 - 117	7032463	03/15/07 18:40
Surrogate: a,a,a-Trifluorotoluene	30.0	44.2	Z2		147%	66 - 146	7032463	03/15/07 18:40
7033211-BS1								
GRO as Gasoline	1000	934		ug/L	93%	58 - 138	7033211	03/19/07 06:59
Surrogate: a,a,a-Trifluorotoluene	30.0	24.8			83%	44 - 152	7033211	03/19/07 06:59

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Client	MACTEC Engineering & Consulting, Inc. (3740)	Work Order:	NQC1739
	21740 Beaumeade Circle, Suite 150	Project Name:	AFRH
	Ashburn, VA 20147	Project Number:	[none]
Attn	Brent Chapman	Received:	03/13/07 08:10

PROJECT QUALITY CONTROL DATA

LCS Dup

Analyte	Orig. Val.	Duplicate	Q	Units	Spike Conc	% Rec.	Target Range	RPD	Limit	Batch	Sample Duplicated	Analyzed Date/Time
Purgeable Petroleum Hydrocarbons												
7032463-BSD1												
GRO as Gasoline		9.90		mg/kg	10.0	99%	76 - 117	2	22	7032463		03/15/07 19:15
Surrogate: a,a,a-Trifluorotoluene		45.3	Z2	ug/L	30.0	151%	66 - 146			7032463		03/15/07 19:15

APPENDIX D
PHOTOGRAPHS

Photograph 1. View of USTs adjacent to Building 46/46A.

Photograph 2. View to the north with Building 46 in the distance and monitoring well W72-2 at the northwest corner of Building 72.

Photograph 3. View of the pump island and USTs adjacent to Building 75 facing southwest.

Photograph 4. View of the oil water separator located adjacent to Building 76.

Photograph 5. View of the apparent waste oil spill located adjacent to the southern side of Building 76.

Photograph 6. View of the incinerator chute/stack associated with Building 69.

APPENDIX E
ERT GEOPHYSICAL REPORT

Earth Resources Technology, Inc.

8106 Stayton Dive, Jessup, MD 20794
Tel: 240-554-0161 Fax: 301-604-0205

August 21, 2006

Brent Chapman
MACTEC, Inc.
21740 Beaumeade Circle, Suite 150
Ashburn, VA 20147

Re: Results of Geophysical Survey at the Armed Forces Retirement Home, Washington, D.C.

Dear Mr. Chapman,

Earth Resources Technology, Inc. (ERT) performed a geophysical survey around Buildings 46, 75, and 76 at the Armed Forces Retirement Home, Washington, D.C, on August 9, 2006. The purpose of this investigation was to determine the presence or absence of underground storage tanks (UST's).

1.0 Equipment

A Geometrics Portable Cesium Magnetometer, Model G-858, was used for the magnetic survey. Using self-oscillating split-beam Cesium vapor (non-radioactive Cs-133), this magnetometer measures the earth's total geomagnetic field (magnetic flux density) at a particular location in units of nanoTeslas (nT) with an accuracy of ±1.0 nT. It collects a maximum of 10 magnetic readings per second. The total field consists of three components: the main field of the earth, the external field caused by the sun and moon, and local variations caused by objects at the site. The main field and external field remain relatively constant over the period of time of a field investigation. Local variations are attributable to anomalies near the surface such as buried metal objects or above ground objects containing ferrous metal. Figure 1 shows a contour map of typical magnetic data containing a confirmed UST. This figure is provided to show what to look for when interpreting a magnetic survey, and *does not contain data collected at this site*.

The SIR-3000 Ground Penetrating Radar unit, manufactured by Geophysical Survey Systems, Inc. (GSSI), was used to conduct the GPR survey. The device radiates a polarized electromagnetic wave from a transmitter antenna into the earth and receives at a receiving antenna the reflection of the wave from subsurface interfaces at which changes in the electrical properties (dielectric permittivity and electrical conductivity) of the subsurface materials occur. Dielectric permittivity controls wave speed; and conductivity determines the signal attenuation. Radar reflections occur when the radio waves encounter a change in the velocity or attenuation. The greater the change in properties the more signal is reflected. These properties may be controlled by water in the material, hence by the porosity and quantity of dissolved solids in the water. Also, metallic objects usually exhibit a strong subsurface reflection due to their high electrical impedance or contrast versus surrounding soil or fill. Depth of penetration of the radar signal is inversely proportional to the conductivity of the soil. As a result, electrically resistive earth materials such as coarse-grained, unsaturated sediments allow a deeper radar penetration than the conductive finer-grained soils such as clay and silt. Similarly, reinforced concrete and shallow groundwater are conductive and thus attenuate the radar signals. The 400 MHz antenna was used for this survey.

The collection of the GPR data was performed by pulling the antenna along, and between, grid lines while the positions of each radar reading were recorded with an odometer attached to a survey wheel. The odometer was set up such that 10 radar readings would be acquired every foot. The GPR penetration can be estimated using the radar time range (time for the waves to leave the antenna, reflect and return to the antenna) and an estimate of the radar velocity. After reviewing the GPR data, the results were cropped at about 4.5 feet, as no features were evident on the

profiles below that depth. The GPR data were recorded digitally in a portable computer for instant display and subsequent processing. An example of a UST seen in a GPR profile is provided in Figure 1. GPR data provided in Figure 1 *is not from this site.*

2.0 Magnetic Survey

Buildings 75 & 76

A grid was laid out at the site with the north side of building 76 used as X=100, as shown in Figure 2. Other notable features on this map include several concrete pads with exposed tank lids, debris areas (where data could not be collected), and several metallic posts, which held up a large canopy for building 76.

The approach to interpreting magnetic data is to distinguish the local variations from the background. To interpret the data, readings collected from the survey grid were used to construct a contour map. Anomalies often occur as closed or elongated contours that have readings either above or below the background. The closed or elongated contours with readings above the background are considered magnetic highs and typically represent buried metallic objects (such as UST's); while the contours with readings below the background are considered as magnetic lows and are often caused by above-ground objects (such as fences or cars).

Figure 3 shows a magnetic contour map with the site features as reference in the background. Magnetic anomalies are labeled with yellow letters. Anomaly **A** is associated with a series of weak highs and lows that are correlated with a set of storage tanks with surface lids and a concrete pad. Anomalies **B** and **C** are not associated with any surface features. Anomaly **D** marks the beginning of a possible set of magnetic lows to the north and northwest of the concrete island. Anomaly **E** is a linear cluster of weak highs that could possibly be influenced by the metal canopy, which runs parallel to the set of anomalies. Anomaly **F** is a set of weak lows that may be associated with the tank at the northeast corner of building 76. Anomaly **G** is a weak high that is located on the southern side of the gas island connected to building 75. GPR data was collected over these areas.

Building 46

A grid was laid out on the site along the south side of building 46, where the Y-axis was nearly parallel to the south wall, as shown in Figure 4. Other notable features of the map include several concrete pads with exposed tank lids, and a retaining wall that divides the site in half.

Figure 5 shows a magnetic contour map with the site features as reference in the background. Magnetic anomalies are labeled with yellow letters. Anomaly **H** strong high that is possibly associated with the large subsurface storage tank and the retaining wall in the center of the site. Anomaly **I** is a strong low that is probably related to the vent pipes and the building.

3.0 GPR Survey

Each GPR profile is made of a series of individual wavelets that have crests and troughs. A GPR profile is constructed by color-coding the crests and troughs of traces and aligning them side-by-side. As shown in the example in Figure 1, the white reflections are crests of individual traces with the highest amplitudes, while the dark gray-black reflections are the troughs of individual traces with the lowest amplitudes. The whitest and blackest reflections are created by interfaces of the highest dielectric contrast.

Interpretation of GPR data is focused on analyzing the reflections created by subsurface objects. On a GPR profile, a cylindrical subsurface feature may be represented by strong hyperbolic reflections in its cross-section and by strong horizontal reflections terminating at both ends in its longitudinal profile. Tanks will often create strong

reflectors. Similarly, pipes or drainage tile will have hyperbolic reflections, but should be smaller and perhaps less intense than those caused by a tank (see Figure 1).

Buildings 75 & 76

GPR profiles were collected over the area shown in Figure 6 as magenta lines. Magnetic contours are shown in gray. Letters show specific profiles presented in Figures 7, 8, and 9.

The horizontal axes of the GPR profiles shown in Figures 7, 8, and 9 represent the horizontal distance in feet, along lines parallel to the X- and Y-axes of the grid.

The vertical axis represents the approximate depth in feet, using an estimated radar velocity of 0.1 m/ns (All profiles are cropped at exactly 27.5 ns). Features of interest are noted in yellow on the profiles.

Profile **A-A'** (Figure 7) was collected over magnetic anomaly **A**. The profile shows a clear image below the concrete pad, which holds three tanks. At a depth of less than a foot, there are a series of small anomalies that can be associated with the rebar in the reinforced concrete pad. The profile also shows a large anomaly at a depth of 2.5 feet, which could be a UST or pipe. Another, even larger anomaly can be identified below this at a depth of 3.5 feet, which is more likely a tank. Profile **H-H'** (Figure 7) was taken parallel to **A-A'** and shows the tank lid. Profiles **F-F'** (Figure 7) and **G-G'** (Figure 7) display longitudinal profile views of the tank system with rebar in the concrete and the series of tank lids visible. Profile **B-B'** (Figure 7) was collected over magnetic anomaly **D**. Rebar possibly associated with a concrete pad is shown between 155 feet to 173 feet along the profile. Adjacent profiles also show that the pad extends to the northwest of **B-B'**. Under this pad, there seem to be two large structures that could be a series of pipes or UST's. These structures, like the pad, both trend in a northwestern direction. Profile **O-O'** (Figure 8) was collected diagonally to the grid through magnetic anomalies **B** and **D**. Rebar can be identified from 5 to 27 feet along this profile. The end of the concrete marks the beginning of magnetic anomaly **D**, and shows a similar feature as was discussed in profile **B-B'**. Profiles **J-J'** (Figure 8) and **I-I'** (Figure 8) were taken at the same angle as profile **O-O'** and cross over both magnetic anomalies **B** and **D**. As in profile **O-O'**, profiles **J-J'** and **I-I'** show a large anomaly at the end of the concrete gas island between 25 and 35 feet along the profile, which correlates to anomaly **B**. They also display a large anomaly area that corresponds to magnetic anomaly **B** between 47 and 63 feet along the profile path. This location also matches the large area of rebar that GPR shows over most of profile **K-K'** (Figure 8), which possibly is the cover for a set of smaller UST's.

Profiles **C-C'** and **D-D'** (Figure 7) show anomalies between 130 and 140 feet in on both of the profiles. This region does not correlate to any magnetic anomaly areas, however shows up consistently in several parallel GPR profiles. Profiles **C-C'** and **D-D'** also show a possible UST, which correlates to anomaly **G**. This anomaly can be seen on the profiles between 145 and 155 feet and is located at a depth of approximately 2 feet. Profile **L-L'** (Figure 9) was taken directly over the deeper anomaly region of profiles **C-C'** and **D-D'**, and shows a large concave dip in the brightest reflector in the GPR profile. This could be interpreted as an area where a previous excavation once occurred, and then the area was backfilled. Profile **L-L'** also shows a concrete pad with a possible set of pipes or UST's directly beneath the pad and are visible between 265 feet and 275 feet along the profile. This set of anomalies also corresponds with magnetic anomaly **C**. Profile **E-E'** (Figure 9) was collected over the linear magnetic anomaly of **E**, which parallels building 76. The profile has very little variation and shows no sign of any anomaly until the last 10 feet of the profile. From 270 to 280 feet, GPR shows a reinforced concrete structure that corresponds to magnetic anomaly **C** and what was shown in profile **L-L'**. No GPR anomalies correspond to magnetic anomaly **E**. Magnetic anomaly **E** could possibly relate to the metal canopy and the pillars that are parallel to building 76. Profile **M-M'** (Figure 8) crosses magnetic anomaly **F**. The profile has very little variation and shows no sign of a subsurface source for the magnetic anomaly. It is possible that anomalies **E** and **F** are similarly caused by the metal framework for the canopy in front of the building or **F** could possibly be caused by a nearby vent pipe for the tank to the south of the anomaly. Profile **N-N'** (Figure 8) is perpendicular to profile **M-M'** and also

shows no variation above the location of magnetic anomaly **F**. The profile does show a tank corresponding to the concrete pad at the surface at the northeast corner of building 76.

All anomalies discussed above are shown in red in Figure 12.

Building 46

GPR profiles were collected over the area shown in Figure 10 as magenta lines. Magnetic contours are shown in gray. The area of GPR investigation was limited due to radar space constraints, therefore the data is not as complete as in other investigation sites. The horizontal axes of the GPR profiles shown in Figure 11 represent the horizontal distance in feet, along lines parallel to the X- and Y-axes of the grid. The vertical axis represents the approximate depth in feet, using an estimated radar velocity of 0.1 m/ns (All profiles are cropped at exactly 27.5 ns). Features of interest are noted in yellow on the profiles.

Profiles **P-P', Q-Q'** and **R-R'** (Figure 11) and were collected over a series of tank ports that were located to the north of magnetic anomaly **H**. Profile **P-P'** shows no anomalies. Both **Q-Q'** and **R-R'** have anomalies around 115 feet along the profile. These anomalies roughly match the location of magnetic anomaly **I** and the vent pipes along the edge of building 46. Also, the anomaly in the profiles does not trend toward the center of this magnetic low. Profile **S-S'** (Figure 11) was collected between the 2 tank ports. The profile shows a strong anomaly at 113 feet, which is probably a large pipe that is connecting the 2 ports. Profiles **U-U'** and **T-T'** (Figure 11) were taken over magnetic anomaly **H**. Only Profile **T-T'** identifies a strong reflector in the subsurface. This is an indication that the object is centered in the region of anomaly **H**. Profile **V-V'** (Figure 11) also shows that the anomalous feature does not extend southward. Only a small portion of the possible UST can be seen in this profile. This reflector is around 2.5 feet deep, which creates an unlikely connection between the visible tank and anomaly **H**, due to the retaining wall. At 2.5 feet in depth, this object may be above ground on the low side of the retaining wall, making it unlikely that this object is related to the tank opposite the retaining wall.

All anomalies discussed above are shown in red in Figure 13.

4.0 Closing

Many anomalies have been identified both by magnetic data and by GPR. Several are possible UST's and have been labeled accordingly on Figures 12 and 13.

Sincerely,
Earth Resources Technology, Inc.

James L. Stuby, MS., PG.
Project Geophysicist

Enclosures: Disclaimer
Figures 1-13

DISCLAIMER

The field procedures and interpretative methodologies used in this project are consistent with standard, recognized practices in similar geophysical investigations. The correlation of geophysical responses with probable subsurface features is based on the past result of similar surveys although it is possible that some variation could exist at this site. This warranty is in lieu of all other warranties either implied or expressed. **Earth Resources Technology, Inc.** (**ERT**) assumes no responsibility for interpretations made by others based on work performed by or recommendations made by **ERT.**

Magnetic contour maps are generated by contouring spatially controlled data in the units of nannoTeslas (nT), typically collected with a magnetometer. Magnetic anomalies are herein defined as locations on a magnetic contour map that are local maxima (highs) or minima (lows). *For purposes of investigation, all magnetic anomalies should be considered indicative of Underground Storage Tanks (UST's) unless proven otherwise*.

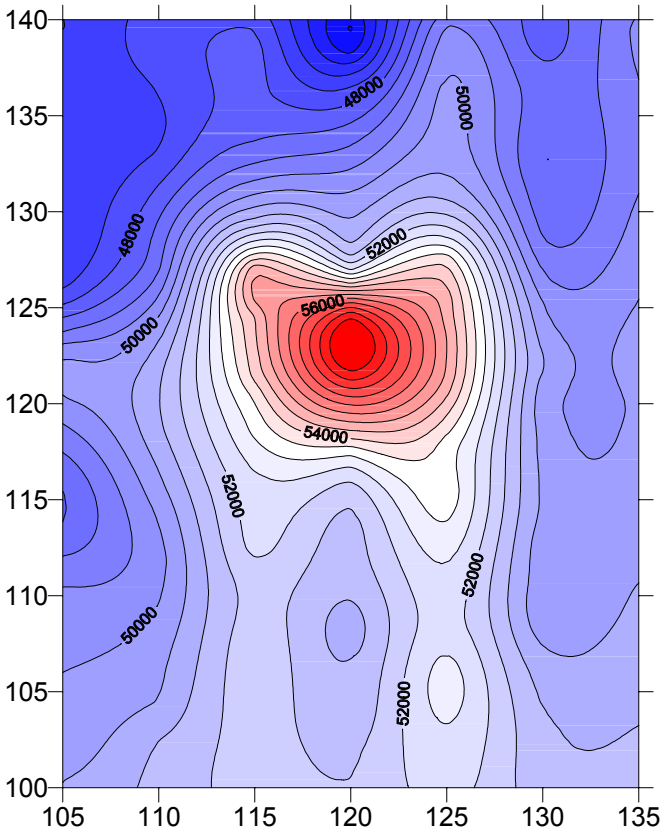
Ground Penetrating Radar (GPR) profiles collected over a magnetic anomaly can provide evidence for or against interpretation of a magnetic anomaly representing a UST. If a part of a strong-amplitude reflection of any kind occurs on a GPR profile below any part of a magnetic anomaly, then it is likely that the reflection represents the cause of the magnetic anomaly. *Strong-amplitude reflectors such as this should be considered possible UST's unless proven otherwise by excavation*.

Other factors enter into interpretation of magnetic and GPR data when conducting a search for UST's, such as anomaly intensity (quantity above or below average for the map) or anomaly size or shape. These factors are considered but not given as much weight as the above criteria. Factors such as the presence of vent pipes or fill ports may be important but their significance should be evaluated by the client and not by **ERT**.

Caution should be exercised in any area with a magnetic anomaly, as they may indicate a number of possibilities. When interpreting magnetic anomalies in combination with GPR profiles, there are four general scenarios:

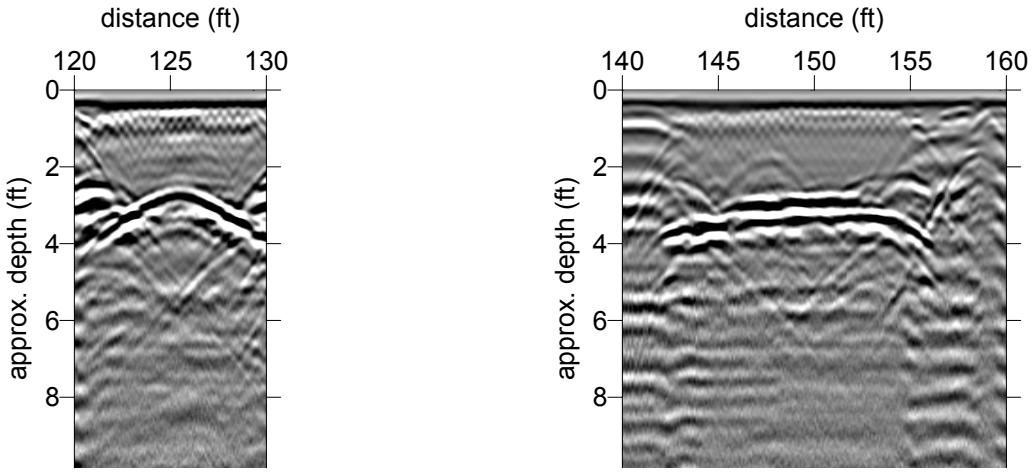
1) Magnetic anomaly is at or near a surface feature (such as a light pole, manhole cover, or fire hydrant) made of ferrous metal and is likely caused by this feature; there is probably no UST present, but it leaves the possibility that the magnetic anomaly is caused by a UST but is obscured by the magnetic signature of the surface feature.
2) Magnetic anomaly is not associated with a surface feature but GPR profiles show no evidence of UST's or other features; there is also probably no UST present, but it leaves the possibility that the GPR signals failed to penetrate to the depth of the object causing the magnetic anomaly (this can occur when the soil is conductive and thus attenuates the GPR signal, or when the signal is blocked or scattered by rebar or wire mesh). Alternately, the subsurface object causing the anomaly may be too small to be imaged by the GPR unit.
3) Magnetic anomaly is not associated with a surface feature and GPR profiles show evidence of subsurface features that are not typical of UST's; there is still a possibility that the GPR profiles show a UST that is deformed or otherwise unusual and may not look like a "typical" UST as seen in Figure 1 of this report.
4) Magnetic anomaly is not associated with a surface feature and GPR profiles show evidence of subsurface features typical of UST's (i.e., broad hyperbolic reflectors and/or flat reflectors with ends curving down). This scenario provides the best evidence of a UST in geophysical terms, but a large pipe or some other subsurface object may cause the anomaly identified on the GPR profiles.

One might rank these scenarios from low UST probability (Scenario 1) to high UST probability (Scenario 4), but geophysics cannot be used to state *conclusively* that there is, or is not, a UST at a given location. *Excavation is the only method that can provide proof of the existence or non-existence of a UST.*



Magnetic Flux Density Contour Map
showing central anomaly (red) indicative of possible UST

500 nT contour interval

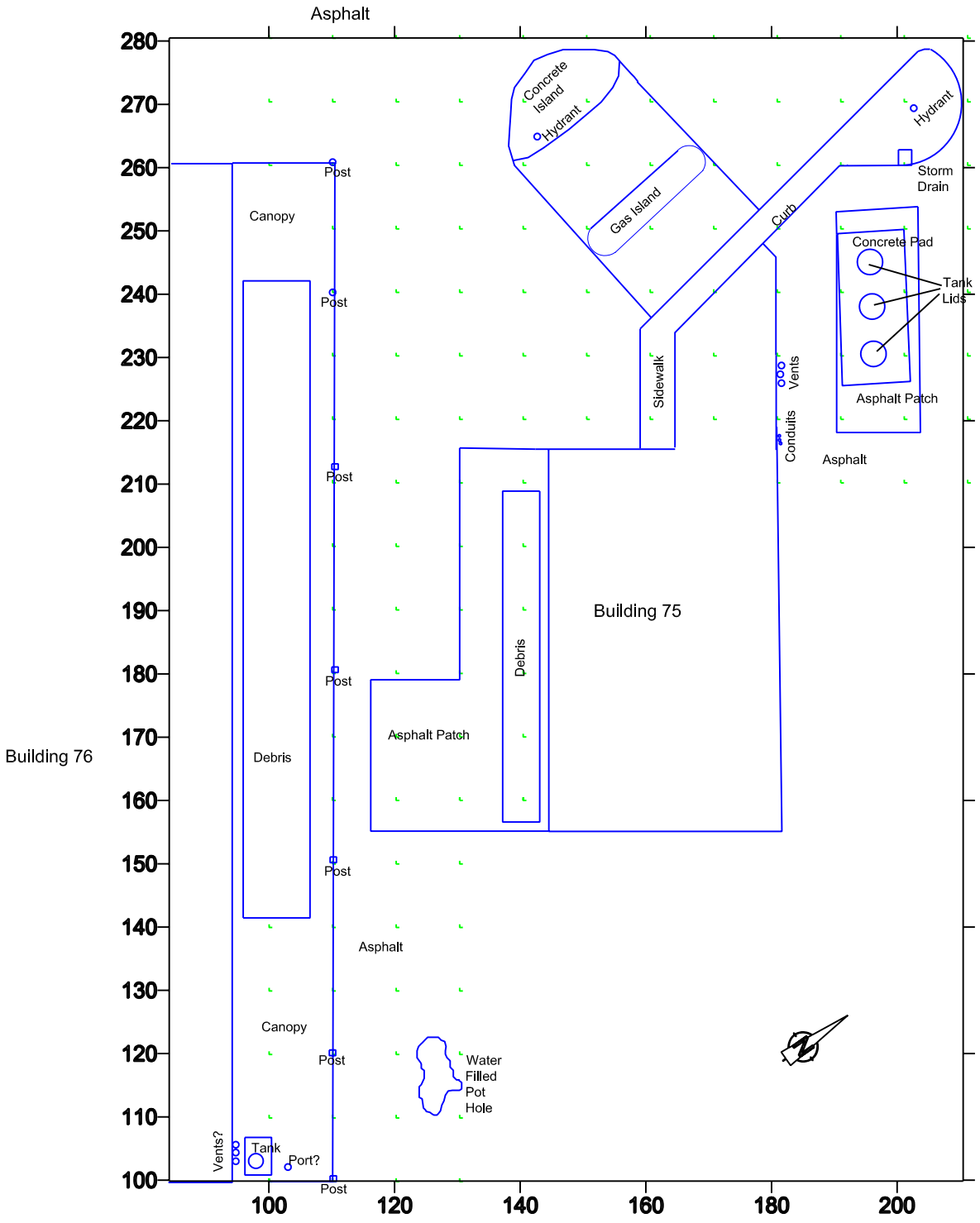


cross-section

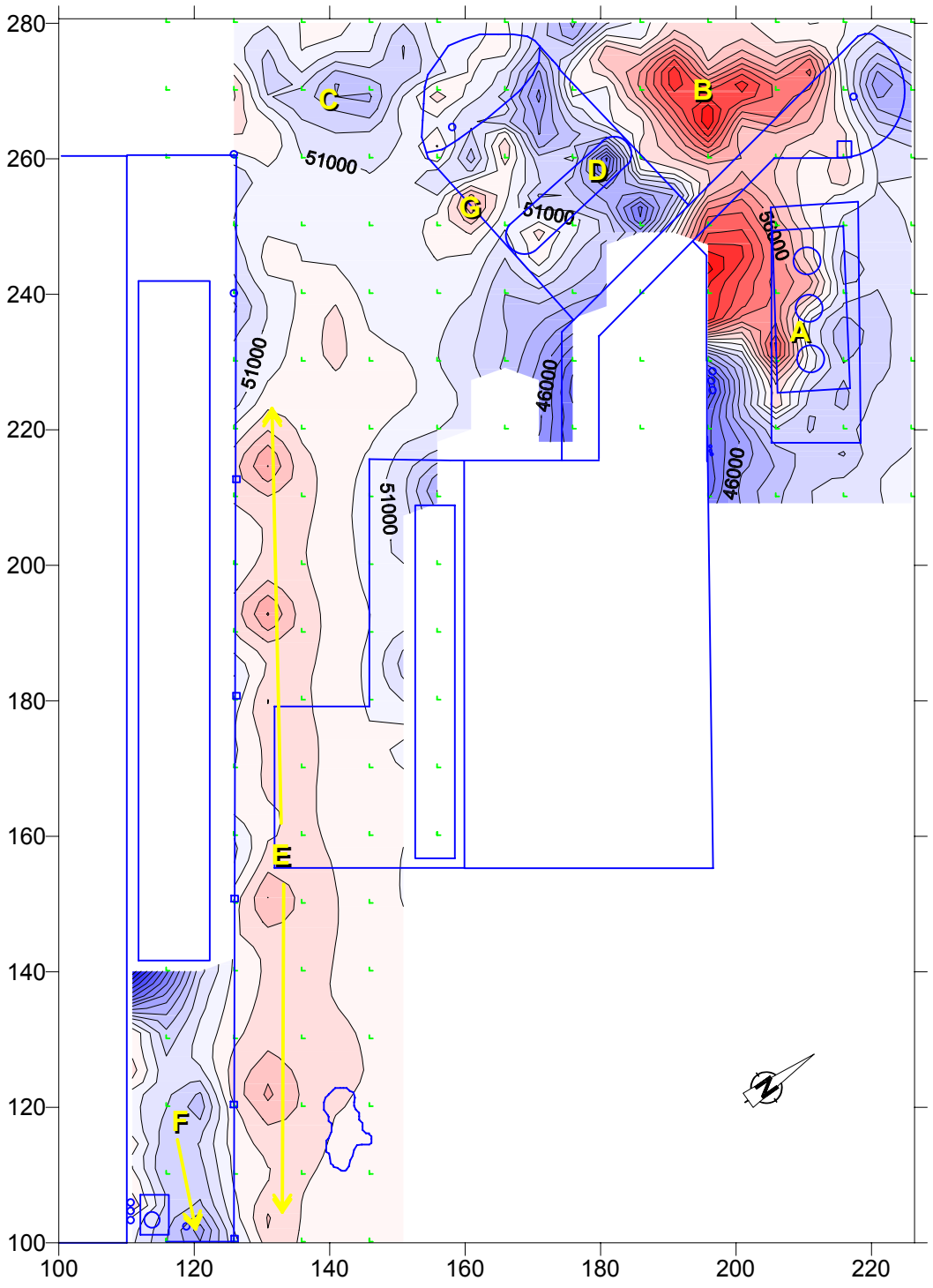
longitudinal section

Profiles acquired over a confirmed UST with 400 MHz antenna.

EARTH RESOURCES TECHNOLOGY	EXAMPLE OF MAGNETIC ANOMALY (TOP) AND GPR PROFILES (BOTTOM) REPRESENTING UNDERGROUND STORAGE TANKS (Not from this site)	FIGURE 1 updated May 5, 2006 SCALE: as shown

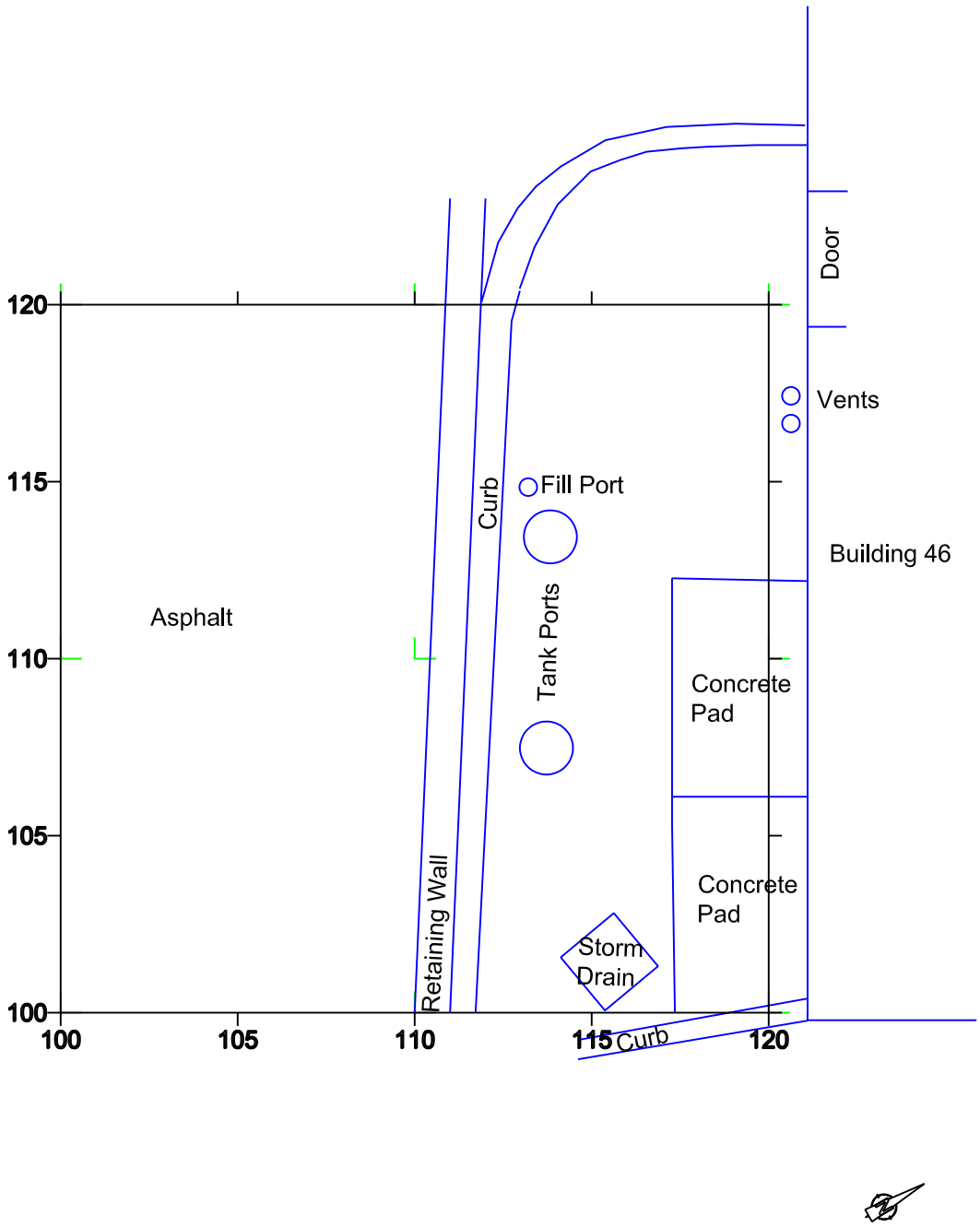


EARTH RESOURCES TECHNOLOGY	SITE MAP Armed Forces Retirement Home, Bldgs. 75 & 76 Washington, D.C.	FIGURE 2 August 21, 2006 Scale: 1" = 25'

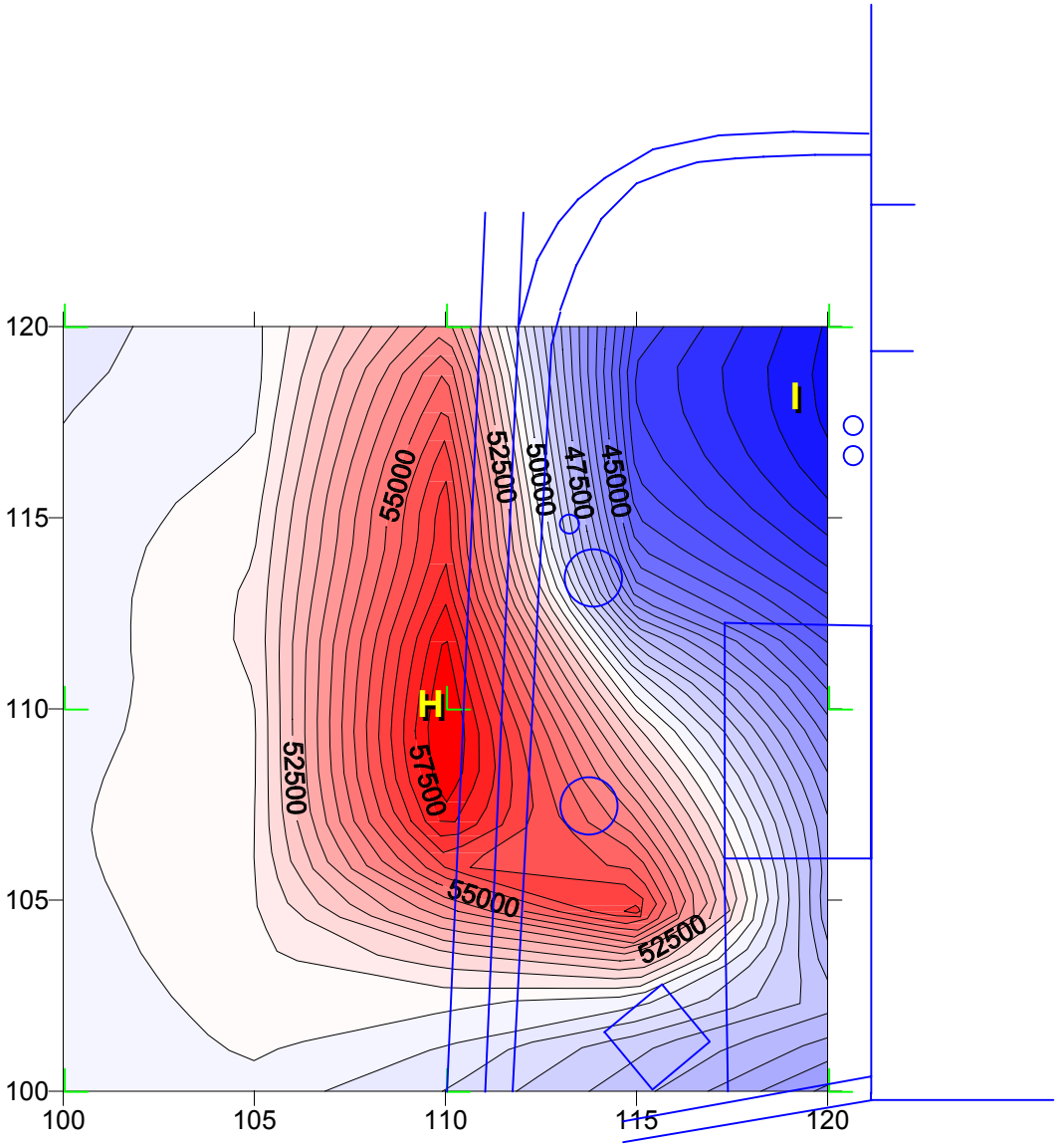


Contour Interval = 1000 nT

EARTH RESOURCES TECHNOLOGY	MAGNETIC FLUX DENSITY CONTOUR MAP Armed Forces Retirement Home, Bldgs. 75 &76 Washington, D.C.	FIGURE 3 August 21, 2006 SCALE: 1" = 25'

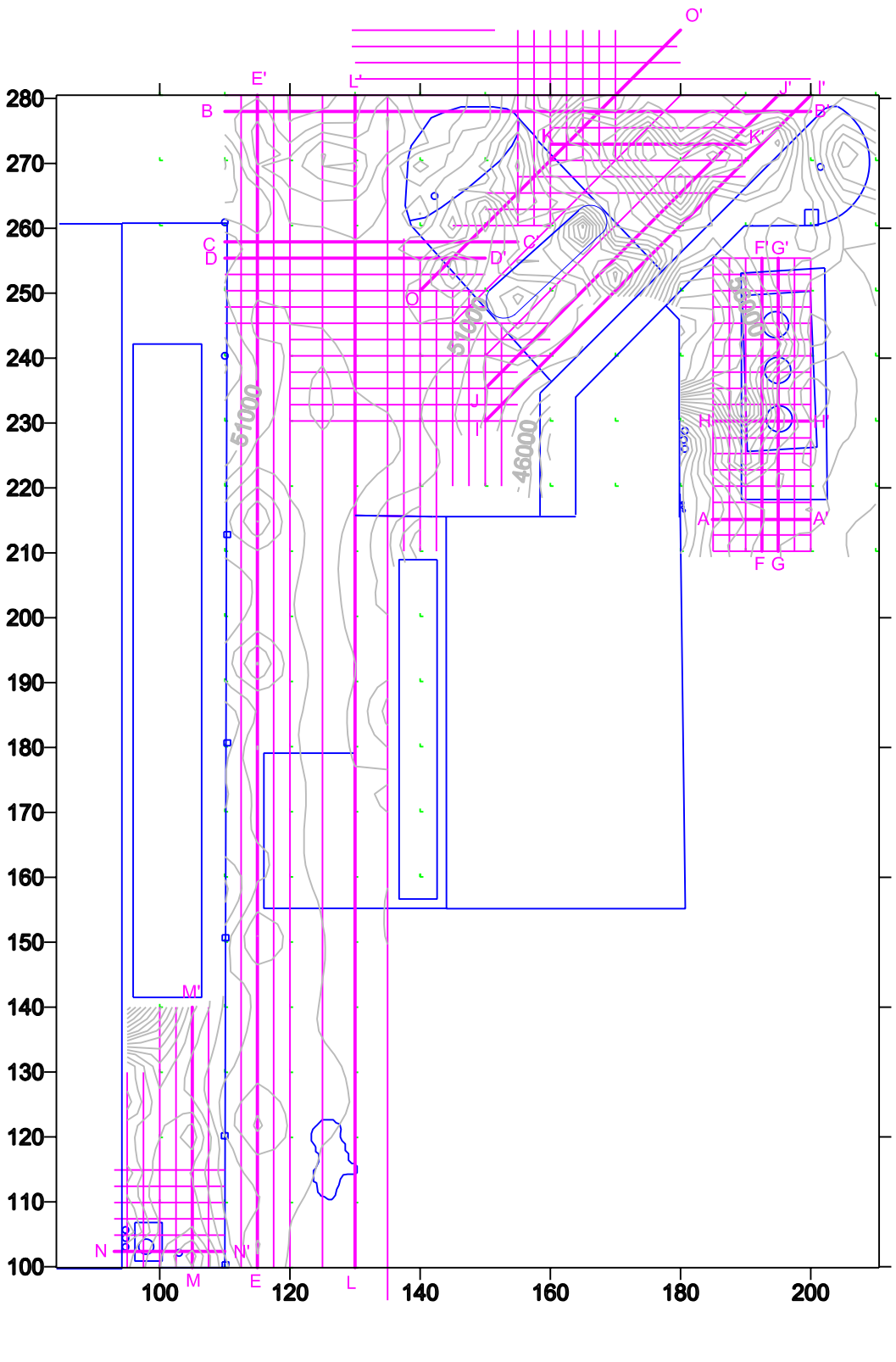


EARTH RESOURCES TECHNOLOGY	SITE MAP Armed Forces Retirement Home, Bldg. 46 Washington, D.C.	FIGURE 4 August 21, 2006 Scale: 1" = 5'

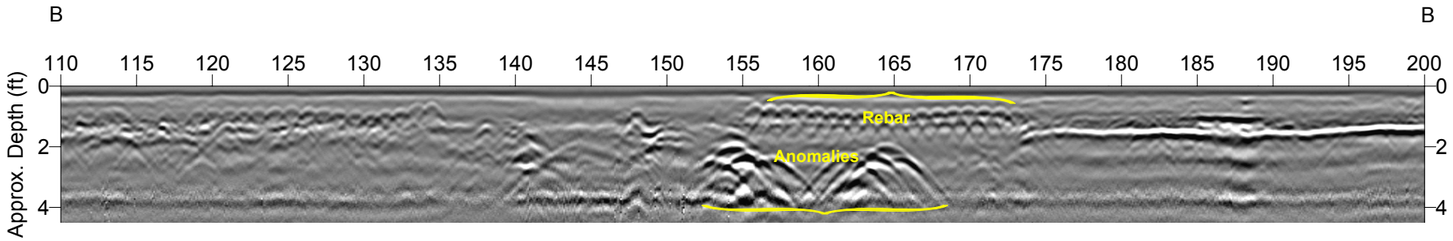


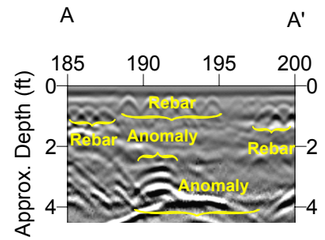
Contour Interval = 500 nT

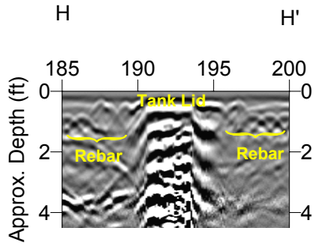
EARTH RESOURCES TECHNOLOGY	MAGNETIC FLUX DENSITY CONTOUR MAP Armed Forces Retirement Home, Bldg. 46 Washington, D.C	FIGURE 5 August 21, 2006 SCALE: 1" = 5'

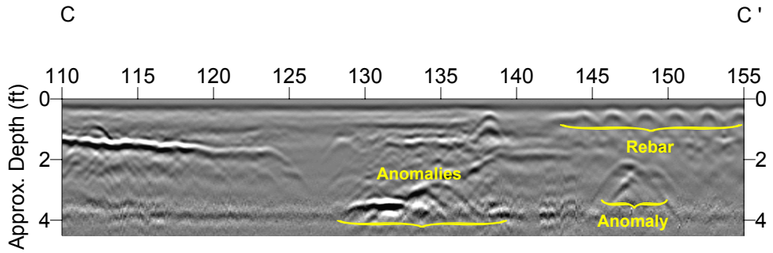


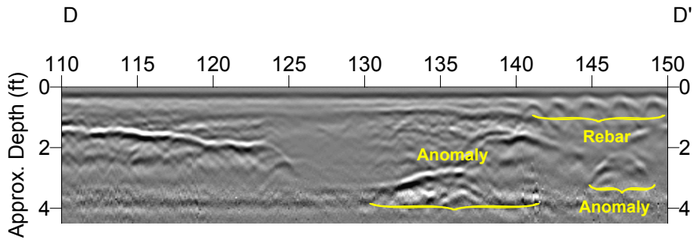
EARTH RESOURCES TECHNOLOGY	GPR PROFILE LOCATIONS Armed Forces Retirement Home, Bldgs. 75 & 76 Washington, D.C.	FIGURE 6 August 21, 2006 Scale: 1" = 25'

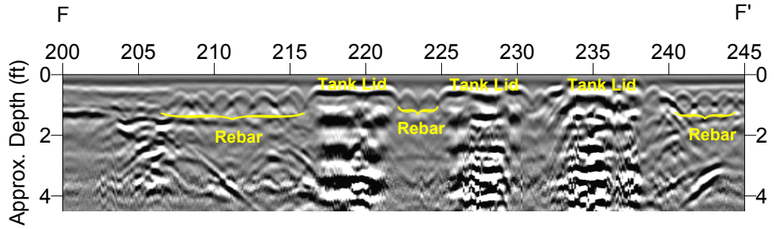


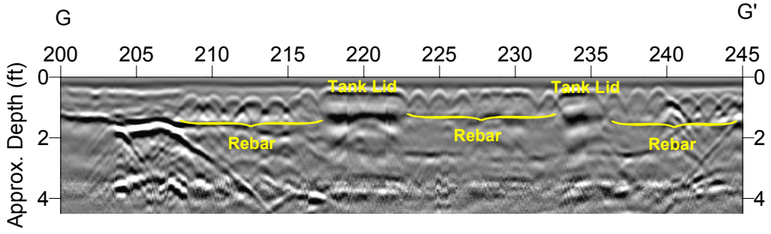












GPR profiles collected August 9, 2006, using GSSI SIR-3000 with 400 MHz antenna.
All profiles cropped at exactly 27.5 ns and converted to approximate depth assuming 0.1 m/ns velocity.

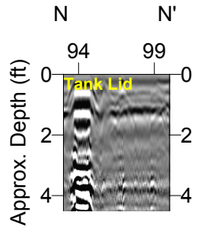
EARTH RESOURCES TECHNOLOGY

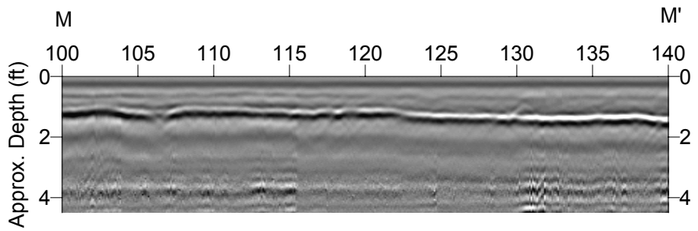
GROUND PENETRATING RADAR PROFILES
Armed Forces Retirement Home, Bldgs. 75 & 76
Washington, D.C.

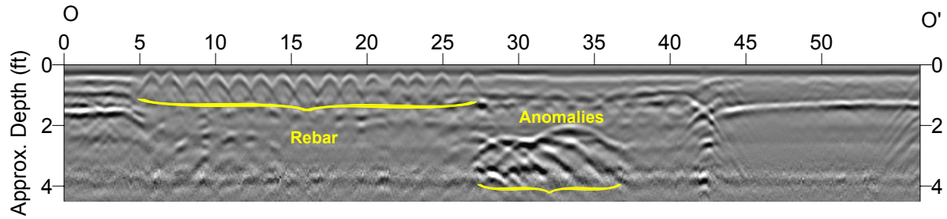
FIGURE 7

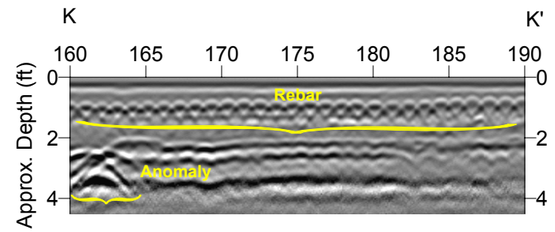
August 21, 2006

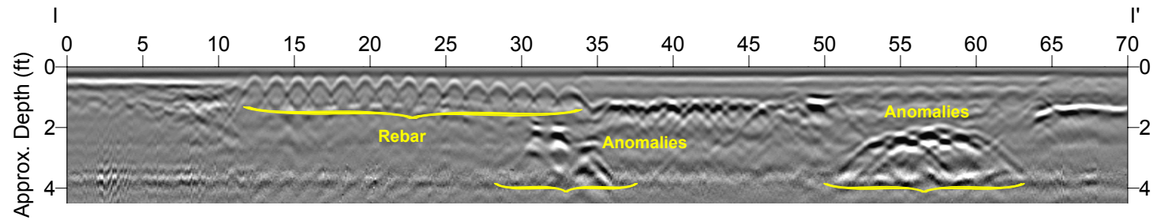
Horiz. Scale: 1" = 10'
Vert. Scale: 1" = 5'

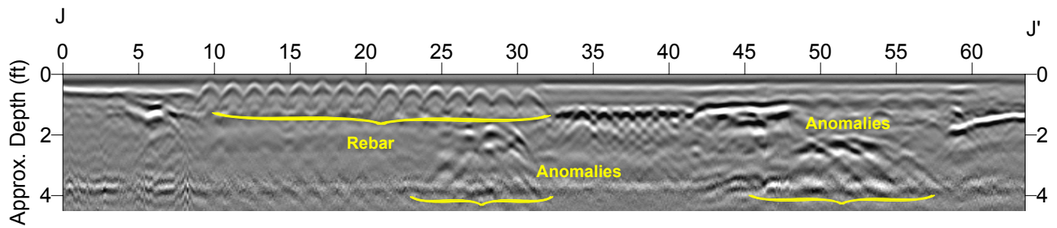












GPR profiles collected August 9, 2006, using GSSI SIR-3000 with 400 MHz antenna.
All profiles cropped at exactly 27.5 ns and converted to approximate depth assuming 0.1 m/ns velocity.

GPR profiles J-J', Q-Q', and I-I' all have horizontal axes that represent linear distance only, and do not reflect the coordinate grid.

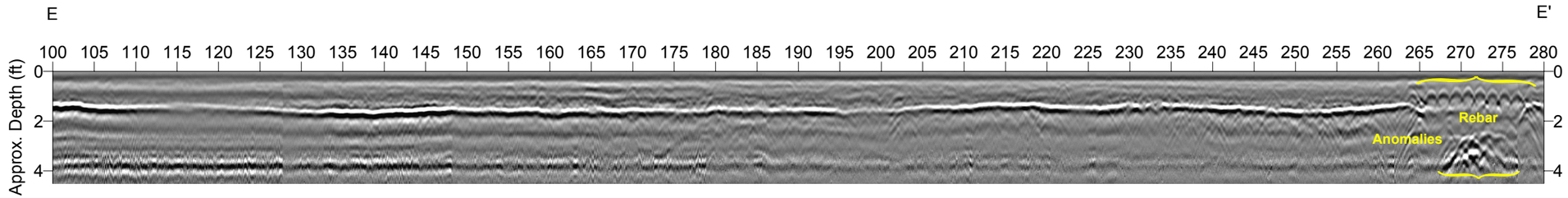
EARTH RESOURCES TECHNOLOGY

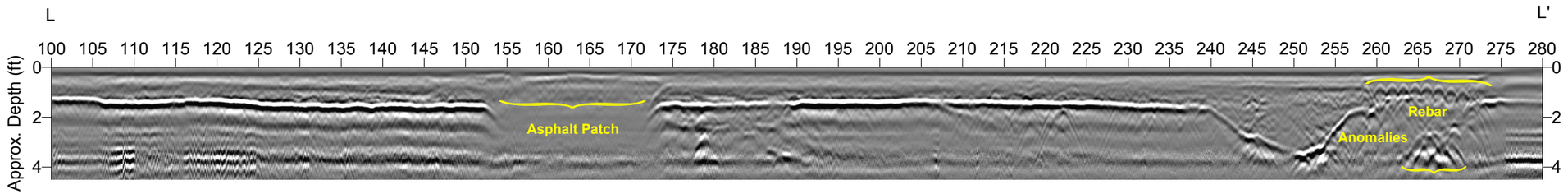
GROUND PENETRATING RADAR PROFILES
Armed Forces Retirement Home, Bldgs. 75 & 76
Washington, D.C.

FIGURE 8

August 21, 2006

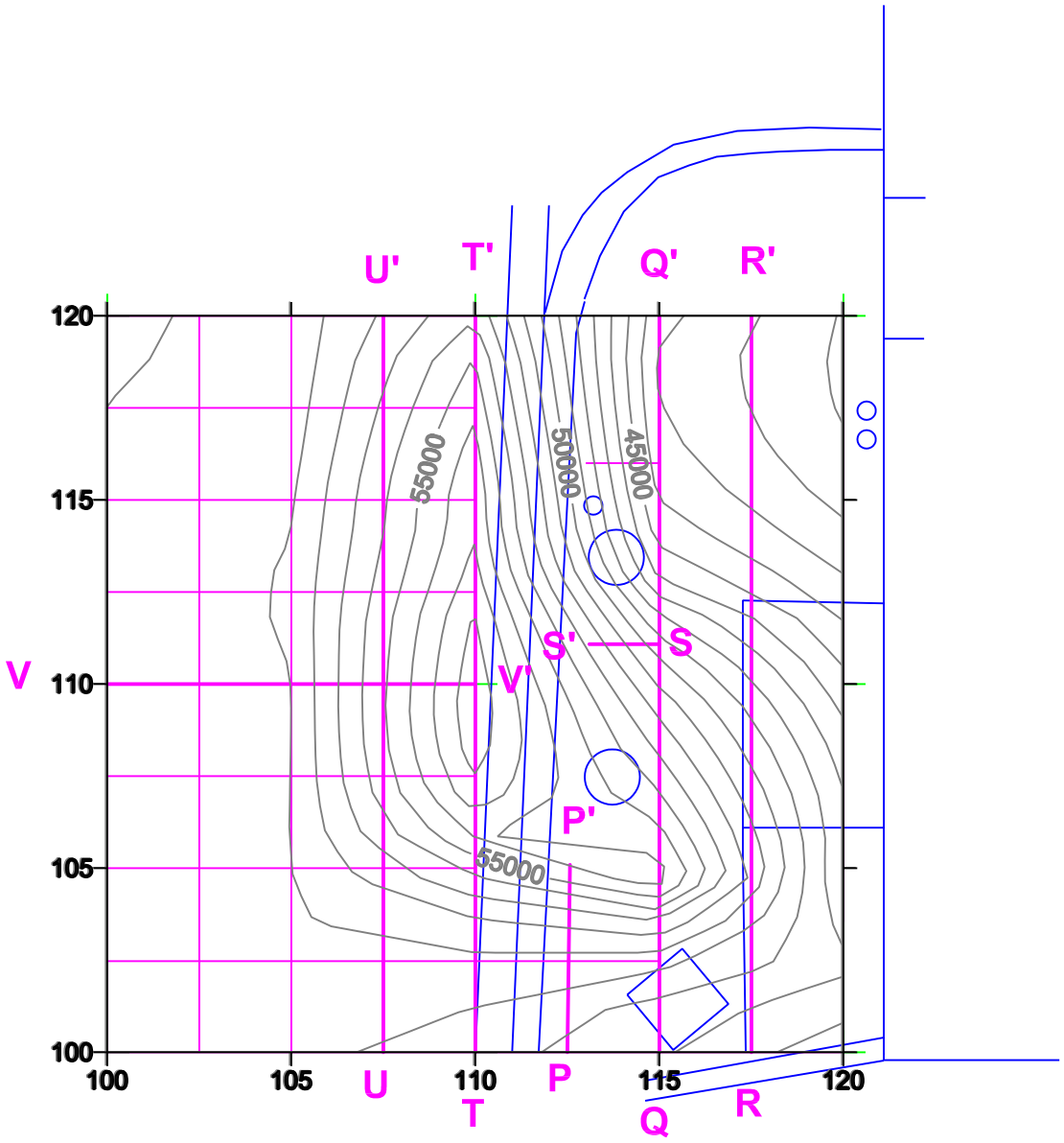
Horiz. Scale: 1" = 10'
Vert. Scale: 1" = 5'



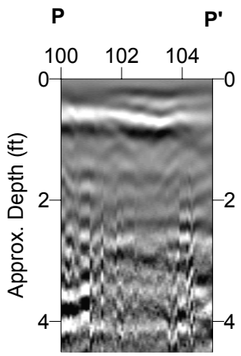


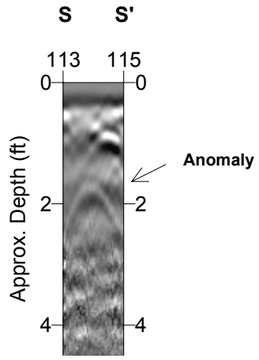
GPR profiles collected August 9, 2006, using GSSI SIR-3000 with 400 MHz antenna.
All profiles cropped at exactly 27.5 ns and converted to approximate depth assuming 0.1 m/ns velocity.

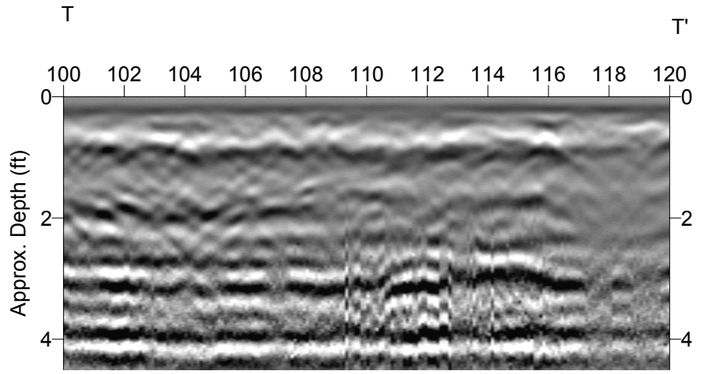
EARTH RESOURCES TECHNOLOGY	GROUND PENETRATING RADAR PROFILES Armed Forces Retirement Home, Bldgs. 75 & 76 Washington, D.C.	FIGURE 9 August 21, 2006 Horiz. Scale: 1" = 15' Vert. Scale: 1" = 5'

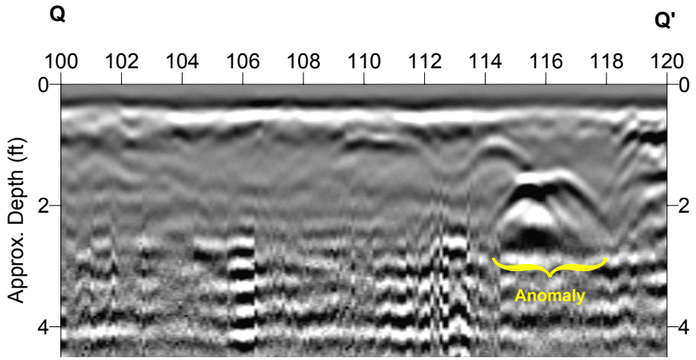


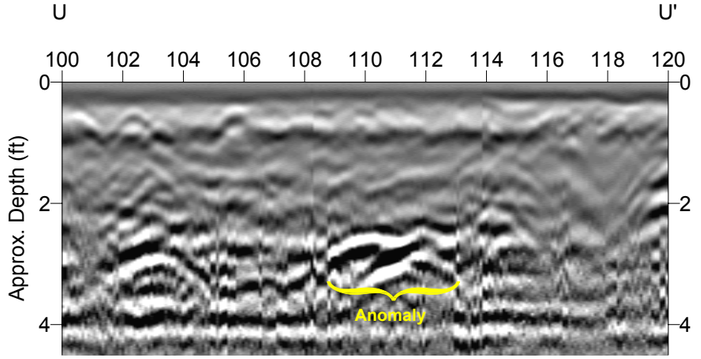
EARTH RESOURCES TECHNOLOGY	GPR PROFILE LOCATIONS Armed Forces Retirement Home, Bldg. 46 Washington, D.C.	FIGURE 10 August 21, 2006 Scale: 1" = 5'

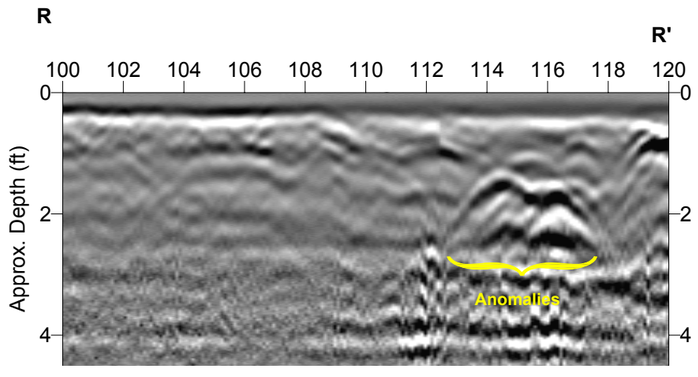


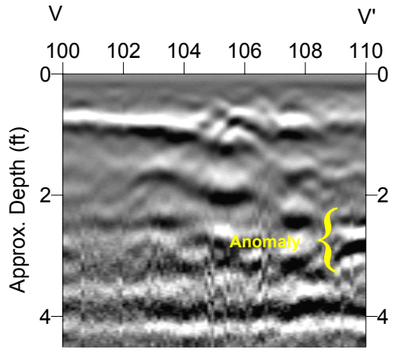












GPR profiles collected August 9, 2006, using GSSI SIR-3000 with 400 MHz antenna.
All profiles cropped at exactly 27.5 ns and converted to approximate depth assuming 0.1 m/ns velocity.

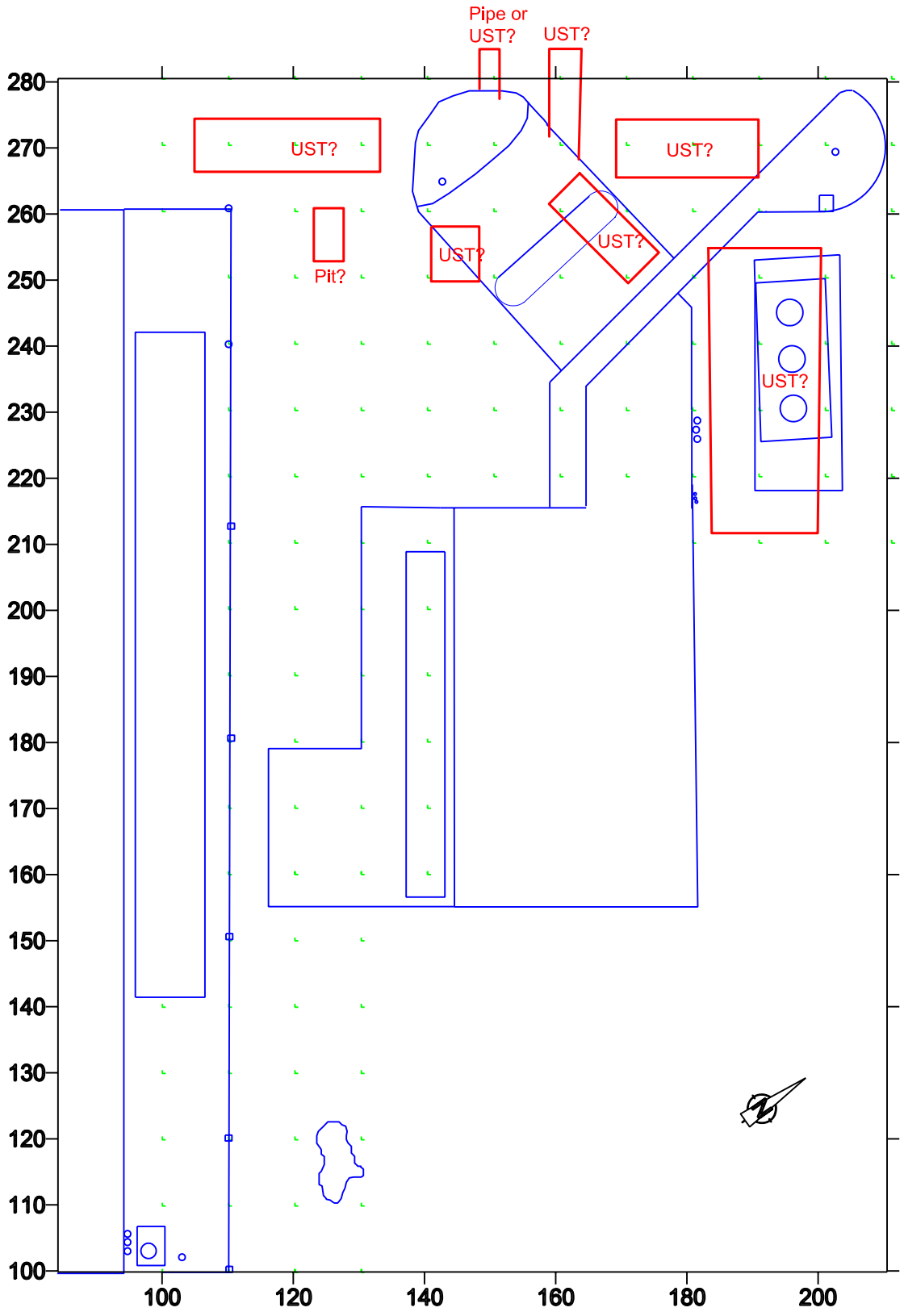
EARTH RESOURCES TECHNOLOGY

GROUND PENETRATING RADAR PROFILES
Armed Forces Retirement Home, Bldg. 46
Washington, D.C.

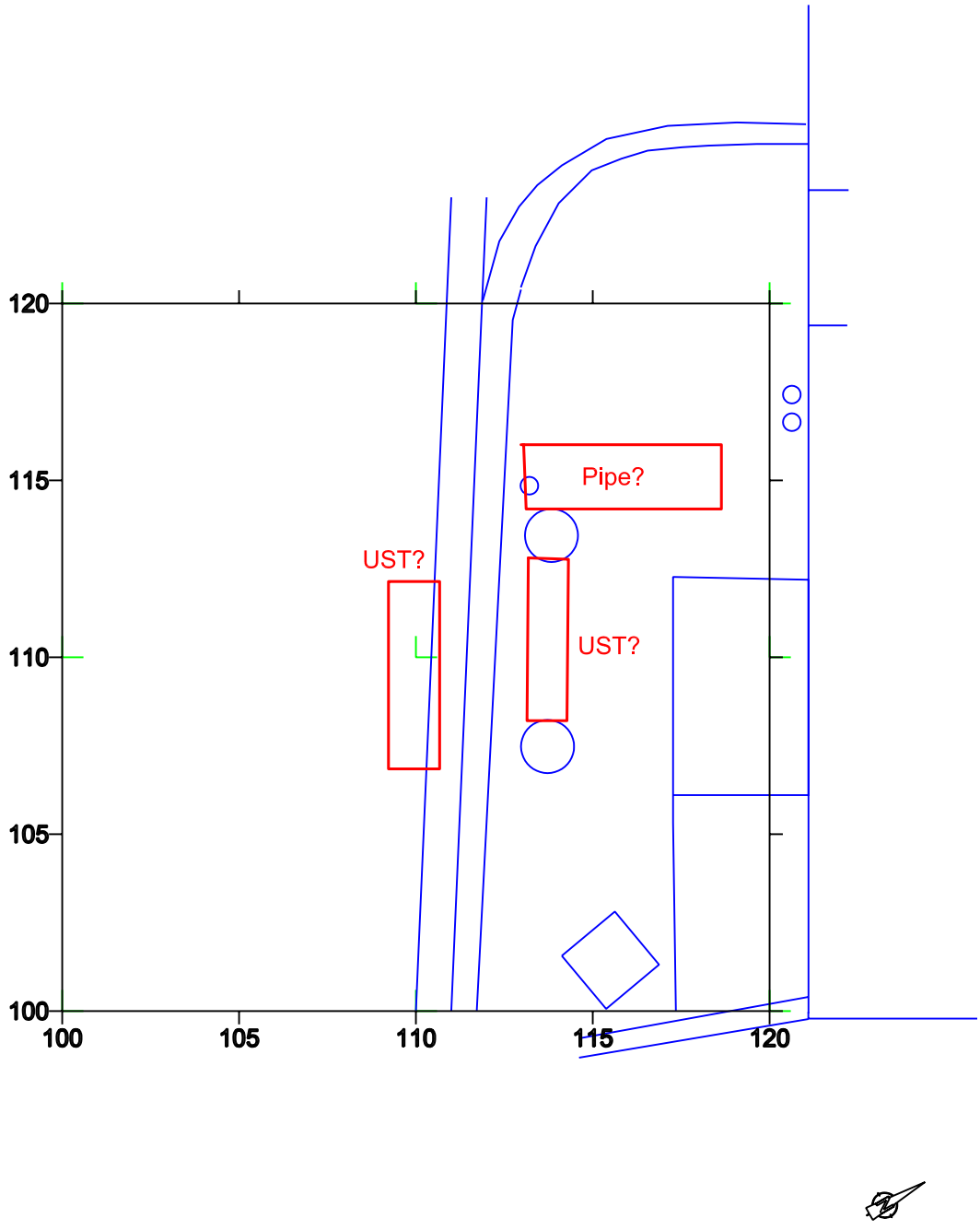
FIGURE 11

August 21, 2006

Horiz. Scale: 1" = 5'
Vert. Scale: 1" = 2.5'



EARTH RESOURCES TECHNOLOGY	ANOMALY LOCATIONS Armed Forces Retirement Home, Bldgs. 75 & 76 Washington, D.C.	FIGURE 12 August 21, 2006 Scale: 1" = 25'



EARTH RESOURCES TECHNOLOGY	ANOMALY LOCATIONS Armed Forces Retirement Home, Bldg. 46 Washington, D.C.	FIGURE 13 August 21, 2006 Scale: 1" = 5'