FINAL

FORSCOM

CORRECTIVE ACTION PLAN

Part A

3d Inf Div (Mech)

Former Heating Oil Tank (HOT)
Building 8582
Hunter Army Airfield, Georgia

Prepared for

U.S. ARMY CORPS OF ENGINEERS
SAVANNAH DISTRICT

Contract No. DACA21-95-D-0022
Delivery Order 0019

January 1999

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DOCUMENT 13

FINAL

CORRECTIVE ACTION PLAN - PART A REPORT FOR FORMER HEATING OIL TANK (HOT) BUILDING 8582 HUNTER ARMY AIRFIELD, GEORGIA

Prepared for:

U.S. Army Corps of Engineers - Savannah District
and
Fort Stewart Directorate of Public Works
Under Contract Number DACA21-95-D-0022
Delivery Order 0019

Prepared by:

Science Applications International Corporation
800 Oak Ridge Turnpike
Oak Ridge, Tennessee 37831

January 1999

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List of Abbreviations and Acronyms

ASTM	American Society for Testing and Materials
ATL	alternate threshold level
BDL	below detection limit
BGS	below ground surface
BLS	below land surface
BTEX	benzene, toluene, ethylbenzene, and xylene
BTL	below threshold level
CAP	Corrective Action Plan
CL	clay
COE	(U.S. Army) Corps of Engineers
CX	Center of Excellence
DOT	U.S. Department of Transportation
DPW	Directorate of Public Works
DQA	data quality assessment
DQCR	Daily Quality Control Report
DQO	date quality objective
DRO	diesel-range organics

EPA	U.S. Environmental Protection Agency
EPD	Environmental Protection Division
FS	Fort Stewart
GA DNR	Georgia Department of Natural Resources
GEL	General Engineering Laboratories
gpm	gallons per minute
GRO	gasoline-range organics
GUST	Georgia Underground Storage Tank
HAAF	Hunter Army Airfield
HOT	Heating Oil Tank
ID	inside diameter
IDW	investigation-derived waste
IWTP	Industrial Waste Treatment Plant
LCS	laboratory control sample
MCL	maximum contaminant level
µg/kg	micrograms per kilogram
µg/L	micrograms per liter
mg/kg	milligrams per kilogram
MPR	Monthly Progress Report
MS	matrix spike
MSL	mean sea level
N/A	not applicable
NCO	noncommissioned officer
NRC	no regulatory criteria
OES	Omega Environmental Services, Inc.
OVM	organic vapor meter
PAHs	polynuclear aromatic hydrocarbon
PID	photoionization detector
ppm	parts per million
PVC	polyvinyl chloride
QA	quality assurance
QA/QC	quality assessment/quality control
QAPjP	Quality Assurance Project Plan
QC	quality control
QCSR	Quality Control Summary Report
RCRA	Resource Conservation and Recovery Act
RPD	relative percent difference
SAIC	Science Applications International Corporation
SAS	South Atlantic Savannah (Division)
SC	clayey sand
SC-SM	clayey, silty sand
SM	silty sand
SP-SC	poorly graded, clayey sand
SW	sand
TBD	to be determined
TCLP	Toxicity Characteristic Leaching Procedure
TOC	total organic carbon
TPH	total petroleum hydrocarbon
UNK	unknown
USACE	U.S. Army Corps of Engineers

USGS	U.S. Geological Survey
UST	underground storage tank
USTMP	Underground Storage Tank Management Program
VOC	volatile organic compound

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CORRECTIVE ACTION PLAN PART A

Facility Name: Former Heating Oil Tank, Building 8582 Street Address: Perimeter Road, HAAF

Facility ID: N/A City: Savannah County: Chatham Zip Code: 31406

Latitude: 32°01'00" N Longitude: 81°09'57" W

Submitted by UST Owner/Operator:
Name: Thomas C. Fry/Environmental Branch
Company: U.S. Army/HQ 3d, Inf. Div. (Mech)
Address: DPW ERD ENV. Br. (Fry)
1557 Frank Cochran Drive
City: Fort Stewart State: Georgia
Zip Code: 31314-4928
Telephone: (912) 767-1078

Prepared by Consultant/Contractor:
Name: C. Allison Bailey
Company: SAIC
Address: P.O. Box 2502
City: Oak Ridge State: TN
Zip Code: 37831
Telephone: (423) 481-8719

I. PLAN CERTIFICATION:

A. UST Owner/Operator Certification

I hereby certify that the information contained in this plan and in all the attachments is true, accurate, and the plan satisfies all criteria and requirements of rule 391-3-15-09 of the Georgia Rules for Underground Storage Tank Management.

Name: Thomas C. Fry
Signature: Thomas C. Fry Date: 02/02/99

B. Registered Professional Engineer or Professional Geologist Certification

I hereby certify that I have directed and supervised the field work and preparation of this plan, in accordance with State Rules and Regulations. As a registered professional geologist and/or professional engineer, I certify that I am a qualified groundwater professional, as defined by the Georgia State Board of Professional Geologists. All of the information and laboratory data in this plan and in all of the attachments are true, accurate, complete, and in accordance with applicable State Rules and Regulations.

Name: John B. Reeves, P.E.
Signature: John B Reeves
Date: 1-22-99

Georgia Stamp or Seal

General: READ THE GUIDANCE DOCUMENT FOR CAP PART-A BEFORE COMPLETING THIS FORM. FAILURE TO READ THE GUIDANCE DOCUMENT WILL MOST LIKELY RESULT IN PREPARATION OF AN UNACCEPTABLE REPORT. All text, figures, and tables requested in their respective sections should be prepared strictly in accordance with the Georgia EPD CAP-A guidance document. Please fill out this form as provided. Do not change the size of the fields or alter the placement of each section on each page.
(Appendix I: All Report Figures)
(Appendix II: All Report Tables)

II. INITIAL RESPONSE REPORT

A. Initial Abatement

Were initial abatement actions initiated? YES ____ NO X
If Yes, please summarize. If No, please explain why not.

Actions were not required to abate imminent hazards and/or emergency conditions at the Former Heating Oil Tank (HOT), Building 8582 site. Therefore, contaminant migration and release prevention, fire and vapor mitigation, or emergency free product removal were not performed prior to, or during, the removal of the Former HOT.

B. Free Product Removal

(Table 1: Summary of Free Product Removal – must include Free Product thickness in each well in which it was detected, and volume of product removed)

Free Product Detected? YES ____ NO X
If Yes, please summarize free product recovery efforts.

Continuing free product recovery proposed? YES ____ NO X
If yes, please indicate the method and frequency of removal.

C. Tank History

List current and former UST's operated at site based on owner/operator knowledge consistent with EPA 7530-1 Form). Systems must be illustrated on Figure 2 (Site Plan), as described in section D below.

CURRENT UST SYSTEMS (if applicable)

Tank ID Number	Capacity (gal)	Substance Stored	Age (yrs)	Meets 1998 Upgrade Standards (Yes/No)
N/A	N/A	N/A	N/A	N/A

FORMER UST SYSTEMS (if applicable)

Tank ID Number	Capacity (gal)	Substance Stored	Date Removed
N/A	1,000	heating oil	January 7, 1997

D. Initial Site Characterization

(Figure 1: Vicinity/Location Map)
(Figure 2: Site Plan)

1. Regulated Substance Released (gasoline, diesel, used oil, etc.): heating oil .
Discuss how this determination was made and circumstances of discovery.

Characterization of petroleum-related contamination at the site was initiated during system closure activities on January 7, 1997, by Omega Environmental Services (OES). After removal of the Former HOT and ancillary piping, three soil samples were collected from the tank pit (Figure 7). Two soil samples (OES-W-1 and OES-E-3) were collected from native soil at the Former HOT excavation base approximately 9 feet below ground surface (BGS), and one soil sample (OES-NE-2) was collected from the lower one-third of the northeast corner excavation pit side wall (OES 1997). The laboratory results indicated that concentrations of ethylbenzene and chrysene were present at concentrations that exceeded Georgia Environmental Protection Division (GA EPD) applicable soil threshold levels (i.e., Table A, column 1). In addition, elevated concentrations of total petroleum hydrocarbons (TPH) were also found to be present (Appendix II, Tables 5a and 5b).

2. Source(s) of Contamination: Unknown; piping leakage or tank overflow suspected .
Discuss how this determination was made.

A detailed schematic diagram illustrating the Former HOT and ancillary piping as configured during operation is not available. However, during removal activities by OES, holes in the tank were not reported. Therefore, the major source of contamination at the Former HOT is believed to have been piping leakage or tank overflow.

3. Local Water Resources

(Figure 3: Quadrangle Map - Public and Private drinking water and surface water)
(Appendix III: Water resources survey documentation, including, but not limited to: USGS database search, interview forms, and documentation of field survey)

a. *Site located in high/average* X *OR low* ____ *groundwater pollution susceptibility area?*

b. *Water Supplies within applicable radii?* YES X NO ____
If yes,
i. *Nearest public water supply located within:* 176 *feet*

ii. *Nearest down-gradient public water supply located within:* 7,200 *feet*

iii. *Nearest non-public water supply located within:* 4,320 *feet*

iv. *Nearest down-gradient non-public water supply located within:* 4,320 *feet*

c. *Surface Water Bodies and sewers:*

i. *Nearest surface water supply located within:* 360 *feet*

ii. *Nearest down-gradient surface water located within:* 360 *feet*

iii. *Nearest storm or sanitary sewer located within:* 5 *feet*

iv. *Depth to bottom of sewer at a point nearest the plume:* 2.0 *feet*

4. Impacted Environmental Media

a. *Soil Impacted*
(Table 2: Soil Analysis Results)
(Figure 4: Soil Quality Map)
(Appendix IV: Soil Boring Logs)
(Appendix V: Soil Laboratory Reports)
(Appendix VI: ATL Calculations, if applicable)

Provide a brief discussion of soil sampling.

Continuous direct-push soil cores were collected at 2.0-foot intervals during the installation of boreholes (01 through 04). The installation of 0-3 was unsuccessful on four separate occasions (0-3A through 0-3D) because the concrete tank pad was encountered. The fifth attempt was successful (present location of 0-3). Field headspace gas analyses were performed on each sample to determine organic vapor concentration. Two soil samples were selected from each borehole for laboratory chemical analysis of BTEX, TPH gasoline-range organics/diesel-range organics (GROs/DROs), and PAHs. In boreholes where organic vapors were detected, one sample was collected from the 2.0-foot interval where the highest vapor concentration was recorded, and the other from the 2.0-foot interval located immediately above the saturated zone. If organic vapors were not detected, one sample was collected from the 2.0-foot interval directly below ground surface, and the other from the 2.0-foot interval located immediately above the saturated zone. Refer to Attachment A for complete documentation of the technical approach implemented during this investigation.

i. Soil contamination above applicable threshold levels?

YES ____ NO X

If yes, indicate highest concentrations in soil along with locations and depths detected.

ii. ATLs calculated? YES ____ NO X

If yes, present ATLs.

iii. If ATL's calculated, is soil contamination above ATL's?

YES ____ NO ____ N/A X

b. *Groundwater Impacted*

(Table 3: Groundwater Analysis Results)
(Figure 5: Groundwater Quality Map)
(Appendix VII: Monitoring Well Details)
(Appendix VIII: Groundwater Laboratory Results)

Provide a brief discussion of groundwater sampling.

At each borehole location (01 through 04), one groundwater sample was collected from a depth interval of approximately 1.0 to 5.0 feet below the saturated zone using a direct-push sampling device. At the vertical profile location (0 to 5), discrete groundwater samples were collected every 10 feet below the water table down to approximately 40 feet BGS (the estimated depth of the Hawthorn confining unit). Although the Hawthorn unit was not encountered at 40 feet BGS, the vertical profile was terminated at this depth because of the difficulty experienced during the extraction of groundwater samples. Chemical parameters for groundwater samples submitted for laboratory analysis included BTEX and PAHs. Refer to Attachment A for complete documentation of the technical approach implemented during this investigation.

i. Groundwater contamination above MCLs? YES ____ NO X

ii. Groundwater contamination above In-Stream Water Quality Standards?

YES ____ NO X

If yes, indicate highest concentrations in groundwater along with the locations.

c. *Surface Water Impacted?* YES ____ NO X
If Yes, indicate concentration(s) of surface water sample(s) taken from the surface water body/bodies impacted.

d. *Point of Withdrawal Impacted?* YES ____ NO ____ N/A X
If Yes, indicate concentration(s) of water sample(s) taken from withdrawal point(s).

5. Other Geologic/Hydrogeologic Data

a. *Depth to Groundwater:* 7.94 to 10.26 feet BGS *(Table 4: Groundwater Elevations)*

b. *Groundwater Flow Direction:* southeast *(Figure 6: Potentiometric Surface Map)*

c. *Hydraulic Gradient:* 0.05 feet/feet

d. *Geophysical Province:* Coastal Plain

e. *Unique geologic/hydrogeological conditions:* None.

6. Corrective Action Completed or In-Progress (if applicable)
(Table 5: UST System Closure Sampling)
(Figure 7: UST System Closure Sampling)
(Appendix IX: Contaminated Soil Disposal Manifests)

a. *Underground Storage Tank (UST) System Closure:* N/A ____
If applicable, summarize UST system closure activities conducted.

OES removed the Former HOT on January 7, 1997. The piping was drained into the tank, and all remaining contents were subsequently removed using a vacuum truck and/or compressor-driven barrel vacuum device. The piping was then closed in place by filling with grout. A backhoe was used to excavate down to the tank top. After the tank atmosphere was tested with a combustible gas indicator, all accessible tank openings were capped and the tank was lifted from the excavation pit.

b. Excavation and Treatment/Disposal of Backfill Materials and Native Soils
Check one: *No UST removal performed* ____
Returned to UST excavation ____
Excavated soils treated or disposed off site X
If soils were excavated, summarize excavation and treatment/disposal activities:

Approximately 32 cubic yards of soil removed from the Building 8582 site were segregated using a photoionization detector (PID) and stockpiled at the OES temporary soil containment area located at Hunter Army Airfield (HAAF) where it was tested in accordance with the disposal facility requirements. The soil was transported to Kedesh, Inc., Highway 84, Ludowici, GA 31316. The Installation has records of all manifests and weight tickets for the total project. However, site-specific information is not available.

7. Site Ranking:
Environmental Site Sensitivity Score: *0*
(Appendix X: Site Ranking Form)

8. Conclusions and Recommendations
Complete applicable section below, one section only

a. No Further Action Required (if applicable) N/A ____
(provide justification)

The groundwater and soil analytical data collected during the Corrective Action Plan (CAP)-Part A investigation are sufficient to define the nature and extent of petroleum-related contamination at this site. The results of the investigation indicate that site conditions do not exceed groundwater maximum contaminant levels (MCLs) or the applicable soil threshold levels (see Tables 2 and 3). Therefore, further investigation of the Former HOT, Building 8582 site is not required.

b. Monitoring Only (if applicable) N/A X
(provide justification)

c. CAP-B (if applicable N/A X
(provide justification)

III. MONITORING ONLY PLAN (if applicable): N/A X

A. Monitoring points

B. Period/Frequency of monitoring and reporting

C. Monitoring Parameters

D. Milestone Schedule

E. Scenarios for site closure or CAP-Part B

IV. SITE INVESTIGATION PLAN (if applicable): N/A X
(Figure 8: Proposed additional boring/monitoring well location)

A. Proposed Investigation of Horizontal and Vertical Extent of Contamination In:

1. Soil N/A X

2. Groundwater

a. Free Product N/A X

b. Dissolved phase NA X

3. Surface Water N/A X

B. Proposed Investigation of Vadose Zone And Aquifer Characteristics:

V. PUBLIC NOTICE

(Figure 9. Tax Map)
(Appendix XI: Copies of public notification letters & certified return receipts or newspaper notice if approved)

Public notification letters are not required for the Former HOT, Building 8582 site because heating oil tanks are not regulated as defined by Georgia Department of Natural Resources (GA DNR) guidance.

VI. CLAIM FOR REIMBURSEMENT (for GUST Trust Fund sites only): N/A X

(Appendix XII: GUST Trust Fund Reimbursement Application and Claim for reimbursement)

The HAAF is a federally owned facility and has funded the investigation for the Former HOT, Building 8582 site, which is unregulated as defined by GA DNR guidance and has no Facility Identification Number, using Environmental Restoration Account funds. Application for Georgia Underground Storage Tank Trust Fund reimbursement is not being pursued at this time.

APPENDIX I

REPORT FIGURES

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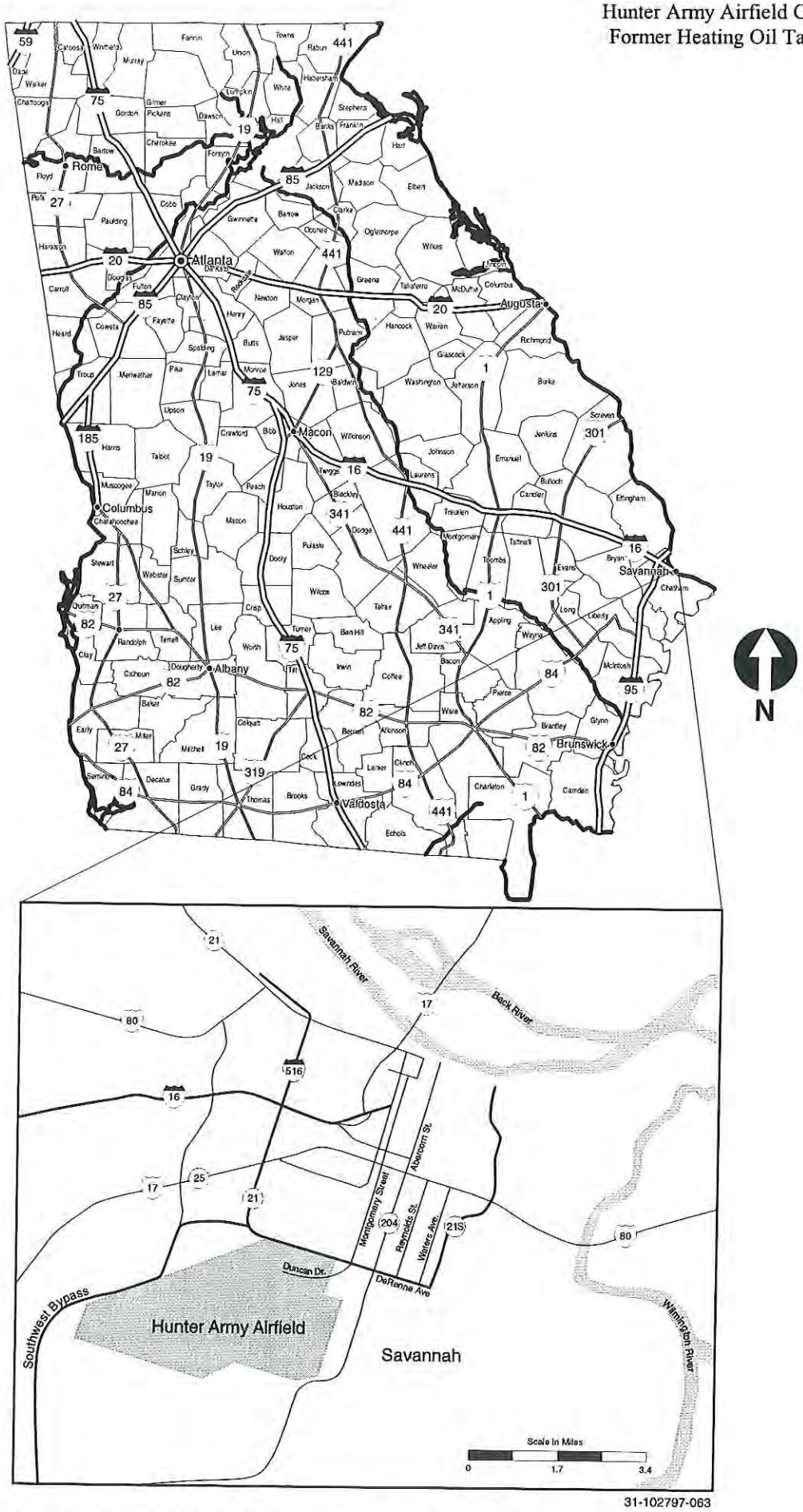


Figure 1. Location Map of Hunter Army Airfield, Chatham County, Georgia

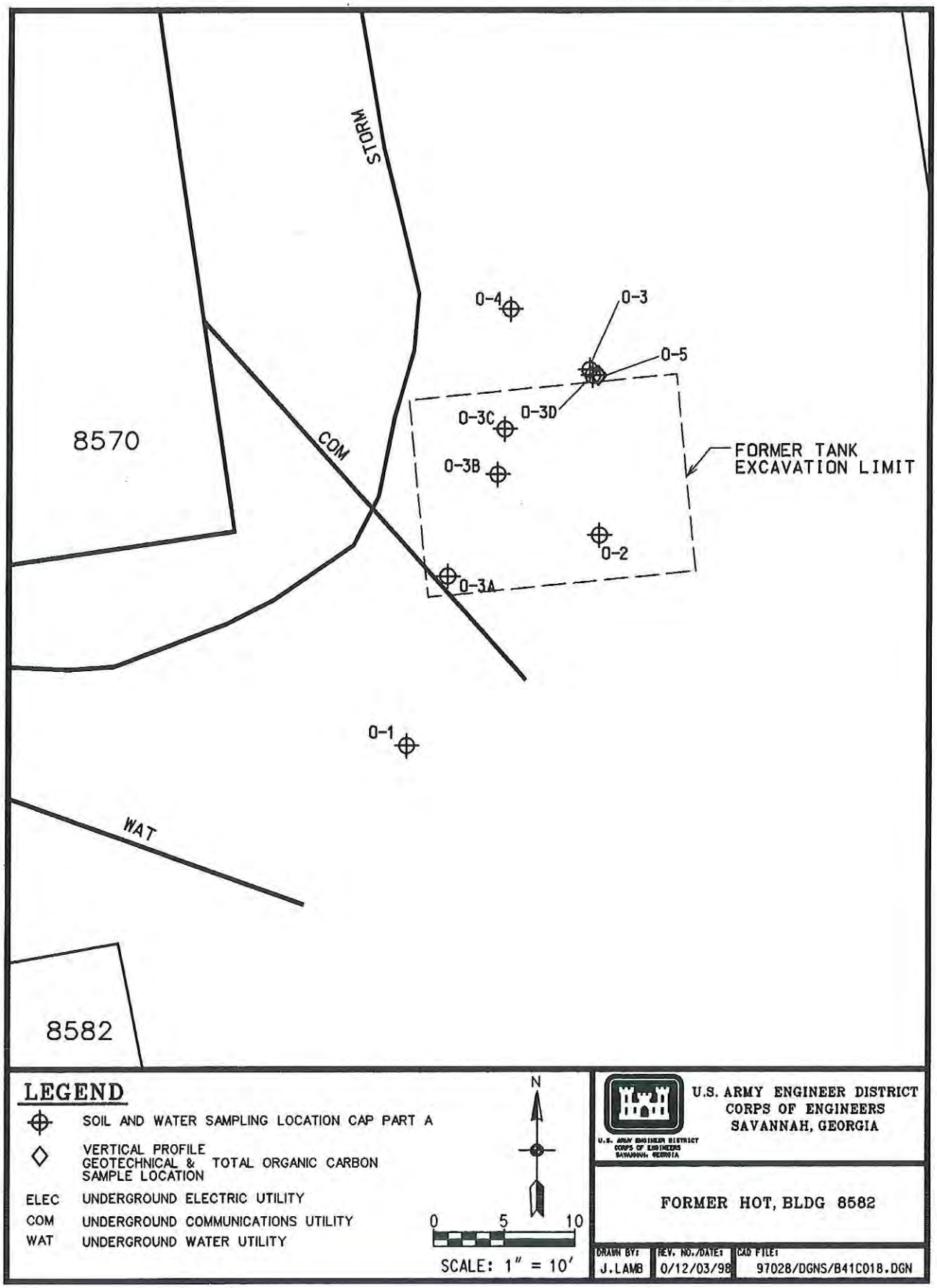
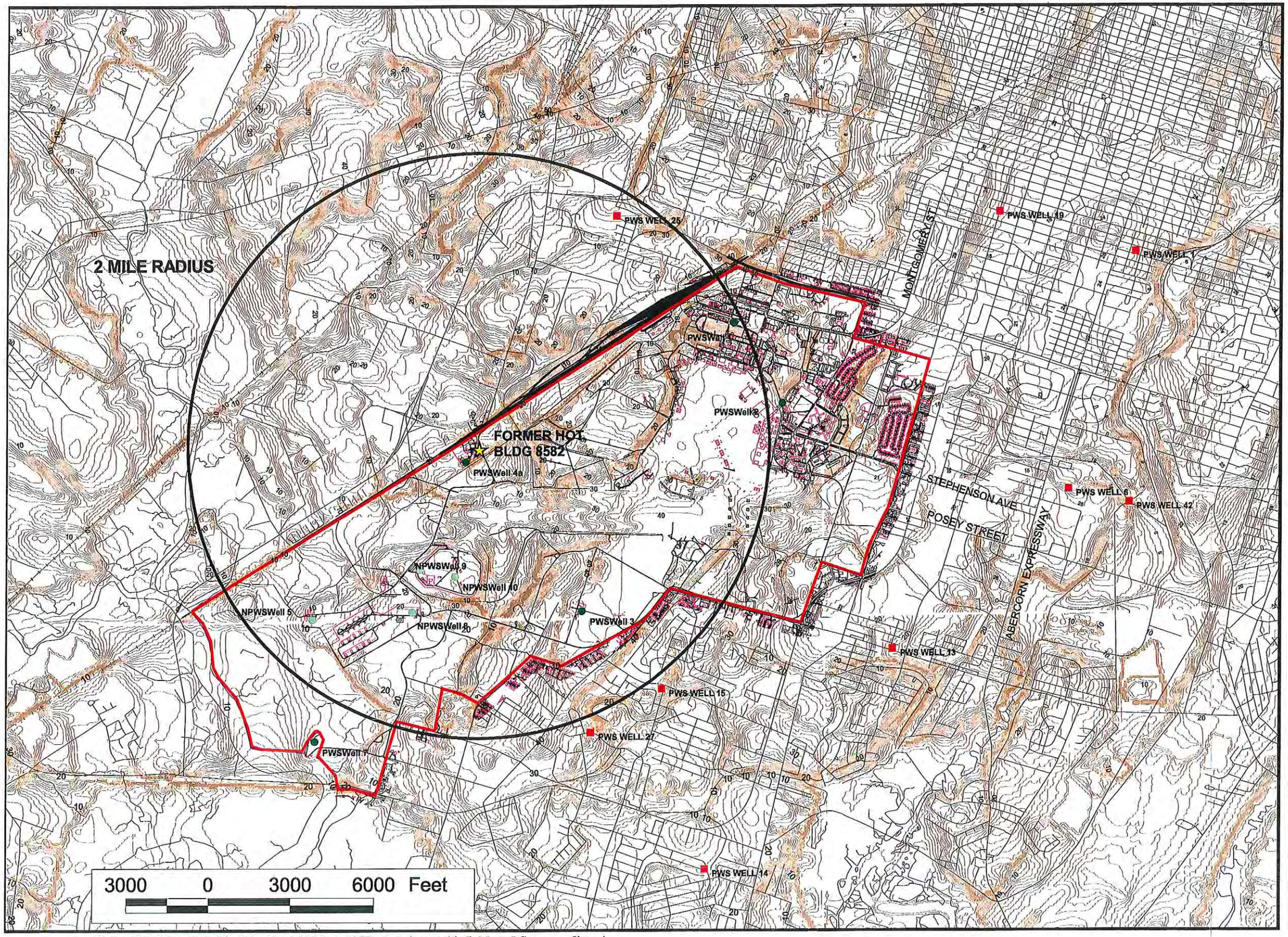


Figure 2. Site Plan for the Former HOT, Building 8582 Site Investigation



Legend:

- Hunter Army Airfield Boundary
- Surface Water (streams/rivers/drains)
- Railroad
- Roads (primary)
- Buildings and Planimetric Features
- Ground Contour (1 FT Intervals)
- HAAF Non-Public Water Supply Well
- HAAF Public Water Supply Well
- City Of Savannah Public Water Supply Well

NOTE:

Contours were created from Digital Elevation Models translated from http://mapping.usgs.gov/, which were obtained from the following U.S.G.S. 7.5 minuteTopographic Quad sheets: Borroughs, Isle of Hope, Savannah, and Garden City. Roads, surface water, and railroad were translated from http://www.gis.state.ga.us/ . Hunter Army Airfield BaseMap received as Microstation files from Fort Stewart.

N

GA State Plane NAD83 (feet)

SAIC
Science Applications International Corporation

FORMER HOT, BLDG 8582

REVISION	DRAWN BY:	CHKD BY:	DATE:
0	M.Norris	A. Bailey	11/30/98

FILE REFERENCES

051rds_polyline	burroughsctrf
051hyd_polyline	isleofhopectrf
051rr	savannahctrf
hunterarea	gardencityctrf
	trveh.dgn
	bggen.dgn

SHT 1 of 1 — DRAWING #

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Figure 3a. Topographic Quadrangle Map of Hunter Army Airfield and Surrounding Area

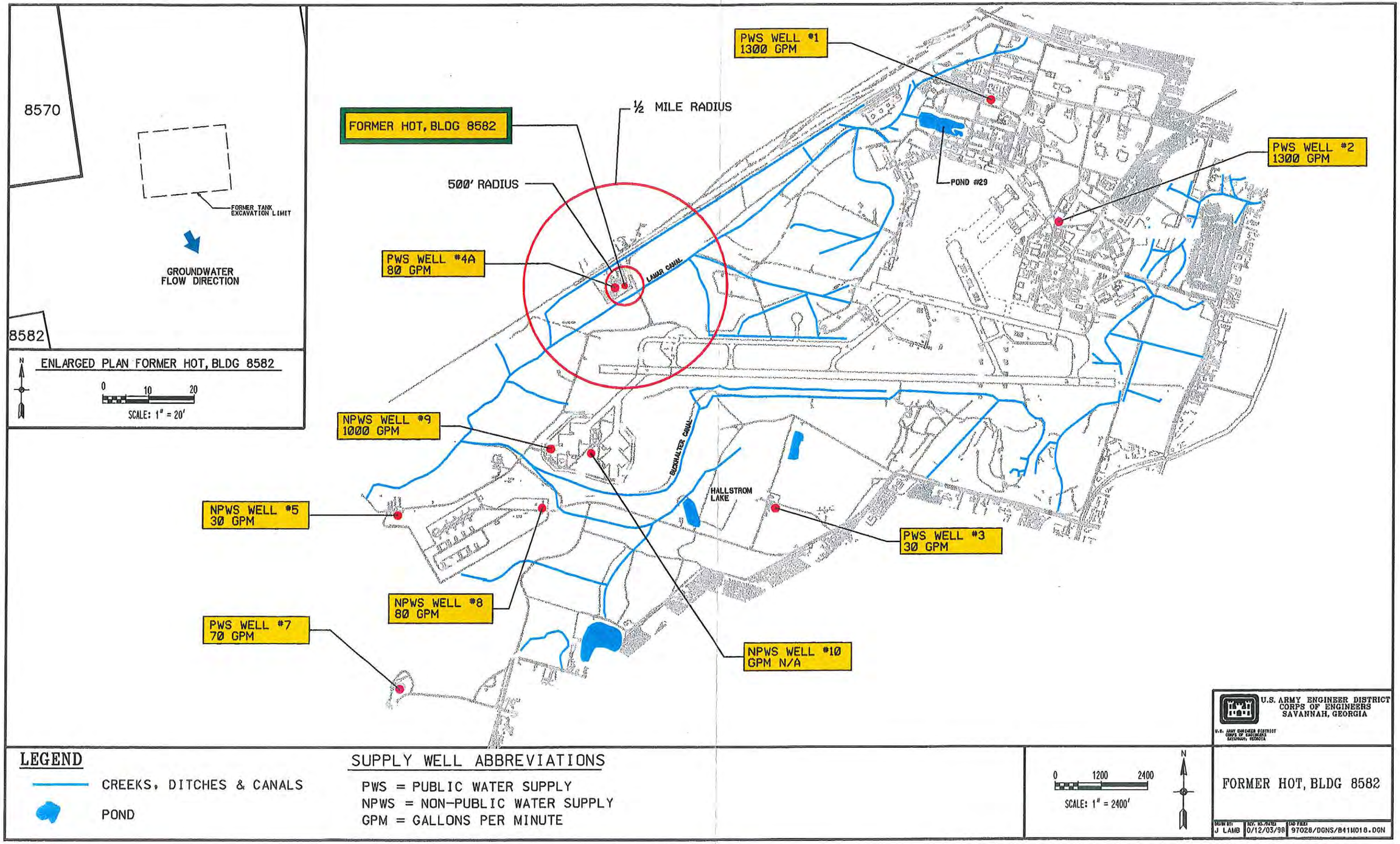

Figure 3b. Detailed Map Showing Public and Private Drinking Water Sources and Surface Water Bodies at Hunter Army Airfield

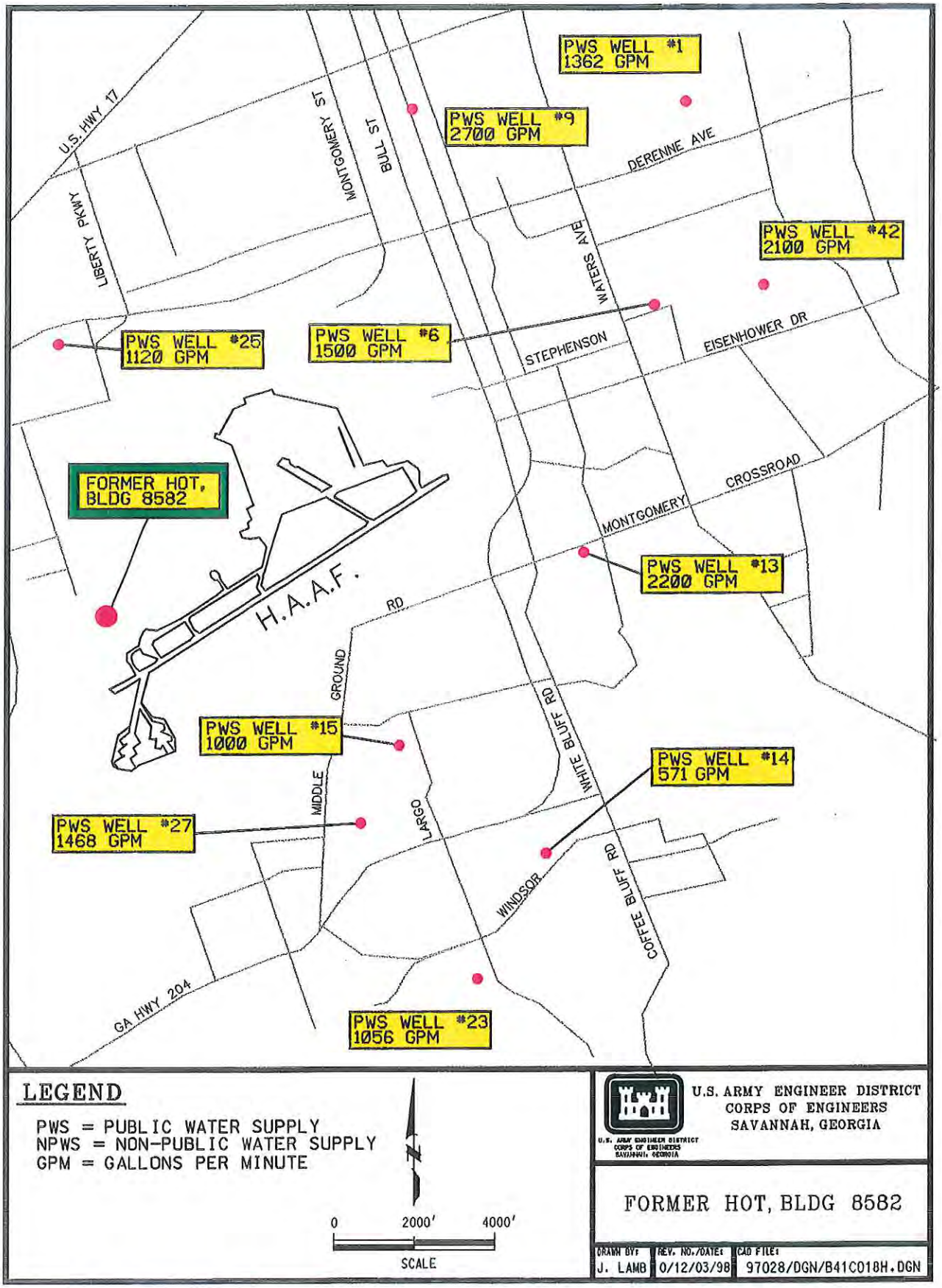

Figure 3c. Detailed Map Showing Public and Private Drinking Water Sources in Areas Adjacent to Hunter Army Airfield

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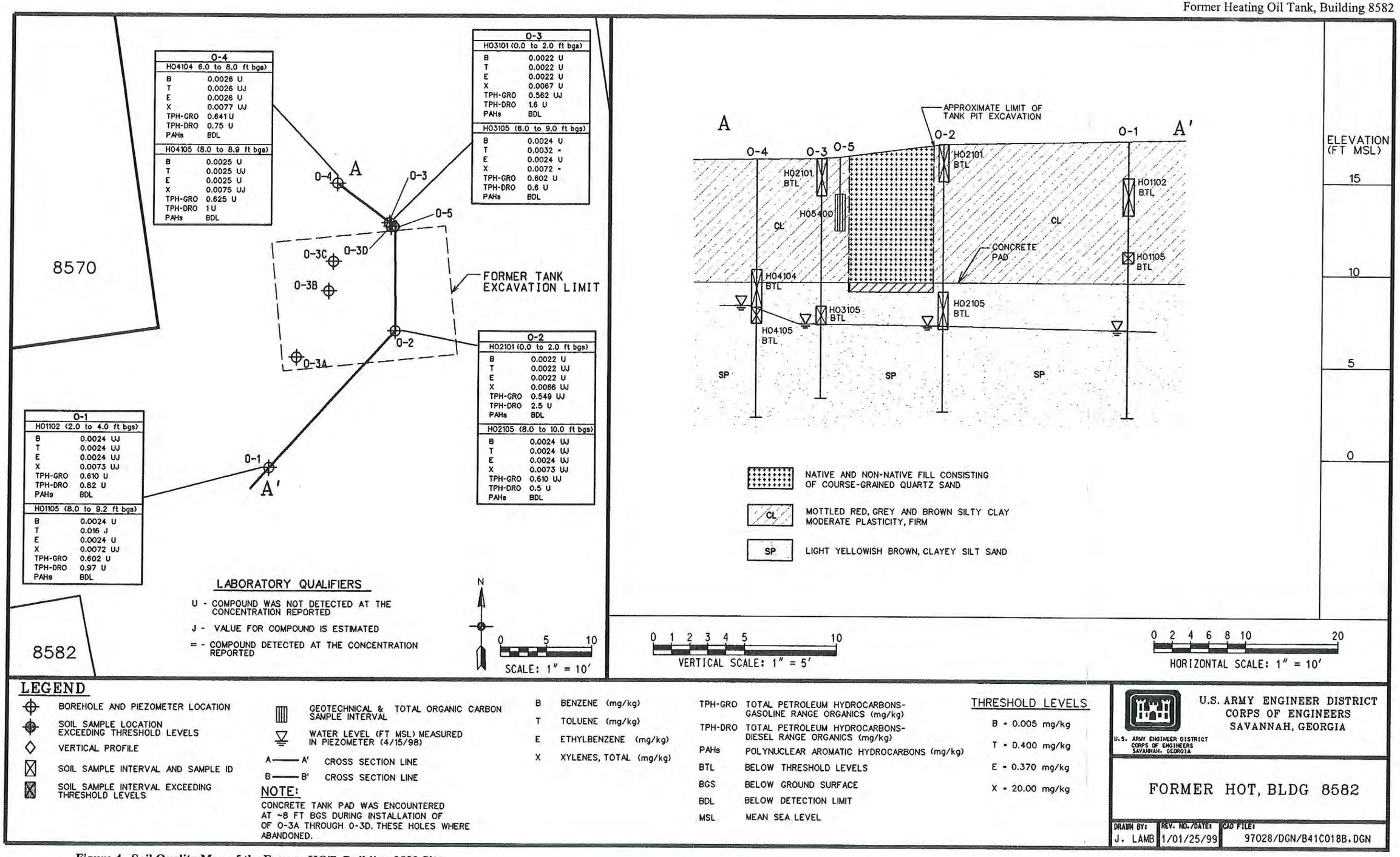

LEGEND

- BOREHOLE AND PIEZOMETER LOCATION
- SOIL SAMPLE LOCATION EXCEEDING THRESHOLD LEVELS
- VERTICAL PROFILE
- SOIL SAMPLE INTERVAL AND SAMPLE ID
- SOIL SAMPLE INTERVAL EXCEEDING THRESHOLD LEVELS
- GEOTECHNICAL & TOTAL ORGANIC CARBON SAMPLE INTERVAL
- WATER LEVEL (FT MSL) MEASURED IN PIEZOMETER (4/15/98)
- A —— A' CROSS SECTION LINE
- B —— B' CROSS SECTION LINE

NOTE:
CONCRETE TANK PAD WAS ENCOUNTERED AT ~8 FT BGS DURING INSTALLATION OF OF O-3A THROUGH O-3D. THESE HOLES WHERE ABANDONED.

B	BENZENE (mg/kg)
T	TOLUENE (mg/kg)
E	ETHYLBENZENE (mg/kg)
X	XYLENES, TOTAL (mg/kg)
TPH-GRO	TOTAL PETROLEUM HYDROCARBONS-GASOLINE RANGE ORGANICS (mg/kg)
TPH-DRO	TOTAL PETROLEUM HYDROCARBONS-DIESEL RANGE ORGANICS (mg/kg)
PAHs	POLYNUCLEAR AROMATIC HYDROCARBONS (mg/kg)
BTL	BELOW THRESHOLD LEVELS
BGS	BELOW GROUND SURFACE
BDL	BELOW DETECTION LIMIT
MSL	MEAN SEA LEVEL

THRESHOLD LEVELS
B = 0.005 mg/kg
T = 0.400 mg/kg
E = 0.370 mg/kg
X = 20.00 mg/kg

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FORMER HOT, BLDG 8582

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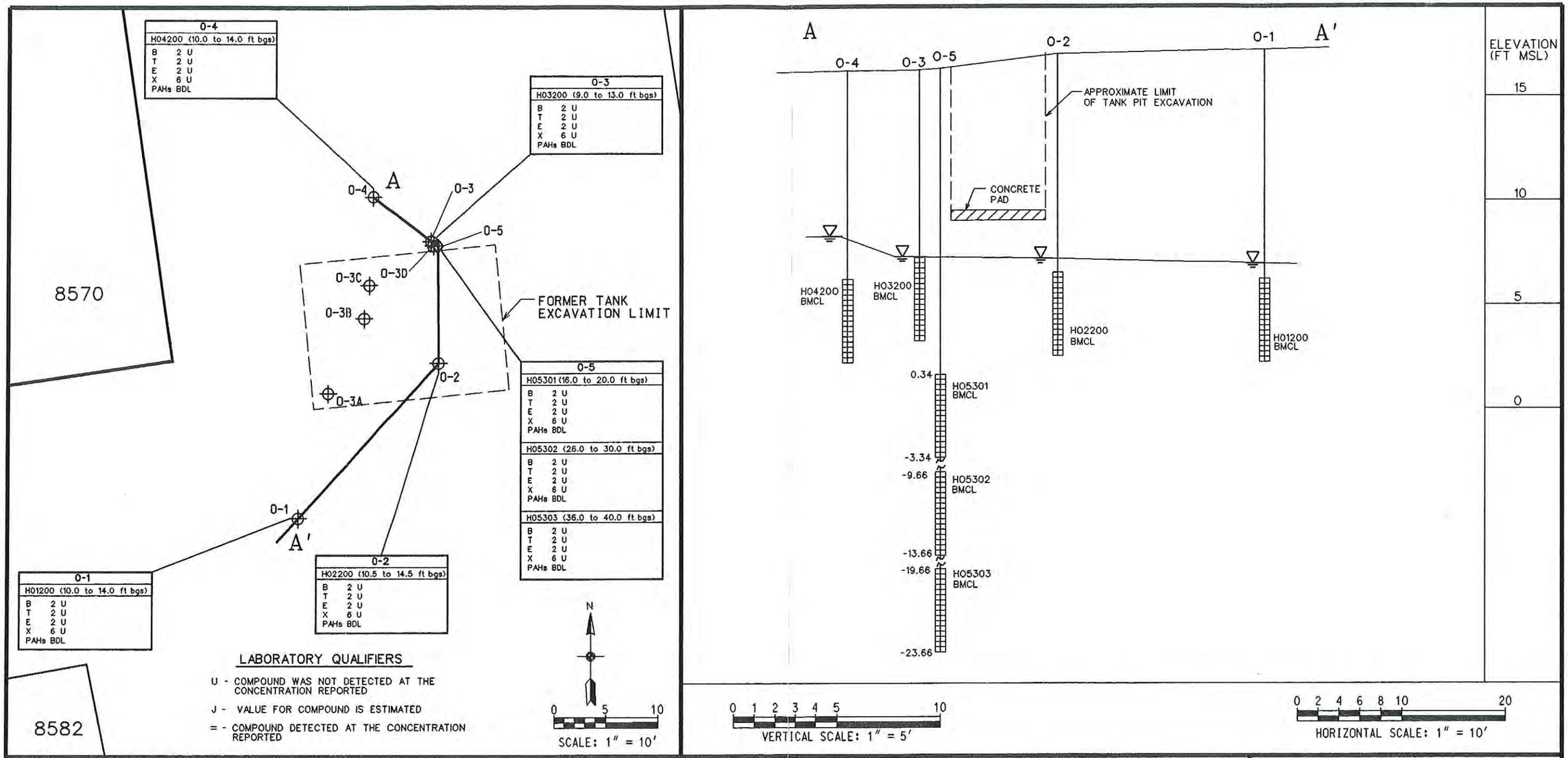
Figure 4. Soil Quality Map of the Former HOT, Building 8582 Site



LEGEND

- BOREHOLE AND PIEZOMETER LOCATION
- GROUNDWATER SAMPLE LOCATION EXCEEDING MCLs
- VERTICAL PROFILE LOCATION
- VERTICAL PROFILE GROUNDWATER SAMPLE LOCATION EXCEEDING MCLs
- WATER LEVEL (FT MSL) MEASURED IN PIEZOMETER (4/18/98)
- SCREENED GROUNDWATER SAMPLE INTERVAL AND SAMPLE ID
- GROUNDWATER SAMPLE INTERVAL EXCEEDING MCLs
- A —— A' CROSS SECTION LINE
- B —— B' CROSS SECTION LINE

NOTE:
CONCRETE PAD WAS ENCOUNTERED AT ~8 FT BGS DURING INSTALLATION OF 0-3A THROUGH 0-3D. THESE HOLES WHERE ABANDONED.

B	BENZENE (ug/L)
T	TOLUENE (ug/L)
E	ETHYLBENZENE (ug/L)
X	XYLENES, TOTAL (ug/L)
PAHs	POLYNUCLEAR AROMATIC HYDROCARBONS (ug/L)
BDL	BELOW DETECTION LEVEL
MSL	MEAN SEA LEVEL
BMCL	BELOW MCLs
BGS	BELOW GROUND SURFACE

MAXIMUM CONTAMINANT LEVELS (MCLs)

B = 5 ug/L

T = 1000 ug/L

E = 700 ug/L

X = 10,000 ug/L

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Figure 5. Groundwater Quality Map of the Former HOT, Building 8582 Site

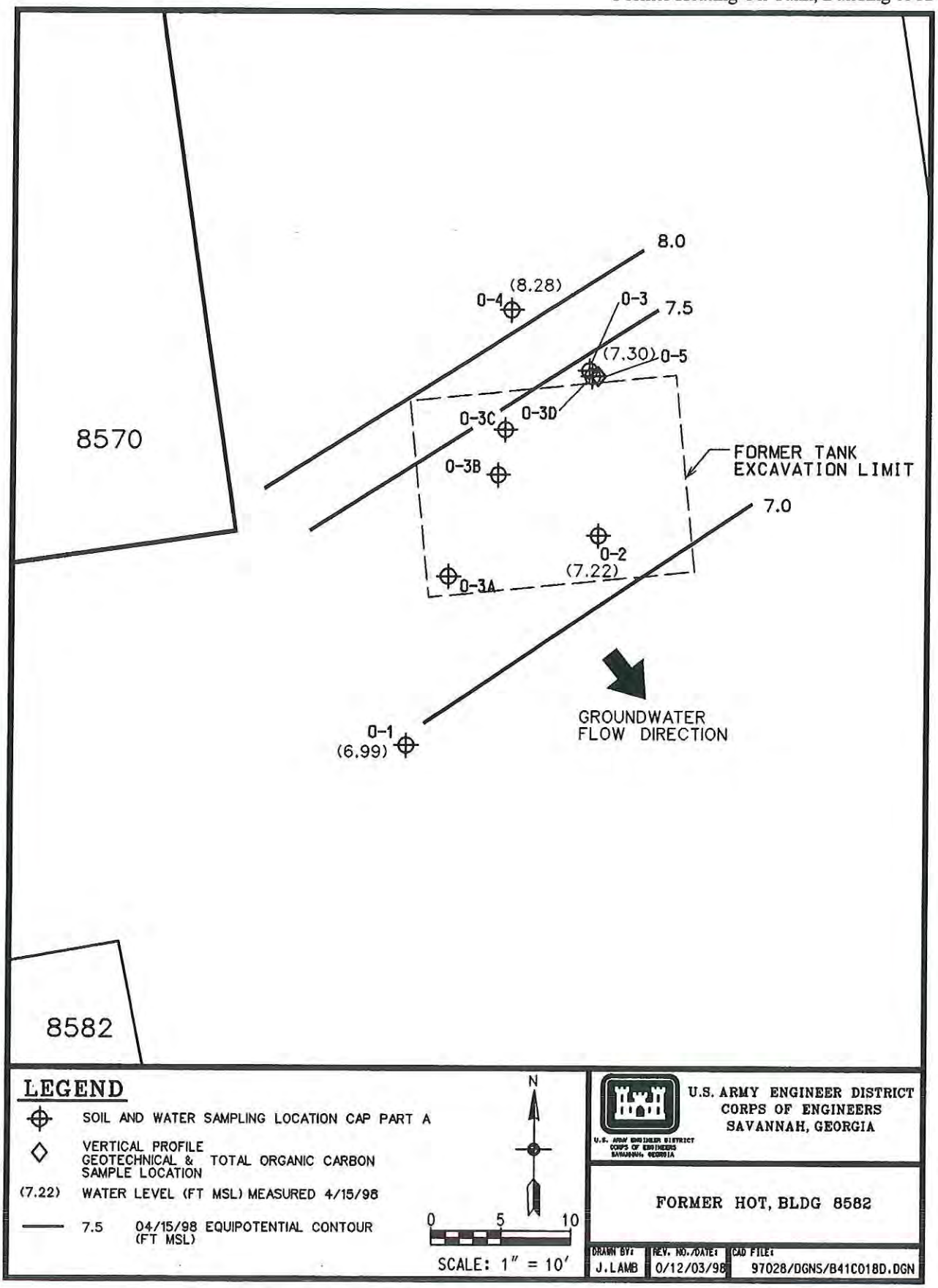

Figure 6. Potentiometric Surface Map of the Former HOT, Building 8582 Site

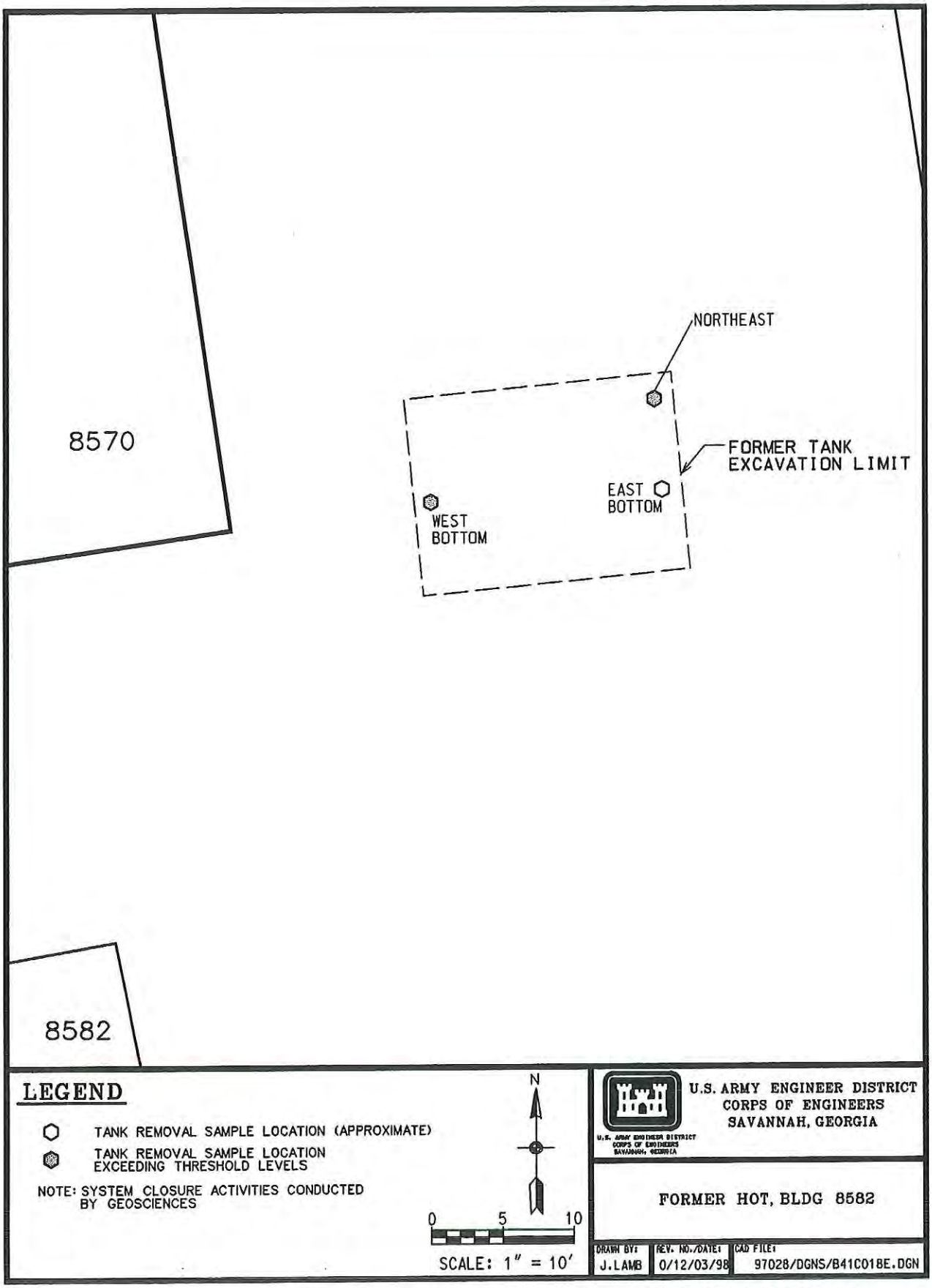

Figure 7. HOT System Closure Sampling Locations at the Former HOT, Building 8582 Site

NOT APPLICABLE FOR THE FORMER HOT, BUILDING 8582 SITE INVESTIGATION

Figure 8. Proposed Additional Boring/Monitoring Well Locations

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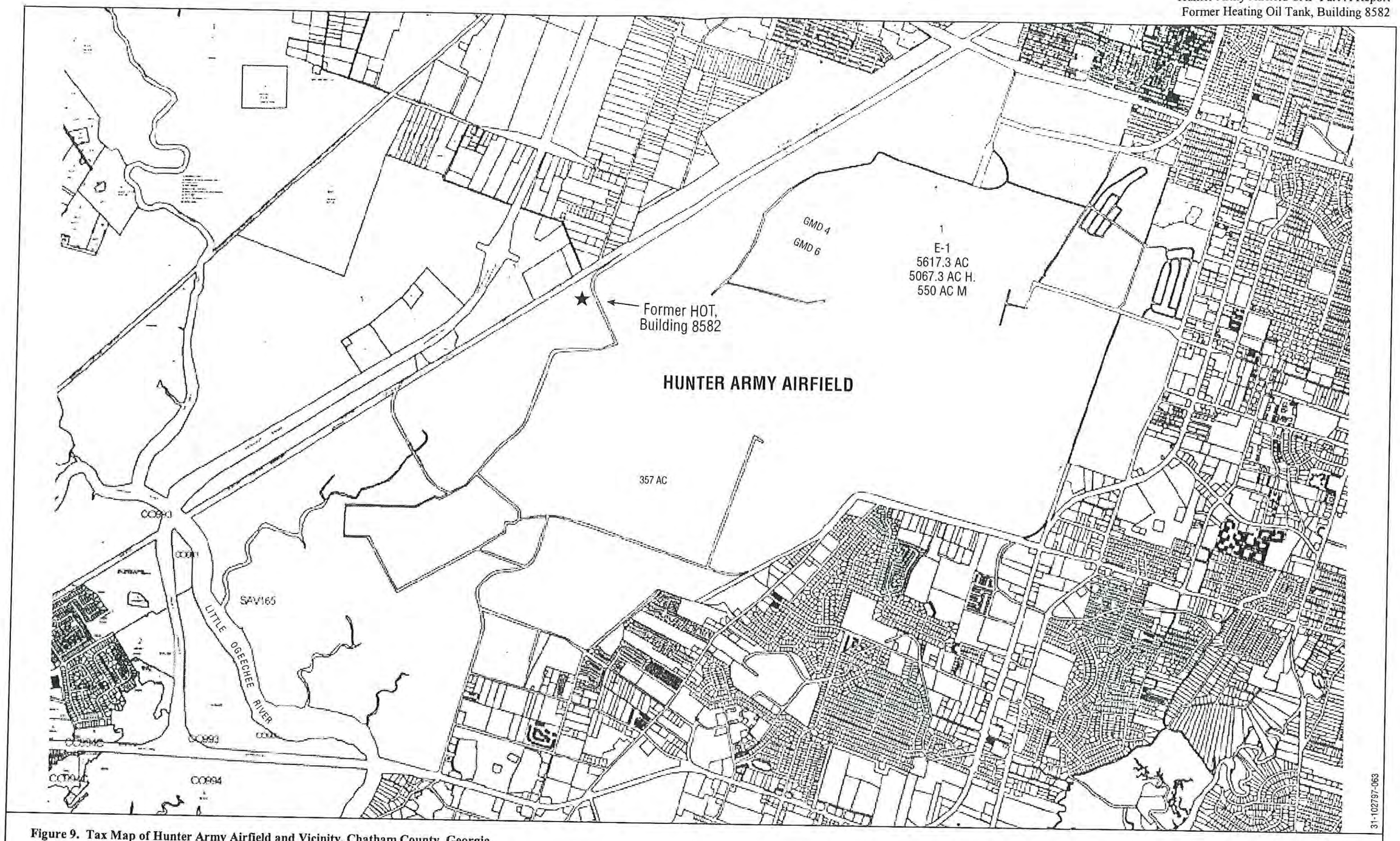

Figure 9. Tax Map of Hunter Army Airfield and Vicinity, Chatham County, Georgia

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APPENDIX II

REPORT TABLES

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Former HOT, Building 8582
Hunter Army Airfield
Chatham County, Facility ID #: N/A

TABLE 1: FREE PRODUCT REMOVAL

Monitoring Well Number: N/A				
Date of Measurement	Groundwater Elev. (ft MSL)	Product Thickness (ft)	Corrected Water Elev. (ft MSL)	Product Removed (gal)
			TOTAL	NONE[1]

Monitoring Well Number: N/A				
Date of Measurement	Groundwater Elev. (ft MSL)	Product Thickness (ft)	Corrected Water Elev. (ft MSL)	Product Removed (gal)
			TOTAL	NONE[1]

NOTE: [1] Free product was not found.
MSL - mean sea level.

Former HOT, Building 8582
Hunter Army Airfield
Chatham County, Facility ID #: N/A

TABLE 2a: SOIL ANALYTICAL RESULTS[3]
(VOLATILE ORGANIC COMPOUNDS)

Sample Location	Sample ID	Depth (ft BGS)	Date Sampled	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX[2] (mg/kg)	TPH - DRO (mg/kg)	TPH - GRO (mg/kg)
O-1	HO1102	2.0 to 4.0	04/07/98	0.0024 UJ	0.0024 UJ	0.0024 UJ	0.0073 UJ	BDL	0.82 U	0.610 U
O-1	HO1105	8.0 to 9.2	04/07/98	0.0024 U	0.016 J	0.0024 U	0.0072 UJ	0.016	0.97 U	0.602 U
O-2	HO2101	0.0 to 2.0	04/07/98	0.0022 U	0.0022 UJ	0.0022 U	0.0066 UJ	BDL	2.5 U	0.549 UJ
O-2	HO2105	8.0 to 10.0	04/07/98	0.0024 UJ	0.0024 UJ	0.0024 UJ	0.0073 UJ	BDL	0.5 U	0.610 UJ
O-3	HO3101	0.0 to 2.0	04/07/98	0.0022 U	0.0022 U	0.0022 U	0.0067 U	BDL	1.6 U	0.562 UJ
O-3	HO3105	8.0 to 9.0	04/07/98	0.0024 U	0.0072 =	0.0024 U	0.0072 =	0.0064	0.6 U	0.602 U
O-4	HO4104	6.0 to 8.0	04/08/98	0.0026 U	0.0026 UJ	0.0026 U	0.0077 UJ	BDL	0.75 U	0.641 U
O-4	HO4105	8.0 to 8.9	04/08/98	0.0025 U	0.0025 UJ	0.0025 U	0.0075 UJ	BDL	1 U	0.625 U
O-4	HO4110[4]	8.0 to 8.9	04/08/98	0.0025 U	0.0025 UJ	0.0025 U	0.0076 UJ	BDL	1.3 U	0.633 U
Applicable Standards[1]				0.005	0.400	0.370	20.00	NRC	NRC	NRC

NOTE:
[1] Georgia Department of Natural Resources (GA DNR) Applicable Soil Threshold Levels (i.e., Table A, column 1).
[2] The total value reported represents the sum of all detected compounds. A total is not reported if all the compounds are below the laboratory detection limits.
[3] **All field work and analytical sampling were performed prior to the release of the new GA DNR Corrective Action Plan (CAP)-Part A Guidance (i.e., May 1998); therefore, the new analytical methods specified were not used.**
[4] Duplicate sample for sample collected from location O-4 at a depth of 8.0 to 8.9 feet BGS.
BDL - Below detection limit.
BGS - Below ground surface.
BTEX - Benzene, toluene, ethylbenzene, and xylene.
NRC - No regulatory criteria.
TPH - DRO - Total petroleum hydrocarbon - diesel-range organics.
TPH - GRO - Total petroleum hydrocarbon - gasoline-range organics.

Laboratory Qualifiers
U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.
UJ - Indicates the compound was not detected at the reported concentration and the concentration was estimated.
= - Indicates the compound was detected at the concentration reported.

Former HOT, Building 8582
Hunter Army Airfield
Chatham County, Facility ID #: N/A

TABLE 2b: SOIL ANALYTICAL RESULTS[3]

(POLYNUCLEAR AROMATIC HYDROCARBONS)

Sample Location	Sample ID	Depth (ft BGS)	Date Sampled	Detected PAH Compounds (mg/kg)					Total PAHs (mg/kg)
				BDL[2]	BDL[2]	BDL[2]	BDL[2]	BDL[2]	
O-1	HO1102	2.0 to 4.0	04/07/98						BDL[2]
O-1	HO1105	8.0 to 9.2	04/07/98						
O-2	HO2101	0.0 to 2.0	04/07/98						
O-2	HO2105	8.0 to 10.0	04/07/98						
O-3	HO3101	0.0 to 2.0	04/07/98						
O-3	HO3105	8.0 to 9.0	04/07/98						
O-4	HO4104	6.0 to 8.0	04/08/98						
O-4	HO4105	8.0 to 8.9	04/08/98						
O-4	HO4110[4]	8.0 to 8.9	04/08/98						
Applicable Standards[1]									NRC

NOTE: [1]Georgia Department of Natural Resources (GA DNR) Applicable Soil Threshold Levels (Table A, column 1).
[2] BDL - Below detection limit; PAH compounds were not detected above the laboratory detection limit. Refer to Appendix V, Table V-A, for a complete list of PAH results.
[3] **All field work and analytical sampling were performed prior to the release of the new GA DNR Corrective Action Plan (CAP)-Part A Guidance (i.e., May 1998); therefore, the new analytical methods specified were not used.**
[4] Duplicate sample for sample collected from location O-4 at a depth of 8.0 to 8.9 feet BGS.
BGS - Below ground surface.
NRC - No regulatory criteria.
PAHs - Polynuclear aromatic hydrocarbons.

Laboratory Qualifiers
U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.
UJ - Indicates the compound was not detected at the reported concentration and the concentration was estimated.
= - Indicates the compound was detected at the concentration reported.

Former HOT, Building 8582
Hunter Army Airfield
Chatham County, Facility ID #: N/A

TABLE 3a: GROUNDWATER ANALYTICAL RESULTS[4]
(VOLATILE ORGANIC COMPOUNDS)

Sample Location	Sample ID	Depth (ft BGS)	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	Total BTEX[3] (µg/L)
O-1	HO1200	10.0 to 14.0	04/07/98	2 U	2 U	2 U	6 U	BDL[2]
O-1	HO1210	10.0 to 14.0	04/07/98	2 U	2 U	2 U	6 U	BDL[2]
O-2	HO2200	10.5 to 14.5	04/07/98	2 U	2 U	2 U	6 U	BDL[2]
O-3	HO3200	9.0 to 13.0	04/07/98	2 U	2 U	2 U	6 U	BDL[2]
O-4	HO4200	10.0 to 14.0	04/08/98	2 U	2 U	2 U	6 U	BDL[2]
O-5	HO5301	16.0 to 20.0	04/18/98	2 U	2 U	2 U	6 U	BDL[2]
O-5	HO5302	26.0 to 30.0	04/18/98	2 U	2 U	2 U	6 U	BDL[2]
O-5	HO5303	36.0 to 40.0	04/18/98	2 U	2 U	2 U	6 U	BDL[2]
Applicable Standards[1]				5	1,000	700	10,000	NRC

TABLE 3b: GROUNDWATER ANALYTICAL RESULTS[4]
(POLYNUCLEAR AROMATIC HYDROCARBONS)

Sample Location	Sample ID	Depth (ft BGS)	Date Sampled	Detected PAH Compounds (µg/L)				Total PAHs[3] (µg/L)
				BDL[2]	BDL[2]	BDL[2]	BDL[2]	
O-1	HO1200	10.0 to 14.0	04/07/98					BDL[2]
O-1	HO1210	10.0 to 14.0	04/07/98					
O-2	HO2200	10.5 to 14.5	04/07/98					
O-3	HO3200	9.0 to 13.0	04/07/98					
O-4	HO4200	10.0 to 13.0	04/08/98					
O-5	HO5301	16.0 to 20.0	04/18/98					
O-5	HO5302	26.0 to 30.0	04/18/98					
O-5	HO5303	36.0 to 40.0	04/18/98					
Applicable Standards[1]								NRC

NOTE: [1] U.S. Environmental Protection Agency maximum contaminant level.
[2] BDL - Below detection limit; PAH/BTEX compounds were not detected above the laboratory detection limit. Refer to Appendix VIII, Table VIII-A, for complete list of PAH and BTEX results.
[3] The total value reported represents the sum of all detected compounds. A total is not reported if all the compounds are below the laboratory detection limits.
[4] **All field work and analytical sampling were performed prior to the release of the new Georgia Department of Natural Resources (GA DNR) Corrective Action Plan (CAP)-Part A Guidance (i.e., May 1998); therefore, the new analytical methods specified were not used.**
BGS - Below ground surface.
BTEX - Benzene, toluene, ethylbenzene, and xylene.
NRC - No regulatory criteria.
PAHs - Polynuclear aromatic hydrocarbons.

Laboratory Qualifiers
U - Indicates the compound was not detected at the concentration reported.

Former HOT, Building 8582
Hunter Army Airfield
Chatham County, Facility ID #: N/A

TABLE 4: GROUNDWATER ELEVATIONS

Well Number	Date Measured	Ground Surface Elev. (ft MSL)	Top of Casing Elev. (ft MSL)	Depth of Screened Interval (ft BGS)	Depth of Free Product (ft BTOC)	Water Depth (ft BTOC)	Product Thickness (ft)	Specific Gravity Adjustment	Corrected Groundwater Elev. (ft MSL)
O-1	4/15/98	17.25	18.95	9.0 to 14.0	N/A	11.96	N/A	N/A	6.99
O-2	4/15/98	17.04	18.37	9.5 to 14.5	N/A	11.15	N/A	N/A	7.22
O-3	4/15/98	16.26	18.71	8.0 to 13.0	N/A	11.41	N/A	N/A	7.30
O-4	4/15/98	16.22	18.67	10.0 to 14.0	N/A	10.39	N/A	N/A	8.28

NOTE: MSL - Mean sea level.
BGS - Below ground surface.
BTOC - Below top of casing.
N/A - Not applicable.

Former HOT, Building 8582
Hunter Army Airfield
Chatham County, Facility ID#: N/A

TABLE 5a: HOT SYSTEM CLOSURE[1] - SOIL ANALYTICAL RESULTS
(VOLATILE ORGANIC COMPOUNDS)

Sample Location	Depth (ft BGS)	Date Sampled	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH (mg/kg)
Northeast	6.5	1/7/97	BDL	0.15	1.2	2.20	3.55	5,100
West, Bottom	9.0	1/7/97	BDL	BDL	1.1	2.42	3.52	3,400
East, Bottom	9.0	1/7/97	BDL	BDL	BDL	BDL	BDL	8.2
Applicable Standards[2]			0.005	0.400	0.370	20.00	NRC	NRC

NOTE: [1]Heating Oil Tank system closure performed by Omega Environmental Services (1997).
[2]Georgia Department of Natural Resources Applicable Soil Threshold Levels (i.e., Table A, column 1).
BDL - Below detection limit. Analytical result/detection limit not provided.
BGS - Below ground surface.
BTEX - Benzene, toluene, ethylbenzene, and xylene.
NRC - No regulatory criteria.
TPH - Total petroleum hydrocarbons.

Former HOT, Building 8582
Hunter Army Airfield
Chatham County, Facility ID #: N/A

TABLE 5b: HOT SYSTEM CLOSURE[1] - SOIL ANALYTICAL RESULTS
(POLYNUCLEAR AROMATIC HYDROCARBONS)

Sample Location	Depth (ft BGS)	Date Sampled	Detected PAH Compounds (mg/kg)									
			Acenaph-thene	Acenaph-thylene	Anthra-cene	Benz(a)-anthra-cene	Benzo(a)-pyrene	Benzo(b)-fluoranthene	Benzo(k)-fluoranthene	Chrysene	Fluoranthene	Fluorene
Northeast	6.5	1/7/97	21	2.30	1.0	1.70	BDL	BDL	BDL	.940	15.00	BDL
West, Bottom	9.0	1/7/97	BDL	BDL	BDL	BDL	0.034	0.050	0.07	.820	3.10	2.00
East, Bottom	9.0	1/7/97	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Applicable Standards[2]			N/A[3]	N/A[3]	N/A[3]	N/A[3]	0.660	0.820	1.60	0.660	N/A[3]	N/A[3]

NOTE: [1]Heating Oil Tank system closure performed by Omega Environmental Services (1997).
[2]Georgia Department of Natural Resources Applicable Soil Threshold Levels (Table A, column 1).
[3]Not applicable; the health-based threshold level exceeds the expected soil concentration under free-product conditions.
BDL - Below detection limit. Analytical result/detection limit not provided.
BGS - Below ground surface.
NRC - No regulatory criteria.
PAHs - Polynuclear aromatic hydrocarbons.

Former HOT, Building 8582
Hunter Army Airfield
Chatham County, Facility ID #: N/A

TABLE 5b: HOT SYSTEM CLOSURE[1] - SOIL ANALYTICAL RESULTS (continued)
(POLYNUCLEAR AROMATIC HYDROCARBONS)

Sample Location	Depth (ft BGS)	Date Sampled	Detected PAH Compounds (mg/kg)					Total PAHs (mg/kg)
			1-Methyl-Naph-thalene	2-Methyl-Naph-thalene	Naph-thalene	Phen-anthrene	Pyrene	
Northeast	6.5	1/15/97	BDL	BDL	BDL	1.10	4.60	47.64
West, Bottom	9.0	1/15/97	42.00	12.00	4.90	BDL	BDL	64.99
East, Bottom	9.0	1/15/97	BDL	BDL	BDL	BDL	BDL	BDL
Applicable Standards[2]			NRC	NRC	N/A[3]	N/A[3]	N/A[3]	NRC

NOTE: [1]Heating Oil Tank system closure performed by Omega Environmental Services (1997).
[2]Georgia Department of Natural Resources Applicable Soil Threshold Levels (Table A, column 1).
[3]Not applicable; the health-based threshold level exceeds the expected soil concentration under free-product conditions.
BDL - Below detection limit. Analytical result/detection limit not provided.
BGS - Below ground surface.
NRC - No regulatory criteria.
PAHs - Polynuclear aromatic hydrocarbons.

Former HOT, Building 8582
Hunter Army Airfield
Chatham County, Facility ID #: N/A

TABLE 6a: HOT SYSTEM CLOSURE[1] - GROUNDWATER ANALYTICAL RESULTS
(VOLATILE ORGANIC COMPOUNDS)

Sample Location	Depth (ft BGS)	Date Sampled	Benzene (mg/L)	Toluene (mg/L)	Ethyl-benzene (mg/L)	Xylenes (mg/L)	Total BTEX (mg/L)
N/A[2]							
Applicable Standards[3]			5	1,000	700	10,000	NRC

TABLE 6b: HOT SYSTEM CLOSURE[1] - GROUNDWATER ANALYTICAL RESULTS
(POLYNUCLEAR AROMATIC HYDROCARBONS)

Sample Location	Depth (ft BGS)	Date Sampled	Detected PAH Compounds (µg/L)				Total PAHs (µg/L)
N/A[2]							
Applicable Standards[3]							NRC

NOTE: [1]Heating Oil Tank system closure performed by Omega Environmental Services (1997).
[2]Not applicable; groundwater samples were not collected by Omega Environmental Services.
[3]U.S. Environmental Protection Agency maximum contaminant levels.
BGS - Below ground surface.
NRC - No regulatory criteria.
PAHs - Polynuclear aromatic hydrocarbons.

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APPENDIX III

WATER RESOURCES SURVEY DOCUMENTATION

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WATER RESOURCES SURVEY DOCUMENTATION

1.0 LOCAL WATER RESOURCES

As required by the Georgia Department of Natural Resources (GA DNR) Underground Storage Tank (UST) Corrective Action Plan (CAP)-Part A Guidance (GA DNR 1998b), a water resource survey documenting information for public and non-public water supply wells, surface water bodies, underground utilities, and potential receptors was conducted for all the Hunter Army Airfield (HAAF) UST investigation sites in April, May, and June 1998. The information presented in this section provides the supporting documentation for Section II.D.3 of the CAP-Part A form.

1.1 WATER SUPPLY WELL SURVEY

The water supply well survey was conducted using the following GA DNR guidelines/requirements:

- HAAF is located in an area of average or higher groundwater pollution susceptibility (GA DNR 1976).
- Locate all public supply wells, as defined by the GA DNR, that exist within 2 miles of the investigation sites.
- Locate all non-public supply wells that exist within 0.5 miles of the investigation sites.
- Locate all supply wells nearest the investigation sites.
- Locate all wells downgradient of the investigation sites.

The required survey was accomplished by obtaining information from the Fort Stewart Directorate of Public Works (FS DPW) and the City of Savannah Bureau of Water Operations, performing a field survey, and conducting a U.S. Geological Survey (USGS) database search. A summary of the information obtained from the survey is provided in the following sections.

1.1.1 Fort Stewart Directorate of Public Works Survey Summary

According to the FS DPW, nine water supply wells are located within the confines of the HAAF area (Figures 3a and 3b, Appendix I). These wells have the potential to provide up to 3890 gallons per minute (gpm) of water to occupants of the HAAF installation. The FS DPW was unable to provide documentation listing the companies responsible for well installation and drillers' logs showing as-built information and subsurface geologic data. Information concerning such documentation was requested from several water well drilling companies in the Chatham County area; however, data were procured with very limited success. The FS DPW provided well locations, pump rates, treatment methods, casing depths, and total depths for eight of the nine wells located at HAAF (Table III-A). However, documentation of subsurface geology based on HAAF drill logs remains extremely limited. Therefore, other references containing deep-well

information were used to document the subsurface geology and aquifer characteristics beneath the HAAF area. Refer to Appendix X, Section 1.0, for further geologic discussion.

Wells 1 and 2, both public water supply wells located in the cantonment area of HAAF, constitute the main water supply system at the HAAF installation. Well 1, located at Building 711 on the corner of Moore Road and Douglas Street, is a 12-inch-diameter well with a 100-hp turbine pump serving a 100,000-gallon elevated storage tank (Tank 1) through 10-inch lines. Water from Well 1 is injected with hydrofluosilic acid and chlorine gas solution at the well house. Well 2, located at Building 1205 on the corner of Neal Street and Strachan Road, is a 12-inch-diameter well with a 100-hp turbine pump serving a 200,000-gallon elevated tank (Tank 2) through 10-inch lines. Water from Well 2 is also injected with hydrofluosilic acid and chlorine gas solution at the well house. Wells 1 and 2 provide water to a 500,000-gallon elevated storage tank (Tank 3) located on Middleground Road behind noncommissioned officer (NCO) family housing. This tank provides potable water to 694 service connections, which are used by an average of at least 5000 individuals year-round.

Wells 3, 4A, and 7 are public supply wells located outside the cantonment area of HAAF. Well 3, located at Building 8455, is a 4.0-inch-diameter well with a 1.0-hp electric submersible pump serving a 1000-gallon hydropneumatic storage tank through 1.5-inch galvanized steel lines. Water from Well 3 is treated with calcium hypochlorite solution and is consumed by approximately 25 people during daytime hours, year-round. Well 4A, located at Building 8581 at the 117th Air National Guard Facility, is a 4.0-inch-diameter well. Pumpage is accomplished with a 0.75-hp turbine pump with 80 gpm capacity. Well 4A provides water for approximately 50 people per day year-round. Well 7 is located at Building 8703 on the Forest River, west of Rio Road. Well 7 is a 4.0-inch well with a 3.0-hp submersible pump serving a 5000-gallon hydropneumatic tank through 2.0-inch galvanized steel lines. Well 7 serves approximately 500 people on a part-time basis. Sanitary protection for Wells 3, 4A, and 7 is provided by a pump motor block, concrete slab, sealed well head, and screened casing vent.

Based on the GA DNR criteria of serving potable water to less than 25 occupants per day and having less than 15 service connections, wells 5, 8, and 9 are classified as non-public supply wells (Figure 3b, Appendix I). Pump rates, casing depths, bore depths, treatment methods, and storage tank information are provided in Table III-A.

Well 10 is a non-potable water source (Figure 3b, Appendix I). Water from Well 10 is used for the cleaning of military equipment at a wash-rack facility. Additional information, including capacity, borehole depth, and casing depth, is not available.

1.1.2 City of Savannah Bureau of Water Operations Survey Summary

The locations of supply wells found outside the boundary of HAAF that are within 2 miles of one or more of the CAP-Part A investigation sites are shown on Figures 3a and 3c, Appendix I. These wells include 25, 15, 27, 14, 23, 6, and 9. Data concerning casing depths, borehole depths, casing sizes, and capacities are listed in Table III-B. The City of Savannah Bureau of Water Operations was unable to provide drill logs or as-built well information

1.1.3 U.S. Geological Survey Summary

Chatham County encompasses three watersheds: Lower Savannah, Lower Ogeechee, and Ogeechee Coastal (EPA 1998). The HAAF installation is located within the Ogeechee Coastal watershed which covers 1477 square miles; includes 18 rivers and streams, including the Little Ogeechee River which borders the south western portion of HAAF; and contains land usage areas

classified as 2 percent urban, 67 percent forest, and 24 percent agricultural. Water use survey data for the watershed estimate that the area has a total population of 200,000 with domestic, industrial, and commercial water supplies mainly derived from groundwater sources (USGS 1990). Domestic water supply data show that a population of 144,000 receives public-supplied water from groundwater sources, 48,000 receive water from self-supplied groundwater sources, and 8,000 from public-supplied surface water sources. The water use survey also reports that two industrial facilities within the watershed are self-supplied with water obtained from groundwater sources. The survey also notes that a total of five wastewater facilities are located in the area with three reported as public wastewater treatment facilities.

1.2 SURFACE WATER BODIES

Surface water(s) in the State of Georgia, as defined by *Rules and Regulations for Water Quality Control, Chapter 391-3-6* (GA DNR 1998a), shall mean any and all rivers, streams, creeks, branches, lakes, reservoirs, ponds, drainage systems, springs producing 100,000 gallons per day, and all other bodies of surface water, natural or artificial, lying within or forming a part of the boundaries of the State which are not entirely confined and retained completely upon the property of a single individual, partnership, or corporation. The surface water body survey was conducted using the following GA DNR guidelines/requirements:

- surface water bodies that exist within 1 mile of the investigation sites,
- all surface water bodies nearest the investigation sites if these bodies lie outside the 1-mile radius of concern,
- all surface water bodies downgradient of the investigation sites, and
- the storm and sanitary sewers adjacent to investigation sites.

The locations of surface water bodies at HAAF were obtained from USGS aerial photographs, USGS topographic maps, and from maps provided by the FS DPW. Storm and sanitary sewer location maps, storm sewer invert elevations, and storm sewer and culvert construction details were provided by the FS DPW and the City of Savannah Bureau of Water and Sewer Planning (1998).

Surface water bodies at HAAF include Hallstrom Lake, Lamar Canal, Buckhalter Canal, Springfield Canal, Pond 29 located northwest of Buildings 336 and 232, and an unnamed pond located along the southeast boundary of the HAAF installation (Figure 3b, Appendix I). Several unnamed drainage canals exist throughout HAAF. Most of these canals drain southwest into the Little Ogeechee River, which is part of the Lower Ogeechee watershed. The remaining drainage canals located on the east side of the HAAF installation flow east and eventually drain into the Vernon River, which is located southeast of the HAAF installation.

Surface water bodies at HAAF and adjacent areas are not used as public water supplies. The ponds and lakes are perennial, whereas most of the drainage canals and ditches are intermittent. Most of the drainage canals are at least partially enclosed in culverts.

1.3 POTENTIAL RECEPTOR SURVEY SUMMARY OF THE FORMER HOT, BUILDING 8582 SITE

A field potential receptor survey was conducted for the Former HOT, Building 8582 site on April 30, 1998. The site and adjacent areas were surveyed for locations of surface water bodies, utility lines, and basements. Basements do not exist in the buildings adjacent to the site. Additional information, provided by the FS DPW, was used to determine the location of the nearest public and non-public water supply wells and downgradient surface water bodies not located during the field survey.

1.3.1 Water Supply Wells Near the Former HOT, Building 8582 Site

The Former HOT, Building 8582 site is located approximately 176 feet northeast (cross-gradient) of Well 4A. Well 4A is located at Building 8581 at the 117th Air National Guard Facility, Perimeter Road, HAAF (Figure 3b, Appendix I). Therefore, the Former HOT, Building 8582 site is classified as being located less than 500 feet to a withdrawal point. Well 4A is a public well that supplies water to 50 persons with 10 service connections. A "bullet" tank with a capacity of 1000 gallons is used for storage.

Based on the estimated nature and extent of petroleum-related groundwater contamination at the site, there is no indication that Well 4A has been impacted (Figure 3b, Appendix I). Therefore, collection and analysis of groundwater samples from Well 4A is not recommended.

1.3.2 Surface Water Bodies Near the Former HOT, Building 8582 Site

Lamar Canal, which flows southwest, is located approximately 360 feet southeast (downgradient) of the Former HOT, Building 8582 site (Figures 3a and 3b). As shown on Figure 3b, Hallstrom Lake lies approximately 6000 feet south of the Former HOT, Building 8582 site. Based on the distances between the Former HOT, Building 8582 site and the nearest surface water bodies, the site is classified as being located less than 500 feet to a downgradient surface water body.

Based on the estimated nature and extent of petroleum-related groundwater contamination at the site, there is no indication that nearby surface water bodies (Figure 3b, Appendix I) have been impacted or that sewer lines, culverts, or any other utility lines could serve as preferential pathways for contaminants to surrounding surface water bodies or water supply wells. Therefore, collection and analyses of surface water samples were not conducted as part of the site investigation.

TABLES

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CAP-Part A UST Investigation Sites
Hunter Army Airfield, Chatham County

TABLE III-A. WATER SUPPLY WELL INFORMATION PROVIDED BY THE FORT STEWART DPW

Building	Well ID	Year Drilled	Bore Depth	Casing Depth	Pump Rate (gpm)	Number of Service Connections	Population	Public or Non-Public Supply
711	1	1941	550	250	1300	525	7500	Public
1205	2	1941	600	250	1300	525	7500	Public
8455	3	1951	360	40	30	2	25	Public
8581	4A	Unk	300	92	80	10	50	Public
8641	5	1955	380	85	30	Unk	Unk	Non-public
8703	7	1980	450	330	70	8	500	Public
8632	8	1956	370	255	80	5	Unk	Non-public
8654	9	Unk	600	255	1000	Unk	Unk	Non-public
8464	10	Unk	Unk	Unk	Unk	N/A	N/A	Non-public

NOTE: DPW - Directorate of Public Works.
gpm - Gallons per minute.
N/A - Not applicable.
Unk - Unknown.

CAP-Part A UST Investigation Sites
Hunter Army Airfield, Chatham County

TABLE III-B. WATER SUPPLY WELL INFORMATION PROVIDED BY THE CITY OF SAVANNAH BUREAU OF WATER OPERATIONS

Well ID	Year Drilled	Bore Depth (feet)	Casing Depth (feet)	Pump Rate (gpm)	Number of Service Connections	Population[1]	Public or Non-Public Supply[1]
1	Unk	1006	300	1362	Unk	Unk	Public
6	Unk	750	240	1500	Unk	Unk	Public
9	Unk	710	267	2700	Unk	Unk	Public
13	Unk	1000	270	2200	Unk	Unk	Public
14	Unk	800	338	571	Unk	Unk	Public
15	Unk	414	252	1000	Unk	Unk	Public
23	Unk	639	320	1056	Unk	Unk	Public
25	Unk	540	287	1120	Unk	Unk	Public
27	Unk	550	321	1468	Unk	Unk	Public
42	Unk	550	260	2100	Unk	Unk	Public

NOTE: gpm - Gallons per minute.
TBD - To be determined.
Unk – Unknown.
[1]All wells are part of the same public water supply system serving the population of the City of Savannah.

APPENDIX IV

SOIL BORING LOGS

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HTRW DRILLING LOG

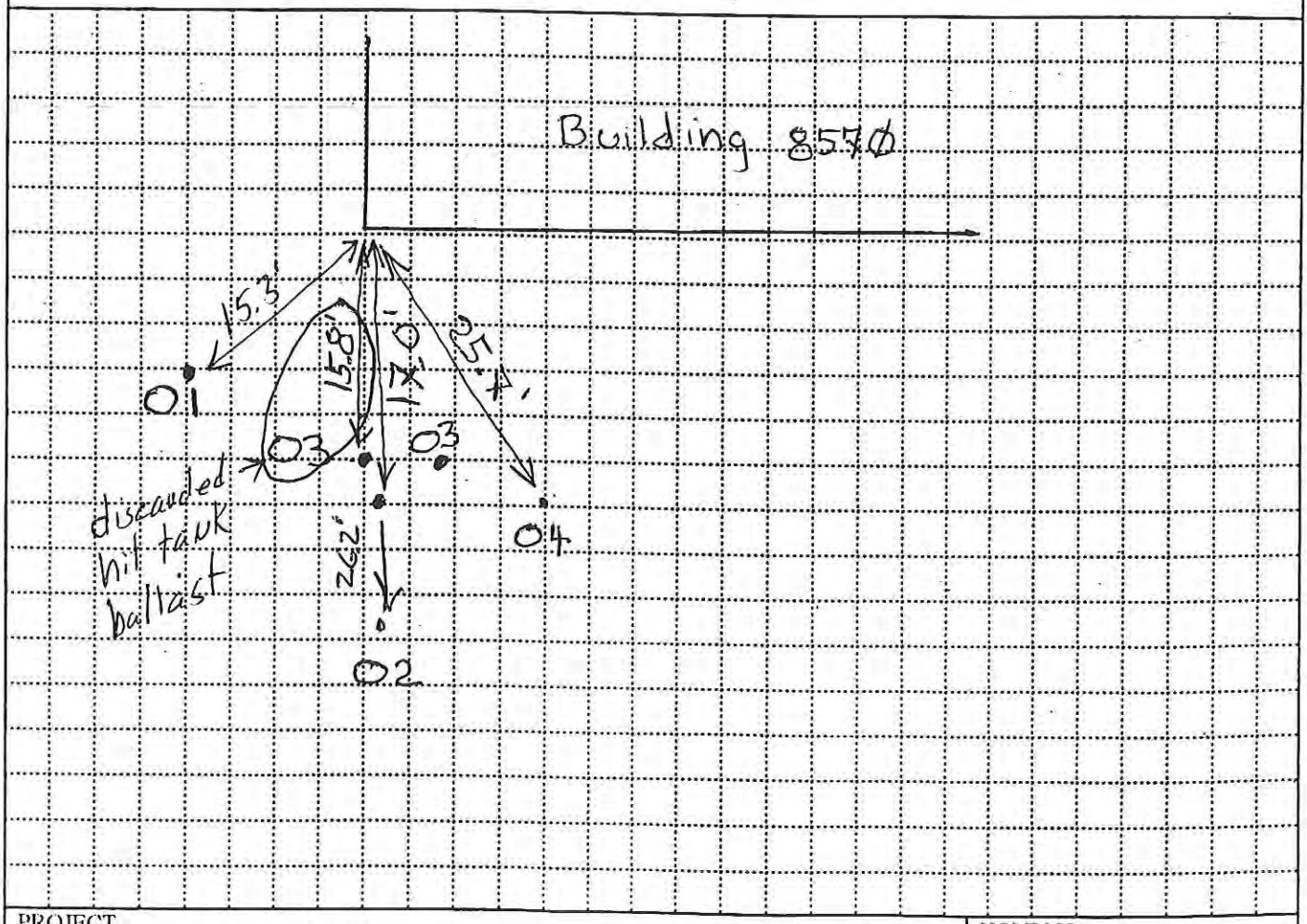
1. COMPANY NAME: SAIC	2. DRILL SUBCONTRACTOR: RE Wright (SAIC)	DISTRICT: USACE Savannah; HOLE NUMBER: 01; SHEET 1 OF 3 SHEETS
3. PROJECT: Hunter AAF CAP Part A UST Sites	4. LOCATION: Hunter AAF Bldg. 8570 Tank X	
5. NAME OF DRILLER: John Hasselhoff	6. MANUFACTURERS DESIGNATION OF DRILL: Geoprobe, Salina, KA	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 2" dia macrocore; acetate liner = 4.0'; shoe to drive top = 4.6', push rods = 3' and 4.0', bore rode = 3', 1.5" dia screen = 3.5'	8. HOLE LOCATION: Bldg 8570	
	9. SURFACE ELEVATION: TBD	
	10. DATE STARTED: 4-7-98	11. DATE COMPLETED: 4-7-98
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: 9.2'	
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: See water level log	
14. TOTAL DEPTH OF HOLE: 14'	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): See water level log	

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
NA	NA	NA	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	BTEX VOC	~~PAH METALS~~	OTHER (SPECIFY) GRO	OTHER (SPECIFY) DRO	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %
soil / water	2/1	2/1	2/0	2/0	NA	97

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
piezometer	✓	NA	NA	John B Reeves

LOCATION SKETCH/COMMENTS — SCALE:



PROJECT: Hunter AAF CAP Part A UST Sites — HOLE NO.: 01

ENG FORM 5056-R, AUG 94 (Proponent: CECW-EG)

64

DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS (D)	GEOTECH SAMPLE OR CORE BOX NO (E)	ANALYTI SAMPLI (F)	
0'	7.5YR4/3 brown silty clay	head space Ø to 2 Ø.9' JBR 4-7-98			began 13:1Ø end 13:15 recovery Ø' to 3.6'
	.8' to 2' 7.5YR3/1 very dark gray sandy silt				
	gradual				
	10YR5/3 brown silty fine sand some organics 2.Ø' to 2.8' same as above becoming sandy med plasticity moist	head space 2' to 4' Ø.9'		2' to 4' H011Ø2	
4'	2.8' to 3.6' 10YR6/2 light brown gray modeled with 2.5YR4/6 red and 7.5YR5/6 strong brown med plasticity moist firm consistency	head space 4 to 6' Ø			began 132Ø end 133Ø recovery 4.Ø' to 8.Ø' (full)
	4.Ø' to 4.4' same as above ~~to~~ JBR 4-7-98 4.4' to 4.8' 10YR3/1 very dark gray - silty fine sand	head space 6' to 8' 4.8' Ø			
8'	4.8 to 6.Ø' 5YR 4/6 yellowish red sandy clay low plasticity moist approx 10% gray sandy	head space 8' to 9.2' Ø clay		8' to 9.2 H011Ø5	began 134Ø end 1345 recovery 8' to 12'
	6.Ø' to 8.Ø' Wt 7.5YR4/6 strong brown sandy clay med plasticity approx	9.2' at water table an abrupt change to sand			

PROJECT 40% 7.5YR6/1 gray silty sand

HOLE NO 01

CONT'd ON page 65

SIZE (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS (D)	GEOTECH SAMPLE OR CORE BOX NO (E)	ANALYT SAMPL (F)
	8'-10'	CONT'd FROM Page 64 Same as above			H012
	12'	~~TD = 12.0~~			
		Groundwater sample taken 10.0 to 14.0			
	14' 12'	TD = 14.0			
	16'				
	20'				

65

PROJECT: HAAF CAP A UST sites

BOLE NO: 01

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HTRW DRILLING LOG

DISTRICT: Savannah
HOLE NUMBER: 02
1. COMPANY NAME: SAIC
2. DRILL SUBCONTRACTOR: R.E. Wright (SAIC)
SHEET 1 OF SHEETS 3
3. PROJECT: Hunter AAF - CAP A UST Investigation
4. LOCATION: Bldg 8582 TK x
5. NAME OF DRILLER: Andy Nickerbocker
6. MANUFACTURER'S DESIGNATION OF DRILL: Geoprobe
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: macroprobe = 2" dia - acetate liner = 4.6'. screen length = 3.5' shoe to drive cap = 4.6' Push rods = 4' and 3' Large bore rods = 3'
8. HOLE LOCATION: 02
9. SURFACE ELEVATION: TBD
10. DATE STARTED: 4/7/98
11. DATE COMPLETED: 4/7/98
12. OVERBURDEN THICKNESS: NA
15. DEPTH GROUNDWATER ENCOUNTERED: @ 9.4 BGS
13. DEPTH DRILLED INTO ROCK: NA
16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: See water level log
14. TOTAL DEPTH OF HOLE: 14.5' BGS
17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): See water level log
18. GEOTECHNICAL SAMPLES: None
DISTURBED: NA
UNDISTURBED: NA
19. TOTAL NUMBER OF CORE BOXES: NA
20. SAMPLES FOR CHEMICAL ANALYSIS: soil / water
BTEX/VOC
METALS: PAH
OTHER (SPECIFY): GRO
OTHER (SPECIFY): DRO
OTHER (SPECIFY): NA
21. TOTAL CORE RECOVERY %: 100
22. DISPOSITION OF HOLE: piezometer
BACKFILLED: ✓
MONITORING WELL: NA
OTHER (SPECIFY): NA
23. SIGNATURE OF INSPECTOR: John B Prewett

LOCATION SKETCH/COMMENTS
SCALE:

See page 63

PROJECT: HUNTER AAF - CAP A UST Site Invest.
HOLE NO.: 02

ENG FORM 5056-R, AUG 94
(Proponent: CECW-EG)

TEST PIT (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS (D)	GEOTECH SAMPLE OR CORE BOX NO (E)	ANALYT SAMPLE (F)	
	0	0 to 0.2 top soil mixed with sand 0.2' to ~~1.0~~ 1.0' QBR 4-7-98 CH ~~sandy clay~~ clayey sand low to med plasticity 5YR4/4 reddish brown 1.0' to 2.2' sandy silt modeled yellow and tan (brown) 7.5YR4/3 ~~gradational~~ contact 2.2' to 4.0' fat clay modeled red and gray 10R4/8 and 5/5GY - moist medium plasticity on all of above	head space 0 4-7-98 QBR			began 1405 end 1410 Recovery 0 to ~~2.0~~ 4.0' QBR 4-7-98
	4'	4.0' to 8.0' same as above structure is lensed, firm consistency becomes sandy clay 6.0' to 8.0'	head space 0 head space 0			began 1420 end 1425 Recovery 4.0' to 8.0'
	8'	same as above	head space 0			began 1420 end 1425
		well sorted sub angular quartz sand with iron staining med grain				

PROJECT

unstained 7.5YR8/2 (pinkish white) soft

HOLE NO

02

iron stained 7.5YR 7/8 (reddish yellow)

USCS (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS (D)	GEOTECH SAMPLE OR CORE BOX NO (E)	ANALYT SAMPLE (F)
	10.0		NA	NA	H022000

water sampled from 10.5 to 14.5 'BGS

14.0

TD = 14.5

PROJECT: HAAF CAP A UST Sites

BOR: 02

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HTRW DRILLING LOG

1. COMPANY NAME	2. DRILL SUBCONTRACTOR	DISTRICT / HOLE NUMBER: 03; SHEET / SHEETS: OF
3. PROJECT	4. LOCATION	
5. NAME OF DRILLER	6. MANUFACTURERS DESIGNATION OF DRILL	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT	8. HOLE LOCATION	
	9. SURFACE ELEVATION	
	10. DATE STARTED / 11. DATE COMPLETED	
12. OVERBURDEN THICKNESS	15. DEPTH GROUNDWATER ENCOUNTERED	
13. DEPTH DRILLED INTO ROCK	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED	
14. TOTAL DEPTH OF HOLE	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)	

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES			
20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %
22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR		

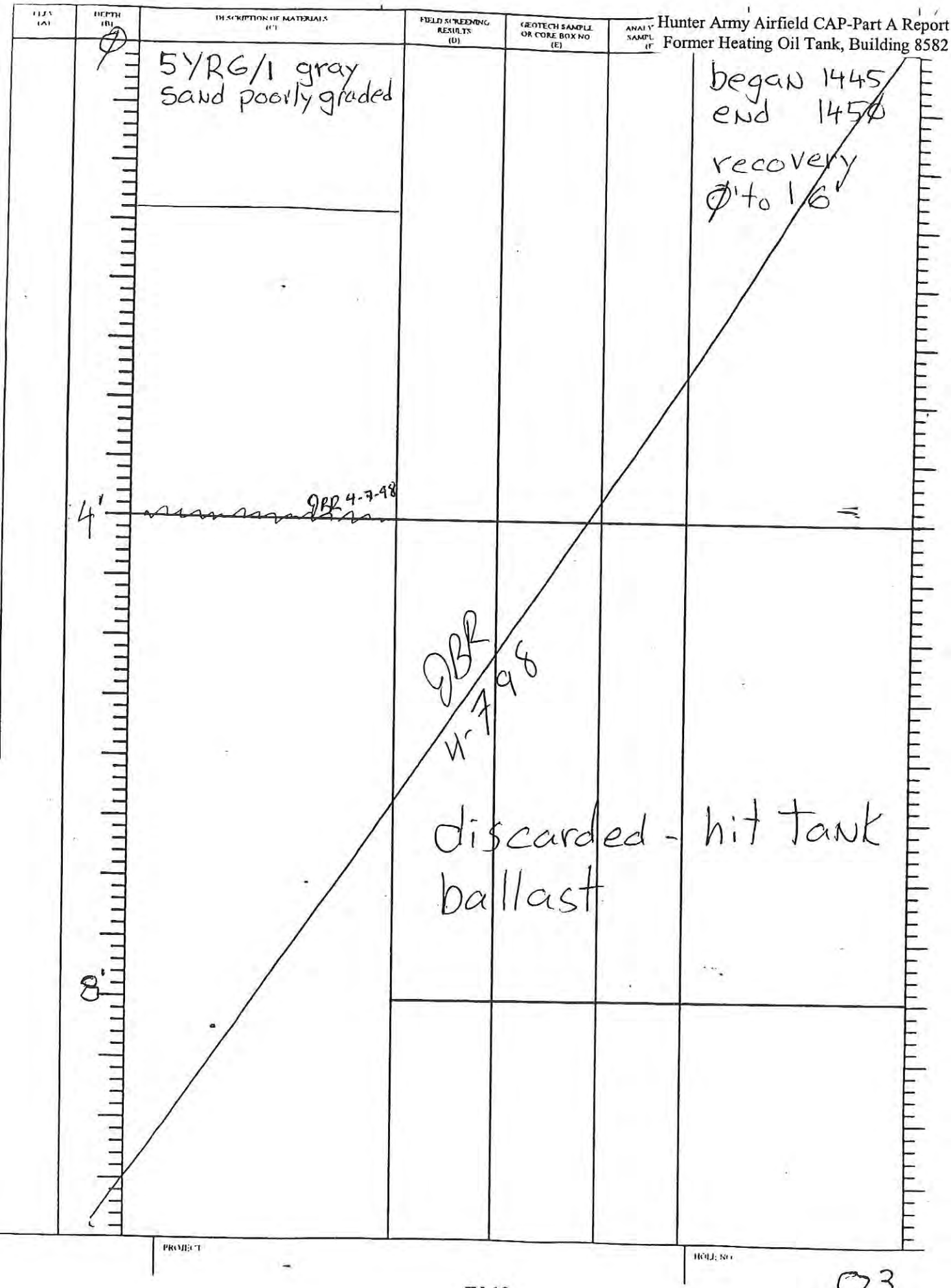
LOCATION SKETCH/COMMENTS — SCALE:

QBK 1' 9"
1'
See page 63
discarded - hit tank ballast

PROJECT — HOLE NO. 03

ENG FORM 5056-R, AUG 94

(Proponent: CECW-EG)


DEPTH (ft)
DESCRIPTION OF MATERIALS (C)
FIELD SCREENING RESULTS (D)
GEOTECH SAMPLE OR CORE BOX NO (E)
0
5YR6/1 gray sand poorly graded
began 1445
end 1450
recovery 0' to 1.6'
78
4'
QBR 4-7-98
QBR 4-7-98
discarded - hit tank ballast
8'
PROJECT
03

HTRW DRILLING LOG

DISTRICT: Savannah
HOLE NUMBER: 03
1. COMPANY NAME: SAIC
2. DRILL SUBCONTRACTOR: R. E. Wright (SAIC)
SHEET 1 OF 3 SHEETS
3. PROJECT: Hunter AAF - Cap A UST Sites
4. LOCATION: Bldg 8582, Tank X
5. NAME OF DRILLER: Andy Nickerbecker
6. MANUFACTURER'S DESIGNATION OF DRILL: Geoprobe
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: acetate liners = 4' macrocore = 2" diam push rods = 3' and 4' Purge bore rods = 3', 1.5" diam
8. HOLE LOCATION: 03
9. SURFACE ELEVATION: TBD
10. DATE STARTED: 4-7-98
11. DATE COMPLETED: 4-7-98
12. OVERBURDEN THICKNESS: NA
15. DEPTH GROUNDWATER ENCOUNTERED: 9.0
13. DEPTH DRILLED INTO ROCK: NA
16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: See water level log.
14. TOTAL DEPTH OF HOLE: 13.0
17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): See water level log
18. GEOTECHNICAL SAMPLES: NA
DISTURBED: NA
UNDISTURBED: NA
19. TOTAL NUMBER OF CORE BOXES: NA

20. SAMPLES FOR CHEMICAL ANALYSIS	BTEX VOC	PAH METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %
soil / water	2 / 0	2 / 1	GRO 1/0	DRO 1/0	NA	96

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
piezometer	✓	NA	NA	Mitchell A. Hall

LOCATION SKETCH/COMMENTS

SCALE: See p. 63

See page 63 logbook 7

PROJECT: Hunters AAF CAP A UST Site Investig.
HOLE NO. 03

ENG FORM 5056-R, AUG 94

(Proponent: CECW-EG)

(A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS (D)	GEOTECH SAMPLE OR CORE BOX NO (E)	ANALYTICAL SAMPLE (F)	
	0'	~~5YR 6/1 gray sand poorly graded~~ TOPSOIL mdl # 4/7/98	Head space =	NA		began 1455 ~~end 1500~~ recovery 0 to 1.6' mdl # 4/7/98 Begin 1526 End 1530 Drilled 4.0 Recovery 3.0
	4'	5YR 4/6 yellowish red lean clay with sand	Head space =	NA	only 4oz Btex collected	~~Began 1510 end 1520 recovery~~ mdl # 4/7/98 ~~Drilled 4.8~~ Begin End Drilled Recovery
	8'					

mdl # Disregard

PROJECT: HAAF - CAP A - UST Sites

HOLE NO: 03

ELEV (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS (D)	GEOTECH SAMPLE OR CORE BOX NO (E)	ANALYSIS SAMPLE (F)	
	0	TOPSOIL Sandy clay mottled red and grey (10R4/8 and 5/5G4) moist, firmed, lensed to structureless lenses of clayey sand	HS =	NA	H03	Begin 1520 end - 1530 drilled - 4.0 recovery - 3.0
	2	~~No recovery~~ mathH 4/7/98				
		2.9 No Recovery				
	4	4.0	HS =	NA	H03	Begin - 1535 end - 1540 drilled - 4.0 recovery - 1.5
		5.5 NO RECOVERY	Disregard mathH 4/7/98			
	6					mathH 4/7/98
		No Recovery				
	8	8.0				

PROJECT: HAAF CAP A

HOLE NO: 03

86

USCS (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS (D)	GEOTECH SAMPLE OR CORE BOX NO (E)	ANALYSIS (F)	
	0	TOPSOIL Reddish brown sandy clay moist	HS = 0.7 ppm	NA	H031Ø1	Begin: 16ØØ End: 16Ø5 Drilled: 4.Ø ft Recovery: 3.5 ft
	2	moist sandy Clay with lenses of clayey sand light grey and red mottled clay; moist and firm. moderate plasticity. Much less sand starting at 2 ft to 4ft.	2-4 HS = Ø.2 ppm			
	4	~~NOT~~ SAME AS ABOVE —	4-6 HS = Ø.6ppm	N.A		Begin: 16Ø5 End: 161Ø Drilled: 4.Ø Recovery: 4.Ø
		1610 ~ gradational contact same color and firm as above; but becoming more sandy with depth sandy is well sorted and fine grained; sand is up to 10-40%				
	6		6-8 HS = Ø.6ppm			
	8	same. mottled sandy clay down to 9.Ø ~~~~ WT - gradational contact 9.Ø - 12 - medium grained, well sorted quartz sand subangular quartz grains; tan color.	HS = Ø.2 ppm WT - 9.Øft 10-12 HS Ø.6ppm	NA	soil H031Ø5 gw H032ØØ	Begin: 1615 End: 1618 Drilled: 4.Ø Recovery: 4.Ø TD = 12.Ø ft

PROJECT HAAF -- CAP A UST Sites

HOLE NO 03

HTRW DRILLING LOG

DISTRICT: USACE Savannah | 04 | SHEET 1 OF 3

1. COMPANY NAME: SAIC
2. DRILL SUBCONTRACTOR: R E Wright (SAIC)
3. PROJECT: Hunter AAF CAP Part A, UST sites
4. LOCATION: Hunter AAF Bldg 8570 Tank x
5. NAME OF DRILLER: John Hasselhoff
6. MANUFACTURERS DESIGNATION OF DRILL: Geoprobe
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: microcore = 2" dia, 4' lgth; acetate liner = 4'; shoe to drive cap = 4.6'; push rods = 4'+3'; screen length = 3.5'
8. HOLE LOCATION: Bldg 8570 04
9. SURFACE ELEVATION: TBD
10. DATE STARTED: 4-8-98
11. DATE COMPLETED: 4-8-98
12. OVERBURDEN THICKNESS: NA
13. DEPTH DRILLED INTO ROCK: NA
14. TOTAL DEPTH OF HOLE: 14.0'
15. DEPTH GROUNDWATER ENCOUNTERED: 8.9
16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: see water level log
17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): See water level log
18. GEOTECHNICAL SAMPLES: NA
DISTURBED: NA
UNDISTURBED: NA
19. TOTAL NUMBER OF CORE BOXES: NA

20. SAMPLES FOR CHEMICAL ANALYSIS	~~BTEX~~ VOC	~~PAH~~ METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %
Soil & water	2/1	2/1	DRO 2/0	GRO 2/0	NA	100

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
piezometer	✓	NA	NA	John B Reeves

LOCATION SKETCH/COMMENTS — SCALE: See p. 63.

See page 63

PROJECT: Hunter AAF CAP UST Investigations | HOLE NO. 04

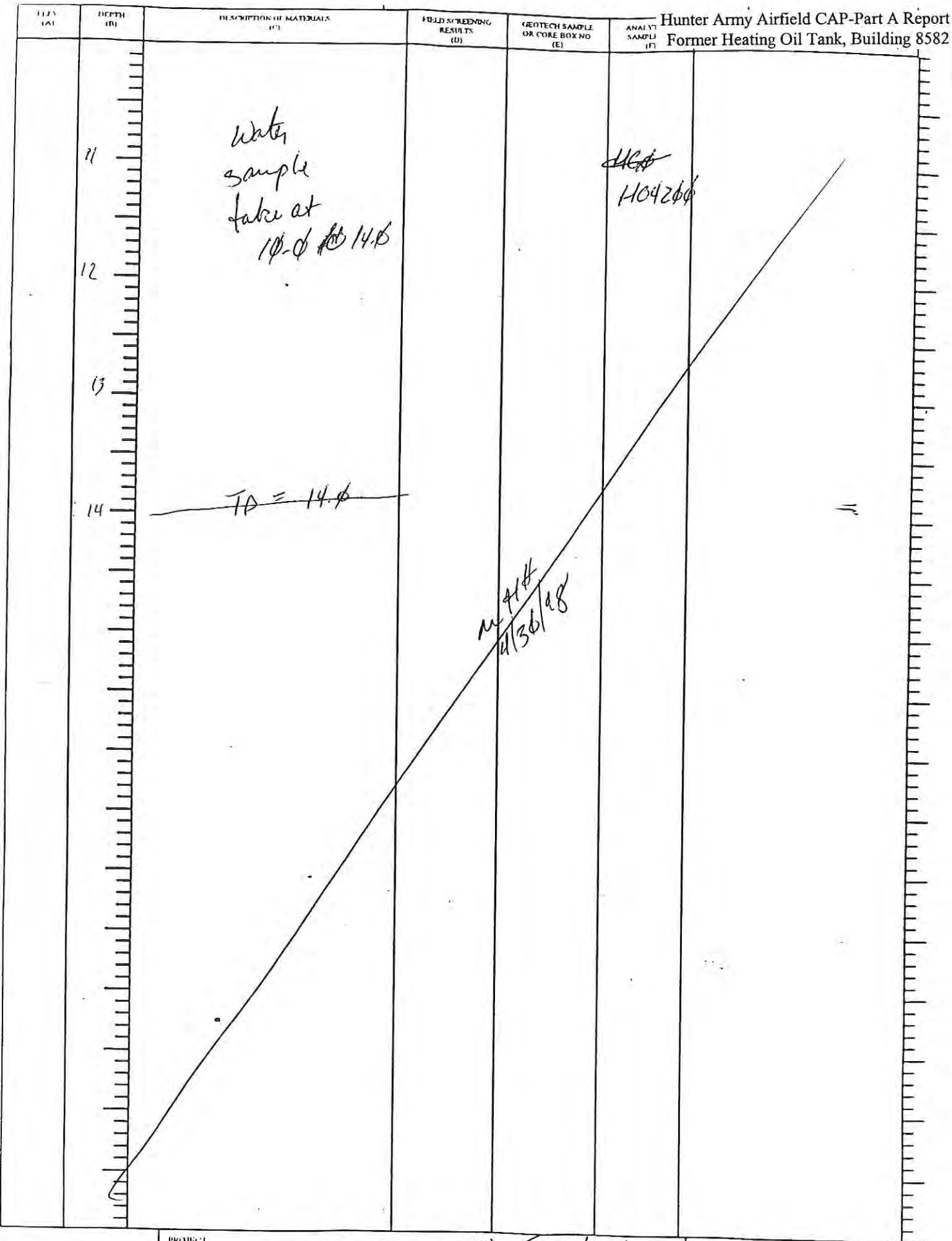
ENG FORM 5056-R, AUG 94 (Proponent: CECW-EG)

USCS (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS (D)	GEOTECH SAMPLE OR CORE BOX NO (E)	ANALYTICAL SAMPLE (F)	
	0	Top Soil	0' to 2' HS=51	NA		begin 0750 end 0755 drilled 4.0' recovery 4.0'
		Sandy clay yellowish brown 10YR5/6 moist, med. plasticity, 40% sand, fine grained				
		~~model~~ motteled gray, red clay with silt moderate plasticity 10R 4/8 = red 10R6/1 = gray moist moderate plasticity, firm	2' to 4' HS=42			
	4'		4' to 6' HS=38	NA		begin 0805 end 0810 drilled 4.0' recovery 4.0'
			6' to 8' HS=130			
		Same as above gradational contact light yellowish brown 2.5Y6/3 clayey silty sand moist very fine grain bimodal sand grains very fine, soft low to mod plasticity				
	8'		8' to 10' HS=68	NA		begin 0835 end 0840 drilled 4.0' recovery 4.0
		Same as above interbedded with clay WT med grained well sorted sand pale yellow 10% silt, quarts sand grains are subangular soft and wet				

PROJECT: Hunter AAF CAPA UST Sites

BOR. NO: 04

93



PROJECT: HAAF CAP A UST Investigation.

HOLE NO: 04

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HTRW DRILLING LOG

DISTRICT: USACE Savannah
HOLE NUMBER: O-6 5 (GBR 4-18-98)
SHEET 1 OF 2

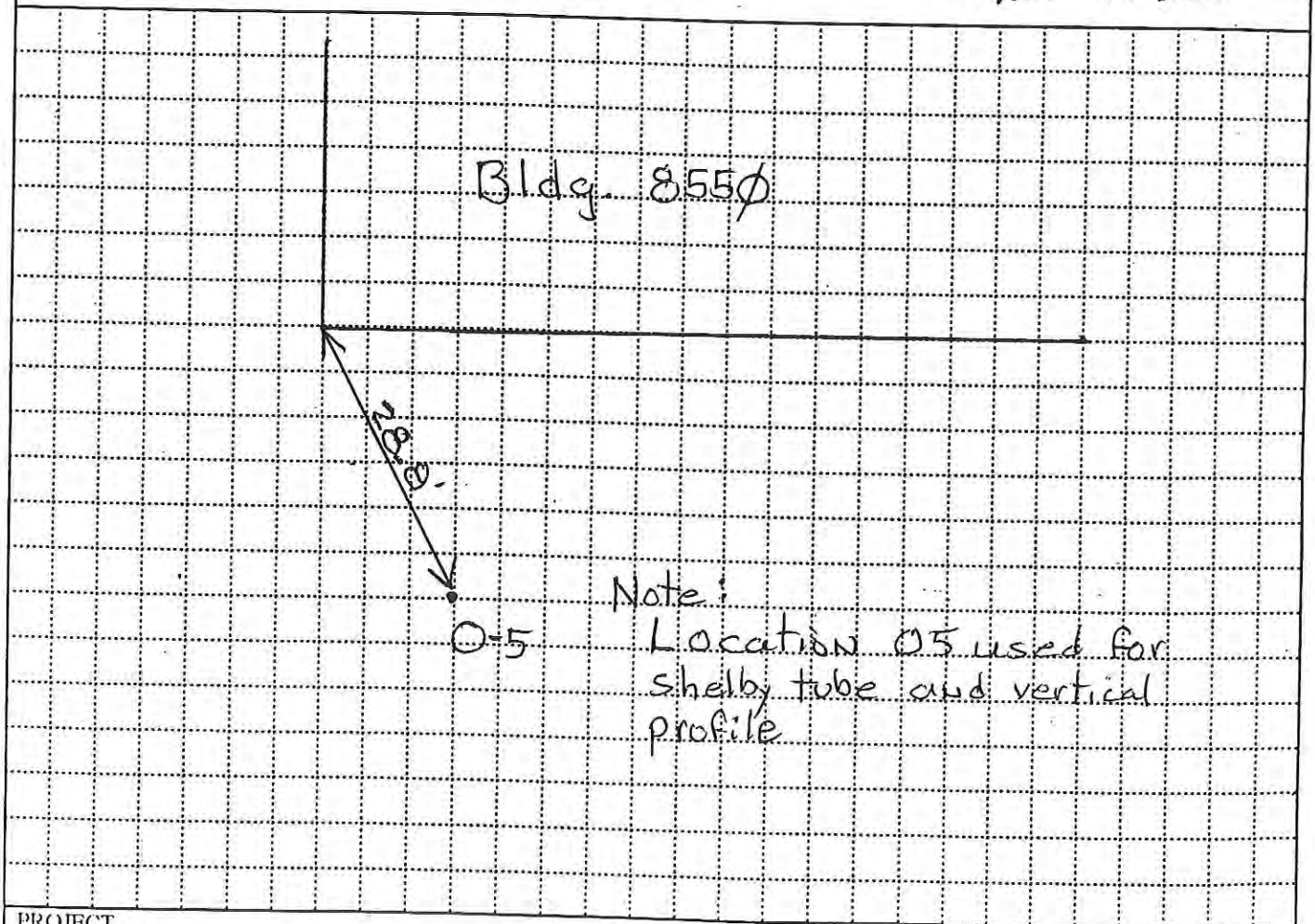
1. COMPANY NAME: AISC	2. DRILL SUBCONTRACTOR: R E Wright (AISC)
3. PROJECT: Hunter AAF CAP Part A UST Sites	4. LOCATION: Bldg 8582 Tank X
5. NAME OF DRILLER: Andy Knickerbocker	6. MANUFACTURERS DESIGNATION OF DRILL: Geoprobe Salina KS
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 2" dia macrocore acetate liner = 4' long. Shoe to drive cap = 4.6' long outer rods = 3' and 4' long; large bore rods = 3' long and 1.5" diameter; screen = 3.5' long	8. HOLE LOCATION: O-5
	9. SURFACE ELEVATION: TBD
	10. DATE STARTED: 4-18-98 — 11. DATE COMPLETED: 4-18-98
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: 10.0 ft BGS
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: See water level log
14. TOTAL DEPTH OF HOLE: 40' BGS	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): See water level log

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
NA	~~NA~~	1 ~~NA~~	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	BTEX VOC	METALS	OTHER (SPECIFY) PAH	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %
water	3	NA	3	NA	~~NA~~	100

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
vertical profile	✓	NA	NA	John B Reeves

LOCATION SKETCH/COMMENTS — SCALE: NOT TO SCALE



PROJECT: Hunter AAF CAP Part A UST Sites
HOLE NO.: O-6 5 (GBR 4-18-98)

ENG FORM 5056-R, AUG 94

(Proponent: CECW-EG)

87

(A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS (D)	GEOTECH SAMPLE OR CORE BOX NO (E)	ANALYSIS SAMPLE (F)
	0'				
		shelby tube interval 2-4' BGS			~~H5~~ H054ØØ
	5'				
	10'	~ 1Ø ft BGS			
				10' below groundwater surface Sample ~~H0530~~ taken H053Ø1	
	15'				
		16-2Ø' water sample			
	2Ø'				
				2Ø' below groundwater surface Sample ~~H0530~~ taken H053Ø2	
	25'				
		26-3Ø' water sample			
	3Ø'				
				3Ø' below groundwater surface Sample ~~H0530~~ taken H053Ø3	
	35'				
		36-4Ø' water sample			
	4Ø'				
	45				

PROJECT HAAF CAP A UST Investigations

BOR. NO. 05

APPENDIX V

SOIL LABORATORY REPORTS

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Former HOT, Building 8582
Hunter Army Airfield
Chatham County, Facility ID: N/A

TABLE V-A. SUMMARY OF SOIL ANALYTICAL RESULTS[3]

Location		O-1	O-1	O-2	O-2	O-3	O-3	O-4
Sample ID		HO1102	HO1105	HO2101	HO2105	HO3101	HO3105	HO4104
Date Collected	Applicable	04/07/98	04/07/98	04/07/98	04/07/98	04/07/98	04/07/98	04/08/98
Depth (ft BGS)	Standards[1]	2.0 to 4.0	8.0 to 9.2	0.0 to 2.0	8.0 to 10.0	0.0 to 2.0	8.0 to 9.0	6.0 to 8.0
VOCs	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Benzene	0.005	0.0024 UJ	0.0024 U	0.0022 U	0.0024 UJ	0.0022 U	0.0024 U	0.0026 U
Toluene	0.400	0.0024 UJ	0.016 J	0.0022 UJ	0.0024 UJ	0.0022 U	0.0072 =	0.0026 UJ
Ethylbenzene	0.370	0.0024 UJ	0.0024 U	0.0022 U	0.0024UJ	0.0022 U	0.0024 U	0.0026 U
Xylenes	20.00	0.0073 UJ	0.0072 UJ	0.0066 UJ	0.0073 UJ	0.0067 U	0.0032 =	0.0077 UJ
TPH-DRO	NRC	0.82 U	0.97 U	2.5 U	0.5 U	1.6 U	0.6 U	0.75 U
TPH-GRO	NRC	0.610 U	0.602 U	0.549 UJ	0.610 UJ	0.562 UJ	0.602 U	0.641 U
PAHs	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
2-Chloronaphthalene	NRC	0.405 U	0.400 U	0.365 U	0.404 U	0.370 U	0.400 U	0.424 U
Acenaphthene	NRC	0.405 U	0.400 U	0.365 U	0.404 U	0.370 U	0.400 U	0.424 U
Acenaphthylene	NRC	0.405 U	0.400 U	0.365 U	0.404 U	0.370 U	0.400 U	0.424 U
Anthracene	N/A[2]	0.405 U	0.400 U	0.365 U	0.404 U	0.370 U	0.400 U	0.424 U
Benzo(a)anthracene	N/A[2]	0.405 U	0.400 U	0.365 U	0.404 U	0.370 U	0.400 U	0.424 U
Benzo(a)pyrene	0.660	0.405 U	0.400 U	0.365 U	0.404 U	0.370 U	0.400 U	0.424 U
Benzo(b)fluoranthene	0.820	0.405 U	0.400 U	0.365 U	0.404 U	0.370 U	0.400 U	0.424 U
Benzo(g,h,i)perylene	NRC	0.405 U	0.400 U	0.365 U	0.404 U	0.370 U	0.400 U	0.424 U
Benzo(k)fluoranthene	1.60	0.405 U	0.400 U	0.365 U	0.404 U	0.370 UJ	0.400 UJ	0.402 U
Chrysene	0.660	0.405 U	0.400 U	0.365 U	0.404 U	0.370 U	0.400 U	0.402 U
Dibenzo(a,h)anthracene	1.50	0.405 U	0.400 U	0.365 U	0.404 U	0.370 U	0.400 U	0.424 U
Fluoranthene	N/A[2]	0.405 U	0.400 U	0.365 U	0.404 U	0.370 U	0.400 U	0.424 U
Fluorene	N/A[2]	0.405 U	0.400 U	0.365 U	0.404 U	0.370 U	0.400 U	0.424 U
Indeno(1,2,3-cd)pyrene	0.660	0.405 U	0.400 U	0.365 U	0.404 U	0.370 U	0.400 U	0.424 U
Naphthalene	N/A[2]	0.405 U	0.400 U	0.365 U	0.404 U	0.370 U	0.400 U	0.424 U
Phenanthrene	N/A[2]	0.405 U	0.400 U	0.365 U	0.404 U	0.370 U	0.400 U	0.424 U
Pyrene	N/A[2]	0.405 U	0.400 U	0.365 U	0.404 U	0.370 U	0.400 U	0.424 U

NOTE: [1]Georgia Department of Natural Resources (GA DNR) Applicable Soil Threshold Levels (i.e., Table A, column 1).
[2]Not applicable; the health-based threshold level exceeds the expected soil concentration under free product conditions.
[3]All field work and analytical sampling were performed prior to the release of the new GA DNR Corrective Action Plan (CAP)-Part A Guidance (i.e., May 1998); therefore, the new analytical methods specified were not used.
BGS - Below ground surface.
NRC - No regulatory criteria.
PAHs - Polynuclear aromatic hydrocarbons.
TPH-DRO - Total petroleum hydrocarbon–diesel-range organics.
TPH-GRO - Total petroleum hydrocarbon–gasoline-range organics.
VOCs - Volatile organic compounds.

Laboratory Qualifier
U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.
UJ - Indicates the compound was not detected at the reported concentration and the concentration was estimated.
= - Indicates the compound was detected at the concentration reported.

Former HOT, Building 8582
Hunter Army Airfield
Chatham County, Facility ID: N/A

TABLE V-A. SUMMARY OF SOIL ANALYTICAL RESULTS[3] (continued)

Location Sample ID Date Collected Depth (ft BGS)	Applicable Standards[1]	O-4 HO4105 04/08/98 8.0 to 8.9	O-4 HO4110[4] 04/08/98 8.0 to 8.9
VOCs	mg/kg	mg/kg	mg/kg
Benzene	0.005	0.0025 U	0.0025 U
Toluene	0.400	0.0025 UJ	0.0025 UJ
Ethylbenzene	0.370	0.0025 U	0.0025 U
Xylenes	20.00	0.0075 UJ	0.0076 UJ
TPH-DRO	NRC	1 U	1.3 U
TPH-GRO	NRC	0.625 U	0.633 U
PAHs	mg/kg	mg/kg	mg/kg
2-Chloronaphthalene	NRC	0.417 U	0.419 U
Acenaphthene	NRC	0.417 U	0.419 U
Acenaphthylene	NRC	0.417 U	0.419 U
Anthracene	N/A[2]	0.417 U	0.419 U
Benzo(a)anthracene	N/A[2]	0.417 U	0.419 U
Benzo(a)pyrene	0.660	0.417 U	0.419 U
Benzo(b)fluoranthene	0.820	0.417 U	0.419 U
Benzo(g,h,i)perylene	NRC	0.417 U	0.419 U
Benzo(k)fluoranthene	1.60	0.417 U	0.419 U
Chrysene	0.660	0.417 U	0.419 U
Dibenzo(a,h)anthracene	1.50	0.417 U	0.419 U
Fluoranthene	N/A[2]	0.417 U	0.419 U
Fluorene	N/A[2]	0.417 U	0.419 U
Indeno(1,2,3-cd)pyrene	0.660	0.417 U	0.419 U
Naphthalene	N/A[2]	0.417 U	0.419 U
Phenanthrene	N/A[2]	0.417 U	0.419 U
Pyrene	N/A[2]	0.417 U	0.419 U

NOTE: [1]Georgia Department of Natural Resources (GA DNR) Applicable Soil Threshold Levels (i.e., Table A, column 1).
[2]Not applicable; the health-based threshold level exceeds the expected soil concentration under free product conditions.
[3]**All field work and analytical sampling were performed prior to the release of the new GA DNR Corrective Action Plan (CAP)-Part A Guidance (i.e., May 1998); therefore, the new analytical methods specified were not used.**
[4]Duplicate sample for sample collected from location O-4 at a depth of 8.0 to 8.9 feet BGS.
BGS - Below ground surface.
NRC - No regulatory criteria.
PAHs - Polynuclear aromatic hydrocarbons.
TPH-DRO - Total petroleum hydrocarbon–diesel-range organics.
TPH-GRO - Total petroleum hydrocarbon–gasoline-range organics.
VOCs - Volatile organic compounds.

Laboratory Qualifier
U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.
UJ - Indicates the compound was not detected at the reported concentration and the concentration was estimated.
= - Indicates the compound was detected at the concentration reported.

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800 Oak Ridge Turnpike, Oak Ridge, TN 37831 (423) 481-4600

CHAIN OF CUSTODY RECORD

COC NO.: 40898C / 40898D

PROJECT NAME: CAP - Hunter AFB - Part A

PROJECT NUMBER: 0019

PROJECT MANAGER: Allison Bailey

Sampler (Signature): Mitchell H. Hall (Printed Name): Mitchell H. Hall

LABORATORY NAME: General Engineering Laboratory

LABORATORY ADDRESS: 2040 Savage Raod, Charleston, SC 29417

PHONE NO: (803) 556-8171

Sample ID	Date Collected	Time Collected	Matrix	BTEX	PAH	EXP-DRO	GRO	TOC	No. of Bottles/ Vials:	OVA SCREENING	OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS
HTBØØ7	4/8/98	ØØØØ	water	X			X		2	NA	9804216-16
HO12Ø	4/7/98	1355	water	X			X		2	NA	ASTM TYPE II, LOT 53
HO22ØØ	4/7/98	1440	water	X			X		2	NA	NA 9804216-17
HO32ØØ	4/7/98	1425	water	X			X		2	NA	NA 9804216-18
HO323Ø	4/7/98	1505	water	X			X		2	NA	NA 9804216-19
HO42ØØ	4/8/98	Ø850	water	X			X		2	NA	NA 9804216-20
HO4Ø5	4/8/98	Ø845	soil	X	X	X	X		2	NA	9804219-01
HO411Ø	4/8/98	Ø845	soil	X	X	X	X		2	68 ppm	9804218-11
HO41Ø4	4/8/98	Ø835	soil	X	X	X	X		2	68 ppm	NA 12
HO11Ø2	4/7/98	1325	soil	X	X	X	X		2	130 ppm	NA 13
HO11Ø5	4/7/98	1345	soil	X	X	X	X		2	Ø.9 ppm	NA 14
HO21Ø1	4/7/98	~~1420~~ 1410	soil	X	X	X	X		2	Ø ppm	NA 15
HO21Ø5	4/7/98	1430	soil	X	X	X	X		2	Ø ppm	NA 16
									2	Ø ppm	NA 17

RELINQUISHED BY: Mitchell Hall	Date/Time 4/8/98 1330	RECEIVED BY:	Date/Time 4.8.98 11:30	TOTAL NUMBER OF CONTAINERS: 26	Cooler Temperature: 4°C
COMPANY NAME: SAIC		COMPANY NAME: GEL		Cooler ID: 423	FEDEX NUMBER: NA
RECEIVED BY:	Date/Time 4/8/98 1330	RELINQUISHED BY:	Date/Time		
COMPANY NAME: SAIC		COMPANY NAME:			
RELINQUISHED BY:	Date/Time 4/8/98 1630	RECEIVED BY:	Date/Time		
COMPANY NAME: GEL		COMPANY NAME:			

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SAIC An Employee-Owned Company
Science Applications International Corporation
800 Oak Ridge Turnpike, Oak Ridge, TN 37831 (423) 481-4600

CHAIN OF CUSTODY RECORD

COC NO.: 46898D

PROJECT NAME: CAP - Hunter AFB - Part A

PROJECT NUMBER: 0019

PROJECT MANAGER: Allison Bailey

Sampler (Signature): Mitchell Hall (Printed Name): Mitchell Hall

LABORATORY NAME: General Engineering Laboratory

LABORATORY ADDRESS: 2040 Savage Raod, Charleston, SC 29417

PHONE NO: (803) 556-8171

Sample ID	Date Collected	Time Collected	Matrix	BTEX	PAH	8015 DRO	GRO	TOC	No. of Bottles/ Vials:	OVA SCREENING	OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS
HO31Ø1	4/7/98	16ØØ	soil	X	X	X	X		2	Ø.7 ppm	9804128-19
HO31Ø5	4/7/98	1625 16Ø5	soil	X	X	X	X		2	Ø.2 ppm	9804128-20
HF111Ø	4/8/98	1Ø55	soil	X	X	X	X		2	13 ppm	Field Duplicate 9804128-21
HF11Ø2	4/8/98	1Ø25	soil	X	X	X	X		2	38 ppm	9804128-17
HF11Ø5	4/8/98	1Ø55	soil	X	X	X	X		2	13 ppm	9804128-18
HF12ØØ	4/8/98	11ØØ	water soil	X					2	NA	9804216-01
HO12ØØ	4/7/98	1355	water	X					2	NA	9804216-02

REQUESTED PARAMETERS

4-8-98

RELINQUISHED BY:	Date/Time	RECEIVED BY:	Date/Time
Mitchell Hall	4/8/98 1570		4-8.98
COMPANY NAME: SAIC		COMPANY NAME: GEL	1630
RECEIVED BY:	Date/Time 4/8/98 1330	RELINQUISHED BY:	Date/Time
COMPANY NAME: GEL		COMPANY NAME:	
RELINQUISHED BY:	Date/Time 4/8/98 1630	RECEIVED BY:	Date/Time
COMPANY NAME: GEL		COMPANY NAME:	

TOTAL NUMBER OF CONTAINERS: 12

Cooler ID: 423

Cooler Temperature: 4°C

FEDEX NUMBER: NA

Quick Turnaround on HF's

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800 Oak Ridge Turnpike, Oak Ridge, TN 37831 (423) 481-4600

CHAIN OF CUSTODY RECORD

COC NO.: 41898B

PROJECT NAME: CAP - Hunter AFB - Part A

PROJECT NUMBER: 0019

PROJECT MANAGER: Allison Bailey

Sampler (Signature) (Printed Name)

LABORATORY NAME: General Engineering Laboratory

LABORATORY ADDRESS: 2040 Savage Raod, Charleston, SC 29417

PHONE NO: (803) 556-8171

REQUESTED PARAMETERS

Sample ID	Date Collected	Time Collected	Matrix	BTEX	PAH	DRP	GRO	TOC	9080	4168	No. of Bottles/ Vials:	OVA SCREENING	OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS
HD31Ø1	4/17/98	1335	Soil	X	X	X	X				2	NA	Ø.Ø - 2.Ø ft
HD41Ø4	4/17/98	1545	Soil	X	X	X	X				2	NA	6.Ø - 8.Ø ft
HD41Ø1	4/17/98	153Ø	soil	X	X	X	X				2	NA	Ø.Ø - 2.Ø ft
HD 51Ø1	4/17/98	162Ø	Soil	X	X	X	X				2	NA	Ø.8 - 2.Ø ft
HD 5104	4/17/98	1635	soil	X	X	X	X				2	NA	6-Ø - 8.Ø ft
HO54ØØ	4/18/98	1Ø2Ø	Soil					X			1	NA	2-Ø - 4.Ø ft
HO53Ø3	4/18/98	1125	water/ Soil	X							2	NA	36.Ø - 4Ø.Ø ft

Analysis 4/16/98

TOTAL NUMBER OF CONTAINERS: 13

Cooler Temperature: 4°C

Cooler ID: 5,04

FEDEX NUMBER: NA

RELINQUISHED BY:	Date/Time	RECEIVED BY:	Date/Time
COMPANY NAME: SAIC	4/18/98 1330	COMPANY NAME: GEL	4-18-98 1620
RELINQUISHED BY:	Date/Time	RECEIVED BY:	Date/Time
COMPANY NAME: GEL	4/18/98 1330	COMPANY NAME:	
RELINQUISHED BY:	Date/Time	RECEIVED BY:	Date/Time
COMPANY NAME:		COMPANY NAME:	

HD31Ø1
HD41Ø4
HD41Ø1
HD51Ø1
HD5104

VSP 4/20/98

Quick turnaround

V-9

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800 Oak Ridge Turnpike, Oak Ridge, TN 37831 (423) 481-4600

CHAIN OF CUSTODY RECORD

COC NO.: 42378A

PROJECT NAME: CAP - Hunter AFB - Part A

PROJECT NUMBER: 0019

PROJECT MANAGER: Allison Bailey

Sampler (Signature) Mitchell Hall (Printed Name) Mitchell Hall

LABORATORY NAME: Catlin Laboratories

LABORATORY ADDRESS: 1051 Johnnie Dodds Blvd. Suite C Mt. Pleasant, SC 29464

PHONE NO: (803)881-6000

Sample ID	Date Collected	Time Collected	Matrix	GRAIN SIZE	MOISTURE CONTENT	PERMEABILITY	SPECIFIC GRAVITY	POROSITY	No. of Bottles/ Vials:	OVA SCREENING	OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS
HL84ØØ	4/18/98	15ØØ	soil	X	X	X	X	X	1	NA	2.Ø - 4.Ø ft
HD84ØØ	4/19/98	1Ø2Ø	soil	X	X	X	X	X	1	NA	4.Ø - 6.Ø ft
HJ64ØØ	4/16/98	1315	soil	X	X	X	X	X	1	NA	2.Ø - 4.Ø ft
HO54ØØ	4/18/98	1Ø2Ø	soil	X	X	X	X	X	1	NA	2.Ø - 4.Ø ft
HP54ØØ	4/1Ø/98	ØØ45	soil	X	X	X	X	X	1	NA	4.Ø - 6.Ø ft
HI84ØØ	4/15/98	135Ø	soil	X	X	X	X	X	1	NA	2.Ø - 4.Ø ft
V-11 HH64ØØ	4/[illegible]/98	1535	soil	X	X	X	X	X	1	NA	Ø.Ø - 2.Ø ft
HG64ØØ	4/7/98	1115	soil	X	X	X	X	X	1	NA	Ø.Ø - 2.Ø ft

REQUESTED PARAMETERS

4/23/98

RELINQUISHED BY:	Date/Time	RECEIVED BY:	Date/Time	TOTAL NUMBER OF CONTAINERS: 8	Cooler Temperature:
COMPANY NAME: SAIC	4/23/98 1124	COMPANY NAME:		Cooler ID:	FEDEX NUMBER:
RECEIVED BY:	Date/Time	RELINQUISHED BY:	Date/Time		
COMPANY NAME: CAT LIN	4/23/98 11:35	COMPANY NAME:			
RELINQUISHED BY:	Date/Time	RECEIVED BY:	Date/Time		
COMPANY NAME:		COMPANY NAME:			

Hunter Army Airfield CAP-Part A Report
Former Heating Oil Tank, Building 8582

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
HO1102

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: HA008S

Matrix: (soil/water) SOIL Lab Sample ID: 9804218-14

Sample wt/vol: 10.0 (g/mL) G Lab File ID: 2F2016

Level: (low/med) LOW Date Received: 04/08/98

% Moisture: not dec. 18 Date Analyzed: 04/21/98

GC Column: J&W DB-624(PID) ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ml) Soil Aliquot Volume: _____(uI

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
71-43-2	Benzene	2.4	U	UJ CP8
108-88-3	Toluene	2.4	U	UJ CP8
100-41-4	Ethylbenzene	2.4	U	UJ CP8
1330-20-7	Xylenes (total)	7.3	U	UJ CP8

DATA VALIDATION COPY

FORM I VOA

FORM 1 Science Applications08-APR-1998 SA
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

HO1102

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: HA008S

Matrix: (soil/water) SOIL Lab Sample ID: 9804218-14

Sample wt/vol: 30.5 (g/mL) G Lab File ID: 4D10057

Level: (low/med) LOW Date Received: 04/08/98

% Moisture: 18 decanted: (Y/N) N Date Extracted:04/10/98

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 04/22/98

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q	
	----------Diesel Range Organics	0.82	B	U F01, F07

FORM I SV

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HC1102

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: HA008S

Matrix: (soil/water) SOIL Lab Sample ID: 9804218-14

Sample wt/vol: 10.0 (g/mL) G Lab File ID: 1F2015

Level: (low/med) LOW Date Received: 04/08/98

% Moisture: not dec. 18 Date Analyzed: 04/21/98

GC Column: J&W DB-624(FID) ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
	----------Gasoline Range Organics	610	U	U

FORM I VOA

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HO1102

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: HA008S

Matrix: (soil/water) SOIL Lab Sample ID: 9804218-14

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 1Q120

Level: (low/med) LOW Date Received: 04/08/98

% Moisture: 18 decanted: (Y/N) N Date Extracted: 04/09/98

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 04/21/98

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	naphthalene	405	U
91-58-7	2-chloronaphthalene	405	U
208-96-8	acenaphthylene	405	U
83-32-9	acenaphthene	405	U
86-73-7	fluorene	405	U
85-01-8	phenanthrene	405	U
120-12-7	anthracene	405	U
206-44-0	fluoranthene	405	U
129-00-0	pyrene	405	U
56-55-3	benzo(a)anthracene	405	U
218-01-9	chrysene	405	U
205-99-2	benzo(b)fluoranthene	405	U
207-08-9	benzo(k)fluoranthene	405	U
50-32-8	benzo(a)pyrene	405	U
193-39-5	indeno(1,2,3-cd)pyrene	405	U
53-70-3	dibenz(a,h)anthracene	405	U
191-24-2	benzo(g,h,i)perylene	405	U

FORM I SV-1

OLM03.0

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HO1105

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: HA008S

Matrix: (soil/water) SOIL Lab Sample ID: 9804218-15

Sample wt/vol: 10.0 (g/mL) G Lab File ID: 2F2011

Level: (low/med) LOW Date Received: 04/08/98

% Moisture: not dec. 17 Date Analyzed: 04/21/98

GC Column: J&W DB-624(PID) ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ml) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
71-43-2	Benzene	2.4	U	U
108-88-3	Toluene	16.0		J CΦ8
100-41-4	Ethylbenzene	2.4	U	U
1330-20-7	Xylenes (total)	7.2	U	UJ CΦ8

DATA VALIDATION
COPY

FORM I VOA

FORM 1 Science Applications08-APR-1998 SA
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

HO1105

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: HA008S

Matrix: (soil/water) SOIL Lab Sample ID: 9804218-15

Sample wt/vol: 30.6 (g/mL) G Lab File ID: 4D10058

Level: (low/med) LOW Date Received: 04/08/98

% Moisture: 17 decanted: (Y/N) N Date Extracted:04/10/98

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 04/22/98

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q	
	----------Diesel Range Organics	0.97	B	U FØ1, FØ7

FORM I SV