

DUPLICATE

FORM 1 Science Applications
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET 15-APR-1999 SA

BD2113

Lab Name: GENERAL ENGINEERING LABOR Contract: NA
Lab Code: NA Case No.: NA SAS No.: NA SDG No.: HBUST02S
Matrix: (soil/water) SOIL Lab Sample ID: 9904479-04
Sample wt/vol: 30.5 (g/mL) G Lab File ID: 063F6301
Level: (low/med) LOW Date Received: 04/15/99
% Moisture: 21 decanted: (Y/N) N Date Extracted: 04/19/99
Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 04/30/99
Injection Volume: 1.0 (uL) Dilution Factor: 2.0
GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q
---------	----------	---	---

-----Diesel Range Organics	0.56	JB	UF01, F06
----------------------------	------	----	-----------

FORM I SV

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

DUPLICATE
EPA SAMPLE NO.

BD2113

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: HBUST02S

Matrix: (soil/water) SOIL Lab Sample ID: 9904479-04

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1F1019

Level: (low/med) LOW Date Received: 04/15/99

% Moisture: not dec. 21 Date Analyzed: 04/19/99

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	69.0	J	J
------------------------------	------	---	---

FORM I VOA

DUPLICATE

Client: Science Applications International Corp.
P.O. Box 2502
800 Oak Ridge Turnpike
Oak Ridge, Tennessee 37831
Contact: Ms. Leslie Barbour
Project Description: Hunter Army Airfield CAP-Part B UST

cc: SAIC00499

Report Date: May 03, 1999

Page 1 of 1

Sample ID : BD2113
Lab ID : 9904479-04
Matrix : Soil
Date Collected : 04/15/99
Date Received : 04/15/99
Priority : Routine
Collector : Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
General Chemistry											
Total Rec. Petro. Hydrocarbons	U	5.22 <i>U</i>	25.1	50.8	mg/kg	1.0	AAT	05/02/99	1000	147917	1
Evaporative Loss @ 105 C		21.0 <i>=</i>	1.00	1.00	wt%	1.0	GJ	04/20/99	1515	147094	2

M = Method	Method-Description
M 1	EPA 418.1 Modified
M 2	EPA 3550

Notes:

The qualifiers in this report are defined as follows:

ND indicates that the analyte was not detected at a concentration greater than the detection limit.

J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).

U indicates that the analyte was not detected at a concentration greater than the detection limit.

* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

Data reported in mass/mass units is reported as 'dry weight'.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis at (843) 769-7391.

Reviewed By




THIS PAGE INTENTIONALLY LEFT BLANK

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BD3101

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: HBUST02S

Matrix: (soil/water) SOIL Lab Sample ID: 9904479-05

Sample wt/vol: 5.6 (g/mL) G Lab File ID: 1F314

Level: (low/med) LOW Date Received: 04/15/99

% Moisture: not dec. 12 Date Analyzed: 04/21/99

GC Column: DB-624 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	2.0	U
108-88-3-----	toluene	2.0	U
100-41-4-----	ethylbenzene	2.0	U
1330-20-7-----	xlenes (total)	3.0	U

FORM I VOA

OLM03.0

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BD3101

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: HBUST02S

Matrix: (soil/water) SOIL Lab Sample ID: 9904479-05

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 5Q413

Level: (low/med) LOW Date Received: 04/15/99

% Moisture: 12 decanted: (Y/N) N Date Extracted: 04/20/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 04/22/99

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	379	U	U ↓
91-58-7-----	2-chloronaphthalene	379	U	
208-96-8-----	acenaphthylene	379	U	
83-32-9-----	acenaphthene	379	U	
86-73-7-----	fluorene	379	U	
85-01-8-----	phenanthrene	379	U	
120-12-7-----	anthracene	379	U	
206-44-0-----	fluoranthene	379	U	
129-00-0-----	pyrene	379	U	
56-55-3-----	benzo(a)anthracene	379	U	
218-01-9-----	chrysene	379	U	
205-99-2-----	benzo(b)fluoranthene	379	U	
207-08-9-----	benzo(k)fluoranthene	379	U	
50-32-8-----	benzo(a)pyrene	379	U	
193-39-5-----	indeno(1,2,3-cd)pyrene	379	U	
53-70-3-----	dibenz(a,h)anthracene	379	U	
191-24-2-----	benzo(g,h,i)perylene	379	U	

FORM I SV-1

OLM03.0

FORM 1 Science Applications15-APR-1999 SA
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

BD3101

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: HBUST02S

Matrix: (soil/water) SOIL Lab Sample ID: 9904479-05

Sample wt/vol: 30.5 (g/mL) G Lab File ID: 011F1101

Level: (low/med) LOW Date Received: 04/15/99

% Moisture: 12 decanted: (Y/N) N Date Extracted: 04/19/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 05/03/99

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		0.90	B	UF01,F07

FORM I SV

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BD3101

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: HBUST02S

Matrix: (soil/water) SOIL Lab Sample ID: 9904479-05

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1F1020

Level: (low/med) LOW Date Received: 04/15/99

% Moisture: not dec. 12 Date Analyzed: 04/19/99

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_____	59.2	J	J
-----------------------------------	------	---	---

FORM I VOA

Client: Science Applications International Corp.
P.O. Box 2502
800 Oak Ridge Turnpike
Oak Ridge, Tennessee 37831
Contact: Ms. Leslie Barbour
Project Description: Hunter Army Airfield CAP-Part B UST

cc: SAIC00499

Report Date: May 03, 1999

Page 1 of 1

Sample ID : BD3101
Lab ID : 9904479-05
Matrix : Soil
Date Collected : 04/15/99
Date Received : 04/15/99
Priority : Routine
Collector : Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
General Chemistry											
Total Rec. Petro. Hydrocarbons	J	39.4 <i>U F01, F06</i>	22.6	45.6	mg/kg	1.0	AAT	05/02/99	1000	147917	1
Evaporative Loss @ 105 C		12.0 =	1.00	1.00	wt%	1.0	GJ	04/20/99	1515	147094	2

M = Method	Method-Description
M 1	EPA 418.1 Modified
M 2	EPA 3550

Notes:

The qualifiers in this report are defined as follows:

ND indicates that the analyte was not detected at a concentration greater than the detection limit.

J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).

U indicates that the analyte was not detected at a concentration greater than the detection limit.

* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

Data reported in mass/mass units is reported as 'dry weight'.

This data report has been prepared and reviewed
in accordance with General Engineering Laboratories
standard operating procedures. Please direct
any questions to your Project Manager, Valerie Davis at (843) 769-7391.

Reviewed By

Janet M. Lind



THIS PAGE INTENTIONALLY LEFT BLANK

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BD3103

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: HBUST02S

Matrix: (soil/water) SOIL

Lab Sample ID: 9904479-06

Sample wt/vol: 5.5 (g/mL) G

Lab File ID: 1F315

Level: (low/med) LOW

Date Received: 04/15/99

% Moisture: not dec. 19

Date Analyzed: 04/21/99

GC Column: DB-624 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	2.2	U	U ↓
108-88-3-----toluene	2.2	U	
100-41-4-----ethylbenzene	2.2	U	
1330-20-7-----xylenes (total)	3.3	U	

FORM I VOA

OLM03.0

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BD3103

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: HBUST02S

Matrix: (soil/water) SOIL Lab Sample ID: 9904479-06

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 5Q414

Level: (low/med) LOW Date Received: 04/15/99

% Moisture: 19 decanted: (Y/N) N Date Extracted: 04/20/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 04/22/99

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	412	U	U ↓
91-58-7	-----2-chloronaphthalene	412	U	
208-96-8	-----acenaphthylene	412	U	
83-32-9	-----acenaphthene	412	U	
86-73-7	-----fluorene	412	U	
85-01-8	-----phenanthrene	412	U	
120-12-7	-----anthracene	412	U	
206-44-0	-----fluoranthene	412	U	
129-00-0	-----pyrene	412	U	
56-55-3	-----benzo (a) anthracene	412	U	
218-01-9	-----chrysene	412	U	
205-99-2	-----benzo (b) fluoranthene	412	U	
207-08-9	-----benzo (k) fluoranthene	412	U	
50-32-8	-----benzo (a) pyrene	412	U	
193-39-5	-----indeno (1,2,3-cd) pyrene	412	U	
53-70-3	-----dibenz (a,h) anthracene	412	U	
191-24-2	-----benzo (g,h,i) perylene	412	U	

FORM I SV-1

OLM03.0

FORM 1 Science Applications15-APR-1999 SA
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

BD3103

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: HBUST02S

Matrix: (soil/water) SOIL Lab Sample ID: 9904479-06

Sample wt/vol: 30.5 (g/mL) G Lab File ID: 006F0601

Level: (low/med) LOW Date Received: 04/15/99

% Moisture: 19 decanted: (Y/N) N Date Extracted: 04/19/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 05/02/99

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	2.1	B	U F01, F07
----------------------------	-----	---	------------

FORM I SV

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BD3103

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: HBUST02S

Matrix: (soil/water) SOIL Lab Sample ID: 9904479-06

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1F1021

Level: (low/med) LOW Date Received: 04/15/99

% Moisture: not dec. 19 Date Analyzed: 04/19/99

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_____	72.2	J	J
-----------------------------------	------	---	---

FORM I VOA

Client: Science Applications International Corp.
P.O. Box 2502
800 Oak Ridge Turnpike
Oak Ridge, Tennessee 37831
Contact: Ms. Leslie Barbour
Project Description: Hunter Army Airfield CAP-Part B UST

cc: SAIC00499

Report Date: May 03, 1999

Page 1 of 1

Sample ID : BD3103
Lab ID : 9904479-06
Matrix : Soil
Date Collected : 04/15/99
Date Received : 04/15/99
Priority : Routine
Collector : Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
General Chemistry											
Total Rec. Petro. Hydrocarbons	U	21.6	24.4	49.2	mg/kg	1.0	AAT	05/02/99	1000	147917	1
Evaporative Loss @ 105 C		19.0	1.00	1.00	wt%	1.0	GJ	04/20/99	1515	147094	2

M = Method	Method-Description
M 1	EPA 418.1 Modified
M 2	EPA 3550

Notes:

The qualifiers in this report are defined as follows:

ND indicates that the analyte was not detected at a concentration greater than the detection limit.

J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).

U indicates that the analyte was not detected at a concentration greater than the detection limit.

* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

Data reported in mass/mass units is reported as 'dry weight'.

This data report has been prepared and reviewed
in accordance with General Engineering Laboratories
standard operating procedures. Please direct
any questions to your Project Manager, Valerie Davis at (843) 769-7391.

Reviewed By



THIS PAGE INTENTIONALLY LEFT BLANK

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BD1500

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: HBUST05S

Matrix: (soil/water) ~~SOIL~~ *Sediment* Lab Sample ID: 9904580-10

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 8G208

Level: (low/med) LOW Date Received: 04/20/99

% Moisture: not dec. 36 Date Analyzed: 04/27/99

GC Column: DB-624 ID: 0.25 (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	3.1	U	U = U U
108-88-3-----toluene	4.7		
100-41-4-----ethylbenzene	3.1	U	
1330-20-7-----xylenes (total)	4.7	U	

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BD1500

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: HBUST05S

Matrix: (soil/water) ~~SOIL~~ Sediment Lab Sample ID: 9904580-02

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 4R213

Level: (low/med) LOW Date Received: 04/20/99

% Moisture: 36 decanted: (Y/N) N Date Extracted: 04/21/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 04/27/99

Injection Volume: 1.0 (uL) Dilution Factor: 4.0

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	2080	U
91-58-7-----	2-chloronaphthalene	2080	U
208-96-8-----	acenaphthylene	2080	U
83-32-9-----	acenaphthene	2080	U
86-73-7-----	fluorene	2080	U
85-01-8-----	phenanthrene	2080	U
120-12-7-----	anthracene	2080	U
206-44-0-----	fluoranthene	2080	U
129-00-0-----	pyrene	2080	U
56-55-3-----	benzo (a) anthracene	2080	U
218-01-9-----	chrysene	2080	U
205-99-2-----	benzo (b) fluoranthene	2080	U
207-08-9-----	benzo (k) fluoranthene	2080	U
50-32-8-----	benzo (a) pyrene	2080	U
193-39-5-----	indeno (1,2,3-cd) pyrene	2080	U
53-70-3-----	dibenz (a,h) anthracene	2080	U
191-24-2-----	benzo (g,h,i) perylene	2080	U

FORM I SV-1

OLM03.0

FORM 1 Science Applications20-APR-1999 SA
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

BD1500

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: HBUST05S

Matrix: (soil/water) ~~SOIL~~ *Sediment* Lab Sample ID: 9904580-02

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 034F3401

Level: (low/med) LOW Date Received: 04/20/99

% Moisture: 36 decanted: (Y/N) N Date Extracted: 04/23/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 04/30/99

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	5.9	B	= F08
----------------------------	-----	---	-------

FORM I SV

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BD1500

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: HBUST05S

Matrix: (soil/water) ~~SOIL~~ Sediment Lab Sample ID: 9904580-02

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1F308

Level: (low/med) LOW Date Received: 04/20/99

% Moisture: not dec. 36 Date Analyzed: 04/21/99

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	358		
------------------------------	-----	--	--

FORM I VOA

Client: Science Applications International Corp.
P.O. Box 2502
800 Oak Ridge Turnpike
Oak Ridge, Tennessee 37831
Contact: Ms. Leslie Barbour
Project Description: Hunter Army Airfield CAP-Part B UST

cc: SAIC00499

Report Date: May 06, 1999

Page 1 of 1

Sample ID : BD1500
Lab ID : 9904580-02
Matrix : Soil (Sediment)
Date Collected : 04/18/99
Date Received : 04/20/99
Priority : Routine
Collector : Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
General Chemistry											
Total Rec. Petro. Hydrocarbons		124	U	15.5	31.2	mg/kg	1.0	AAT	05/05/99	0800	148172 1
Evaporative Loss @ 105 C		36.0	U	1.00	1.00	wt%	1.0	GI	04/20/99	1545	147173 2

M = Method	Method-Description
M 1	EPA 418.1 Modified
M 2	EPA 3550

Notes:

The qualifiers in this report are defined as follows:

ND indicates that the analyte was not detected at a concentration greater than the detection limit.

J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).

U indicates that the analyte was not detected at a concentration greater than the detection limit.

* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

Data reported in mass/mass units is reported as 'dry weight'.

This data report has been prepared and reviewed
in accordance with General Engineering Laboratories
standard operating procedures. Please direct
any questions to your Project Manager, Valerie Davis at (843) 769-7391.

Reviewed By

Janet M. Galt



9904580-02

THIS PAGE INTENTIONALLY LEFT BLANK

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BD2500

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: HBUST05S

Matrix: (soil/water) *SOIL Sediment* Lab Sample ID: 9904580-07

Sample wt/vol: 4.7 (g/mL) G Lab File ID: 8G207

Level: (low/med) LOW Date Received: 04/20/99

% Moisture: not dec. 27 Date Analyzed: 04/27/99

GC Column: DB-624 ID: 0.25 (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	2.9	U	J J J J
108-88-3-----toluene	0.76	J	
100-41-4-----ethylbenzene	2.9	U	
1330-20-7-----xylenes (total)	4.4	U	

FORM I VOA

OLM03.0

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BD2500

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: HBUST05S

Matrix: (soil/water) ~~SOIL~~ Sediment Lab Sample ID: 9904580-01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 4R212

Level: (low/med) LOW Date Received: 04/20/99

% Moisture: 27 decanted: (Y/N) N Date Extracted: 04/21/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 04/27/99

Injection Volume: 1.0 (uL) Dilution Factor: 4.0

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	1830	U
91-58-7-----	2-chloronaphthalene	1830	U
208-96-8-----	acenaphthylene	1830	U
83-32-9-----	acenaphthene	1830	U
86-73-7-----	fluorene	1830	U
85-01-8-----	phenanthrene	1830	U
120-12-7-----	anthracene	1830	U
206-44-0-----	fluoranthene	1830	U
129-00-0-----	pyrene	1830	U
56-55-3-----	benzo (a) anthracene	1830	U
218-01-9-----	chrysene	1830	U
205-99-2-----	benzo (b) fluoranthene	1830	U
207-08-9-----	benzo (k) fluoranthene	1830	U
50-32-8-----	benzo (a) pyrene	1830	U
193-39-5-----	indeno (1,2,3-cd) pyrene	1830	U
53-70-3-----	dibenz (a,h) anthracene	1830	U
191-24-2-----	benzo (g,h,i) perylene	1830	U

FORM I SV-1

OLM03.0

FORM 1 Science Applications20-APR-1999 SA
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

BD2500

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: HBUST05S

Matrix: (soil/water) ~~SOIL~~ Sediment Lab Sample ID: 9904580-01

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 033F3301

Level: (low/med) LOW Date Received: 04/20/99

% Moisture: 27 decanted: (Y/N) N Date Extracted: 04/23/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 04/30/99

Injection Volume: 1.0 (uL) Dilution Factor: 10.0

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

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) MG/KG Q

-----Diesel Range Organics	87.8	B	J F08, H03
----------------------------	------	---	------------

FORM I SV

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BD2500

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: HBUST05S

Matrix: (soil/water) ~~SOIL~~ *Sediment* Lab Sample ID: 9904580-01

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1F307

Level: (low/med) LOW Date Received: 04/20/99

% Moisture: not dec. 27 Date Analyzed: 04/21/99

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_____	398	=
-----------------------------------	-----	---

FORM I VOA

Client: Science Applications International Corp.
P.O. Box 2502
800 Oak Ridge Turnpike
Oak Ridge, Tennessee 37831
Contact: Ms. Leslie Barbour
Project Description: Hunter Army Airfield CAP-Part B UST

cc: SAIC00499

Report Date: May 06, 1999

Page 1 of 1

Sample ID : BD2500
Lab ID : 9904580-01
Matrix : *Soil sediment*
Date Collected : 04/18/99
Date Received : 04/20/99
Priority : Routine
Collector : Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
General Chemistry											
Total Rec. Petro. Hydrocarbons		1410 =	67.8	137	mg/kg	5.0	AAT	05/05/99	0800	148172	1
Evaporative Loss @ 105 C		27.0 =	1.00	1.00	wt%	1.0	GJ	04/20/99	1545	147173	2

M = Method	Method-Description
M 1	EPA 418.1 Modified
M 2	EPA 3550

Notes:

The qualifiers in this report are defined as follows:

ND indicates that the analyte was not detected at a concentration greater than the detection limit.

J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).

U indicates that the analyte was not detected at a concentration greater than the detection limit.

* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

Data reported in mass/mass units is reported as 'dry weight'.

This data report has been prepared and reviewed
in accordance with General Engineering Laboratories
standard operating procedures. Please direct
any questions to your Project Manager, Valerie Davis at (843) 769-7391.

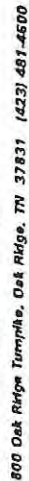
Reviewed By

Jan M. U

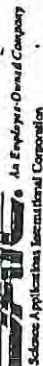


0004580.01

THIS PAGE INTENTIONALLY LEFT BLANK



COC NO.:



COC NO.: HAAFOH99602

CHAIN OF CUSTODY RECORD

LABORATORY NAME:
General Engineering Laboratory

LABORATORY ADDRESS:
2040 Savage Road
Charleston, SC 29407

PHONE NO: (843) 556-8171

RELINQUISHED BY: <i>[Signature]</i>	DATE/TIME 4/19/99	RECEIVED BY: <i>[Signature]</i>	DATE/TIME 4/20/99	TOTAL NUMBER OF CONTAINERS: - - 35	COOLER TEMPERATURE: 4° (F)
COMPANY NAME: SAYC	1600	COMPANY NAME: <i>[Signature]</i>	COOLER ID: 326142	FEDEX NUMBER: 811236285423	

TEMP BLANK INCURRED IN COOLER

Date/Time



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

Science Applications International Corporation An Employee-Owned Company

CHAIN OF CUSTODY RECORD

COC NO.: HAAF04199901

PROJECT NAME: HAAF CAP B, UST 21/22, BLDG 1327, ID 9-025053
AJO HAAF CAP B, UST 108, BLDG 1346, ID 9-025054
PROJECT NUMBER: DACA21-95-D-0022, DO # 38

PROJECT MANAGER: Allison Bailey

Sampler (Signature) *Mike Kideers* (Printed Name) **MIKE KIDEERS**

Sample ID	Date Collected	Time Collected	Matrix
B02500	4/18/99	1641	SEDIMENT
B01500	4/18/99	1706	SEDIMENT
B01500	4/18/99	1422	SEDIMENT
B02500	4/18/99	1519	SEDIMENT
B01510	4/18/99	1422	SEDIMENT
B01610	4/18/99	1410	SURFACE WATER

REQUESTED PARAMETERS									
PAH, TPH-DRO, MOISTURE	TPH-GRO	PAH	PAH, TPH, TPH-DRO, MOISTURE						
1	1	1	1						
1	1	1	1						
1	1	1	1						
1	1	1	1						
1	1	1	1						
2									

No. of Bottles/Vials

OVA SCREENING

OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS

N/A
N/A
N/A
N/A
N/A
N/A
9904580-01
02
03
04
05
06

RELINQUISHED BY: <i>Allison Bailey</i> COMPANY NAME: SAIC	Date/Time 4/19/99 1600	RECEIVED BY: <i>Stano</i> COMPANY NAME: FEDER	Date/Time 4/20/99 402	TOTAL NUMBER OF CONTAINERS: Cooler ID: 226,42	Cooler Temperature: 42 (FIELD) FEDEX NUMBER: 808910135511
--	------------------------------	--	-----------------------------	--	--

TEMPERATURE BLANK INCLUDED IN COOLER

RELINQUISHED BY: <i>FEDER</i> COMPANY NAME:	Date/Time 4/19/99 1600	RELINQUISHED BY: <i>Stano</i> COMPANY NAME:	Date/Time 4/20/99 402	TOTAL NUMBER OF CONTAINERS: Cooler ID: 226,42	Cooler Temperature: 42 (FIELD) FEDEX NUMBER: 808910135511
---	------------------------------	---	-----------------------------	--	--

THIS PAGE INTENTIONALLY LEFT BLANK

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BD1200

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: H3UST07W

Matrix: (soil/water) WATER Lab Sample ID: 9905347-17

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 2J520

Level: (low/med) LOW Date Received: 05/11/99

% Moisture: not dec. _____ Date Analyzed: 05/21/99

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
---------	----------	--	---

71-43-2-----	benzene	2.0	U	U J J U F01, F07
108-88-3-----	toluene	0.90	J	
100-41-4-----	ethylbenzene	1.8	J	
1330-20-7-----	xylene (total)	5.5	B	

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BD1200

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: HBUST07W

Matrix: (soil/water) GROUNDH2O Lab Sample ID: 9905347-17

Sample wt/vol: 980.0 (g/mL) ML Lab File ID: 4T618

Level: (low/med) LOW Date Received: 05/11/99

% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 05/12/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 05/15/99

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/L	Q
91-20-3	naphthalene	10.2	U
91-58-7	2-chloronaphthalene	10.2	U
208-96-8	acenaphthylene	10.2	U
83-32-9	acenaphthene	10.2	U
86-73-7	fluorene	10.2	U
85-01-8	phenanthrene	10.2	U
120-12-7	anthracene	10.2	U
206-44-0	fluoranthene	10.2	U
129-00-0	pyrene	10.2	U
56-55-3	benzo (a) anthracene	10.2	U
218-01-9	chrysene	10.2	U
205-99-2	benzo (b) fluoranthene	10.2	U
207-08-9	benzo (k) fluoranthene	10.2	U
50-32-8	benzo (a) pyrene	10.2	U
193-39-5	indeno (1,2,3-cd) pyrene	10.2	U
53-70-3	dibenz (a,h) anthracene	10.2	U
191-24-2	benzo (g,h,i) perylene	10.2	U

DATA VALIDATION
COPY

FORM I SV-1

OLM03.0

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BD2200

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: HBUST07W

Matrix: (soil/water) WATER Lab Sample ID: 9905347-16

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 2J519

Level: (low/med) LOW Date Received: 05/11/99

% Moisture: not dec. _____ Date Analyzed: 05/21/99

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
---------	----------	--	---

71-43-2-----benzene	2.0	U	U ↓ UFO1, FOL
108-88-3-----toluene	2.0	U	
100-41-4-----ethylbenzene	2.0	U	
1330-20-7-----xylenes (total)	5 4.8	JB	

MAR
6/11/99

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BD2200

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: HBUST07W

Matrix: (soil/water) GROUNDH2O Lab Sample ID: 9905347-16

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 4T617

Level: (low/med) LOW Date Received: 05/11/99

% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 05/12/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 05/15/99

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/L	Q
---------	----------	--	---

91-20-3-----naphthalene	10.0	U
91-58-7-----2-chloronaphthalene	10.0	U
208-96-8-----acenaphthylene	10.0	U
83-32-9-----acenaphthene	10.0	U
86-73-7-----fluorene	10.0	U
85-01-8-----phenanthrene	10.0	U
120-12-7-----anthracene	10.0	U
206-44-0-----fluoranthene	10.0	U
129-00-0-----pyrene	10.0	U
56-55-3-----benzo (a) anthracene	10.0	U
218-01-9-----chrysene	10.0	U
205-99-2-----benzo (b) fluoranthene	10.0	U
207-08-9-----benzo (k) fluoranthene	10.0	U
50-32-8-----benzo (a) pyrene	10.0	U
193-39-5-----indeno (1,2,3-cd) pyrene	10.0	U
53-70-3-----dibenz (a,h) anthracene	10.0	U
191-24-2-----benzo (g,h,i) perylene	10.0	U

FORM I SV-1

OLM03.0

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BD3200

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: HBUST07W

Matrix: (soil/water) WATER Lab Sample ID: 9905347-14

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 2J517

Level: (low/med) LOW Date Received: 05/11/99

% Moisture: not dec. Date Analyzed: 05/21/99

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
---------	----------	--	---

71-43-2-----	benzene	2.0	U
108-88-3-----	toluene	2.0	U
100-41-4-----	ethylbenzene	2.0	U
1330-20-7-----	xylene (total)	5 ~~4.6~~	JB

U
↓
U F01, F06

WAP
6/11/99

FORM I VOA

OLM03.0

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BD3200

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: HBUST07W

Matrix: (soil/water) GROUNDH2O Lab Sample ID: 9905347-14

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 4T616

Level: (low/med) LOW Date Received: 05/11/99

% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 05/12/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 05/15/99

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/L	Q
---------	----------	--	---

91-20-3-----	naphthalene	10.0	U
91-58-7-----	2-chloronaphthalene	10.0	U
208-96-8-----	acenaphthylene	10.0	U
83-32-9-----	acenaphthene	10.0	U
86-73-7-----	fluorene	10.0	U
85-01-8-----	phenanthrene	10.0	U
120-12-7-----	anthracene	10.0	U
206-44-0-----	fluoranthene	10.0	U
129-00-0-----	pyrene	10.0	U
56-55-3-----	benzo (a) anthracene	10.0	U
218-01-9-----	chrysene	10.0	U
205-99-2-----	benzo (b) fluoranthene	10.0	U
207-08-9-----	benzo (k) fluoranthene	10.0	U
50-32-8-----	benzo (a) pyrene	10.0	U
193-39-5-----	indeno (1,2,3-cd) pyrene	10.0	U
53-70-3-----	dibenz (a, h) anthracene	10.0	U
191-24-2-----	benzo (g, h, i) perylene	10.0	U

U
↓

FORM I SV-1

OLM03.0

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BD1600

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: HBUST05W

Matrix: (soil/water) WATER (Surface water) Lab Sample ID: 9904580-09

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 2G111

Level: (low/med) LOW Date Received: 04/20/99

% Moisture: not dec. _____ Date Analyzed: 04/26/99

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
---------	----------	--	---

71-43-2-----	benzene	2.0	U	↓
108-88-3-----	toluene	2.0	U	
100-41-4-----	ethylbenzene	2.0	U	
1330-20-7-----	xylene (total)	3.0	U	

FORM I VOA

OLM03.0

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BD1600

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: HBUST05W

Matrix: (soil/water) ~~GROUNDWATER~~ Surface water Lab Sample ID: 9904580-09

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 4Q508

Level: (low/med) LOW Date Received: 04/20/99

% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 04/23/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 04/23/99

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/L	Q
---------	----------	--	---

91-20-3-----	naphthalene	10.0	U
91-58-7-----	2-chloronaphthalene	10.0	U
208-96-8-----	acenaphthylene	10.0	U
83-32-9-----	acenaphthene	10.0	U
86-73-7-----	fluorene	10.0	U
85-01-8-----	phenanthrene	10.0	U
120-12-7-----	anthracene	10.0	U
206-44-0-----	fluoranthene	10.0	U
129-00-0-----	pyrene	10.0	U
56-55-3-----	benzo (a) anthracene	10.0	U
218-01-9-----	chrysene	10.0	U
205-99-2-----	benzo (b) fluoranthene	10.0	U
207-08-9-----	benzo (k) fluoranthene	10.0	U
50-32-8-----	benzo (a) pyrene	10.0	U
193-39-5-----	indeno (1,2,3-cd) pyrene	10.0	U
53-70-3-----	dibenz (a,h) anthracene	10.0	U
191-24-2-----	benzo (g,h,i) perylene	10.0	U

FORM I SV-1

DATA VALUE

OLM03.0

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BD2600

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: HBUST05W

Matrix: (soil/water) WATER (surface water) Lab Sample ID: 9904580-08

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 2G110

Level: (low/med) LOW Date Received: 04/20/99

% Moisture: not dec. Date Analyzed: 04/26/99

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

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

CAS NO.

COMPOUND

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Q

71-43-2-----benzene	2.0	U
108-88-3-----toluene	2.0	U
100-41-4-----ethylbenzene	2.0	U
1330-20-7-----xylenes (total)	0.53	J

56

FORM I VOA

OLM03.0

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BD2600

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: HBUST05W

Matrix: (soil/water) ~~GROUNDH2O~~ *Surface water* Lab Sample ID: 9904580-08

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 4Q507

Level: (low/med) LOW Date Received: 04/20/99

% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 04/23/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 04/23/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

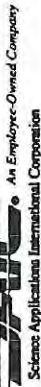
GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
---------	----------	--	---

91-20-3-----	naphthalene	10.0	U
91-58-7-----	2-chloronaphthalene	10.0	UU
208-96-8-----	acenaphthylene	10.0	UU
83-32-9-----	acenaphthene	10.0	UU
86-73-7-----	fluorene	10.0	UU
85-01-8-----	phenanthrene	10.0	UU
120-12-7-----	anthracene	10.0	UU
206-44-0-----	fluoranthene	10.0	UU
129-00-0-----	pyrene	10.0	UU
56-55-3-----	benzo (a) anthracene	10.0	UU
218-01-9-----	chrysene	10.0	UU
205-99-2-----	benzo (b) fluoranthene	10.0	UU
207-08-9-----	benzo (k) fluoranthene	10.0	UU
50-32-8-----	benzo (a) pyrene	10.0	UU
193-39-5-----	indeno (1,2,3-cd) pyrene	10.0	UU
53-70-3-----	dibenz (a,h) anthracene	10.0	UU
191-24-2-----	benzo (g,h,i) perylene	10.0	U

FORM I SV-1

OLM03.0



COC NO.: HAAFO41999C02

CHAIN OF CUSTODY RECORD

PROJECT NAME: HAAAF CAP B, UST 108, BLDG 1346, ID 9-025104 AJO HAAAF CAP B, UST 21122, BLDG 1327, 109-025053 PROJECT NUMBER: DACA21-95-D-0022, DO # 38										LABORATORY NAME: General Engineering Laboratory									
PROJECT MANAGER: Allison Bailey										LABORATORY ADDRESS: 2040 Savage Road Charleston, SC 29407									
Sample ID										PHONE NO: (843) 556-8171									
Date Collected										OVA SCREENING									
Time Collected										OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS									
Matrix																			
BOZ500										3 N/A 9904580-07									
BOZ600										4 N/A 2 -08									
BOZ600										4 N/A 2 -09									
BOZ500										3 N/A 2 -10									
BL1600										4 N/A 2 -11									
BL1500										3 N/A 2 -12									
BL2600										4 N/A 2 -13									
BL2500										3 N/A 2 -14									
BL2600										2 N/A 2 -15									
BL1510										3 N/A 2 -16									
TBLOO3										2 N/A 2 -17									
RELINQUISHED BY: [Signature]										Cooler Temperature: 4°C (FIELD)									
DATE/TIME: 4/19/99										FEDEX NUMBER: 811236285423									
COMPANY NAME: SAK										Cooler ID: 32614C									
RECEIVED BY: [Signature]										TEMP BLANK INCUBED IN COOLER									
DATE/TIME: 4/19/99																			
COMPANY NAME: SAK																			
RELINQUISHED BY: [Signature]																			
DATE/TIME: 4/19/99																			
COMPANY NAME: SAK																			
RELINQUISHED BY: [Signature]																			
DATE/TIME: 4/19/99																			
COMPANY NAME: SAK																			

APPENDIX B

FIELD BORING LOGS

THIS PAGE INTENTIONALLY LEFT BLANK

55

HTRW DRILLING LOG			DISTRICT SAVANNAH USACE		HOLE NUMBER BD-1	
1. COMPANY NAME SAIC			1. DRILL SUBCONTRACTOR SAIC Middletown		SHEET 1 OF 3	
3. PROJECT UST 108, Bldg. 1346 CAP B Investigation			4. LOCATION UST 108, Bldg. 1346, HUNTER AAF			
5. NAME OF DRILLER JIM HEWITT			6. MANUFACTURERS DESIGNATION OF DRILL Geoprobe Model 66DT			
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT 2.0-inch DIA, 4.0 FT LENGTH MACROCORE SAMPLER WITH 1.75-inch DIA, 4.0 FT LENGTH ACETATE LINERS, 8.75-inch OD, 4.25-inch ID HOLLOW STEM AUGERS			8. HOLE LOCATION UST 108, Bldg. 1346			
			9. SURFACE ELEVATION TBD			
12. OVERBURDEN THICKNESS N/A			10. DATE STARTED 04-14-99		11. DATE COMPLETED 04-20-99	
13. DEPTH DRILLED INTO ROCK N/A			15. DEPTH GROUNDWATER ENCOUNTERED 4.0 FT BGS			
14. TOTAL DEPTH OF HOLE 14.8 FT BGS			16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED N/A			
			17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY) N/A			
18. GEOTECHNICAL SAMPLES BD1400		DISTURBED 1, (0-1 TO 1.5')		UNDISTURBED 1, (1.5' TO 1.8')		19. TOTAL NUMBER OF CORE BOXES N/A
20. SAMPLES FOR CHEMICAL ANALYSIS N/A		VOC		METALS		OTHER (SPECIFY) N/A
22. DISPOSITION OF HOLE WELL		BACKFILLED		MONITORING WELL		OTHER (SPECIFY) N/A
				23. SIGNATURE OF INSPECTOR <i>W. Kevin Ganga</i>		21. TOTAL CORE RECOVERY 65%

LOCATION SKETCH/COMMENTS

SCALE: **NOT TO SCALE**

PROJECT UST 108, Bldg. 1346 CAP B Investigation		HOLE NO. BD-1
---	--	-------------------------

PROJECT		INSPECTOR		HOLE NO		
UST 108, Bldg. 1346 CAP B		W. Kevin J. J...		2 OF 3		
ELEV (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS (D)	GEOTECH SAMPLE OR CORE BOX NO (E)	ANALYTICAL SAMPLE NO (F)	REMARKS (G)
		SOIL COVER, ROOTS, GRAVEL	FS=0.0ppm HS=0.0ppm BZA=0.0ppm	↑ BD1408 0.1 TO 1.5 FT BGS ↓		RUN 1 START: 1724 STOP: 1727 RUN: 4.0 RECOVERY: 1.4 FT NO CHEMICAL SAMPLES COLLECTED.
	1.0	SP: poorly graded sand with gravel. 10YR 5/2 grayish brown. PIECE OF WOOD 1.2 TO 1.4.				
	2.0	NO				
	3.0	RECOVERY				
	4.0	WET AT 4.0 FT BGS				
	4.0	CONTINUED ABOVE INTERVAL: SP-poorly graded sand continued	BZA=0.0ppm FS=0.0ppm HS=N/A			RUN 2 START: 1745 STOP: 1748 RUN: 4.0 RECOVERY: 2.0 FT
	5.0	CL: lean clay with very fine sand to silt. High organic content. 10YR 2/1 (black)				
	6.0	NO				
	7.0	RECOVERY				
	8.0	SP-SM: poorly sorted, medium to coarse grained silty sand, micaceous. SATURATED, SOUPY.	FS=0.0ppm HS= N/A W/ +14.99 0.0ppm			RUN 3 START: 1552 STOP: 1555 RUN: 9.0 FT RECOVERY: 4.0 FT
	9.0					
	10.0					

PROJECT
 UST 108, Bldg. 1346 CAP B Investigation
 B-4

HOLE NO
 BD-1

THIS PAGE INTENTIONALLY LEFT BLANK

HTRW DRILLING LOG		DISTRICT		HOLE NUMBER	
1. COMPANY NAME: SAIC		2. DRILL SUBCONTRACTOR: SAIC - MIDDLETOWN		3. HOLE NUMBER: BD-1A	
4. PROJECT: WST 108, Bldg. ~~1347~~ 1346 CAP B		5. LOCATION: WST 108, Bldg. 1346, WINTER AAF			
6. NAME OF DRILLER: JIM HEWITT		7. MANUFACTURERS DESIGNATION OF DRILL: Geoprobe Model 660T			
8. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 2.0-INCH DIA, 9.0-FT LENGTH MACROCORE SAMPLER WITH 1.75-INCH DIA, 4.0-FT LENGTH ACETATE LINERS.		9. HOLE LOCATION: WST 108, Bldg. ~~1347~~ 1346			
10. OVERBURDEN THICKNESS: N/A		11. SURFACE ELEVATION: N/A			
12. (DEPTH DRILLED) INTO ROCK: N/A		13. DATE STARTED: 04-14-99			
14. TOTAL DEPTH OF HOLE: 9.0 FT BGS		15. DATE COMPLETED: 04-14-99			
16. GEOTECHNICAL SAMPLES: NONE		17. DEPTH GROUNDWATER ENCOUNTERED: 4.0 FT BGS			
18. DISTURBED: NONE		19. UNDISTURBED: N/A			
20. SAMPLES FOR CHEMICAL ANALYSIS: BD1101		21. TOTAL NUMBER OF CORE BOXES: 35			
22. DISPOSITION OF HOLE: Plugged		23. SIGNATURE OF INSPECTOR: W. Hewitt			
24. BACKFILLED: Bentonite		25. MONITORING WELL: BIEX			
26. OTHER (SPECIFY): OTHER (SPECIFY):		27. OTHER (SPECIFY): OTHER (SPECIFY):			
28. LOCATION SKETCH/COMMENTS:		29. SCALE: NOT TO SCALE			

NOTE: BD-1A IS 3.5 FT NORTHWEST OF FENCE. BB-1 IS 2.9 FT OFF OF FENCE.

PROJECT: WST 108, Bldg. ~~1347~~ 1346 CAP B INVESTIGATION		HOLE NO.: BD-1A
--	--	---------------------------

PROJECT		INSPECTOR		SHEET									
ELEV (A)		DEPTH (B)		DESCRIPTION OF MATERIALS (C)		FIELD SCREENING RESULTS (D)		GEOTECH SAMPLE OR CORE BOX NO (E)		ANALYTICAL SAMPLE NO (F)		REMARKS (G)	
UST 108, Bldg. 1346 CAP B		W. Kevin Jago		20F2								28	
Soil cover, root zone, grass, gravel, plastic debris		BZA=0.0ppm FS=0.0ppm HS=0.0ppm								BD1101 0.0 TO 1.4 FT BGS		RUN 1 START: 1630 STOP: 1635 RUN: 4.0 FT RECOVERY: 1.4 FT	
1.0 SP-SM: poorly sorted silty sand, micaceous. 10YR 4/2 (dark grayish brown).												1.0	
2.0 NO		FS=0.0ppm HS=N/A										2.0	
3.0 RECOVERY												3.0	
4.0 WET AT 4.0												4.0	
CONTINUED SP-SM: poorly sorted silty sand from above interval - color same.		BZA=0.0ppm FS=0.0ppm HS=N/A										RUN 2: START: 1646 STOP: 1653 RUN: 5.0 FT RECOVERY: 2.4 FT SATURATED SAND INTERVAL MAY BE PERCHED ZONE.	
5.0 NO CONTACT WKT 04-19-99												5.0	
6.0 CL: lean clay with very fine sand to silt. High organic content. 10YR 2/1 (black) to 10YR 3/2 very dark grayish brown												6.0	
7.0 NO												7.0	
8.0 RECOVERY												8.0	
9.0 END BORING												9.0	
PROJECT		1346 WKT 04-19-99		HOLE NO		BD-1A							
UST 108, Bldg. 1346 CAP B INVESTIGATION		B-8											

HTRW DRILLING LOG		DISTRICT		HOLE NUMBER	
1. COMPANY NAME		SAVANNAH USACE		BD-2	
2. PROJECT		3. DRILL SUBCONTRACTOR		SHEET SHEETS	
SAIC		SAIC - Middle town		1 OF 3	
4. LOCATION		5. NAME OF DRILLER		6. MANUFACTURERS DESIGNATION OF DRILL	
UST 108, Bldg. 1346 CAP B Investigation		JIM HEWITT		Geoprobe Model 66DT	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT		8. HOLE LOCATION		9. SURFACE ELEVATION	
2.0-inch DIA MACROCORE SAMPLER WITH 1.75-inch diameter acetate liners, 4.0-FT LENGTH. Expendable carbon steel drive points		Bldg. 1346, UST 108		180	
12. OVERBURDEN THICKNESS		10. DATE STARTED		11. DATE COMPLETED	
N/A		04-15-99		04-21-99	
13. DEPTH DRILLED INTO ROCK		15. DEPTH GROUNDWATER ENCOUNTERED		16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED	
N/A		7.2 FT BGS		3.6 FT BGS ON 04-20-99 @ 1400 HRS	
14. TOTAL DEPTH OF HOLE		17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)		19. TOTAL NUMBER OF CORE BOXES	
14.2 FT BGS		N/A		N/A	
18. GEOTECHNICAL SAMPLES		DISTURBED		UNDISTURBED	
BD2400		1 (2.0 TO 2.0')		N/A	
20. SAMPLES FOR CHEMICAL ANALYSIS		VOC		METALS	
BD2101, BD2103, BD2113		BACKFILLED		MONITORING WELL	
22. DISPOSITION OF HOLE		WELL		MW-L2	
21. TOTAL CORE RECOVERY		OTHER (SPECIFY)		OTHER (SPECIFY)	
90%		BTEX		TPH (Total Petroleum Hydrocarbons) PAHs	
23. SIGNATURE OF INSPECTOR		W. William Goyt			
LOCATION SKETCH/COMMENTS		SCALE:		NOT TO SCALE	
PROJECT		HOLE NO.			
UST 108, Bldg. 1346 CAP B Investigation		BD-2			

PROJECT			INSPECTOR		SHEET	
UST 108, Bldg. 1346 CAPB			W. Kevin GARD		2 OF 3	
DEPTH (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS (D)	GEOCHEMICAL SAMPLE OR CORE BOX NO (E)	ANALYTICAL SAMPLE NO (F)	REMARKS (G)
		Soil cover, root zone, gravel fill	BSA=0.0 ppm FS=0.0 ppm HS=16.4 ppm			RUN 1: START: 1000 STOP: 1002 RUN: 4.0 FT RECOVERY: 3.2 F
	1.0	Grade to a SM: fine to very fine-grained silty sand. High silt fraction. High organic content. Fining downward. Some plastic. Moist		BD2400 0.0 TO 2.0 FT BGS	BD2101 0.0 TO 2.0 FT BGS	HAMMERING REQUIRED. MOISTURE EFFECTS APPEAR TO AFFECT HEADSPACE FROM 0.0 TO 2.0 FT BGS, AND 2.0 TO 3.2 FT BGS.
	2.0	lower 0.5 FT. micaceous SY 2.5/1 (black) to 10YR 3/3 (dark brown).	FS=0.0 ppm HS=8.7 ppm			
	3.0					
	4.0	NO RECOVERY				
	5.0	CONTINUED ABOVE INTERVAL SAND LENSE	FS=0.0 ppm HS: N/A			RUN 2: START: 1014 STOP: 1017 RUN: 4.0 FT RECOVERY: 4.0 FT
	5.3	WET ZONE		W13 4-15.99 BD2105		
	6.0		W13 4-15.99 FS=0.0 ppm HS=0.0 ppm 6.2 TO 7.2 FT INTERVAL	BD2103 BD2113 5.2 TO 7.2 FT BGS		
	7.0	WET AT 7.2 FT BGS				
	8.0	Sharp contact to a SP: fine to medium grained. SAND. 10YR 5/1 (gray).				HOLE COLLAPSED TO 4.0' END PROBING AT 8.0 FT BGS
	9.0	NO RECOVERY				AUGERING ONLY 8.0 TO 14.2 FT BGS
	10.0					

PROJECT

UST 108, Bldg. 1346 CAPB Investigation

B-10

HOLE NO

BD-2

THIS PAGE INTENTIONALLY LEFT BLANK

HTRW DRILLING LOG				DISTRICT		HOLE NUMBER	
1. COMPANY NAME: SACC				2. DRILL SUBCONTRACTOR SAVANNAH USACE		3. HOLE NUMBER BD-3	
4. PROJECT 1346 CAPB INVESTIGATION				5. LOCATION UST 108, Bldg. 1346 HUNTER AAF		6. SHEET SHEETS 1 OF 3	
7. NAME OF DRILLER JIM HEWITT				8. MANUFACTURERS DESIGNATION OF DRILL Geoprobe Model 66DT		9. HOLE LOCATION 1346-1	
10. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT 2.0-inch DIA MACROCORE SAMPLER WITH 1.75-inch DIA				11. SURFACE ELEVATION TRD		12. DATE STARTED 04-15-99	
13. OVERBURDEN THICKNESS N/A				14. DATE COMPLETED 04-20-99		15. DEPTH GROUNDWATER ENCOUNTERED 5.1 FT BGS	
16. DEPTH DRILLED INTO ROCK N/A				17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED N/A		18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY) N/A	
19. TOTAL DEPTH OF HOLE 15.3 FT BGS				20. GEOTECHNICAL SAMPLES BD 340d		21. TOTAL CORE RECOVERY % 80	
22. SAMPLES FOR CHEMICAL ANALYSIS BD 3101, BD 3102, 3103		23. DISTURBED 1 (2.0 TO 4.0')		24. UNDISTURBED		25. TOTAL NUMBER OF CORE BOXES N/A	
26. VOC		27. METALS		28. OTHER (SPECIFY) BTEX		29. OTHER (SPECIFY) TPH (Total, DROGRO) PAHs	
30. BACKFILLED		31. MONITORING WELL MW-D2		32. OTHER (SPECIFY)		33. SIGNATURE OF INSPECTOR L. Kevin Gage	
34. LOCATION SKETCH/COMMENTS				35. SCALE: NOT TO SCALE			

PROJECT UST 108, Bldg. 1346 CAPB Investigation		HOLE NO. BD-3
--	--	-------------------------

HTRW DRILLING LOG						
PROJECT			INSTRUCTOR			NO. 17
UST 108, Bldg. 1347 1346			W. Kevin Gags			2 OF 3
DEPTH (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS (D)	GEOTECH. SAMPLE OR CORE BOX NO. (E)	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	1.0	Soil, ROOT ZONE, GRASS	BSA=0.0 ppm FS=0.0 ppm HS=0.0 ppm		BD3101 0.0 TO 2.0 FT BGS	RUN 1 START: 0919 STOP: 0922 RUN: 4.0 FT RECOVERY: 4.0 FT
	2.0	GRADATIONAL CONTACT to MH: elastic, silt w/ minor fine sand fraction. high organic content	FS=0.0 ppm HS=7.0 ppm	BD3400 2.0 TO 4.0 FT BGS		NOTE: Headspace affected by moisture in 2.0 to 4.0 FT interval.
	3.0	10YR 2/1 (black) to 10YR 2/2 very dark brown. Some slough present from uphole				
	4.0		FS=0.0 ppm HS=			RUN 2 START: 0932 STOP: 0935 RUN: 4.0 FT RECOVERY: 2.8 FT
	5.0	WET AT 5.1 FT BGS			BD3103 4.5 TO 5.5 FT BGS	
	6.0	Sharp contact to a SP: poorly graded sand, with small pebbles up to 3mm in diameter, well rounded. Shell fragments 10YR 5/1 (gray)				
	7.0	NO RECOVERY				
	8.0	Continued Above interval.	BSA=0.0 ppm FS=0.0 ppm			RUN 3: 0 START: 0943 END: 0946 RUN: 4.0 FT RECOVERY: 2.8 FT
	9.0					
	10.0					

PROJECT

UST 108, Bldg. 1347 CAPB Investigation

HOLE NO.

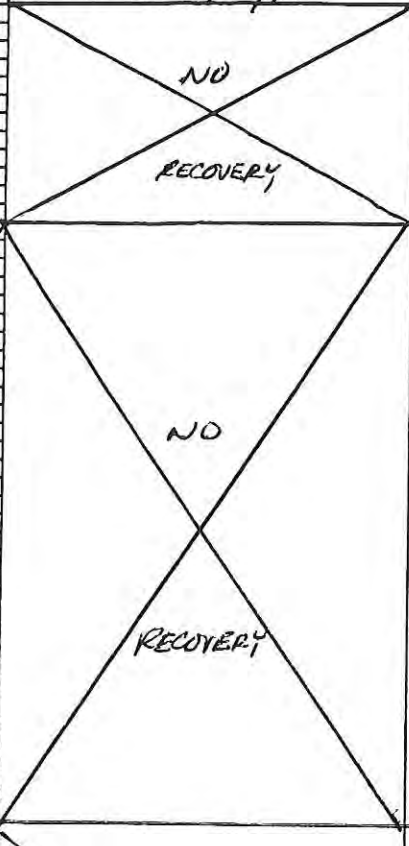
BD-3

PROJECT		1346 WED 4-15-99 UST 108; Bldg. T347 CAP B		INSPECTOR		W. Kevin Jago		SHEET		3 of 3	
DEPT	DEPTH	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS	GEO TECH SAMPLE OR CORE BOX NO	ANALYTICAL SAMPLE NO	REMARKS					

48

GRADE TO A SW fine to very fine, well-graded sand, micaceous. 10%R 6/1 (gray).

11.0
12.0
13.0
14.0
15.0
15.3



HOLE CAVING
END GEOPROBE AT
12.0 FT BGS

AUGER ONLY
12.0 TO 15.3
FT BGS

TD 15.3 FT BGS

11.0
12.0
13.0
14.0
15.0
15.3

W. Kevin Jago
4-20-99

THIS PAGE INTENTIONALLY LEFT BLANK

HTRW DRILLING LOG		DISTRICT		HOLE NUMBER	
1. COMPANY NAME: SAIC		2. DRILL SUBCONTRACTOR SAIC Middletown office		3. HOLE NUMBER BD-4	
4. PROJECT 1346 WAF 4-15-99 UST 108, Bldg. 1347 CAP B		5. LOCATION UST 108, Bldg. 1347, HUNTER AAF		6. SHEET SHEETS 1 OF 2	
7. NAME OF DRILLER		8. MANUFACTURERS DESIGNATION OF DRILL Geoprobe Model 66 DT		9. HOLE LOCATION 1346 WAF 4-15-99 UST 108, Bldg. 1347	
10. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT 2.0-inch Dia., 2.5-ft. length Shelby tube and push probe.		11. SURFACE ELEVATION N/A		12. DATE STARTED 4-15-99	
13. OVERBURDEN THICKNESS N/A		14. DATE COMPLETED 4-15-99		15. DEPTH GROUNDWATER ENCOUNTERED N/A	
16. DEPTH DRILLED INTO ROCK N/A		17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED N/A		18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY) N/A	
19. TOTAL DEPTH OF HOLE 4.0 FT BGS		20. GEOTECHNICAL SAMPLES BD 3400		21. TOTAL NUMBER OF CORE BOXES N/A	
22. SAMPLES FOR CHEMICAL ANALYSIS N/A		23. DISTURBED 1 (2.0 TO 4.0')		24. UNDISTURBED N/A	
25. VOC		26. METALS		27. OTHER (SPECIFY)	
28. BACKFILLED		29. MONITORING WELL		30. OTHER (SPECIFY)	
31. DISPOSITION OF HOLE Plugged		32. SIGNATURE OF INSPECTOR L. Quinn Gray		33. TOTAL CORE RECOVERY % N/A	
34. LOCATION SKETCH/COMMENTS		35. SCALE: NOT TO SCALE		36. SIGNATURE OF INSPECTOR	
PROJECT 1346 WAF 4-15-99 UST 108, Bldg. 1347 CAP B Investigation				HOLE NO. BD-4	

HIRW DRILLING LOG

PROJECT		INSPECTOR		SHEET		
108 ^{and} 1346 ^{and} 1347		W. Kevin G. 1347		2 of 2		
ELV (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS (D)	GEOTECH SAMPLE OR CORE BOX NO (E)	ANALYTICAL SAMPLE NO (F)	REMARKS (G)
	1.0	NO RECOVERY FOR LITHOLOGIC LOG				Reference Boring B-2 for lithology description from 0.0 to 4.0 FT BGS for B-4 site area.
	2.0					Shelby tube undisturbed sample.
	3.0				BD3400 2.0 to 4.0 FT BGS	
	4.0					TD = 4.0 FT BGS
W. Kevin G. 1347 8-15-99						

PROJECT

1346 ^{and} 1347
UST 108, Bldg. T347 CAP B Investigation

B-18

HOLE NO

B-4

HTRW DRILLING LOG			DISTRICT		HOLE NUMBER	
1. COMPANY NAME: SAIC			SAVANNAH USACE		SSD-01	
2. PROJECT UST 108, Bldg, 1346 CAP B Investigation			1. DRILL SUBCONTRACTOR N/A		SHEET SHEETS 1 OF 1	
3. NAME OF DRILLER N/A			4. LOCATION UST 108, Bldg, 1346, NUTTER AAF			
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT SEDIMENT - STAINLESS TROWEL WITH ENCORE SAMPLER			6. MANUFACTURERS DESIGNATION OF DRILL N/A			
			8. HOLE LOCATION N/A			
SURFACE WATER - AMBER GLASS BOTTLE FOR DIPPER. VOCs COLLECTED DIRECTLY INTO VOA VIAL			9. SURFACE ELEVATION N/A			
12. OVERBURDEN THICKNESS N/A			10. DATE STARTED 04-18-99		11. DATE COMPLETED 04-18-99	
13. DEPTH DRILLED INTO ROCK N/A			15. DEPTH GROUNDWATER ENCOUNTERED N/A			
14. TOTAL DEPTH OF HOLE N/A			16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED N/A			
18. GEOTECHNICAL SAMPLES N/A			17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY) N/A		19. TOTAL NUMBER OF CORE BOXES N/A	
20. SAMPLES FOR CHEMICAL ANALYSIS			DISTURBED		UNDISTURBED	
VOC			METALS		OTHER (SPECIFY)	
BD/600(WATER), BD/500(SED)			BTEX (WT SED)		TYPN (WT SED), DCS, GRS	
22. DISPOSITION OF HOLE N/A			BACKFILLED		MONITORING WELL	
			OTHER (SPECIFY)		OTHER (SPECIFY)	
					21. TOTAL CORE RECOVERY % N/A	
					23. SIGNATURE OF INSPECTOR W. K. G. G. G.	
LOCATION SKETCH/COMMENTS REFERENCE PAGE 76 FOR SKETCH						
SCALE:						
PROJECT UST 108, Bldg, 1346 CAP B INVESTIGATION					HOLE NO. SSD-01	

THIS PAGE INTENTIONALLY LEFT BLANK

HTRW DRILLING LOG		DISTRICT		HOLE NUMBER	
1. COMPANY NAME: SATC		SAVANNAH USACE		SSD-02	
2. DRILL SUBCONTRACTOR N/A				SHEET 1 OF 1	
3. PROJECT UST 108, Bldg. 1346 CAPB INVESTIGATION		4. LOCATION Bldg. 1346, UST 108 HUNTER AAF			
5. NAME OF DRILLER N/A		6. MANUFACTURER'S DESIGNATION OF DRILL N/A			
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT SEDIMENT - STAINLESS STEEL SPOOP AND ENCORE SAMPLERS.		8. HOLE LOCATION Bldg. 1346, UST 108			
9. SURFACE ELEVATION TBD		10. DATE STARTED 04-18-99		11. DATE COMPLETED 04-18-99	
12. OVERBURDEN THICKNESS N/A		13. DEPTH DRILLED INTO ROCK N/A		15. DEPTH GROUNDWATER ENCOUNTERED N/A	
14. TOTAL DEPTH OF HOLE N/A		16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED N/A		17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY) N/A	
18. GEOTECHNICAL SAMPLES N/A		19. TOTAL NUMBER OF CORE BOXES N/A			
20. SAMPLES FOR CHEMICAL ANALYSIS		21. TOTAL CORE RECOVERY %			
22. DISPOSITION OF HOLE N/A		23. SIGNATURE OF INSPECTOR W. K. K. K.			

LOCATION SKETCH/COMMENTS

SCALE: NOT TO SCALE

PROJECT: UST 108, Bldg. 1346 CAPB INVESTIGATION

HOLE NO.: SSD-02

ENG FORM 5056-R, AUG 94

B-21

(Proponent: CECW-EG)

THIS PAGE INTENTIONALLY LEFT BLANK

APPENDIX C

WELL CONSTRUCTION DIAGRAMS

THIS PAGE INTENTIONALLY LEFT BLANK

MONITORING WELL

PROJECT: HAAF CAP-B's

DELIVERY ORDER NO: 0038

WELL NUMBER: MW-D1

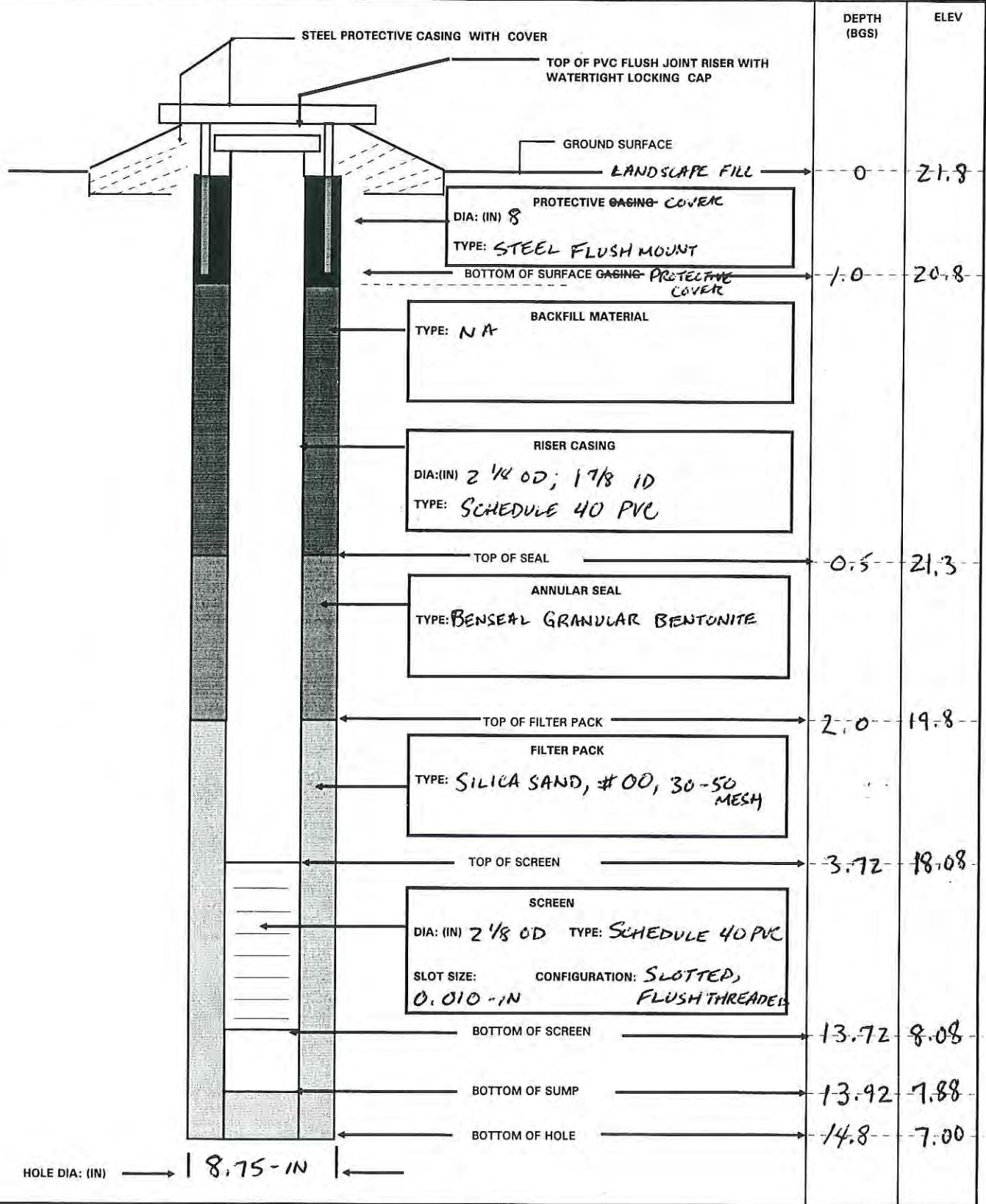
BEGIN: 4-20-99

END: 4-20-99

COORDINATES: N: 734469.53159
E: 979992.70879

REFERENCE POINT: TOP OF CASING ELEVATION: 21.52 DATUM/UNITS: VERTICAL DATUM 1988 FEET

DATUM/UNITS: NORTH AMERICA DATUM 1983



MONITORING WELL

PROJECT: HAAF CAP-B's

DELIVERY ORDER NO: 0038

WELL NUMBER: MW-D2

BEGIN: 4-21-99

END: 4-21-99

COORDINATES: N: 734453.24677

E: 980001.08486

DATUM/UNITS: NORTH AMERICA DATUM 1983

REFERENCE POINT:

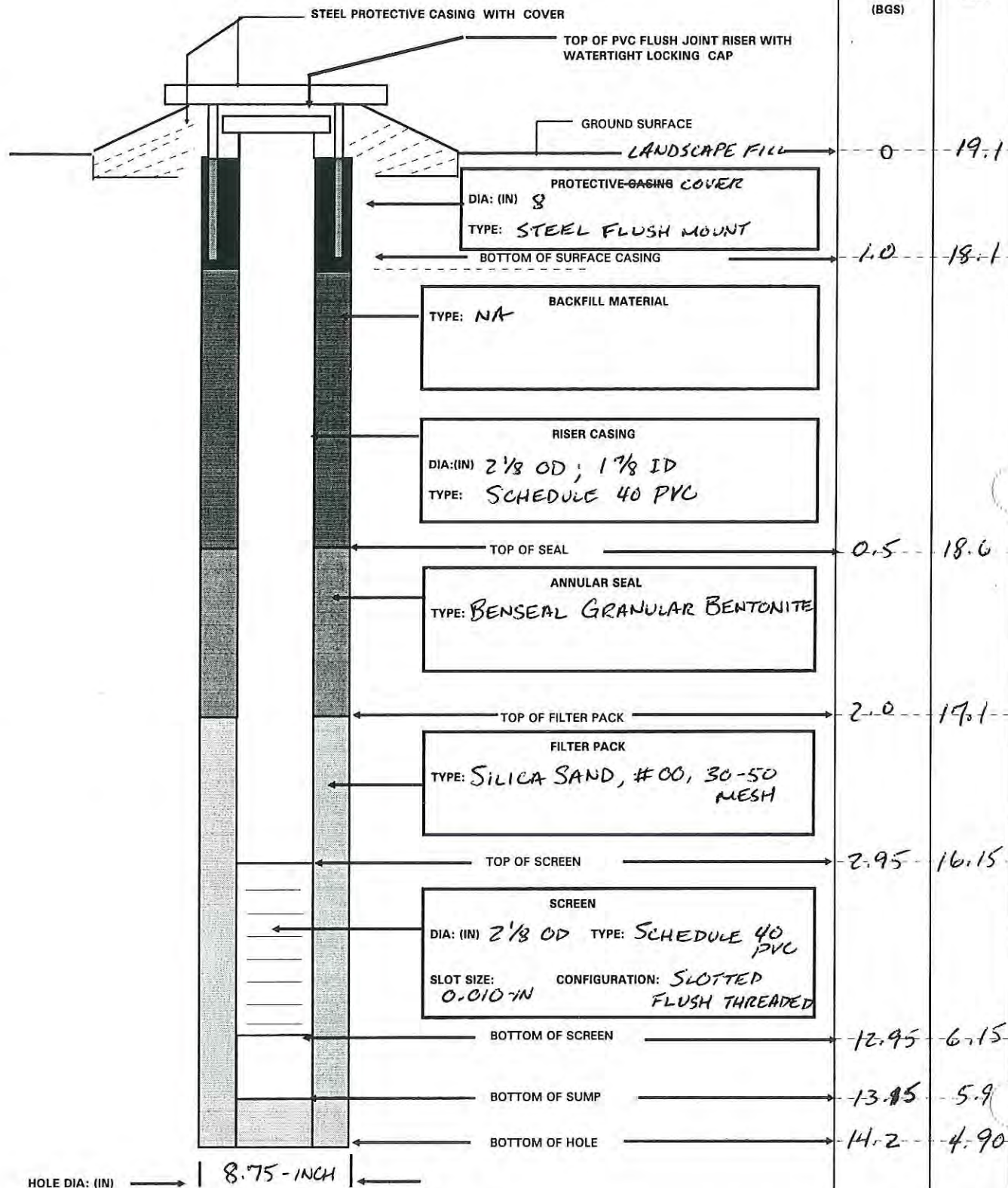
ELEVATION:

DATUM/UNITS:

TOP OF CASING

19.0

VERTICAL DATUM 1988
FEET



MONITORING WELL

PROJECT: HAAF CAP-B's

DELIVERY ORDER NO: 0038

WELL NUMBER: MW-D3

BEGIN: 4-20-99

END: 4-20-99

COORDINATES: N: 734487, 41122

E: 980027, 42907

DATUM/UNITS: NORTH AMERICA DATUM 1983

REFERENCE POINT:

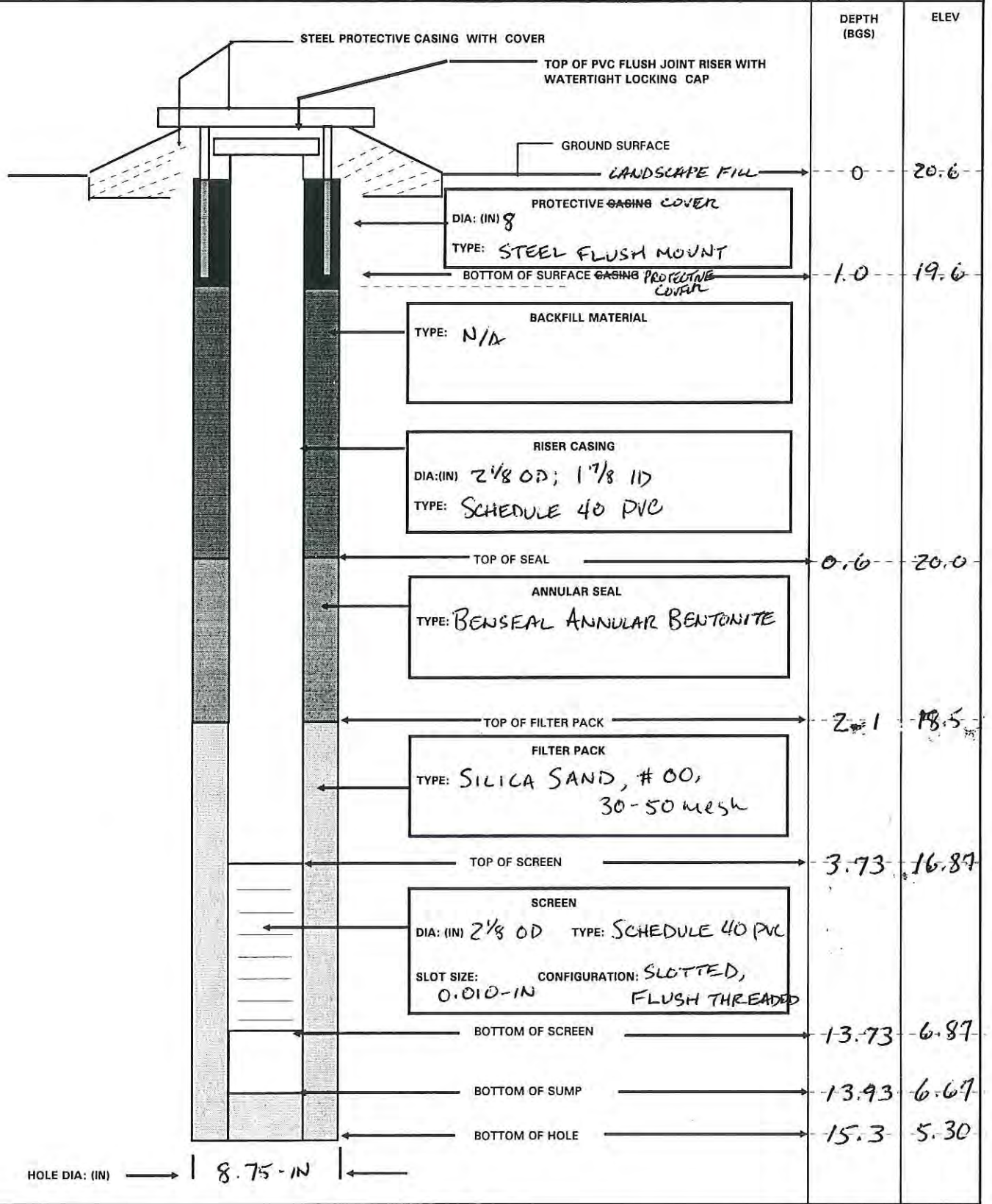
ELEVATION:

DATUM/UNITS:

TOP OF CASING

20.59

VERTICAL DATUM 1983
FEET



THIS PAGE INTENTIONALLY LEFT BLANK

APPENDIX D

SOIL GEOTECHNICAL DATA

THIS PAGE INTENTIONALLY LEFT BLANK

SUMMARY TABLE O. RESULTS FOR HAAF CAP B
UST 108 AND 21/22

SAMPLE NO.	MOISTURE CONTENT (%)	ATTERBERG LIMITS FINES CLASSIFICATION				SIEVE ANALYSIS (% PASSING)											
		LL	PL	PI		3"	2"	1 1/2"	3/4"	3/8"	#4	#10	#20	#40	#60	#140	#200
BD1400	7.7	NONPLASTIC				100	100	100	100	100	90.9	85.6	75	59.0	46.4	23.3	18.2
BD2400	17.5	21	20.7	0.33	ML	100	100	100	100	100	99.7	99.6	99.3	98.5	96.7	45.4	37.0
BD3400	24.9	26.2	25.9	0.33	ML	100	100	100	100	100	100	100	99.6	98.4	93.8	35.8	26.6
BD4400	23.7	27	14.8	12.2	CL	100	100	100	100	100	100	100	99.7	99.2	98.1	42.7	31.2
BL1400	8.2	NONPLASTIC				100	100	100	100	100	97.9	95.5	84.3	61.3	42.6	11.3	8.0
BL2400	9.0	NONPLASTIC				100	100	100	100	100	99.3	95.4	79.3	50.4	28.6	8.7	8.1
BL3400	4.5	NONPLASTIC				100	100	100	100	100	99.3	94.7	80.7	49.5	22.0	4.0	2.8
BL4400	12.3	NONPLASTIC				100	100	100	100	100	100	99.9	99.3	97.0	85.4	12.4	8.2
BL5400	11.6	NONPLASTIC				100	100	100	100	100	99.3	98.2	93.2	83.4	73.3	13.5	4.5
BL6400	10.7	NONPLASTIC				100	100	100	100	100	93.8	88.1	84.4	81.6	77.6	24.7	18.9
BL7400	14.5	NONPLASTIC				100	100	100	100	100	99.9	99.5	96.7	91.0	83.4	18.0	7.4

BULK	
DENSITY (pcf)	104.47

POROSITY	
	0.36

SPECIFIC GRAVITY	
	2.63

PERMEABILITY	
k (cm/sec)	6.52E-08

SAMPLE NO.	
BD4400	3


John Jones, P.E.
Laboratory Manager

NOTE: Sample numbers with the prefix BL are for the USTs 21 & 22 site.
Sample numbers with the prefix BD are for the UST 108 site.

GRAIN SIZE ANALYSIS-SIEVE (ASTM D422)

Project: SAIC	Job No.: 99063Y
Project Location: UST 108 BD1	Sample No.: BD1400
Sample Description: Gray Sand With Clay	Sample Depth: 0.1-1.5'
Tested By: AJ/FB	Boring No.:
	Date of Testing: 5/10/99

Mcws	Mcds	Mc : A16	Mw	Ms	w%	Mws	Ms
16.30	16.28	11.07	0.02	5.21	0.4	200.30	199.53

Sieve No.	Diam. (mm)	Wt. retained	% retained	E % retained	% passing
3	76.2	0	0.00	0.00	100.00
2	50.8	0	0.00	0.00	100.00
1 1/2	25.4	0	0.00	0.00	100.00
3/4	19.05	0	0.00	0.00	100.00
3/8	9.51	15.99	8.01	0.00	100.00
4	4.76	18.1	9.07	9.07	90.93
10	2.00	10.64	5.33	14.40	85.60
20	0.841	20.67	10.36	24.76	75.24
40	0.42	32.47	16.27	41.04	58.96
60	0.25	25.11	12.58	53.62	46.38
140	0.106	46.09	23.10	76.72	23.28
200	0.074	10.05	5.04	81.76	18.24
pan	---	0.3	0.15	81.91	18.09
total		163.43			

GRAIN SIZE ANALYSIS-SIEVE (ASTM D422)

Project: SAIC	Job No.:99063Y
Project Location: UST108 BD2	Sample No.: BD2400
Sample Description: Black Silty Sand	Sample Depth: 0.0-2.0'
	Boring No.:
Tested By: CA/FB	Date of Testing: 5/10/99

Mcws	McDs	Mc : A38	Mw	Ms	w%	Mws	Ms
18.99	18.94	14.93	0.05	4.01	1.2	200.34	197.87

Sieve No.	Diam. (mm)	Wt. retained	% retained	E % retained	% passing
3	76.2	0	0.00	0.00	100.00
2	50.8	0	0.00	0.00	100.00
1 1/2	25.4	0	0.00	0.00	100.00
3/4	19.05	0	0.00	0.00	100.00
3/8	9.51	0	0.00	0.00	100.00
4	4.76	0.67	0.34	0.34	99.66
10	2.00	0.07	0.04	0.37	99.63
20	0.841	0.6	0.30	0.68	99.32
40	0.42	1.59	0.80	1.48	98.52
60	0.25	3.59	1.81	3.30	96.70
140	0.106	101.48	51.29	54.58	45.42
200	0.074	16.65	8.41	63.00	37.00
pan	—	0.31	0.16	63.15	36.85
total		124.96			

ATTERBERG LIMITS DETERMINATION (ASTM D4318-93)

Project: SAIC	Job No.: 99063Y
Location of project: HUNTER ARMY AIR FIELD	Sample No.: BD2400
Description Of Soil: BLACK SILTY SAND	Depth of Sample: 0' - 2'
Tested By: CA/AJ	Date of Testing: 5/13/99

Liquid Limit Dermination

Can No.	A1	A54	A45	A38	A5	
Wt of Soil + can, Mcws	19.73	17.43	19.56	18.16	16.30	
Wt. of dry soil + can, Mcds	18.80	17.00	18.70	17.50	15.10	
Wt. of can, Mc	15.31	15.28	15.45	14.93	10.94	
Wt. of dry soil, Ms	3.49	1.72	3.25	2.57	4.16	
Wt. of moisture	0.93	0.43	0.86	0.66	1.20	
Water content, w%	26.65	25.00	26.46	25.68	28.85	
No. of blows, N	8	18	27	35	13	

Note: Liquid Limit determined on hard copy.

Plastic Limit Determination

Can no.	C17	C4	C10			
Wt. of wet soil + can, Mcws	6.92	4.35	3.94			
Wt. of dry soil +can, Mcds	6.10	3.90	3.60			
Wt. of can, Mc	1.90	1.90	1.90			
Wt. of dry soil, Ms	4.20	2.00	1.70			
Wt. of moisture, Mw	0.82	0.45	0.34			
Water content, W% = Wp	19.52	22.50	20.00			

LIQUID LIMIT = 21
 PLASTIC LIMIT = 20.67
 PLASTICITY INDEX = 0.33
 CLASSIFICATION = ML

GRAIN SIZE ANALYSIS-SIEVE (ASTM D422)

Project: SAIC	Job No.: 99063Y
Project Location: UST 108 BD3	Sample No.: BD3400
Sample Description: Black Silty Sand	Sample Depth: 2.0-4.0'
	Boring No.:
Tested By: CA/FB	Date of Testing: 5/10/99

Mcws	Mcds	Mc : A5	Mw	Ms	w%	Mws	Ms
15.89	15.82	10.93	0.07	4.89	1.4	130.81	128.96

Sieve No.	Diam. (mm)	Wt. retained	% retained	E % retained	% passing
3	76.2	0	0.00	0.00	100.00
2	50.8	0	0.00	0.00	100.00
1 1/2	25.4	0	0.00	0.00	100.00
3/4	19.05	0	0.00	0.00	100.00
3/8	9.51	0	0.00	0.00	100.00
4	4.76	0	0.00	0.00	100.00
10	2.00	0.04	0.03	0.03	99.97
20	0.841	0.51	0.40	0.43	99.57
40	0.42	1.57	1.22	1.64	98.36
60	0.25	5.9	4.57	6.22	93.78
140	0.106	74.79	57.99	64.21	35.79
200	0.074	11.85	9.19	73.40	26.60
pan	---	0.99	0.77	74.17	25.83
total		95.65			

ATTERBERG LIMITS DETERMINATION (ASTM D4318-93)

Project: SAIC	Job No.: 99063Y
Location of project: HUNTER ARMY AIR FIELD	Sample No.: BD3400
Description Of Soil: BLACK SILTY SAND	Depth of Sample: 2' - 4'
Tested By: CA/AJ	Date of Testing: 5/13/99

Liquid Limit Determination

Can No.	C3	C22	C13	C15	C23	
Wt of Soil + can, Mcws	7.38	8.53	6.72	8.86	6.06	
Wt. of dry soil + can, Mcds	6.75	7.60	5.80	7.90	5.30	
Wt. of can, Mc	4.30	4.28	2.37	4.31	2.38	
Wt. of dry soil, Ms	2.45	3.32	3.43	3.59	2.92	0.00
Wt. of moisture	0.63	0.93	0.92	0.96	0.76	0.00
Water content, w%	25.71	28.01	26.82	26.74	26.03	#DIV/0!
No. of blows, N	29	33	20	18	15	

Note: Liquid Limit Determined on Hard Copy

Plastic Limit Determination

Can no.	C7	CC8	CC20			
Wt. of wet soil + can, Mcws	2.96	2.90	2.54			
Wt. of dry soil + can, Mcds	2.85	2.70	2.40			
Wt. of can, Mc	2.38	1.92	1.91			
Wt. of dry soil, Ms	0.47	0.78	0.49	0	0	0
Wt. of moisture, Mw	0.11	0.20	0.14	0	0	0
Water content, W% = Wp	23.40	25.64	28.57	#DIV/0!	#DIV/0!	#DIV/0!

LIQUID LIMIT = 26.2
 PLASTIC LIMIT = 25.87
 PLASTICITY INDEX = 0.33
 CLASSIFICATION = ML

PERMEABILITY TEST ANALYSIS (ASTM D5084)

Project : SAIC
 Location of Project : UST 108 BD4
 Description of Soil : Dark Gray Clayey Sand

Job # : 99063Y
 Date of Testing: 4/28-5/12/99
 Tested by: FB/CA
 Boring # :
 Sample # : BD4400
 Sample Depth : 2-4'

Sample Type (Undisturbed or Remolded)

Standard Proctor:

Maximum Dry Density: pcf
 Optimum Moisture Content: %

% Sample Compaction: %

Sample Dry Density: pcf

Sample Moisture Content: %

Sample Wet Density: pcf

Sample Permeation:

De-Aired Water
 % Saturation: 96 %
 Cell Pressure: 75 psi
 Lower Pressure: 71.5 psi
 Upper Pressure: 70 psi
 Gradient: 16.75

Sample Dimensions		
	Before	After
Length (cm)	6.30	6.55
Diameter (cm)	4.70	4.85
Water Content (%)	23.6	29.9
Weight (g)	229.9	222.7

Constant Head Calculation:

$$K = [V(t_1, t_2) LR_T] / [P_B A t] \text{ (cm/sec)}$$

$V(t_1, t_2)$ = Volume of flow from t_1 to t_2 (cm³)

L = Length of Sample = 6.30 cm

A = Area of Sample = 17.35 cm²

t = $t_2 - t_1$ (sec)

P_B = Bias Pressure = 1.5 psi x 70.37 cm/psi (cm - H₂O) 105.56 cm

R_T = Temperature correction = 0.931

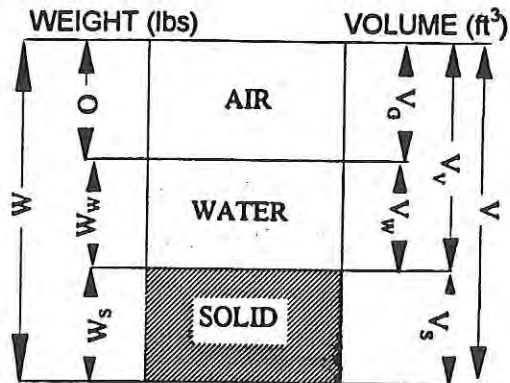
t_2 (min)	t_1 (min)	$(t_2 - t_1) \cdot 60$ (sec)	V (cm ³)	$[LR_T] / [P_B A]$ (cm ³)	K (cm/sec)
5773	5640	7980	0.2	3.20E-03	8.03E-08
6000	5773	13620	0.6	3.20E-03	1.41E-07
8536	6000	152160	1.1	3.20E-03	2.32E-08
8865	8536	19740	0.1	3.20E-03	1.62E-08

$K_{avg} = \underline{6.52E-08} \text{ cm/sec}$

BULK DENSITY, SPECIFIC GRAVITY AND POROSITY

PROJECT: SAIC
 LOCATION OF PROJECT: UST108 BD4
 DESCRIPTION OF SOIL: Black Clayey Sand
 TESTED BY: B.J. Vance

JOB NO.: 99063Y
 SAMPLE NO.: BD4400
 DEPTH OF SAMPLE: 2.0-4.0 ft.
 DATE OF TESTING: 4/28/99



$$\begin{aligned} W &= 1.08157 \\ W_w &= W - W_s = 0.20688 \\ W_s &= Y_d \cdot V = 0.8747 \\ V &= 0.00837 \\ V_w &= W_w / Y_w = 0.0033 \\ V_s &= W_s / G_s \cdot Y_w = 0.0053 \\ V_g &= V - (V_s + V_w) = -0.00027 \\ V_v &= V_g + V_w = 0.0030 \end{aligned}$$

MEASUREMENTS OF TUBE/CAN

HEIGHT= 13.1 cm
 DIAMETER= 4.8 cm

WT. OF TUBE/CAN + WET SOIL= 678.00 g
 WEIGHT OF TUBE/CAN= 187.4 g
 WEIGHT OF WET SOIL= 490.60 g
 W = 1.08157 lb

CALCULATED VOLUME OF TUBE/CAN

V = 237.05 cm³
 0.00837 ft³

MOISTURE CONTENT

$M_{cws} = 31.00$ g $M_c = 14.95$ g
 $M_{cDS} = 27.93$ g $M_s = 12.98$ g
 $M_w = 3.07$ g $w = 23.7$ %

Wet Density, $Y_m = W / V$

Dry Density, $Y_d = W_s / V$ or $Y_d = Y_m / (1 + w)$	
<u>double check</u>	$Y_d = Y_m / (1 + w)$
$Y_d = W_s / V$	$Y_m = 129.18$ lbs/ft ³
$Y_d = 104.47$ lbs/ft ³	$Y_d = 104.47$ lbs/ft ³

Void Ratio, $e = V_v / V_s$
 $e = 0.5717$

Porosity, $n = V_v / V$
 $n = 0.36$

Specific Gravity = 2.63

Degree of Saturation, $S = V_w / V_v$
 $S = 1.0881$

GRAIN SIZE ANALYSIS-SIEVE (ASTM D422)

Project: SAIC	Job No.:99063Y
Project Location: UST108	Sample No.: BD4400
Sample Description: Black Clayey Sand	Sample Depth: 2-4'
Tested By: BJV	Boring No.:
	Date of Testing: 4/28/99

Mcws	Mcds	Mc : A32	Mw	Ms	w%	Mws	Ms
22.59	22.06	10.90	0.53	11.16	4.7	263.50	251.55

Sieve No.	Diam. (mm)	Wt. retained	% retained	E % retained	% passing
3	76.2	0	0.00	0.00	100.00
2	50.8	0	0.00	0.00	100.00
1 1/2	25.4	0	0.00	0.00	100.00
3/4	19.05	0	0.00	0.00	100.00
3/8	9.51	0	0.00	0.00	100.00
4	4.76	0	0.00	0.00	100.00
10	2.00	0.06	0.02	0.02	99.98
20	0.841	0.7	0.28	0.30	99.70
40	0.42	1.21	0.48	0.78	99.22
60	0.25	2.79	1.11	1.89	98.11
140	0.106	139.49	55.45	57.34	42.66
200	0.074	28.9	11.49	68.83	31.17
pan	---	2.23	0.89	69.72	30.28
total		175.38			

ATTERBERG LIMITS DETERMINATION (ASTM D4318-93)

Project: SAIC	Job No.: 99063Y
Location of project: HUNTER ARMY AIR FIELD	Sample No.: BD4400
Description Of Soil: BLACK CLAYEY SAND	Depth of Sample: 2.0-4.0'
Tested By: CA/AJ	Date of Testing: 5/13/99

Liquid Limit Dermination

Can No.	A18	A49	A15	A27	A32	
Wt of Soil + can, Mcws	21.57	17.90	20.12	21.05	21.00	
Wt. of dry soil + can, Mcds	19.50	16.40	18.40	18.80	19.30	
Wt. of can, Mc	11.44	10.87	11.24	10.91	10.90	
Wt. of dry soil, Ms	8.06	5.53	7.16	7.89	8.40	0.00
Wt. of moisture	2.07	1.50	1.72	2.25	1.70	0.00
Water content, w%	25.68	27.12	24.02	28.52	20.24	#DIV/0!
No. of blows, N	31	10	40	19	28	

Plastic Limit Determination

Can no.	C3	C12	C2			
Wt. of wet soil + can, Mcws	7.00	4.18	5.20			
Wt. of dry soil +can, Mcds	6.80	3.90	4.70			
Wt. of can, Mc	2.39	2.37	2.37			
Wt. of dry soil, Ms	4.41	1.53	2.33	0	0	0
Wt. of moisture, Mw	0.20	0.28	0.50	0	0	0
Water content, W% = Wp	4.54	18.30	21.46	#DIV/0!	#DIV/0!	#DIV/0!

LIQUID LIMIT = 27
 PLASTIC LIMIT = 14.77
 PLASTICITY INDEX = 12.23
 CLASSIFICATION = CL

Client: Science Applications International Corp.
P.O. Box 2502
800 Oak Ridge Turnpike
Oak Ridge, Tennessee 37831
Contact: Ms. Leslie Barbour
Project Description: Hunter Army Airfield CAP-Part B UST

cc: SAIC00499

Report Date: May 04, 1999

Page 1 of 1

Sample ID : BD4400
Lab ID : 9904531-01
Matrix : Soil
Date Collected : 04/15/99
Date Received : 04/16/99
Priority : Routine
Collector : Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
General Chemistry											
Evaporative Loss @ 105 C		19.0 =	1.00	1.00	wt%	1.0	GJ	04/20/99	1515	147094	1
TOTAL ORGANIC CARBON (TOC)		341 =	43.1	100	mg/kg	1.0	LS	04/30/99	1740	147699	2

M = Method	Method-Description
M 1	EPA 3550
M 2	SW846 9060 modified

Notes:

The qualifiers in this report are defined as follows:

ND indicates that the analyte was not detected at a concentration greater than the detection limit.

J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).

U indicates that the analyte was not detected at a concentration greater than the detection limit.

* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

Data reported in mass/mass units is reported as 'dry weight'.

This data report has been prepared and reviewed
in accordance with General Engineering Laboratories
standard operating procedures. Please direct
any questions to your Project Manager, Valerie Davis at (843) 769-7391.

Reviewed By

[Signature]



9904531-01



COC NO.: HAAFW 234502

CHAIN OF CUSTODY RECORD

D-14



Science Applications Inc. (SAI)
An Employee-Owned Company

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

CHAIN OF CUSTODY RECORD

COC NO.: HAAFO4239904

PROJECT NAME: HAAF CAP B, UST 108, BLDG 1346, ID 9-025104				REQUESTED PARAMETERS												LABORATORY NAME: Catlin Laboratories			
PROJECT NUMBER: DACA21-95-D-0022, DO # 38				MOISTURE CONTENT												LABORATORY ADDRESS: 1051 Johnnie Dodds Blvd. Suite C Mt. Pleasant, SC 29464			
PROJECT MANAGER: Allison Bailey				GRAIN SIZE (SIEVE)												PHONE NO: (803) 881-6000			
Sample (Signature) <i>Mike Klidze</i>				PERMEABILITY												OVA SCREENING		OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS	
Sample (Printed Name) MIKE KLIDZE				SPECIFIC GRAVITY												N/A		2.0-4.0 FT	
Sample ID				POROSITY/BULK DENSITY												1			
Date Collected				ATTERBERG LIMITS															
Time Collected				PERMEABILITY															
Matrix				SPECIFIC GRAVITY															
BO-400				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTERBERG LIMITS															
				PERMEABILITY															
				SPECIFIC GRAVITY															
				POROSITY/BULK DENSITY															
				ATTER															



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

CHAIN OF CUSTODY RECORD

4904531%

COC NO.: HAAF04169903

PROJECT NAME: HAAAF CAP B, UST 108, BLDG 1346, ID 9-025104		PROJECT NUMBER: DACA21-95-D-0022, DO # 38		PROJECT MANAGER: Allison Bailey		LABORATORY NAME: General Engineering Laboratory	
Sampler (Signature) <i>Mitchell Hall</i>		Date Collected 4-15-99		Time Collected 1038		Matrix Soil	
Sample ID BD4400		Date Collected 4-15-99		Time Collected 1038		Matrix Soil	
PAH, TPH, TPH-DRO, MOISTURE		PAH		TPH-GRO		Total Organic Carbon	
BTEX		PAH		TPH-GRO		Total Organic Carbon	
No. of Bottles/Vials: 1		OVA SCREENING N/A		OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS N/A		LABORATORY ADDRESS: 2040 Savage Road, Charleston, SC 29407	
PHONE NO: (843) 556-8171		TOTAL NUMBER OF CONTAINERS: 1		Cooler Temperature: 4°C		FEDEX NUMBER: N/A	
Cooler ID: 521		Cooler Temperature: 4°C		FEDEX NUMBER: N/A		Temperature Blank Included	
RECEIVED BY: <i>Mitchell Hall</i>		DATE/TIME: 4-15-99 1328		RECEIVED BY: <i>SPAC</i>		DATE/TIME: 4-16-99 1328	
COMPANY NAME: <i>SPAC</i>		DATE/TIME: 4-16-99 1328		RECEIVED BY: <i>SPAC</i>		DATE/TIME: 4-16-99 1328	
RECEIVED BY: <i>SPAC</i>		DATE/TIME: 4-16-99 1328		RECEIVED BY: <i>SPAC</i>		DATE/TIME: 4-16-99 1328	
COMPANY NAME: <i>SPAC</i>		DATE/TIME: 4-16-99 1328		RECEIVED BY: <i>SPAC</i>		DATE/TIME: 4-16-99 1328	
RECEIVED BY: <i>SPAC</i>		DATE/TIME: 4-16-99 1328		RECEIVED BY: <i>SPAC</i>		DATE/TIME: 4-16-99 1328	
COMPANY NAME: <i>SPAC</i>		DATE/TIME: 4-16-99 1328		RECEIVED BY: <i>SPAC</i>		DATE/TIME: 4-16-99 1328	

APPENDIX E

PUBLIC NOTIFICATION

THIS PAGE INTENTIONALLY LEFT BLANK

STATE OF GEORGIA
CHATHAM COUNTY

Affidavit of Publication
Savannah Morning News
Savannah Evening Press

Personnally appeared before me, Lynnette Tuck, to me known, who being sworn, deposes and says:

That he is the Class. Inside Sales Mgr. of Southeastern Newspapers Corporation, a Georgia corporation, doing business in Chatham County, Georgia, under the trade name of Savannah Morning News/Savannah Evening Press, a daily newspaper published in said county;

That he is authorized to make affidavits of publication on behalf of said published corporation;

That said newspaper is of general circulation in said county and in the area adjacent thereto;

That he has reviewed the regular editions of the Savannah Morning News/Savannah Evening Press, published on 9-26, 1999, 10-3, 1999, _____, 1999, _____, 1999, and finds that the following Advertisement, to-wit:

*****PUBLIC NOTICE*****
Notification of Corrective Action
Plan Underground Storage Tank
Releases, Hunter Army Airfield,
Savannah, Ga.
The Georgia EPD (GEPD) has
required Fort Stewart Direc-
torate of Public Works to pre-
pare Corrective Action Plans
Part-B to investigate and/or
clean up contamination at the
underground storage tank sites
listed at the end of this notifica-
tion. These plans will be submit-
ted to the GEPD on or before
December 31, 1999. If you want
to examine a copy of one or
more of the plans, please contact
Commander, 3rd Infantry Divi-
sion (Mechanized) and Fort
Stewart, attn: DPW ENRD
ENVB, (T. Rutland), 1557
Frank Cochran, Fort Stewart,
Ga. 31314-4928.
A copy will be mailed at a nomi-
nal fee.
Comments to the plan will be
accepted until January 31, 2000,
and should be directed to GEPD
at 404-362-5697. Following is the
mailing address:
GEPD USTMP, 424 International
at Parkway, Suite 104, Atlanta,
Ga. 30354
Hunter Army Airfield CAP
Part B Underground Storage
Tank Sites
UST Building, Facility ID#
21 & 22; 1327; 9-025053
25 & 26, 1336/23; 9-025008
100; 1346; 9-025104

appeared in each of said editions.

Sworn to and subscribed
before me this 4 day
of Oct., 1999.

Lynnette Tuck
(Deponent)

Lillie D. Lang
Notary Public, Chatham County, Georgia

THIS PAGE INTENTIONALLY LEFT BLANK

APPENDIX F

SITE RANKING FORM

THIS PAGE INTENTIONALLY LEFT BLANK

A site ranking score has been prepared to reflect the current site conditions using the most recent data available. The site ranking score remains 0 as was reported in the Corrective Action Plan (CAP)-Part A Report submitted in March 1999. The Site Ranking Form is included in this appendix.

THIS PAGE INTENTIONALLY LEFT BLANK

SITE RANKING FORM

Facility Name: Tank 108, Building 1346

Ranked by: C. Allison Bailey

County: Chatham Facility ID #: 9-025104

Date Ranked: 10/07/99

SOIL CONTAMINATION

A. Total PAHs -
Maximum Concentration found on the site
(Assume <0.660 mg/kg if only gasoline
was stored on site)

- ☒ ≤0.660 mg/kg = 0
☐ >0.66 - 1 mg/kg = 10
☐ >1 - 10 mg/kg = 25
☐ >10 mg/kg = 50

B. Total Benzene -
Maximum Concentration found on the site

- ☒ ≤0.005 mg/kg = 0
☐ >0.005 - .05 mg/kg = 1
☐ >0.05 - 1 mg/kg = 10
☐ >1 - 10 mg/kg = 25
☐ >10 - 50 mg/kg = 40
☐ >50 mg/kg = 50

C. Depth to Groundwater
(bls = below land surface)

- ☐ >50' bls = 1
☐ >25' - 50' bls = 2
☐ >10' - 25' bls = 5
☒ ≤10' bls = 10

Fill in the blanks: (A. 0) + (B. 0) = (0) x (C. 10) = (D. 0)

GROUNDWATER CONTAMINATION

E. Free Product (Nonaqueous-phase
liquid hydrocarbons; See Guidelines
For definition of "sheen").

- ☒ No free product = 0
☐ Sheen - 1/8" = 250
☐ >1/8" - 6" = 500
☐ >6" - 1ft. = 1,000
☐ For every additional inch, add another
100 points = 1,000 + _____

F. Dissolved Benzene -
Maximum Concentration at the site
(One well must be located at the source
of the release.)

- ☒ ≤5 µg/L = 0
☐ >5 - 100 µg/L = 5
☐ >100 - 1,000 µg/L = 50
☐ >1,000 - 10,000 µg/L = 100
☐ >10,000 µg/L = 250

Fill in the blanks: (E. 0) + (F. 0) = (G. 0)

POTENTIAL RECEPTORS (MUST BE FIELD-VERIFIED)

Distance from nearest contaminant plume boundary to the nearest downgradient and hydraulically connected Point of Withdrawal for water supply. **If the point of withdrawal is not hydraulically connected, evidence as outlined in the CAP-A guidance document MUST be presented to substantiate this claim.**

H. Public Water Supply

- ☐ Impacted = 2000
☐ ≤500' = 500
☐ >500' - ¼ mi = 25
☐ ¼ mi - 1 mi = 10
☐ >1 mi - 2 mi = 2
☒ * >2 mi = 0
For lower susceptibility areas only:
☐ >1 mi = 0

I. Non-Public Water Supply

- ☐ Impacted = 1000
☐ ≤100' = 500
☐ >100' - 500' = 25
☐ >500' - ¼ mi = 5
☐ >¼ - ½ mi = 2
☒ >½ mi = 0
For lower susceptibility areas only:
☐ >¼ mi = 0

Note: If site is in lower susceptibility area, do not use the shaded areas.

*** Please see Section II.B.1, "Documentation of Local Groundwater Conditions," for justification of this evaluation.**

J. Distance from nearest Contaminant Plume boundary to downgradient Surface Waters **OR UTILITY TRENCHES & VAULTS** (a utility trench may be omitted from ranking if its invert elevation is more than 5 feet above the water table)

- ☐ Impacted = 500
☒ * ≤500' = 50
☐ >500' - 1,000' = 5
☐ >1,000' = 1

K. Distance from any Free Product to basements and crawl spaces

- ☐ Impacted = 500
☐ <500' = 50
☐ >500' - 1,000' = 5
☒ >1,000' or no free product. = 0

*** Distance to nearest downgradient surface water body used. Site utilities located upgradient.**

Fill in the blanks: (H. 0) + (I. 0) + (J. 50) + (K. 0) = L. 50

(G. 0) x (L. 50) = M. 0

(M. 0) + (D. 0) = N. 0

P. **SUSCEPTIBILITY AREA MULTIPLIER**

- ☐ If site is located in a Low Ground-Water Pollution Susceptibility Area = 0.5
☒ All other sites = 1

Q. **EXPLOSION HAZARD**

Have any explosive petroleum vapors, possibly originating from this release, been detected in any subsurface structure (e.g., utility trenches, basements, vaults, crawl spaces, etc.)?

- ☐ Yes = 200,000
☒ No = 0

Fill in the blanks: (N. 0) x (P. 1) = (0) + (Q. 0)

= 0

ENVIRONMENTAL SENSITIVITY SCORE