FINAL

FIRST ANNUAL MONITORING ONLY REPORT
FOR
UNDERGROUND STORAGE TANK 28B
FACILITY ID #9-089011
BUILDING 1720
FORT STEWART, 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 0055

Prepared by

Science Applications International Corporation
800 Oak Ridge Turnpike
Oak Ridge, Tennessee 37830

December 2000

TABLE OF CONTENTS

List of Abbreviations and Acronyms

ACL	alternate concentration limit
BGS	below ground surface
BTEX	benzene, toluene, ethylbenzene, and xylenes
CAP	Corrective Action Plan
GA EPD	Georgia Environmental Protection Division
IWQS	In-stream Water Quality Standard
NFAR	No Further Action Required
PAH	polynuclear aromatic hydrocarbon
SAIC	Science Applications International Corporation
UST	underground storage tank
USTMP	Underground Storage Tank Management Program

MONITORING ONLY REPORT

Submittal Date: December 2000 Monitoring Report Number: 1st Annual

For Period Covering: January 2000 to December 2000

Facility Name: UST 28B, Building 1720 Street Address: Divarty Road and McFarland Avenue

Facility ID: 9-089011 City: Fort Stewart County: Liberty Zip Code: 31314

Latitude: 31° 51′ 24″ Longitude: 81° 16′ 38″

Submitted by UST Owner/Operator:		Prepared by Consultant/Contractor:	
Name:	Thomas C. Fry/ Environmental Branch	Name:	Patricia A. Stoll
Company:	U.S. Army/HQ 3d, Inf. Div (Mech)	Company:	SAIC
Address:	Directorate of Public Works, Bldg. 1137	Address:	P.O. Box 2502
	1550 Frank Cochran Drive		
City:	Fort Stewart State: GA	City:	Oak Ridge State: TN
Zip Code:	31314-4927	Zip Code:	37831
Telephone:	(912) 767-2010	Telephone:	(865) 481-8792

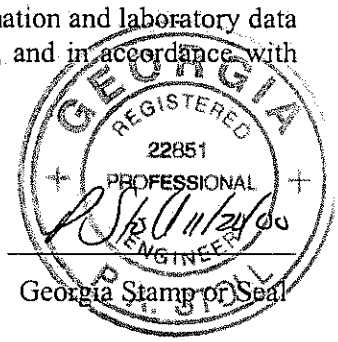
I. REGISTERED PROFESSIONAL ENGINEER OR PROFESSIONAL GEOLOGIST CERTIFICATION

I hereby certify that I have directed and supervised the fieldwork 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: Patricia A. Stoll

Signature: Patricia A. Stoll

Date: 11/20/00



Georgia Stamp or Seal

II. PROJECT SUMMARY

(Appendix I, Figure 1: Site Location Map)

Provide a brief description or explanation of the site and a brief chronology of environmental events leading up to this report.

Former Underground Storage Tank (UST) 28B, Facility ID #9-089011 was located near Building 1720 at Fort Stewart, Georgia. The tank was excavated and removed on July 2, 1996, and the associated ancillary piping was closed in place. Science Applications International Corporation (SAIC) performed a Corrective Action Plan (CAP)–Part A investigation in 1998 to determine the extent of petroleum contamination at the site. One vertical-profile boring and six temporary piezometers were installed during the investigation. The CAP–Part A Report (SAIC 1999) recommending monitoring only at the site was submitted in August 1999 and approved by the Georgia Environmental Protection Division (GA EPD) Underground Storage Tank Management Program (USTMP) in correspondence dated January 25, 2000 (Logan 2000). As recommended in the Monitoring Only Plan, three shallow monitoring wells (60-08 through 60-10) were installed as part of the first semiannual sampling event in January/February 2000, and groundwater was sampled for benzene, toluene, ethylbenzene, and xylenes (BTEX).

The fate and transport modeling performed as part of the CAP–Part A Report (SAIC 1999) modeled a continuous source of contamination. The results are summarized in Attachment A of this document. As a result of the semiannual monitoring events in January/February and June 2000, it was not necessary to revise the fate and transport modeling results.

The purpose of the semiannual monitoring summarized in this report was to confirm the results of the fate and transport modeling and that natural attenuation is taking place at the site. The benzene concentrations during the January/February and June 2000 sampling events were below their respective In-stream Water Quality Standards (IWQSs) and alternate concentration limits (ACLs); therefore, a No Further Action Required status is being recommended for the site.

III. ACTIVITIES AND ASSESSMENT OF EXISTING CONDITIONS

A. Potentiometric Data:

(Appendix I, Figures 2a and 2b: Potentiometric Surface Maps)
(Appendix II, Table 1: Groundwater Elevations)

Discuss groundwater flow at this site and implications for this project.

During the first semiannual sampling event in January/February 2000, groundwater elevations were measured in all of the monitoring wells to determine the groundwater flow direction. In February 2000, the groundwater flow direction was toward the southeast, and the groundwater gradient was approximately 0.0053 foot/foot.

During the second semiannual sampling event in June 2000, groundwater elevations were measured in all of the monitoring wells to determine the groundwater flow direction. In June 2000, the groundwater flow direction was toward the southwest, and the groundwater gradient was approximately 0.0045 foot/foot.

B. Analytical Data:

(Appendix I, Figures 3a and 3b: Groundwater Quality Maps)
(Appendix I, Figure 4: Trend of Contaminant Concentrations)
(Appendix II, Table 2: Groundwater Analytical Results)
(Appendix III: Laboratory Analytical Results)

Discuss groundwater analysis results, trend of contaminant concentrations, and implications for this project.

During the first semiannual sampling event in January/February 2000, monitoring wells 60-08, 60-09, and 60-10 were sampled for BTEX. Analytical results from the first sampling event showed estimated concentrations below the analytical reporting limits or no detectable BTEX concentrations in wells 60-08, 60-09, and 60-10. Benzene was not detected in any of the wells. Because no benzene was present in the wells, a figure with the trend of contaminant concentrations was not developed.

During the second semiannual sampling event in June 2000, monitoring wells 60-08, 60-09, and 60-10 were sampled for BTEX. Analytical results from the second sampling event showed no detectable BTEX concentrations in wells 60-08, 60-09, and 60-10. Because no benzene was present in the wells, a figure with the trend of contaminant concentrations was not developed.

As discussed in the CAP–Part A Report (SAIC 1999), polynuclear aromatic hydrocarbon (PAH) analysis was not recommended as part of the Monitoring Only Plan for the site.

IV. SITE RANKING (Note: re-rank site after each monitoring event)
(Appendix IV: Site Ranking Form)

Environmental Site Sensitivity Score:	2,850 (CAP–Part A Report)
(April 1999 version of the Site Ranking Form was used for 2000 scores.)	350 (Jan. 2000 – First Semiannual Monitoring Event)
	350 (June 2000 – Second Semiannual Monitoring Event)

V. CONCLUSIONS/RECOMMENDATIONS

Provide justification of no-further-action-required recommendation or briefly discuss future monitoring plans for this site.

Fort Stewart respectfully requests that GA EPD USTMP assign Facility ID #9-089011 a No Further Action Required (NFAR) status for the following reasons:

- The Monitoring Only Plan was conducted in accordance with Section III of the CAP–Part A Report (SAIC 1999) and was submitted to GA EPD USTMP in August 1999 and approved by GA EPD USTMP in correspondence January 25, 2000 (Logan 2000).

- The site score for the last two rounds of semiannual groundwater sampling has been 350, which GA EPD USTMP representatives have indicated is an acceptable score for requesting an NFAR status (i.e., January 27, 1999, meeting between GA EPD, Fort Stewart, the U.S. Army Corps of Engineers, and SAIC representatives). The site ranking score of 350 is due to soil contamination observed during closure activities.

- The fate and transport modeling conducted during the CAP–Part A Report (SAIC 1999), which used a continuous source of contamination and which is summarized in Attachment A of this report, indicated that benzene will never reach the nearest potential preferential pathway (i.e., a drainage ditch) at a concentration above the IWQS of 71.28 µg/L.

- Benzene was not detected in the wells during the semiannual monitoring events in January/February and June 2000.

- The closest surface water bodies are a drainage ditch and Mill Creek, located at 250 feet and 3,000 feet, respectively, downgradient from the site.

- Natural attenuation has continued to take place at the site, as shown by the fact that no benzene was observed during the semiannual monitoring events.

The monitoring only program at this site will be discontinued.

VI. REIMBURSEMENT

Attached _____ N/A __X__

(Appendix V: Reimbursement Application)

Fort Stewart is a federally owned facility and has funded the investigation for the UST 28B site, Building 1720, Facility ID #9-089011 using U.S. Department of Defense Environmental Restoration Account Funds. Application for Georgia Underground Storage Tank Trust Fund reimbursement is not being pursued at this time.

APPENDIX I

REPORT FIGURES

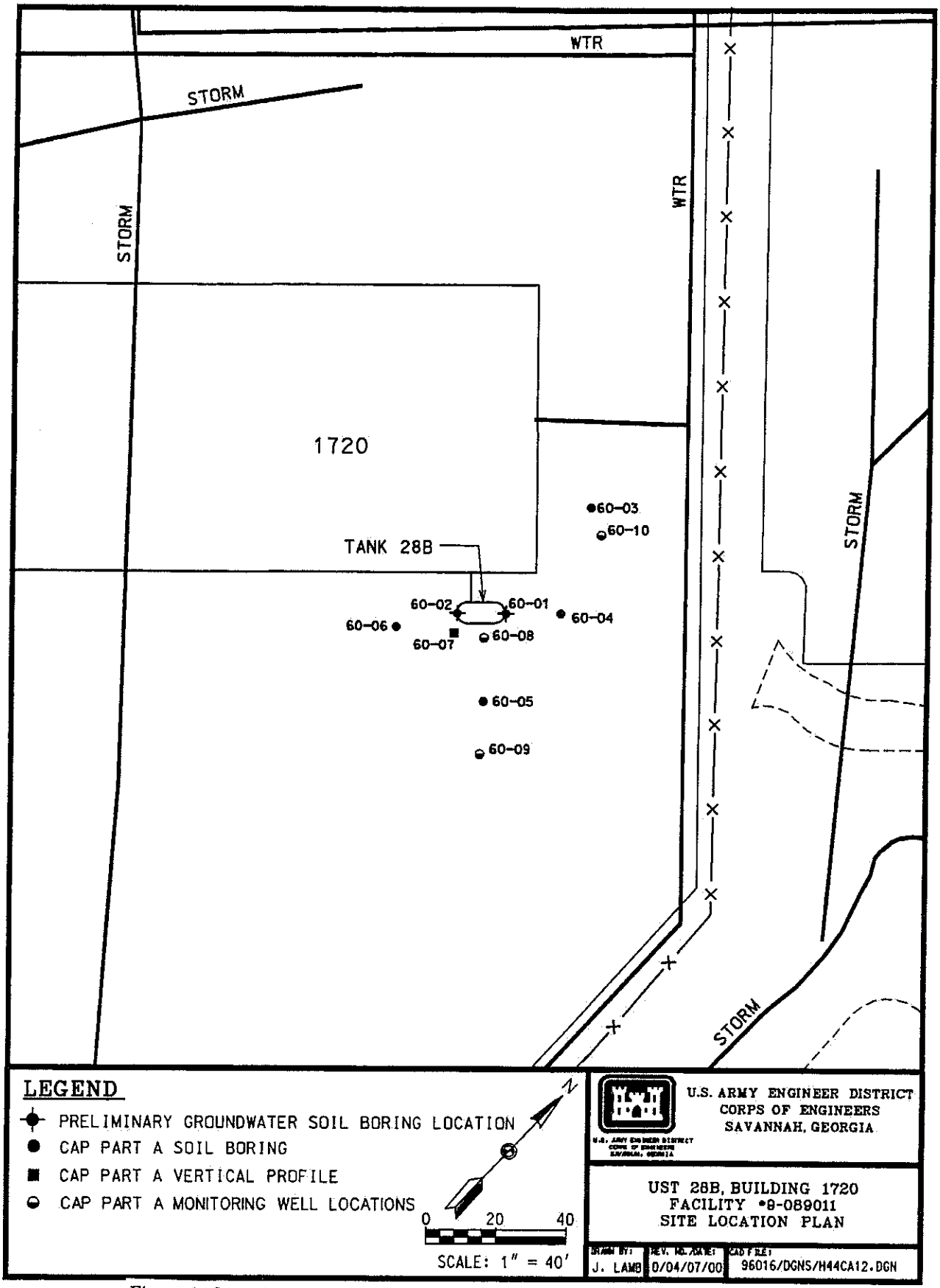


Figure 1. Location Map of UST 28B at Fort Stewart, Liberty County, Georgia

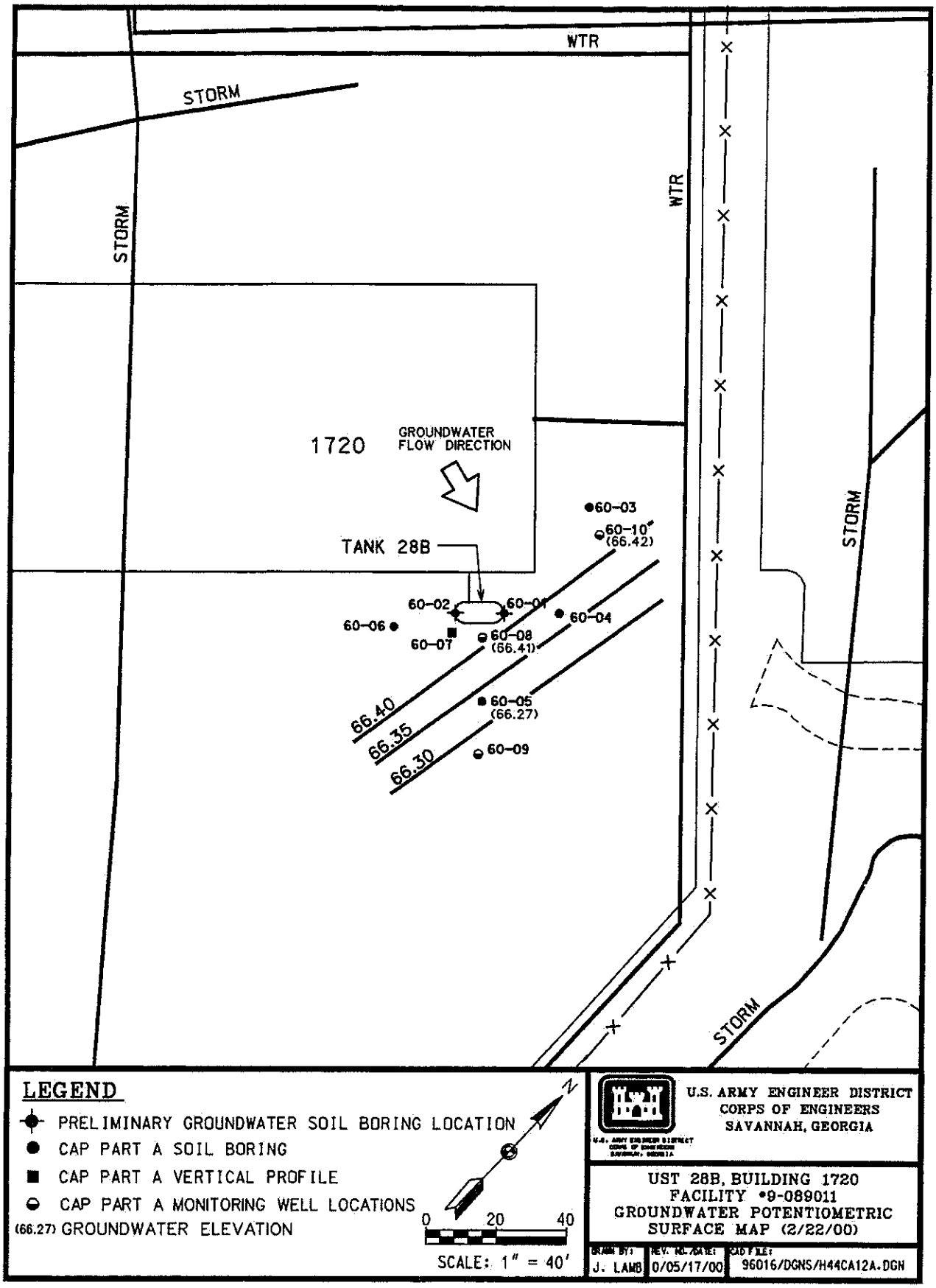


Figure 2a. Potentiometric Surface Map of the UST 28B Site (February 2000)

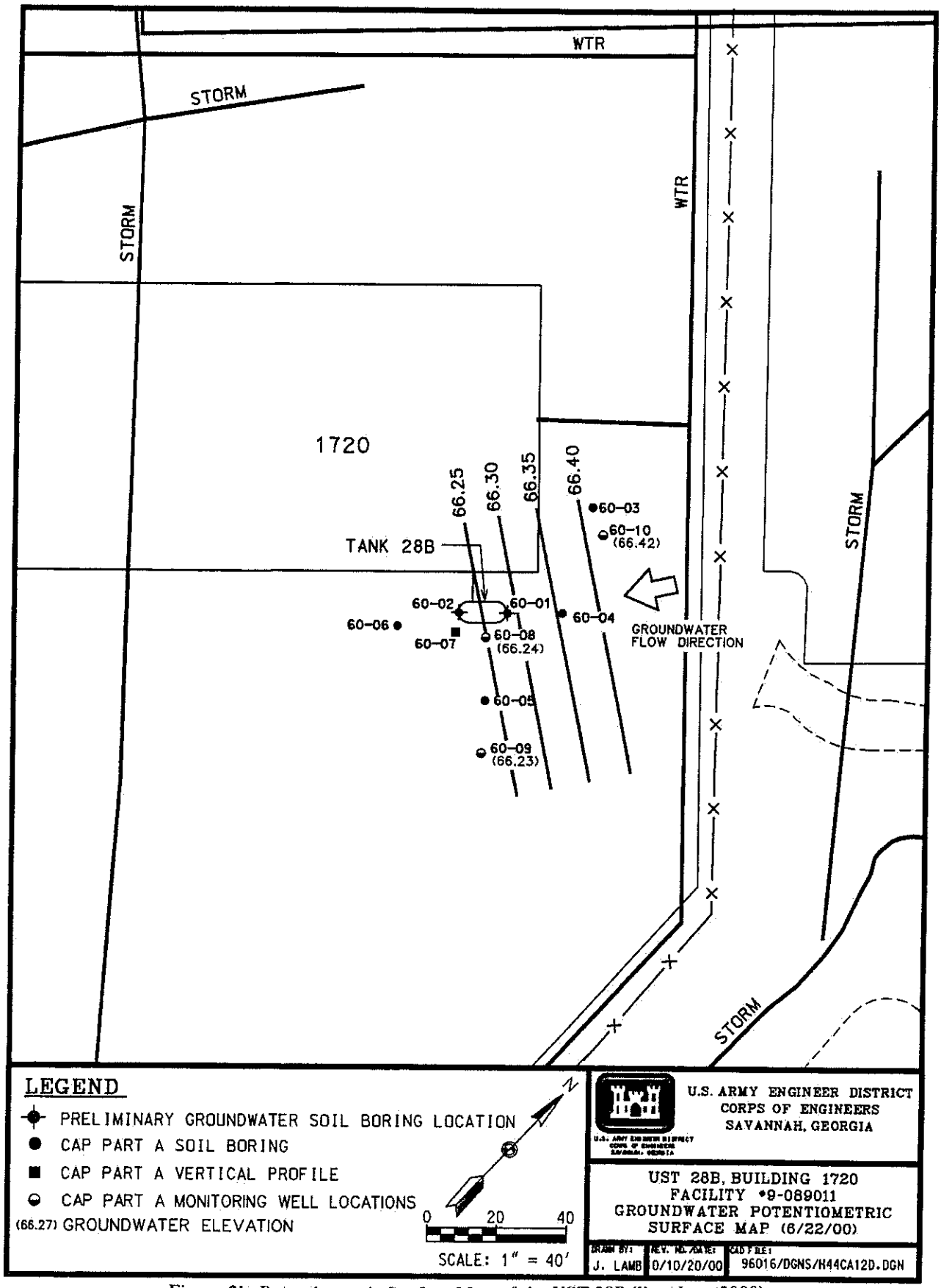


Figure 2b. Potentiometric Surface Map of the UST 28B Site (June 2000)

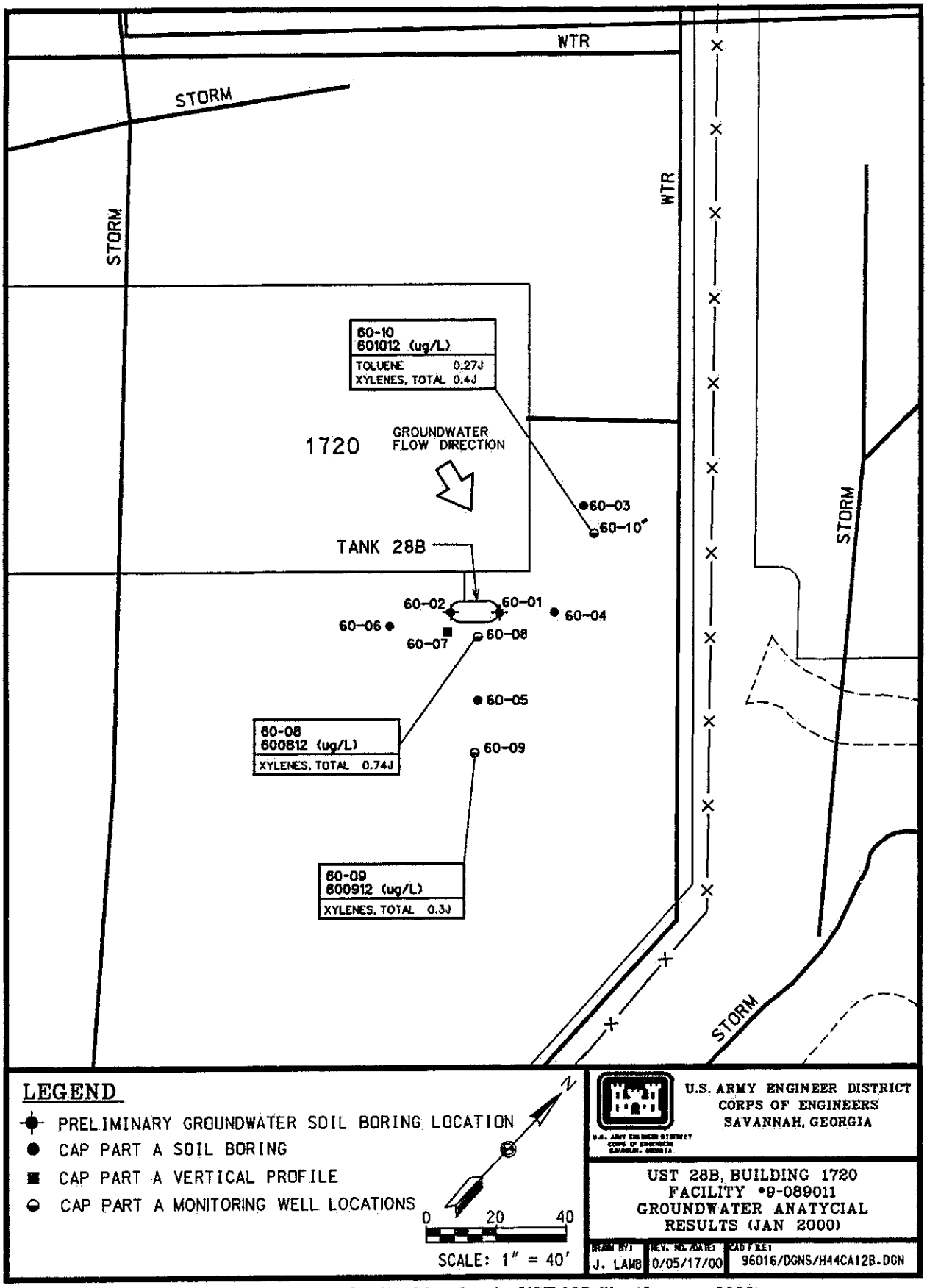


Figure 3a. Groundwater Quality Map for the UST 28B Site (January 2000)

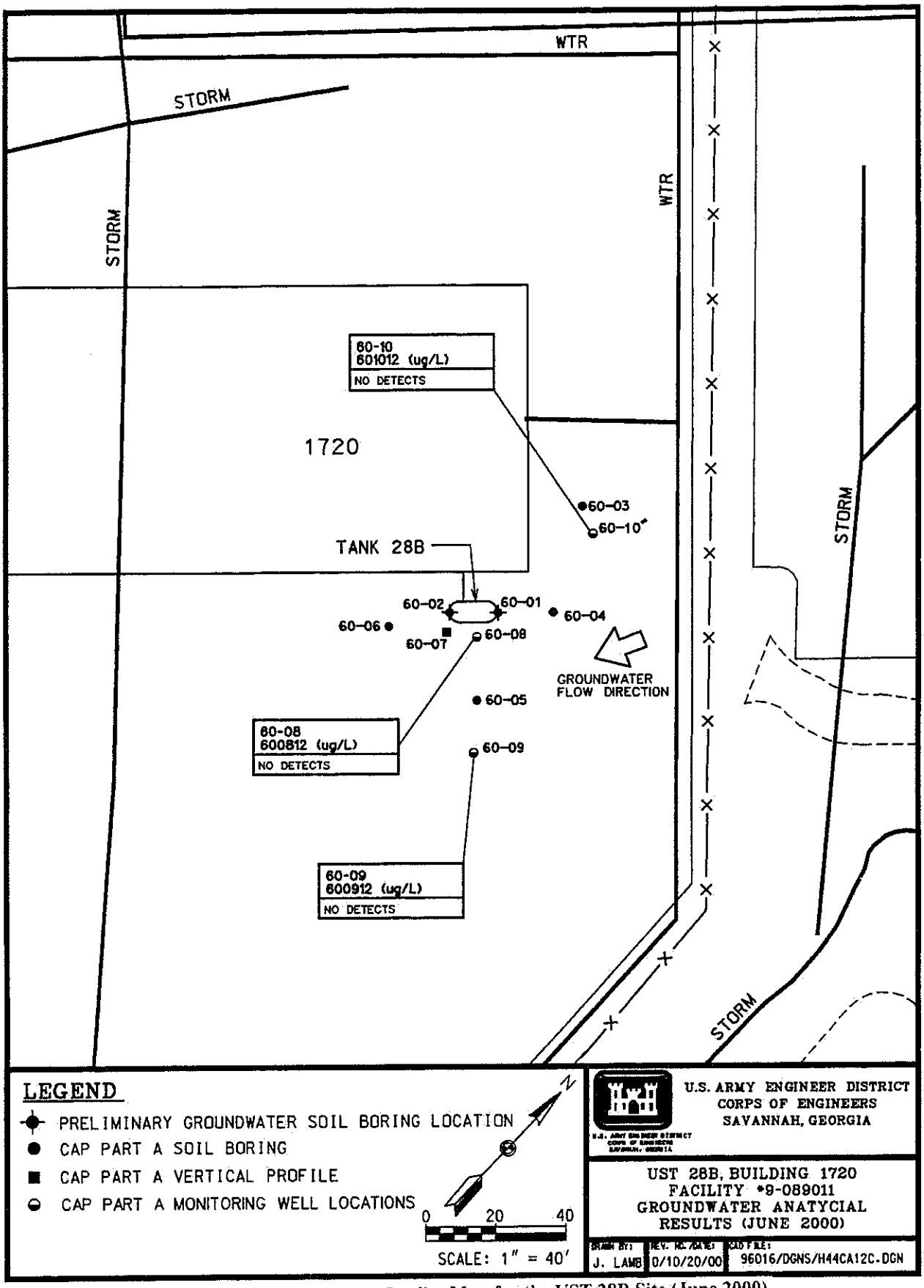


Figure 3b. Groundwater Quality Map for the UST 28B Site (June 2000)

Estimated concentrations of toluene and total xylenes below the analytical reporting limit of 1 µg/L and 3 µg/L, respectively, were the only constituents present at the site during the first semiannual monitoring event. No constituents were detected during the second semiannual monitoring event; therefore, a figure indicating the trend of contaminant concentrations for benzene was not developed.

Figure 4. Trend of Contaminant Concentrations for the UST 28B Site

APPENDIX II

REPORT TABLES

Table 1. Groundwater Elevations

Well Number	Date of Measurement	Top of Casing Elevation (feet AMSL)	Screened Interval (feet BGS)	Water Depth (feet BTOC)	Groundwater Elevation (feet AMSL)
First Semiannual Monitoring Event – January/February 2000					
60-08	2/22/00	72.74	2.9 – 12.9	6.33	66.41
60-09	2/22/00	72.23	2.9 – 12.9	5.96	66.27
63-10	2/22/00	72.81	2.9 – 12.9	6.39	66.42
Second Semiannual Monitoring Event – June 2000					
60-08	6/22/00	72.74	2.9 – 12.9	6.50	66.24
60-09	6/22/00	72.23	2.9 – 12.9	6.00	66.23
63-10	6/22/00	72.81	2.9 – 12.9	6.39	66.42

NOTES:

AMSL Above mean sea level
BGS Below ground surface
BTOC Below top of casing

Table 2. Groundwater Analytical Results

Sample Location	Sample ID	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	Total BTEX (µg/L)	Total PAH (µg/L)
First Semiannual Monitoring Event – January/February 2000								
60-08	600812	1/14/00	1 U	1 U	1 U	0.74 J	0.74	NA
60-09	600912	1/14/00	1 U	1 U	1 U	0.30 J	0.30	NA
60-10	601012	1/14/00	1 U	0.27 J	1 U	0.40 J	0.67	NA
Second Semiannual Monitoring Event – June 2000								
60-08	600822	6/21/00	1 U	1 U	1 U	3 U	ND	NA
60-09	600922	6/21/00	1 U	1 U	1 U	3 U	ND	NA
60-10	601022	6/21/00	1 U	1 U	1 U	3 U	ND	NA
In-stream Water Quality Standard (GA EPD Chapter 391-3-6)			71.28	200,000	28,718	NRC	NRC	NRC
Alternate Concentration Limit			[a]	–	–	–	–	–

NOTES:

Bold values exceed IWQSs.

Italic values exceed ACLs.

[a] ACLs were not developed because the dilution attenuation factor for the receptor was infinity.

AMSL Above mean sea level
BGS Below ground surface
BTEX Benzene, toluene, ethylbenzene, and xylenes
BTOC Below top of casing
NA Not analyzed; PAH compounds were not required as part of the Monitoring Only Plan.
ND Not detected
NRC No regulatory criteria
PAH Polynuclear aromatic hydrocarbon

Laboratory Qualifiers

U Indicates that the compound was not detected at the concentration reported.
UJ Indicates that the compound was not detected above an approximated sample quantitation limit.
J Indicates that the value for the compound is an estimated value.
= Indicates that the compound was detected at the concentration reported.

Table 3. Well Construction Details

Boring/Well Number	Date Installed	Boring Depth (feet BGS)	Screened Interval (feet BGS)	Type of Completion	Coordinates		Ground Surface Elevation	Top of Casing Elevation
					Northing (NAD83)	Easting (NAVD88)		
First Semiannual Monitoring Event – January/February 2000								
60-08	1/14/00	13.0	2.9 – 12.9	¾" PVC	681703.1	823671.4	73.01	72.74
60-09	1/14/00	13.0	2.9 – 12.9	¾" PVC	681678.4	823693.4	72.50	72.23
60-10	1/14/00	13.0	2.9 – 12.9	¾" PVC	681746.9	823675.4	73.01	72.81

NOTES:
BGS Below ground surface
PVC Polyvinyl chloride

APPENDIX III

LABORATORY ANALYTICAL RESULTS

FIRST SEMIANNUAL MONITORING EVENT

JANUARY/FEBURARY 2000

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

600812

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: FSAB001W

Matrix: (soil/water) WATER Lab Sample ID: 20655019

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: SS515

Level: (low/med) LOW Date Received: 01/14/00

% Moisture: not dec. _____ Date Analyzed: 01/21/00

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		1.0	U	U
108-88-3	Toluene		1.0	U	U
100-41-4	Ethylbenzene	1.0	~~0.20~~	JB	U
1330-20-7	Xylenes (total)		0.74	J	J

MA 7/15/00

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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

600912

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: FSAB001W

Matrix: (soil/water) WATER Lab Sample ID: 20655017

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 5S513

Level: (low/med) LOW Date Received: 01/14/00

% Moisture: not dec. _____ Date Analyzed: 01/21/00

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	1.0	U	U
108-88-3	Toluene	1.0	U	U
100-41-4	Ethylbenzene	1.0 ~~0.12~~	JB	U FOL, FOL
1330-20-7	Xylenes (total)	0.30	J	J

MLP 3/15/00

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RINSATE

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

600916

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: FSAB001W

Matrix: (soil/water) WATER Lab Sample ID: 20655016

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 55512

Level: (low/med) LOW Date Received: 01/15/00

% Moisture: not dec. _____ Date Analyzed: 01/21/00

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	1.0	U	U
108-88-3	Toluene	1.0	U	U
100-41-4	Ethylbenzene	1.0 ~~0.12~~	JB	U FOL,FOC
1330-20-7	Xylenes (total)	3.0	U	U

MMD
3/15/00

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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

601012

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: FSAB001W

Matrix: (soil/water) WATER Lab Sample ID: 20655018

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 53514

Level: (low/med) LOW Date Received: 01/14/00

% Moisture: not dec. _____ Date Analyzed: 01/21/00

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	1.0	U	U
108-88-3	Toluene	0.27	J	J
100-41-4	Ethylbenzene	1.0	~~0.13~~	JB
1330-20-7	Xylenes (total)	0.40	J	J

MMR 3/15/00

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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.: DO5543

PROJECT NAME: Ft. Stewart USTs D.O. #55

PROJECT NUMBER: 01-1624-04-2352-200

PROJECT MANAGER: Patty Stoll

Sampler (Signature) Laura Lumley (Printed Name)

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	PAH, Lead	Dissolved Iron	TPH	TCLP BTEX	TCLP Lead	No. of Bottles/ Vials	OVA SCREENING	OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS
TB5502	1/14/00	0800	water	2							2		20655010
751212	1/14/00	1525		2							2		011
771412	1/14/00	1155		2							2		012
751312	1/14/00	1720		2							2		013
771112	1/14/00	0940		2							2		014
771212	1/14/00	1030		2							2		015
600916	1/14/00	1736		2							2		016
600912	1/14/00	1741		2							2		017
600102	1/14/00	1540		2							2		018
600812	1/14/00	1645		2							2		019
430412	1/14/00	1155	↓	2							2		020

REQUESTED PARAMETERS

RELINQUISHED BY:	Date/Time	RECEIVED BY:	Date/Time
Laura Lumley	1/15/00	Dionne FRANCO	
COMPANY NAME: SAIC	1130	COMPANY NAME: GEL	1/15/00 1350
RECEIVED BY: Amy C Jamison	Date/Time 1/15/00	RELINQUISHED BY:	Date/Time
COMPANY NAME: GEL	1730	COMPANY NAME:	
RELINQUISHED BY: Amy Jamison	Date/Time 1/15/00	RECEIVED BY:	Date/Time
COMPANY NAME: GEL	1350	COMPANY NAME:	

TOTAL NUMBER OF CONTAINERS: 22

Cooler ID: #24

Cooler Temperature: 4°C

FEDEX NUMBER:

SECOND SEMIANNUAL MONITORING EVENT

JUNE 2000

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

600822

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: FSBLTM10W

Matrix: (soil/water) WATER Lab Sample ID: 27385011

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 8P314

Level: (low/med) LOW Date Received: 06/22/00

% Moisture: not dec. _____ Date Analyzed: 06/28/00

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	1.0	U
108-88-3	Toluene	1.0	U
100-41-4	Ethylbenzene	1.0	U
1330-20-7	Xylenes (total)	3.0	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

600922

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: FSBLTM10W

Matrix: (soil/water) WATER Lab Sample ID: 27385012

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 8P315

Level: (low/med) LOW Date Received: 06/22/00

% Moisture: not dec. _____ Date Analyzed: 06/28/00

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	1.0	U
108-88-3	Toluene	1.0	U
100-41-4	Ethylbenzene	1.0	U
1330-20-7	Xylenes (total)	3.0	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

600924

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: FSBLTM10W

Matrix: (soil/water) WATER Lab Sample ID: 27385013

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 8P316

Level: (low/med) LOW Date Received: 06/22/00

% Moisture: not dec. _____ Date Analyzed: 06/28/00

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	1.0	U
108-88-3	Toluene	1.0	U
100-41-4	Ethylbenzene	1.0	U
1330-20-7	Xylenes (total)	3.0	U

u

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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

601022

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: FSBLTM10W

Matrix: (soil/water) WATER Lab Sample ID: 27385014

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 8P317

Level: (low/med) LOW Date Received: 06/22/00

% Moisture: not dec. _____ Date Analyzed: 06/28/00

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	1.0	U
108-88-3	Toluene	1.0	U
100-41-4	Ethylbenzene	1.0	U
1330-20-7	Xylenes (total)	3.0	U

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55

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Science Applications International Corporation
Ridge Turnpike, Oak Ridge, TN 37831 (423) 481-6600

1 of 2

CHAIN OF CUSTODY RECORD

COC NO.: GLTM15

PROJECT NAME: Fort Stewart CAP B LTM

PROJECT NUMBER: 01-1624-04-2725-200

PROJECT MANAGER: Patty Stoll

SAMPLER (Signature) (Printed Name): Laura Lumley

REQUESTED PARAMETERS

Sample ID	Date Collected	Time Collected	Matrix	BTEX	PAH	BTEX, GRO	PAH, DRO	No. of Bottles/ Vials:	OVA SCREENING	OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS
801122	6/21/00	1600	water	Z				2		27385001
801322	6/21/00	1700		Z				2		002
140752	6/21/00	0915		Z				2		003
141052	6/21/00	1205		Z				2		004
140952	6/21/00	0840		Z				2		005
141152	6/21/00	0955		Z				2		006
141252	6/21/00	1120		Z				2		007
141254	6/21/00	1120		Z				2		008
141352	6/21/00	1255		Z				2		009
141452	6/21/00	1035		Z				2		010
600822	6/21/00	1600		Z				2		011
600922	6/21/00	1630		Z				2		012
600924	6/21/00	1630	✓	Z				2		013

LABORATORY NAME: General Engineering Laboratory

LABORATORY ADDRESS: 2040 Savage Raod, Charleston, SC 29417

PHONE NO: (843) 556-8171

RELINQUISHED BY:	Date/Time	RECEIVED BY:	Date/Time
Laura Lumley	6/22/00 1130	Kristen Chandler	6/22/00 1430
COMPANY NAME: SAIC		COMPANY NAME: GEL	
RELINQUISHED BY:	Date/Time	RELINQUISHED BY:	Date/Time
COMPANY NAME: GEL	6/22/00 1130	COMPANY NAME:	
RELINQUISHED BY:	Date/Time	RECEIVED BY:	Date/Time
COMPANY NAME: GEL	6/22/00 1430	COMPANY NAME:	

TOTAL NUMBER OF CONTAINERS:

Cooler ID: #403

Cooler Temperature: 4.2

FEDEX NUMBER:

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

CHAIN OF CUSTODY RECORD

COC NO.: GLTM15

CT NAME: Fort Stewart CAP B LTM

CT NUMBER: 01-1624-04-2725-200

CT MANAGER: Patty Stoll

(Signature) Laura Lumley (Printed Name)

LABORATORY NAME: General Engineering Laboratory

LABORATORY ADDRESS: 2040 Savage Road Charleston, SC 29417

PHONE NO: (843) 556-8171

REQUESTED PARAMETERS

Sample ID	Date Collected	Time Collected	Matrix	BTEX	PAH	BTEX, GRO	PAH, DRO	No. of Bottles/ Vials	OVA SCREENING	OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS
601022	6/21/00	1620	water	2				2		27385014
770922	6/21/00	1450		2				2		015
771022	6/21/00	1525		2				2		016
771122	6/21/00	1540		2				2		017
771222	6/21/00	1510		2				2		018
771322	6/21/00	1600		2				2		019
771422	6/21/00	1430		2				2		020
771324	6/21/00	1600		2				2		27387001
TB5509	6/21/00	0600		2				2		002

Hold for 2400

	Date/Time		Date/Time		
QUISHED BY:	6/22/00	RECEIVED BY:	6/22/00	TOTAL NUMBER OF CONTAINERS: 46	Cooler Temperature: 4.2
ANY NAME: SAIC	1130	COMPANY NAME: BCL	1430	Cooler ID: #803	FEDEX NUMBER:
ED BY:	Date/Time 6/22/00	RELINQUISHED BY:	Date/Time		
ANY NAME: BCL	1130	COMPANY NAME:			
QUISHED BY:	Date/Time 6-22-00	RECEIVED BY:	Date/Time		
ANY NAME: BCL	1430	COMPANY NAME:			

APPENDIX IV

SITE RANKING FORMS

FIRST SEMIANNUAL MONITORING EVENT

JANUARY/FEBRUARY 2000

SITE RANKING FORM

Facility Name: UST 28B, Building 1720 **Ranked by:** S. Stoller

County: Liberty **Facility ID #:** 9-089011 **Date Ranked:** 5/24/2000

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

* *Closure sample 28B-T1-S1 (1996)*

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

* *Due to elevated detection limits during closure sampling (1996)*

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. 25) + (B. 10) = (35) x (C. 10) = (D. 350)**

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	= 500
☐	>10,000 µg/L	= 1500

* *No benzene during LTM sampling (January 2000)*

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

Facility Name: UST 28B, Building 1720 **County:** Liberty **Facility ID #:** 9-089011

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

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

* For justification that withdrawal point is not hydraulically connected, see attached text.

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

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'	= 2

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

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

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

(M. 0) + (D. 350)= N. 350

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. 350) x (P. 1) = (350) + (Q. 0)

= 350 (January 2000 - First Semiannual Sampling Event)
ENVIRONMENTAL SENSITIVITY SCORE

SECOND SEMIANNUAL MONITORING EVENT

JUNE 2000

SITE RANKING FORM

Facility Name: UST 28B, Building 1720 **Ranked by:** S. Stoller

County: Liberty **Facility ID #:** 9-089011 **Date Ranked:** 10/25/2000

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

* *Closure sample 28B-T1-S1 (1996)*

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

* *Due to elevated detection limits during closure sampling (1996)*

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. 25) + (B. 10) = (35) x (C. 10) = (D. 350)**

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	= 500
☐	>10,000 µg/L	= 1500

* *No benzene during LTM sampling (June 2000)*

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

Facility Name: UST 28B, Building 1720 **County:** Liberty **Facility ID #:** 9-089011

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

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

* For justification that withdrawal point is not hydraulically connected, see attached text.

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

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'	= 2

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

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

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

(M. 0) + (D. 350) = N. 350

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. 350) x (P. 1) = (350) + (Q. 0)

= 350 (June 2000 - Second Semiannual Sampling Event)
ENVIRONMENTAL SENSITIVITY SCORE

OTHER GEOLOGIC AND HYDROLOGIC DATA

The following information is presented to provide supplemental information to Item H of the Site Ranking Form and details relating to the geologic and hydrogeologic conditions at Fort Stewart to support determinations of groundwater flow pathway(s) or direction(s) and contaminant transport.

1.0 REGIONAL AND LOCAL GEOLOGY

Fort Stewart is located within the coastal plain physiographic province. This province is typified by nine southeastward-dipping strata that increase in thickness from 0 feet at the fall line, located approximately 150 miles inland from the Atlantic coast, to approximately 4,200 feet at the coast. State geologic records describe a probable petroleum exploration well (the No. 1 Jelks-Rogers) located in the region as encountering crystalline basement rocks at a depth of 4,254 feet below ground surface (BGS). This well provides the most complete record for Cretaceous, Tertiary, and Quaternary sedimentary strata in the region.

The Cretaceous section was found to be approximately 1,970 feet thick and dominated by clastics. The Tertiary section was found to be approximately 2,170 feet thick and dominated by limestone, with a 175-foot-thick cap of dark green phosphatic clay. This clay is regionally extensive and is known as the Hawthorn Group. The interval from approximately 110 feet to the surface is Quaternary in age and composed primarily of sand, with interbeds of clay or silt. This section is undifferentiated into separate formations (Herrick and Vochis 1963).

State geologic records contain information regarding a well drilled in October 1942, 1.8 miles north of Flemington at Liberty Field of Camp Stewart (now known as Fort Stewart). This well is believed to be an artesian well located approximately one-quarter mile north of the runway at Wright Army Airfield within the Fort Stewart Military Reservation. The log for this well describes a 410-foot section, the lowermost 110 feet of which consisted predominantly of limestone sediments, above which 245 feet of dark green phosphatic clay typical of the Hawthorn Group were encountered. The uppermost portion of the section was found to be Quaternary-age interbedded sands and clays. The top 15 feet of these sediments were described as sandy clay (Herrick and Vochis 1963).

The surface soil located throughout the Fort Stewart garrison area consists of Stilson loamy sand. The surface layer of this soil is typically dark grayish-brown loamy sand measuring approximately 6 inches in depth. The surface layer is underlain by material consisting of pale yellow loamy sand and extends to a depth of approximately 29 inches. The subsoil is predominantly sandy clay loam and extends to a depth of 72 inches or more (Herrick and Vochis 1963).

2.0 REGIONAL AND LOCAL HYDROGEOLOGY

The hydrogeology in the vicinity of Fort Stewart is dominated by two aquifers referred to as the Principal Artesian and the surficial aquifers. The Principal Artesian Aquifer is the lowermost hydrologic unit and is regionally extensive from South Carolina through Georgia, Alabama, and most of Florida. Known elsewhere as the Floridan, this aquifer is composed primarily of Tertiary-age limestone, including the Bug Island Formation, the Ocala Group, and the Suwannee Limestone. These formations are approximately 800 feet thick, and groundwater from this aquifer is used primarily for drinking water (Arora 1984).

The uppermost hydrologic unit is the surficial aquifer, which consists of widely varying amounts of sand and clay ranging from 55 feet to 150 feet in thickness. This aquifer is primarily used for domestic lawn and agricultural irrigation. The top of the water table ranges from approximately 2 feet to 10 feet BGS (Geraghty and Miller 1993). The base of the aquifer corresponds to the top of the underlying dense clay of the Hawthorn Group. The Hawthorn Group was not encountered during drilling at this site but is believed to be located at 40 feet to 50 feet BGS; thus, the effective aquifer thickness would be approximately 35 feet to 45 feet. Soil surveys for Liberty and Long counties describe the occurrence of a perched water table within the Stilson loamy sands present within Fort Stewart (Looper 1980).

The confining layer for the Principal Artesian Aquifer is the phosphatic clay of the Hawthorn Group and ranges in thickness from 15 feet to 90 feet. The vertical hydraulic conductivity of this confining unit is on the order of 10^{-8} cm/sec. There are minor occurrences of aquifer material within the Hawthorn Group; however, they have limited utilization (Miller 1990). The Hawthorn Group has been divided into three formations: Coosawhatchie Formation, Markshead Formation, and Parachula Formation, which are listed from youngest to oldest.

The Coosawhatchie Formation is composed predominantly of clay but also has sandy clay, argillaceous sand, and phosphorite units. The formation is approximately 170 feet thick in the Savannah, Georgia, area. This unit disconformably overlies the Markshead Formation and is distinguished from the underlying unit by dark phosphatic clays or phosphorite in the lower part and fine-grained sand in the upper part.

The Markshead Formation is approximately 70 feet thick in the Savannah, Georgia, area and consists of light-colored phosphatic, slightly dolomitic, argillaceous sand to fine-grained sandy clay with scattered beds of dolostone and limestone.

The Parachula Formation consists of sand, clay, limestone, and dolomite and is approximately 10 feet thick in the Savannah, Georgia, area. The Parachula Formation generally overlies the Suwannee Limestone in Georgia.

Groundwater encountered at all the UST investigation sites is part of the surficial aquifer system. Based on the fact that all public and nonpublic water supply wells draw water from the Principal Artesian (Floridan) Aquifer and that the Hawthorn confining unit separates the Principal Artesian Aquifer from the surficial aquifer, it is concluded that there is no hydraulic interconnection between the surficial aquifer (and associated groundwater plumes, if applicable) located beneath former UST sites and identified water supply withdrawal points at Fort Stewart.

APPENDIX V

REIMBURSEMENT APPLICATION

Fort Stewart is a federally owned facility and has funded the investigation for the UST 28B site, Building 1720, Facility ID #9-089011, using U.S. Department of Defense Environmental Restoration Account Funds. Application for Georgia Underground Storage Tank Trust Fund reimbursement is not being pursued at this time.

ATTACHMENT A

SUMMARY OF FATE AND TRANSPORT MODELING RESULTS

A.1 FATE AND TRANSPORT MODELING

The fate and transport modeling that was performed as part of the CAP–Part A Report (SAIC 1999) was based on the assumption of a continuous source of contamination of infinite duration at the site based on the maximum observed benzene concentration in groundwater (i.e., 171 µg/L in temporary piezometer 60-02 in May 1998). In summary, the Analytical Transient 1-, 2-, 3-Dimensional Model was used to model contaminant migration to two potential downgradient receptors: a drainage ditch located approximately 250 feet southeast of the site and Mill Creek located approximately 3,000 feet south of the site. The modeling results indicated that, due to dilution attenuation, benzene would not reach the drainage ditch at concentrations above the IWQS or Mill Creek at detectable concentrations.

Based on the modeling results, the estimated dilution attenuation factor for benzene was infinity at both the drainage ditch and Mill Creek, indicating that the predicted concentrations at these receptors are zero. Simulations of a 2-year period were not performed to predict the maximum concentrations of benzene in the downgradient wells that will be used for long-term monitoring because permanent wells did not exist at the site. As a result of the semiannual monitoring events in January/February and June 2000, it was not necessary to revise the fate and transport modeling results.

Benzene was identified as a contaminant of potential concern during the risk screening performed as part of the CAP–Part A investigation; however, an ACL was not developed for benzene because the fate and transport modeling results indicated that the CAP–Part A concentrations at the site were not high enough to result in detectable concentrations at the receptor locations. Benzene concentrations observed during the semiannual sampling events in January/February and June 2000 were less than the concentrations observed during the CAP–Part A investigation.

A.1.1 FATE AND TRANSPORT MODELING CONCLUSIONS

The conclusion below is based on a fate and transport model that assumes a continuous source of contamination of infinite duration at the site based on the maximum predicted benzene concentration (i.e., 171 µg/L) in groundwater at the source during the CAP–Part A investigation.

- Benzene concentrations in groundwater in January/February and June 2000 did not exceed the IWQS and ACL of 71.28 µg/L in any of the wells at the site, indicating that the benzene concentrations at the site are not high enough to reach the drainage ditch or Mill Creek at levels above the IWQS.

ATTACHMENT B

REFERENCES

REFERENCES

Arora, Ram, 1984. *Hydrologic Evaluation for Underground Injection Control in the Coastal Plain of Georgia*, Department of Natural Resources, Environmental Protection Division, Georgia Geological Survey.

Geraghty and Miller 1993. *RCRA Facility Investigation Work Plan, Fort Stewart, Georgia.*

Herrick, S.M., and R.C. Vochis 1963. *Subsurface Geology of the Georgia Coastal Plain*, Georgia Geologic Survey Information Circular 25.

Logan, William E., 2000. Letter to Ovidio Perez (Fort Stewart Directorate of Public Works, Environmental Branch), January 25.

Looper, Edward E., 1980. *Soil Survey of Liberty and Long Counties, Georgia*, U.S. Department of Agriculture, Soil Conservation Service.

Miller, James A., 1990. *Groundwater Atlas of the United States*, U.S. Department of the Interior, U.S. Geological Survey, Hydrologic Inventory Atlas 730G.

SAIC (Science Applications International Corporation) 1999. *CAP–Part A Report for UST 28B, Facility ID #9-089011, Building 1720, Fort Stewart, Georgia*, August.

SAIC 2000. *First Semiannual Monitoring Only Report for UST 28B, Facility ID #9-089011, Building 1720, Fort Stewart, Georgia*, June.

ATTACHMENT C

BORING LOGS AND WELL CONSTRUCTION DIAGRAMS

HTRW DRILLING LOG

HOLE NUMBER 606-608

PROJECT: Fort Stewart USTs | INSPECTOR J. Celeste | SHEET 1 OF 1

ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
		CONCRETE				
	1	SAND (SW), fine grained, some gravel and silt, soft to very soft, gray (2.5 Y 5/1)				
	2					
	3	NO RECOVERY				
	4					
		SAND w/ SILT (SP-SM), fine grained, soft to very soft, moist to wet, gray (2.5 Y 5/1)				
	5					
						▽ wet below 5.8 FT BGS
	6					
		NO RECOVERY				
	7					
	8					PUSHED TO 13.0 FT BGS TO SET 3/4" MONITORING POINT SCREENED FROM 2.9 TO 12.9 FT BGS
	9					COLLECTED GROUNDWATER SAMPLE 606812 FROM MONITORING POINT
	10					

HTRW DRILLING LOG

HOLE NUMBER 600-09

PROJECT: Fort Stewart USTs | INSPECTOR J. Celeste | SHEET 1 OF 1

ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
		CONCRETE				
	1	Silty SAND (SM), fine grained, soft to very soft, brown (7.5 YR 4/2)				
	2	Silty SAND (SM), fine grained, soft to very soft, yellow (2.5 Y 8/4)				
	3	Clayey SAND (SC), fine grained, firm, gray (2.5 Y 7/1)				
	4	NO RECOVERY				
	5	Sandy CLAY (CH), fine grained, firm, moist, light tan (2.5 Y 8/1)				
	6					▽ wet below 6.0 FT BGS
	7	Silty SAND (SM), fine grained, soft to very soft, wet, light tan (2.5 Y 8/1)				
	8					PUSHED TO 13.0 FT BGS TO SET 3/4" MONITORING POINT SCREENED FROM 2.9 TO 12.9 FT BGS
	9					COLLECTED GROUNDWATER SAMPLE 600912 FROM MONITORING POINT
	10					

HTRW DRILLING LOG

HOLE NUMBER 60-10

PROJECT: Fort Stewart USTs | INSPECTOR J. Celeste | SHEET 1 OF 1

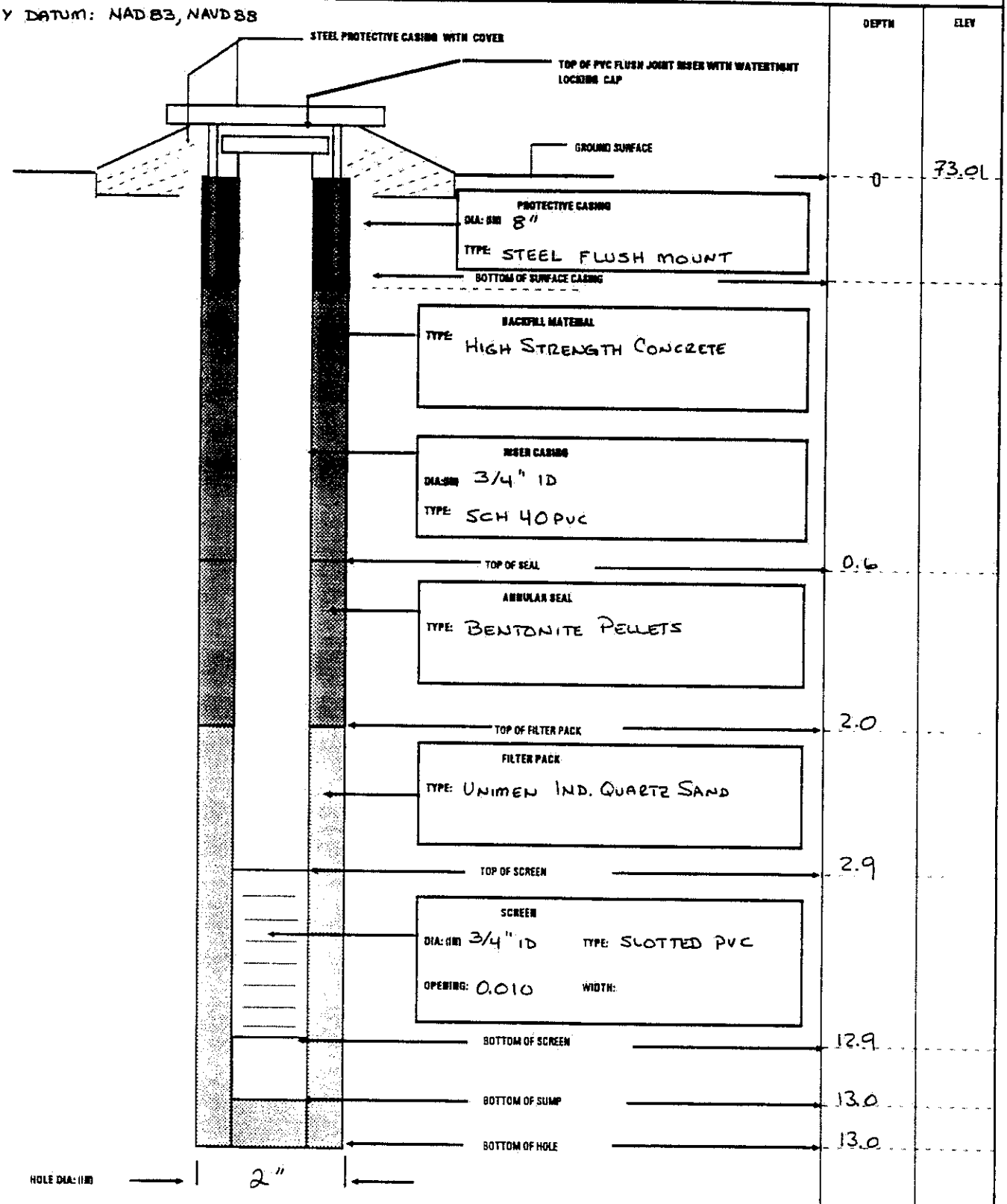
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
		CONCRETE				
	1	Silty SAND (SM), fine grained, soft to very soft, gray (2.5 Y 7/2)				
	2	Silty SAND (SM), fine grained, soft to very soft, dark grayish brown (2.5 Y 4/2)				
	3					
	4	NO RECOVERY				
	5	Clayey SAND (SC), fine grained, soft to very soft, moist, gray (2.5 Y 5/1)				
	6	Sandy CLAY (CH), firm to hard, moist, gray (2.5 Y 6/1)				▽ wet below 5.5 FT BGS
	7	SAND (SW), fine to medium grained, some silt, soft to firm, moist (2.5 Y 7/1)				
	8					PUSHED TO 13.0 FT BGS TO SET 3/4" MONITORING POINT SCREENED FROM 2.9 TO 12.9 FT BGS
	9					COLLECTED GROUNDWATER SAMPLE 60-10-12 FROM MONITORING POINT
	10					

MONITORING WELL

PROJECT: UST 28B

WELL NUMBER: 60-08	**BEGIN:** 1/14/00	**END:** 1/14/00
COORDINATES: N: 681703.1 E: 823671.4	**REFERENCE POINT:** TOP OF CASING	**ELEVATION:** 72.74

SURVEY DATUM: NAD 83, NAVD 88

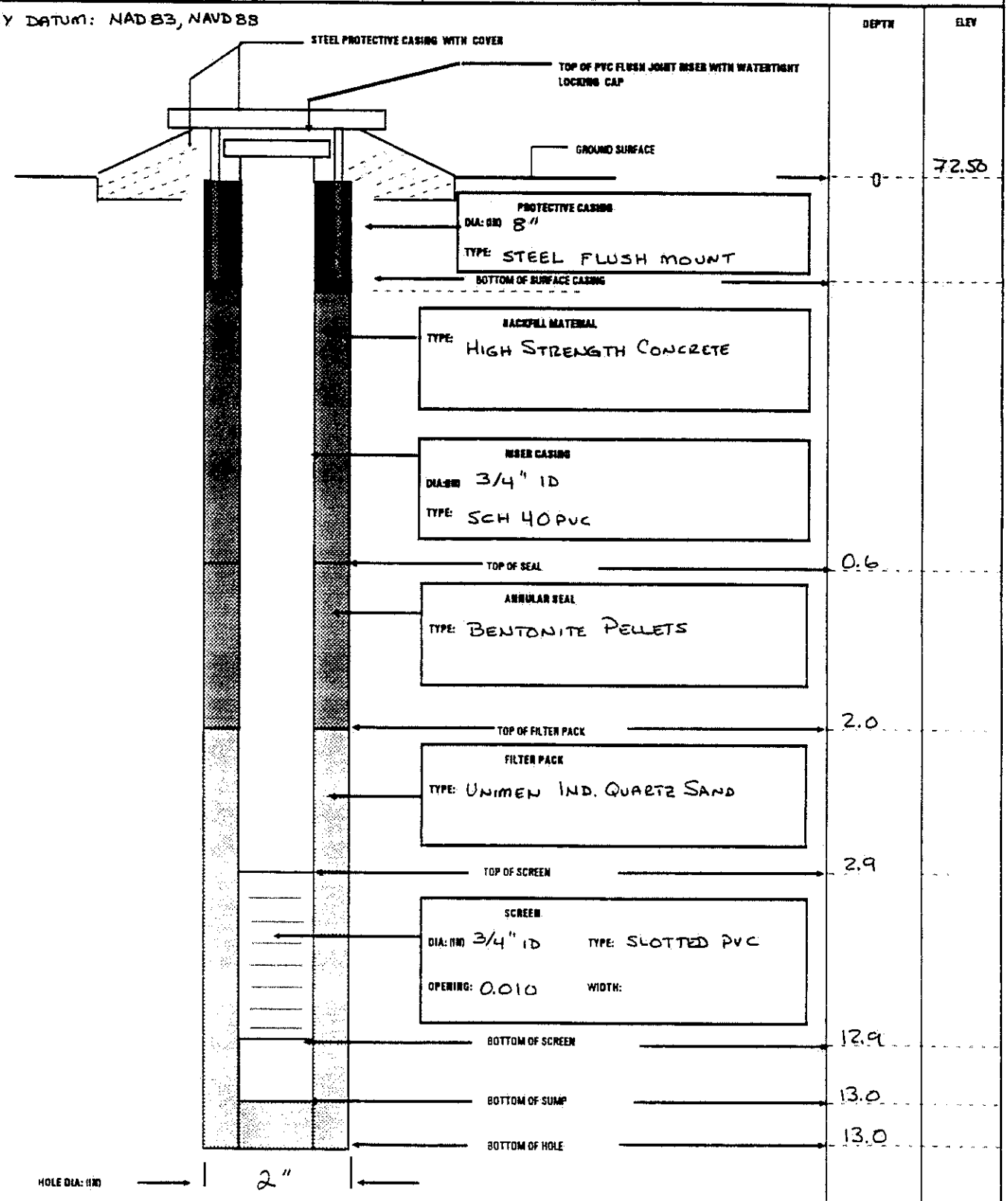


MONITORING WELL

PROJECT: UST 28 B

WELL NUMBER: 60-09	**BEGIN:** 1/14/00	**END:** 1/14/00
COORDINATES: N: 681678.4 E: 823693.4	**REFERENCE POINT:** TOP OF CASING	**ELEVATION:** 72.23

SURVEY DATUM: NAD 83, NAVD 88



MONITORING WELL

PROJECT: UST 28B

WELL NUMBER: 60-10	**BEGIN:** 1/14/00	**END:** 1/14/00
COORDINATES: N: 681746.9 E: 823675.4	**REFERENCE POINT:** TOP OF CASING	**ELEVATION:** 78.21

SURVEY DATUM: NAD 83, NAVD 88