FINAL

IMA

THIRD ANNUAL MONITORING AND FREE PRODUCT REMOVAL REPORT

3d Inf Div (Mech)

Former Underground Storage Tank 117
Building 7009
Bulk Fuel Facility (HAA-09)
Facility ID #9-025113*2
Hunter Army Airfield, Georgia

Prepared for

U.S. ARMY CORPS OF ENGINEERS
SAVANNAH DISTRICT

Contract No. DACA21-02-D-0004
Delivery Order 0066

July 2007

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FINAL

THIRD ANNUAL MONITORING AND FREE PRODUCT REMOVAL REPORT FOR FORMER UNDERGROUND STORAGE TANK 117 BUILDING 7009 BULK FUEL FACILITY (HAA-09) FACILITY ID #9-025113*2 HUNTER ARMY AIRFIELD, GEORGIA

Prepared for

U. S. Army Corps of Engineers, Savannah District
and
Fort Stewart Directorate of Public Works
Under Contract Number DACA21-02-D-0004
Delivery Order 0066

Prepared by

Science Applications International Corporation
P.O. Box 2501
Oak Ridge, TN 37831

July 2007

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CONTENTS

Attachments

List of Abbreviations and Acronyms

ACL	alternate concentration limit
AST	aboveground storage tank
BTEX	benzene, toluene, ethylbenzene, and xylenes
CAP	Corrective Action Plan
EPA	U. S. Environmental Protection Agency
GA EPD	Georgia Environmental Protection Division
IWQS	In-Stream Water Quality Standard
MCL	maximum contaminant level
PAH	polynuclear aromatic hydrocarbon
SAIC	Science Applications International Corporation
UST	underground storage tank

MONITORING AND FREE PRODUCT REMOVAL REPORT

Submittal Date: July 2007 Monitoring Report Number: 3rd Annual

For Period Covering: January 2005 to December 2006

Facility Name: Former UST 117 Street Address: Bulk Fuel Facility, Building 7002

Facility ID: 9-025113*2 City: Savannah County: Chatham Zip Code: 31409

Latitude: 32°01'43" Longitude: 81°08'37"

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
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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: 7/26/07

Georgia Stamp or Seal

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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) 117, Facility ID #9-025113*1, was located near Building 7002 at the Bulk Fuel Facility at Hunter Army Airfield, Georgia. The Bulk Fuel Facility is approximately 600 by 1,200 ft and covers an area of approximately 16.5 acres. Currently, the facility contains three aboveground storage tanks (ASTs) for the storage of jet propellant (JP)-8 with capacities of approximately 500,000 gal each, aboveground and underground piping, and off-loader and pump stations for the distribution of fuel to and from the tanks. The tank was removed and the piping abandoned in place on September 30, 1996. Science Applications International Corporation (SAIC) performed a soil gas survey in January 1999 to identify areas of significant contaminant concentrations (SAIC 1999). SAIC conducted a Corrective Action Plan (CAP)–Part A investigation in December 1999 and January 2000 and a CAP–Part B investigation from November 2000 to March 2001 to determine the extent of petroleum contamination at the site. Thirty-four monitoring wells, seven soil borings, and six vertical-profile borings were installed during these investigations, and surface water and sediment samples were collected from Lamar Canal. The CAP–Part B Report (SAIC 2001) was submitted to the Georgia Environmental Protection Division (GA EPD) UST Management Program in July 2001. The report recommended that a well be installed to replace BF-MW-21, which had been destroyed, and that seven monitoring wells (i.e., BF-MW-19, BF-MW-20, BF-MW-21R, BF-MW-22, BF-MW-32, BF-MW-33, and BF-MW-34) be sampled on a semiannual basis for benzene, toluene, ethylbenzene, and xylenes (BTEX) and polynuclear aromatic hydrocarbons (PAHs) because benzene and naphthalene were selected as constituents of potential concern in groundwater. The fate and transport modeling performed as part of the CAP–Part B Report for Release #1 reflected a continuous source of contamination. The results are summarized in Attachment A of this document.

In July 2002 and January 2003, free product was observed in well BF-MW-E5, which is located in the vicinity of AST 7009. This tank is approximately 500 ft northeast of AST 7003, which is where the groundwater plume is being monitored. Free product was not observed in this well during the CAP–Part B investigation. During that investigation, the BTEX and PAH constituents detected in the well were below the maximum contaminant level (MCL), the In-Stream Water Quality Standard (IWQS), and the alternate concentration limit (ACL); therefore, groundwater monitoring of this area was not warranted.

It was apparent that there were two separate releases at the Bulk Fuel Facility. For clarification, Release #1 is associated with the groundwater plume in the vicinity of AST 7003 where the original semiannual monitoring only program was conducted. GA EPD granted no further action for Release #1 in correspondence dated October 6, 2003 (Lewis 2003). Release #2 is associated with the free product observed in well BF-MW-E5, which is in the vicinity of AST 7009 and has been assigned Facility ID #9-025113*2.

As recommended in the First Annual Monitoring Only Report (SAIC 2003), three additional wells were installed around the perimeter of the bermed area in the vicinity of AST 7009 to confirm that free product in BF-MW-E5 was not from an upgradient source or migrating downgradient of the AST containment area. Well construction diagrams are provided in Attachment D. Due to the construction of the containment area around the AST, the "E" series of monitoring wells could not be overdrilled and screened across the water table. Also,

additional wells could not be installed within the containment area do to accessibility issues. The purpose of the semiannual monitoring, summarized in the Second Annual Monitoring and Free Product Removal Report issued December 2006, was to confirm that natural attenuation is taking place at the site and to document the free product removal activities at the site. In accordance with recommendations made in the First Annual Monitoring Only Report (SAIC 2003), ACLs were to be developed for any constituent exceeding its respective IWQS by conducting fate and transport modeling specifically for Release #2. During the year of semiannual monitoring associated with Release #2, none of the constituents exceeded its respective IWQS, thus ACLs were not developed at this time. The monitoring only plan for Release #2 will be terminated if contaminant concentrations are less that their respective IWQS or ACL and if free product is less than 1/8-in. The monitoring only program may be terminated regardless of the site ranking score.

The concrete foundations within the berms and UST 117 at the BFF were removed by CAPE Environmental in May 2006. During the removal of the concrete foundations free product was discovered approximately 3 to 4 ft BGS. This was identified as Release #3 at UST 117. Three 6-inch diameter sumps were installed by CAPE Environmental in the bermed area to collect free product. A subcontractor to HAAF, Griffin Services, was contracted to measure the level of free product in the sumps and to pump the free product on a routine basis starting in May 2006 and continuing through August 2006.

III. ACTIVITIES AND ASSESSMENT OF EXISTING CONDITIONS

A. Potentiometric Data:

(Appendix I, Figure 2: Potentiometric Surface Map)
(Appendix II, Table 1: Groundwater Elevations)

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

During the water level measurement activities at the site during the semiannual monitoring for Release #1, free product was identified in well BF-MW-E5 (i.e., Release #2). This well is located within the containment system of active AST 7009 and is approximately 500 ft northeast of AST 7003 and Release #1. During the CAP–Part B investigation, free product was not observed in well BF-MW-E5. In June 2004, three additional wells were installed around the perimeter of the containment area associated with AST 7009 to confirm that free product was not migrating beyond the perimeter of the containment area and that free product was not coming from an upgradient source. Well BF-MW-E5 is the only well at the site that contains free product.

At various times throughout the year, the water level in BF-MW-E5 is above the screened interval, thus free product is being removed by aggressively pumping the well on a bi-monthly basis with absorbent socks placed in the well in between pumping events when the presence of free product warrants absorbent sock placement. This alternative ensures the active AST system for the Army's Southeastern Power Projection Platform stays operational and that the integrity of the associated system remains intact. The free product removal activities were initiated in June 2004, when there was 3.14 ft of free product present in BF-MW-05. The free product thickness has continued to decrease since June 2004 with the bi-monthly pumping events. Absorbent socks have not been placed in the well since July 2004. Since October 2004, the maximum free product thickness was 0.01 ft in February 2005. In the other monthly measurements, there has either been a sheen or no product present.

During CY 2006, 8 monthly evaluations of free product in BF-MW-E5 were performed consisting of measuring free product in the well followed by potentially pumping the well and/or placing absorbent socks in the well. Measurable free product was identified during 4 of the 8 evaluations. The maximum free product thickness was 4.32 ft in December 2006. A summary of free product removal activities is provided in Table 4a.

During the third semiannual monitoring event in July 2004, groundwater elevations were measured in the site monitoring wells to determine the groundwater flow direction (Table 1). In July 2004, the groundwater flow direction ranged from the south to the southeast toward Lamar Canal, and the average groundwater gradient was approximately 0.008 ft/ft. Free product was observed in well BF-MW-E5, which is associated with Release #2.

During the fourth semiannual monitoring event in January 2005, groundwater elevations were measured in the site monitoring wells to determine the groundwater flow direction (Table 1). In January 2005, the groundwater flow direction was to the southeast toward Lamar Canal, and the average groundwater gradient was approximately 0.007 ft/ft. A sheen was observed in well BF-MW-E5, which is associated with Release #2.

On February 15, 2006, 23 monitoring wells associated with Release #1 (MW-01, 02, 03, 06, 07, 08, 09, 10, 11, 12, 13, 14, 17, 18, 20, 21R, 22, 23, 28, 29, 30, 31, and 32) located throughout the BFF were abandoned by SAIC personnel. The abandonment was documented in the *Completion Report for Former UST 117, Bulk Fuel Facility (HAA-09), Facility ID #9-025113*1* dated April 2006. Six monitoring wells (MW-15, 16, 19, 24, 33, and 34) located around the perimeter of the site remain intact for the monitoring of Release #2. Figure 1a identifies the monitoring wells that were abandoned in February 2006 and the remaining wells at the BFF.

The concrete foundations within the berms and UST 117 at the BFF were removed by CAPE Environmental in May 2006. During the removal of the concrete foundations free product was discovered approximately 3 to 4 ft BGS. Three 6-inch diameter sumps were installed by CAPE Environmental in the bermed area to collect free product. A subcontractor to HAAF, Griffin Services, was contracted to measure the level of free product in the sumps and to pump the free product on a routine basis starting in May 2006 and continuing through August 2006. The results of these pumping activities are presented in Table 4b. This area is presently being investigated under Release #3.

In an effort to delineate free product associated with Release #3, 42 2-inch diameter monitoring points (FP-1 through FP-42) were installed on an approximate 50-foot centers in the bermed area of the former ASTs at the BFF in November 2006. The monitoring points were constructed of 1.5-inch diameter PVC 0.010-in slot screen and installed from ground surface to 3 to 4 ft BGS. Filter pack sand was poured around the annulus between the borehole and the screen. Each monitoring point has a flush surface completion with an approximate 2 ft × 2 ft concrete pad. Each monitoring point was installed using mechanical hand techniques. The location of the free product monitoring points are presented in Figure 1b. The soil boring logs and free product monitoring point construction diagrams are presented in Attachment D.

Water and free product levels were measured in the free product monitoring wells after installation in November 2006. No water or free product was measured in any of the points. No groundwater sampling was performed in CY 2006.

B. Analytical Data:

(Appendix I, Figure 3: Groundwater Quality Map)
(Appendix I, Figure 4: Trend of Contaminant Concentrations)
(Appendix II, Table 2: Groundwater Analytical Results)
(Appendix II, Table 3: Soil Analytical Results)
(Appendix III: Laboratory Analytical Results)

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

During the third semiannual sampling event in July 2004, which is associated with Release #2, monitoring wells BF-MW-E1, BF-MW-E2, BF-MW-E3, BF-MW-E4, BF-MW-E5, BF-MW-E6, BF-MW-04, BF-MW-25, BF-MW-26, BF-MW-27, BF-MW-35, BF-MW-36, and BF-MW-37 were sampled for BTEX using U. S. Environmental Protection Agency (EPA) Method 8021B/8260B and PAHs using EPA Method 8270C. Analytical results from the sampling event are summarized below.

- Benzene was detected in 1 of 13 groundwater samples at a concentration of 2.0 µg/L. The concentration did not exceed the IWQS of 71.28 µg/L or the ACL of 634 µg/L associated with Release #1.

- Toluene was not detected in any of the groundwater samples.

- Ethylbenzene was detected in 1 of 13 groundwater samples at a concentration of 17.3 µg/L. The concentration did not exceed the IWQS of 28,718 µg/L.

- Total xylenes were detected in 1 of 13 groundwater samples at a concentration of 42.7 µg/L. There is no ACL or IWQS for total xylenes; however, the concentration did not exceed the MCL of 10,000 µg/L.

- 2-Methylnaphthalene was detected in 4 of 13 groundwater samples at concentrations ranging from 0.6J to 8.4 µg/L. There is no ACL or IWQS for 2-methylnaphthalene.

- Acenaphthene was detected in 2 of 13 groundwater samples at concentrations of 1.6 and 2.8 µg/L. There is no ACL or IWQS for acenaphthene.

- Fluorene was detected in 2 of 13 groundwater samples at concentrations of 2.6 and 5.7 µg/L. The concentrations did not exceed the IWQS of 14,000 µg/L.

- Naphthalene was detected in 4 of 13 groundwater samples at concentrations ranging from 0.49J to 17.3 µg/L. There is no IWQS for naphthalene; however, the concentrations did not exceed the ACL of 820 µg/L associated with Release #1.

- Phenanthrene was detected in 2 of 13 groundwater samples at concentrations of 0.57J and 5.28 µg/L. There is no ACL or IWQS for phenanthrene.

None of the constituents exceeded its respective IWQS or ACLs calculated for Release #1. Since none of the constituents associated with Release #2 exceed their respective IWQS, the development of ACLs for Release #2 is not necessary. Figure 4 shows the trend in benzene concentrations in groundwater for the wells in the monitoring only program for Release #2.

During the fourth semiannual sampling event in January 2005, which is associated with Release #2, monitoring wells BF-MW-E1, BF-MW-E2, BF-MW-E3, BF-MW-E4, BF-MW-E5, BF-MW-E6, BF-MW-04, BF-MW-25, BF-MW-26, BF-MW-27, BF-MW-35, BF-MW-36, and BF-MW-37 were sampled for BTEX using EPA Method 8021B/8260B and PAHs using EPA Method 8270C. Analytical results from the sampling event are summarized below.

- Benzene was not detected in any of the groundwater samples.

- Toluene was detected in 2 of 13 groundwater samples at concentrations of 0.43J and 0.47J µg/L. The concentrations did not exceed the IWQS of 200,000 µg/L.

- Ethylbenzene was detected in 1 of 13 groundwater samples at a concentration of 10.4 µg/L. The concentration did not exceed the IWQS of 28,718 µg/L.

- Total xylenes were detected in 2 of 13 groundwater samples at concentration of 0.9J and 34.9 µg/L. There is no ACL or IWQS for total xylenes; however, the concentration did not exceed the MCL of 10,000 µg/L.

- 2-Methylnaphthalene was detected in 3 of 13 groundwater samples at concentrations ranging from 1.4 and 43.2 µg/L. There is no ACL or IWQS for 2-methylnaphthalene.

- Acenaphthene was detected in 2 of 13 groundwater samples at concentrations of 1.6 and 5.4 µg/L. There is no ACL or IWQS for acenaphthene.

- Fluorene was detected in 2 of 13 groundwater samples at concentrations of 3.1 and 10.3 µg/L. The concentrations did not exceed the IWQS of 14,000 µg/L.

- Naphthalene was detected in 3 of 12 groundwater samples at concentrations ranging from 0.31J to 32.9 µg/L. There is no IWQS for naphthalene; however, the concentrations did not exceed the ACL of 820 µg/L associated with Release #1.

- Phenanthrene was detected in 2 of 12 groundwater samples at concentrations of 1.2 and 10.7 µg/L. There is no ACL or IWQS for phenanthrene.

- Pyrene was detected in 1 of 13 groundwater samples at a concentration of 2.4 µg/L. The concentration did not exceed the IWQS of 11,000 µg/L.

None of the constituents exceeded its respective IWQS or ACLs calculated for Release #1. Since none of the constituents associated with Release #2 exceed their respective IWQS, the development of ACLs for Release #2 is not necessary. Figure 4 shows the trend in benzene concentrations in groundwater for the wells in the monitoring only program for Release #2.

GAEPD concurred with the recommendation of suspending the semiannual groundwater sampling until free product removal in BF-MW-E5 is complete (letter from William Logan GAEPD UST Management Program dated May 16, 2006).

IV. SITE RANKING (Note: Re-rank site after each monitoring event.)

(Appendix IV: Site Ranking Form)

Environmental Site Sensitivity Score:
(April 1999 version of the Site Ranking Form was used for all scores.)

Release #1
3,250 (CAP–Part B Report)
3,250 (July 2002 – First semiannual sampling event)
3,250 (Jan. 2003 – Second semiannual sampling event)
Release #2
65,250 (July 2004 – Third semiannual sampling event)
12,750 (Jan. 2005 – Fourth semiannual sampling event)
145,250 (December 2006 – Third Annual Report

V. CONCLUSIONS/RECOMMENDATIONS

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

The Monitoring Only Plan for the plume in the vicinity of BF-MW-21 (i.e., Release #1) was conducted in accordance with Section III.D of the CAP–Part B Report (SAIC 2001). Termination conditions in the CAP–Part B Report were achieved and GA EPD granted no further action for Release #1 in correspondence dated October 6, 2003 (Lewis 2003).

The Monitoring Only Plan for the plume in the vicinity of BF-MW-E5 (i.e., Release #2) is being conducted in accordance with the technical approach provided in the First Annual Monitoring Only Report (SAIC 2003). Termination for Release #2 will be requested once the measured contaminants remain below their respective IWQS or ACL for 1 year and the free product thickness is less than 1/8-in. The Monitoring Only Plan may be terminated regardless of the site ranking score if the above conditions are met.

During the last year of the monitoring program, a free-product mixture has been pumped from well BF-MW-E5 on a bi-monthly basis. Free product has measured between 0 and 0.1 ft since September 20, 2004. Because BTEX and PAH concentrations associated with Release #2 have not exceeded their respective IWQS and ACLs since the CAP–Part B Investigation (Release #2) – 2000, semiannual groundwater sampling was discontinued at the site during CY 2006.

For the product delineation points at Release #3, no free product has been detected in the 42 free product monitoring points and the fluid removed from the three 6-inch sumps installed by CAPE Environmental indicates that the recoverable free product in the vicinity of the removed AST foundations is complete.

Free product continues to be measured in BF-MW-E5. The measurement of free product in BF-MW-E5, and the fluid removal from the three sumps will continue along with water/product measurements in the sentinel wells outside the berm to monitor any product movement on a bimonthly basis.

Residual soil contamination remains in the area of the former foundations. This area is estimated to be confined to the area of the foundations plus approximately 10% and to a depth of approximately 7 ft BGS. Soil sampling to determine the residual soil contamination levels and to decide if soil remediation is necessary will be required.

The results of the free product removal and final confirmatory sampling will be documented in the Fourth Annual Monitoring Report, which will be submitted to GA EPD in May 2008.

VI. REIMBURSEMENT

Attached _____ N/A X

(Appendix V: Reimbursement Application)

Fort Stewart is a federally owned facility and has funded the investigation for the former UST 117 site, Facility ID #9-025113*2, using U. S. Department of Defense Environmental Restoration Account Funds. Application for Georgia UST Trust Fund reimbursement is not being pursued at this time.

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APPENDIX I

REPORT FIGURES

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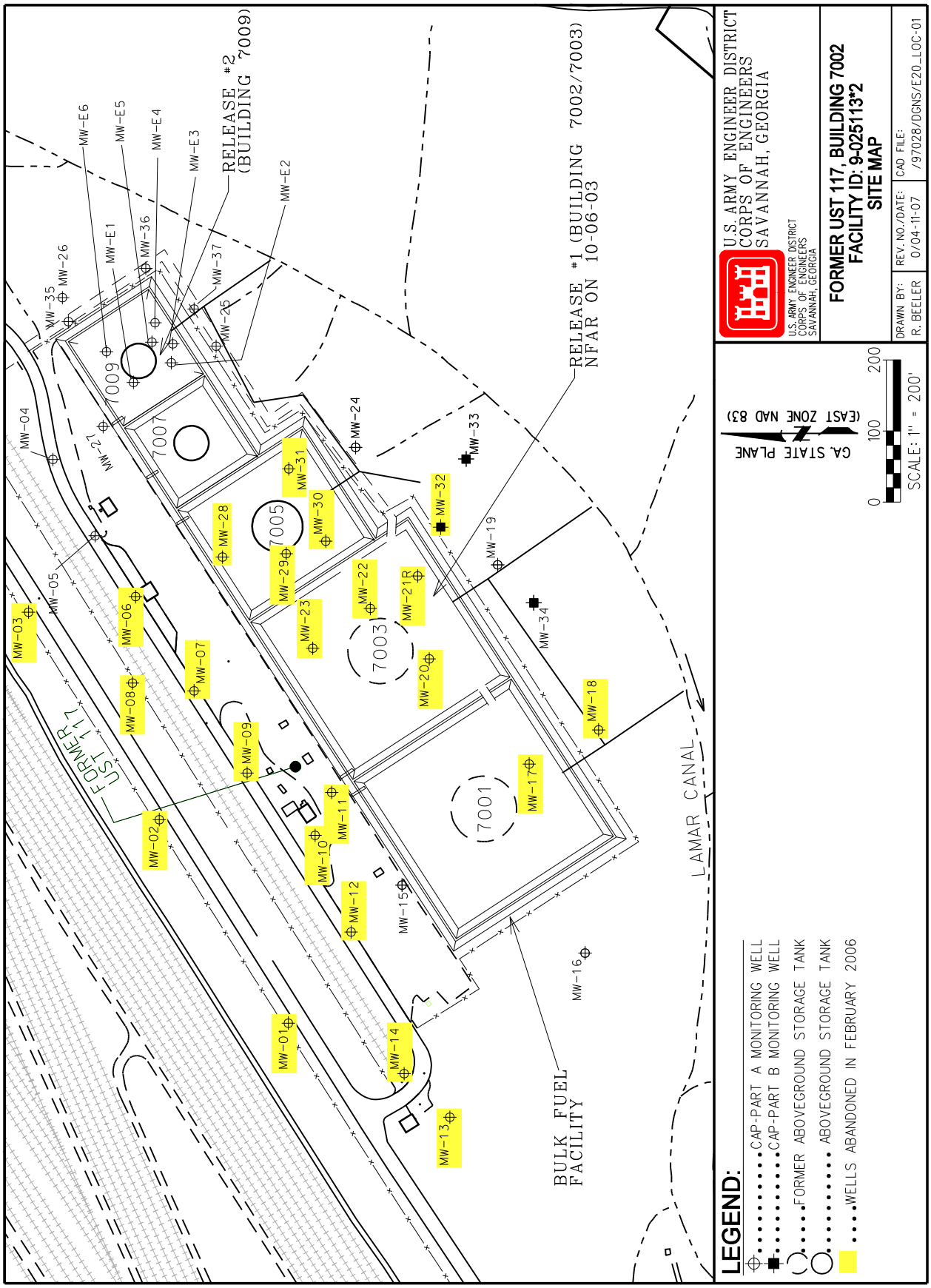

Figure 1a. Location Map of the Former UST 117 (Bulk Fuel Facility), Hunter Army Airfield, GA

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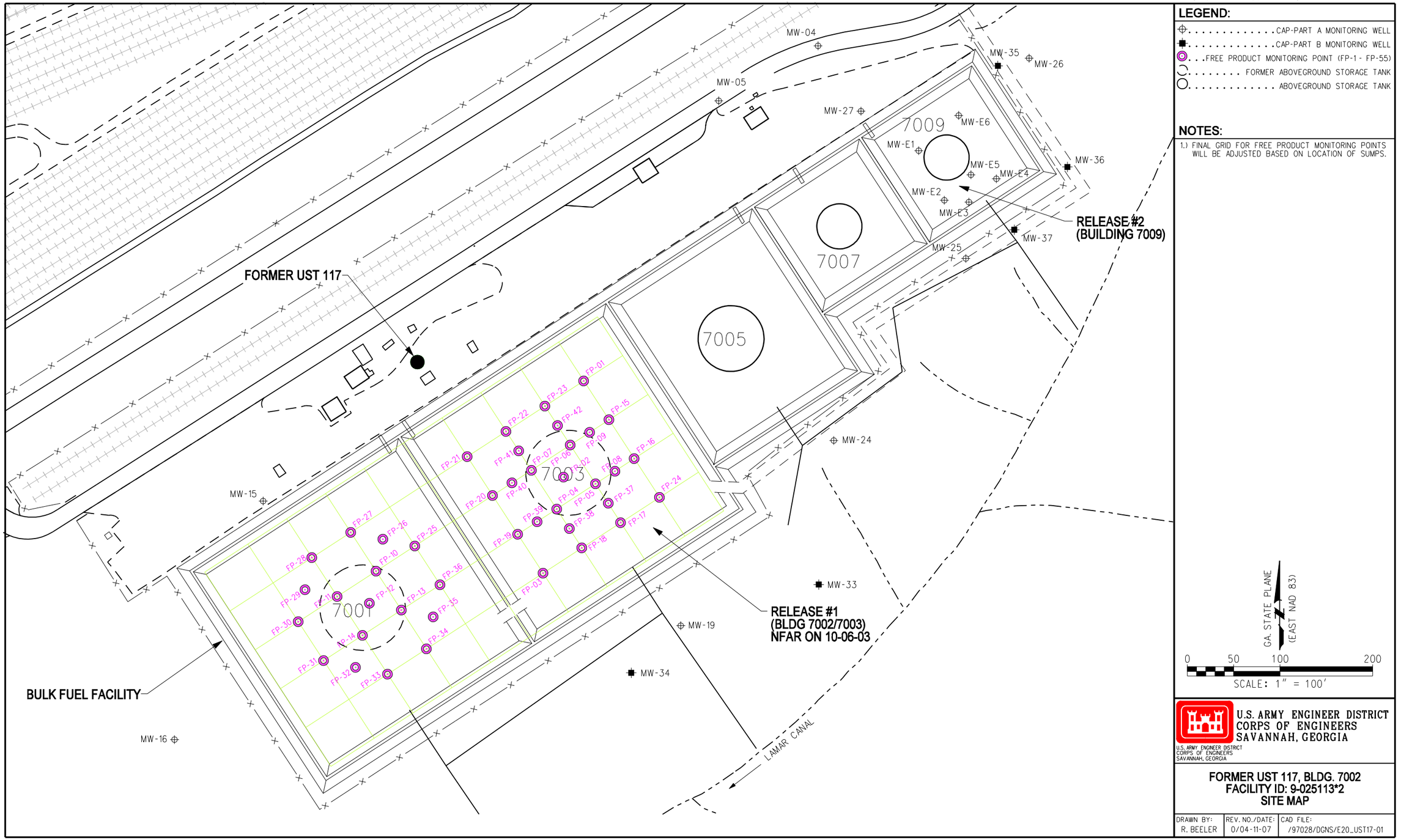

LEGEND:

- ⊕ . . . . . CAP-PART A MONITORING WELL
- ■ . . . . . CAP-PART B MONITORING WELL
- ◎ . . . FREE PRODUCT MONITORING POINT (FP-1 - FP-55)
- ◯ . . . . . FORMER ABOVEGROUND STORAGE TANK
- ○ . . . . . ABOVEGROUND STORAGE TANK

NOTES:

1.) FINAL GRID FOR FREE PRODUCT MONITORING POINTS WILL BE ADJUSTED BASED ON LOCATION OF SUMPS.

GA. STATE PLANE (EAST NAD 83)

0 50 100 200

SCALE: 1" = 100'

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

FORMER UST 117, BLDG. 7002
FACILITY ID: 9-025113*2
SITE MAP

DRAWN BY:	REV. NO./DATE:	CAD FILE:
R. BEELER	0/04-11-07	/97028/DGNS/E20_UST17-01

Figure 1b. Free Product Monitoring Point Location Map (Installed November 2006)

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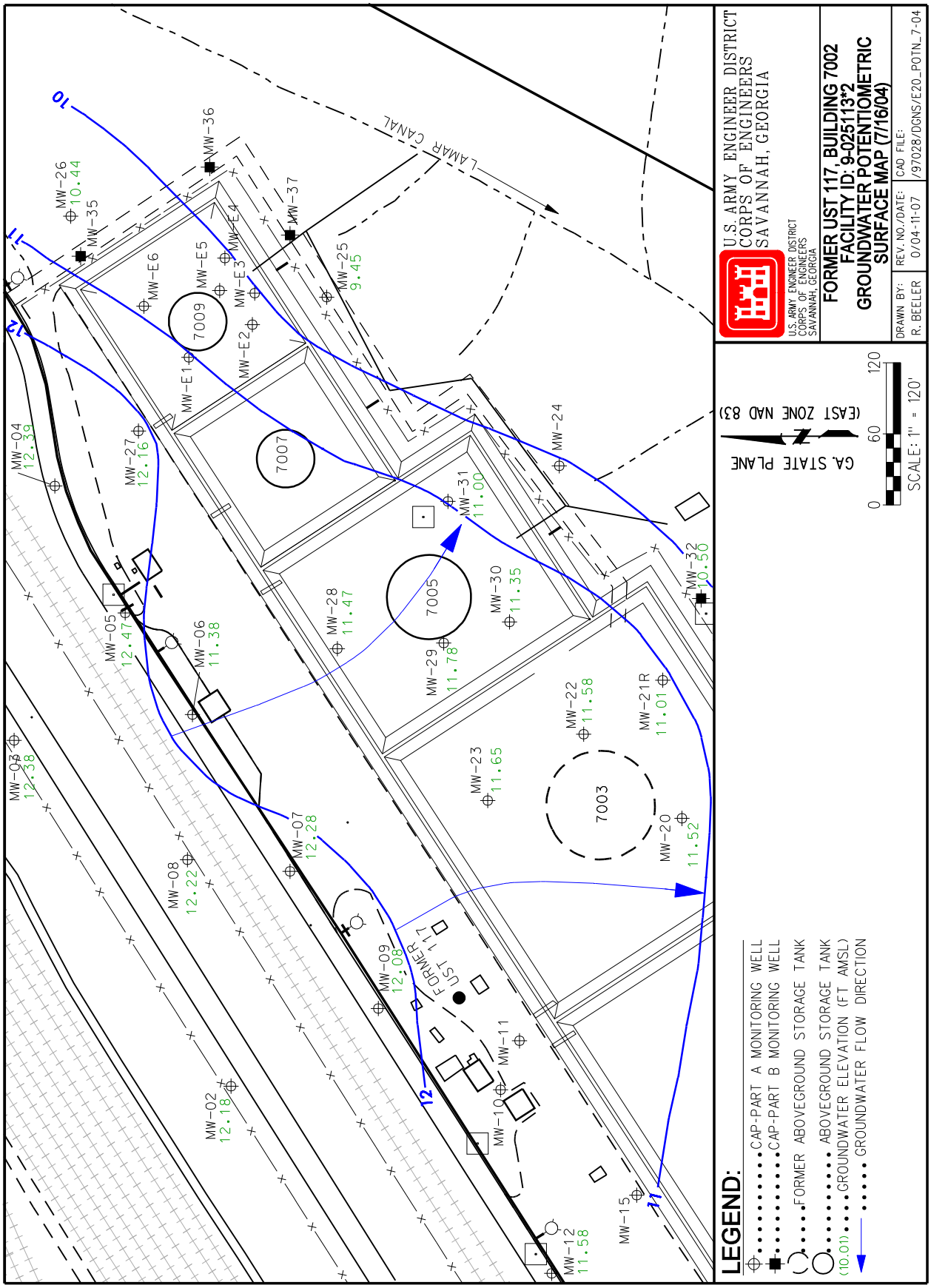

Figure 2a. Potentiometric Surface Map of the Former UST 117 Site (July 2004)

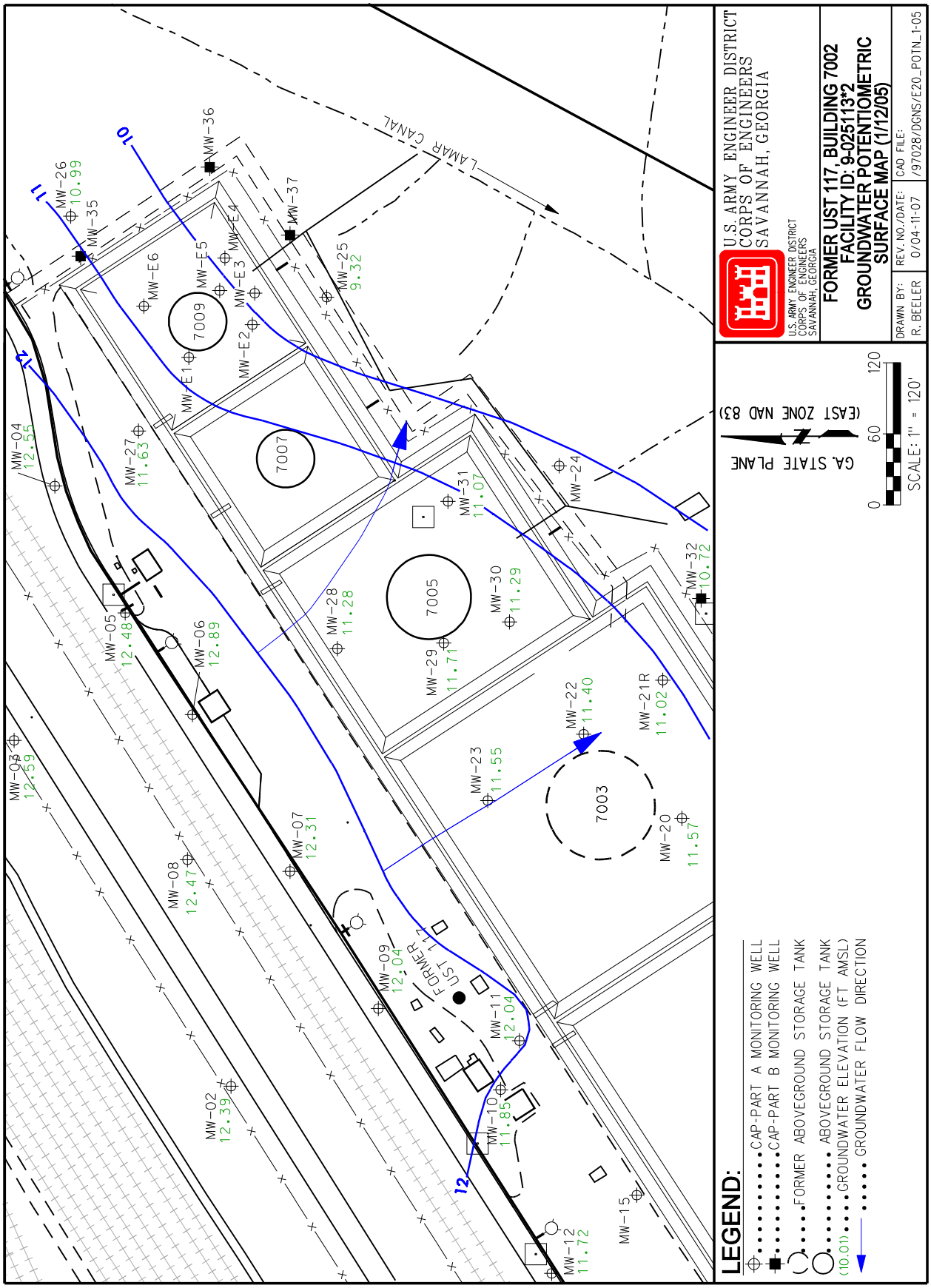

Figure 2b. Potentiometric Surface Map of the Former UST 117 Site (January 2005)

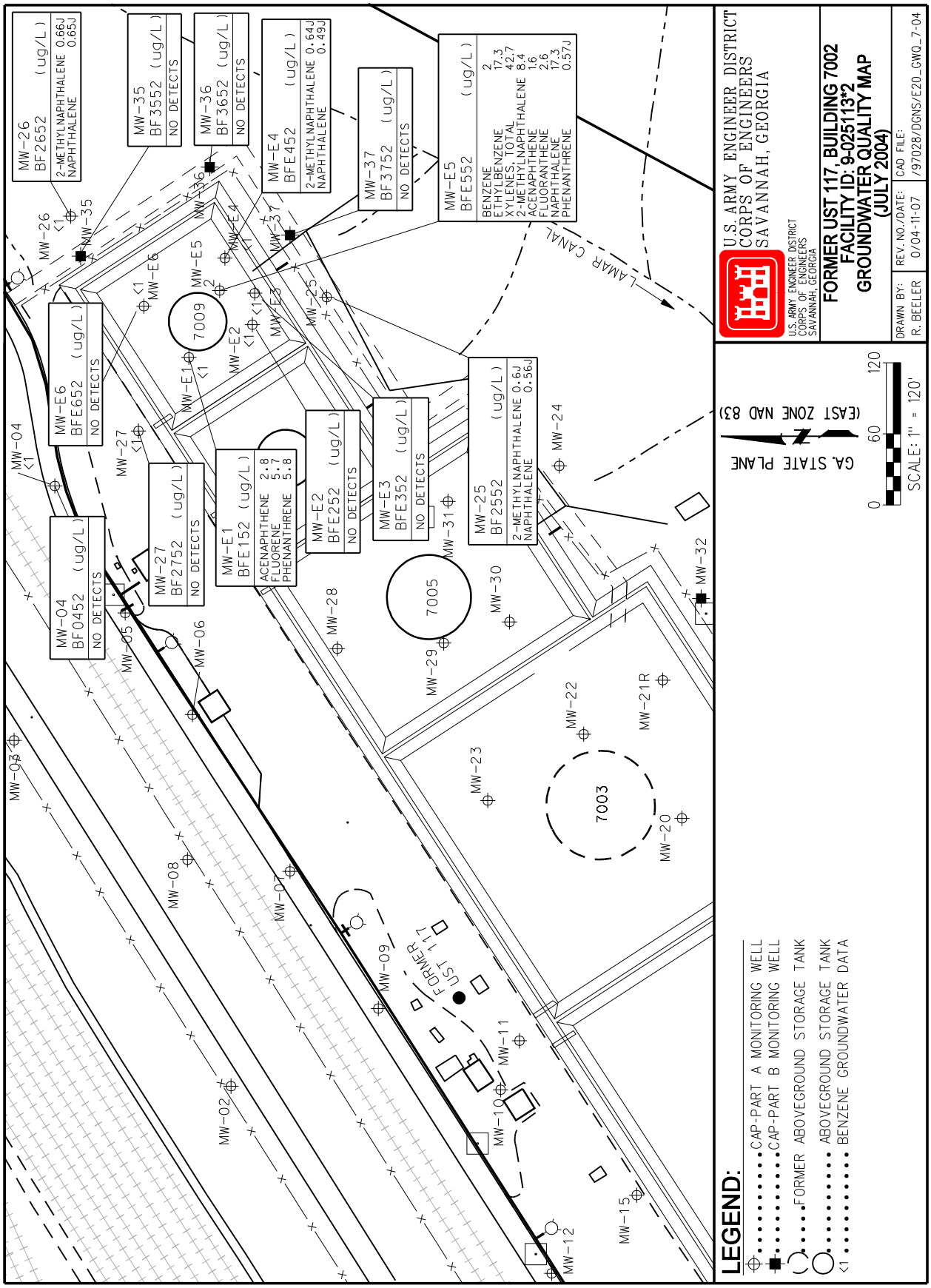

Figure 3a. Groundwater Quality Map of the Former UST 117 Site, Release #2 (July 2004)

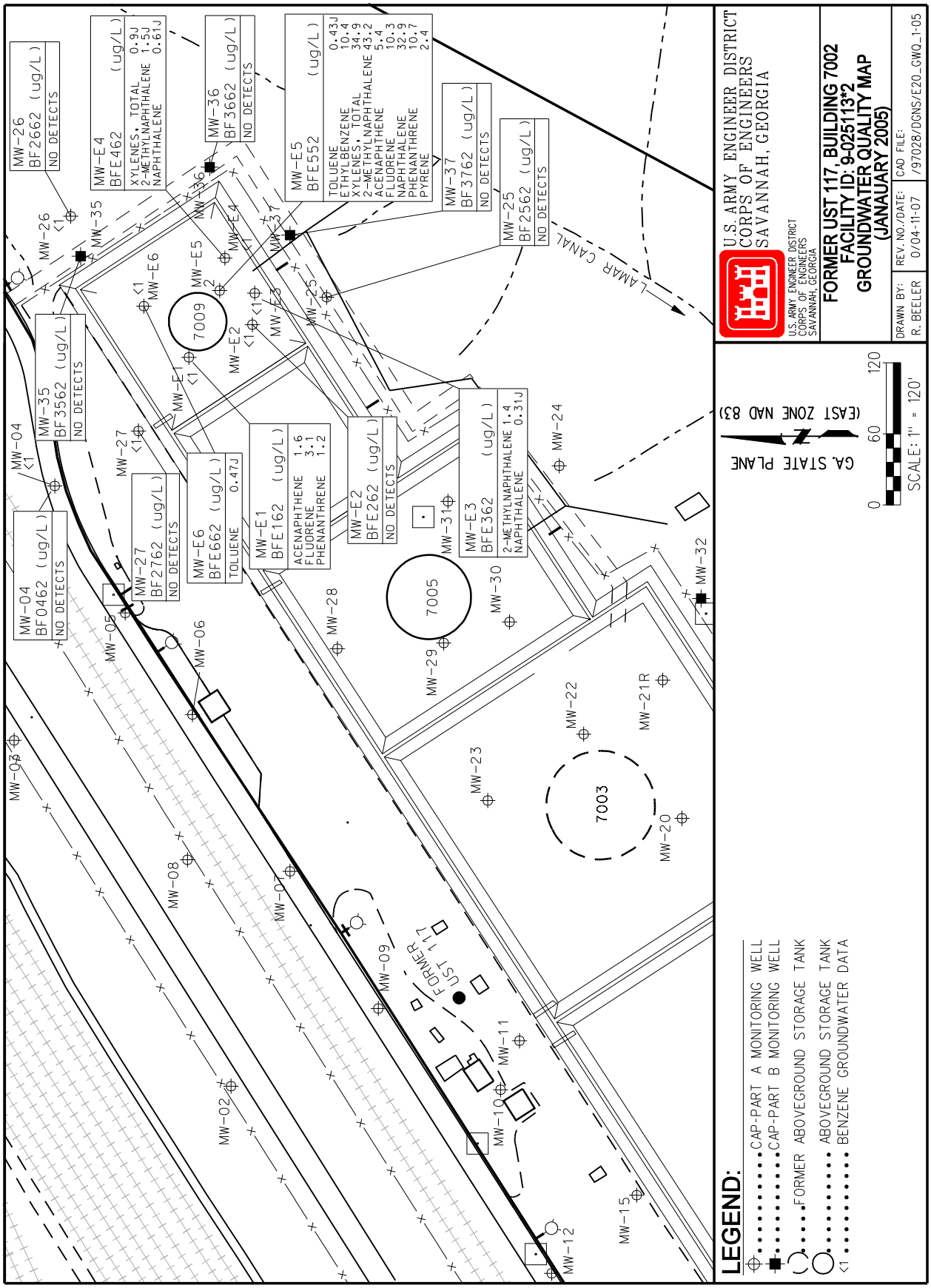

Figure 3b. Groundwater Quality Map of the Former UST 117 Site, Release #2 (January 2005)

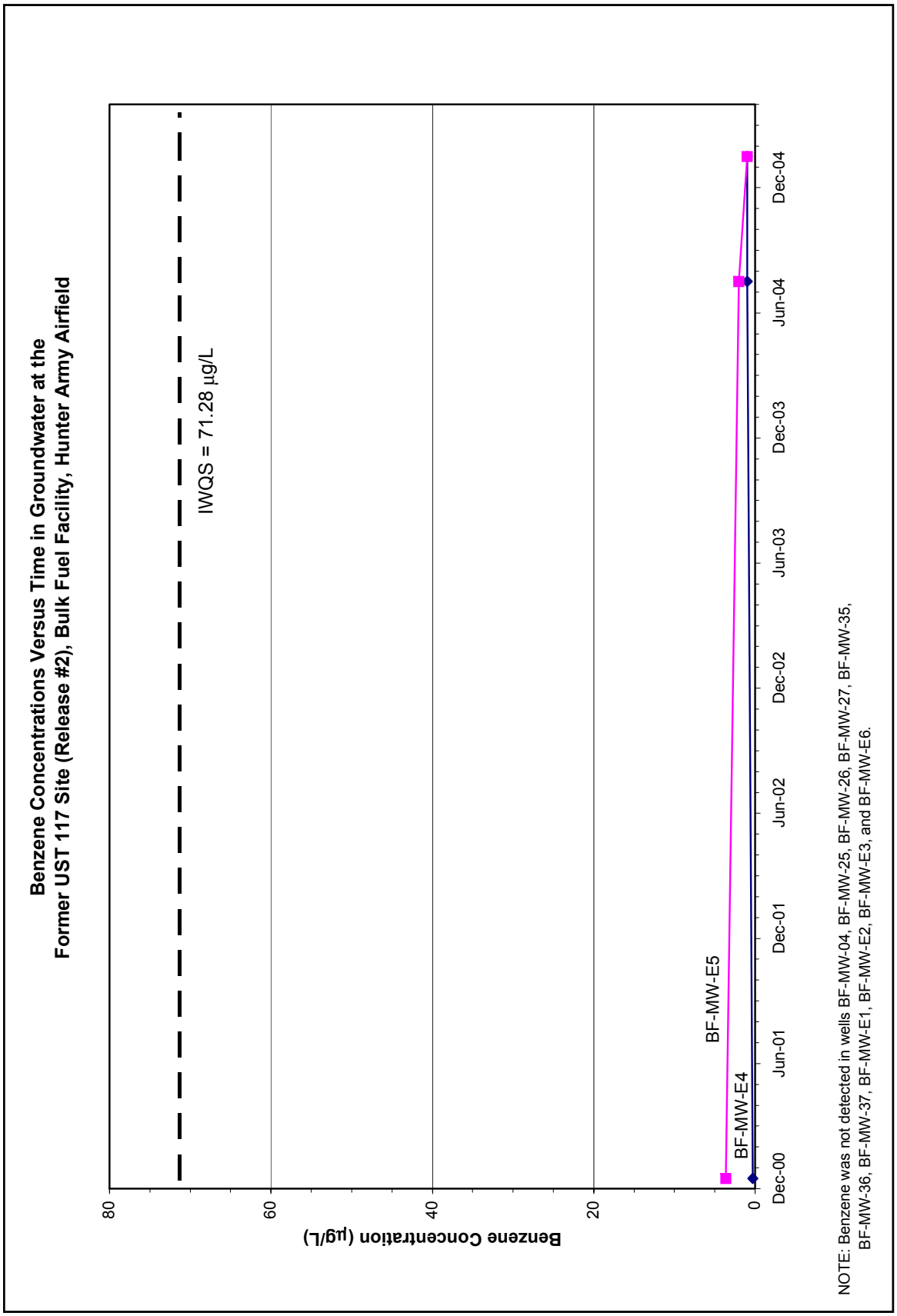

Figure 4. Trend of Benzene Concentrations for the Former UST 117 Site

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APPENDIX II

REPORT TABLES

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Table 1. Groundwater Elevations

Well Number	Date Measured	Top of Casing Elevation (ft AMSL)	Depth of Screened Interval (ft BGS)	Depth to Free Product (ft BTOC)	Depth to Water (ft BTOC)	Product Thickness (ft)	Corrected Groundwater Elevation[a] (ft AMSL)
First Semiannual Monitoring Event – July 2002							
BF-MW-01	07/11/02	15.47	3.5 – 12.5	—	4.04	0	11.43
BF-MW-02	07/11/02	16.24	3.5 – 13.0	—	3.88	0	12.36
BF-MW-03	07/11/02	16.39	3.6 – 13.1	—	3.88	0	12.51
BF-MW-04	07/11/02	17.11	2.8 – 12.3	—	4.63	0	12.48
BF-MW-05	07/11/02	16.99	2.9 – 12.4	—	4.40	0	12.59
BF-MW-06	07/11/02	16.80	2.7 – 12.2	—	4.26	0	12.54
BF-MW-07	07/11/02	16.74	2.9 – 12.4	—	4.44	0	12.30
BF-MW-08	07/11/02	16.40	2.3 – 11.8	—	4.00	0	12.40
BF-MW-09	07/11/02	16.60	2.9 – 12.4	—	4.62	0	11.98
BF-MW-10	07/11/02	15.33	2.3 – 11.8	—	3.56	0	11.77
BF-MW-11	07/11/02	15.42	2.3 – 11.8	—	3.52	0	11.90
BF-MW-12	07/11/02	16.35	3.0 – 12.5	—	4.79	0	11.56
BF-MW-13	07/11/02	13.72	2.3 – 11.8	—	4.84	0	8.88
BF-MW-14	07/11/02	15.26	28 – 12.3	—	5.04	0	10.22
BF-MW-15	07/11/02	15.01	2.5 – 12.0	—	3.56	0	11.45
BF-MW-16	07/11/02	12.61	2.7 – 12.2	—	4.74	0	7.87
BF-MW-17	07/11/02	13.15	3.0 – 12.5	—	3.08	0	10.07
BF-MW-18	07/11/02	12.99	3.4 – 12.9	—	3.80	0	9.19
BF-MW-19	07/11/02	13.88	2.0 – 11.5	—	3.61	0	10.27
BF-MW-20	07/11/02	14.79	2.2 – 11.7	—	3.38	0	11.41
BF-MW-21R	07/11/02	14.57	4.8 – 14.8	—	3.55	0	11.02
BF-MW-22	07/11/02	14.60	2.4 – 11.9	—	3.19	0	11.41
BF-MW-23	07/11/02	14.74	2.7 – 12.2	—	3.13	0	11.61
BF-MW-25	07/11/02	13.60	3.6 – 13.1	—	3.90	0	9.70
BF-MW-27	07/11/02	14.90	2.5 – 12.0	—	2.72	0	12.18
BF-MW-28	07/11/02	15.49	2.0 – 11.5	—	4.07	0	11.42
BF-MW-29	07/11/02	14.49	2.0 – 11.5	—	2.82	0	11.67
BF-MW-30	07/11/02	14.19	1.9 – 11.4	—	2.85	0	11.34
BF-MW-31	07/11/02	14.46	1.5 – 11.0	—	3.53	0	10.93
BF-MW-32	07/11/02	15.74	1.4 – 11.2	—	5.12	0	10.62
BF-MW-33	07/11/02	13.95	1.6 – 11.4	—	4.75	0	9.20
BF-MW-34	07/11/02	14.87	3.1 – 13.1	—	5.24	0	9.63
BF-MW-E1	07/11/02	14.00	4.6 – 14.6	—	3.77	0	10.23
BF-MW-E2	07/11/02	13.76	3.94 – 13.94	—	3.91	0	9.85
BF-MW-E3	07/11/02	13.99	4.4 – 14.4	—	4.31	0	9.68

NOTES:
[a] Corrected groundwater elevation based on a product density of 880 kg/m^3.
AMSL Above mean sea level.
BGS Below ground surface.
BTOC Below top of casing.

Table 1. Groundwater Elevations (continued)

Well Number	Date Measured	Top of Casing Elevation (ft AMSL)	Depth of Screened Interval (ft BGS)	Depth to Free Product (ft BTOC)	Depth to Water (ft BTOC)	Product Thickness (ft)	Corrected Groundwater Elevation[a] (ft AMSL)
BF-MW-E4	07/11/02	13.88	4.6 – 14.6	—	4.42	0	9.46
BF-MW-E5	07/11/02	14.00	4.8 – 14.8	4.34	4.41	0.07	9.65[a]
BF-MW-E6	07/11/02	13.76	3.7 – 13.7	—	3.69	0	10.07
Second Semiannual Monitoring Event – January 2003							
BF-MW-01	01/27/03	15.47	3.5 – 12.5		3.71	0	11.76
BF-MW-03	01/27/03	16.39	3.6 – 13.1	—	3.79	0	12.60
BF-MW-09	01/27/03	16.60	2.9 – 12.4	—	4.29	0	12.31
BF-MW-12	01/27/03	16.35	3.0 – 12.5	—	4.39	0	11.96
BF-MW-17	01/27/03	13.15	3.0 – 12.5	—	2.47	0	10.68
BF-MW-18	01/27/03	12.99	3.4 – 12.9	—	3.32	0	9.67
BF-MW-19	01/27/03	13.88	2.0 – 11.5	—	3.38	0	10.50
BF-MW-20	01/27/03	14.79	2.2 – 11.7	—	3.08	0	11.71
BF-MW-21R	01/27/03	14.57	4.8 – 14.8	—	3.45	0	11.12
BF-MW-22	01/27/03	14.60	2.4 – 11.9	—	3.05	0	11.55
BF-MW-23	01/27/03	14.74	2.7 – 12.2	—	3.12	0	11.62
BF-MW-25	01/27/03	13.60	3.6 – 13.1	—	3.72	0	9.88
BF-MW-26	01/27/03	13.62	2.4 – 11.9	—	2.01	0	11.61
BF-MW-28	01/27/03	15.49	2.0 – 11.5	—	4.02	0	11.47
BF-MW-32	01/27/03	15.74	1.4 – 11.2	—	4.88	0	10.86
BF-MW-33	01/27/03	13.95	1.6 – 11.4	—	4.54	0	9.41
BF-MW-E1	01/27/03	14.00	4.6 – 14.6	—	3.99	0	10.01
BF-MW-E2	01/27/03	13.76	3.94 – 13.94	—	4.02	0	9.74
BF-MW-E3	01/27/03	13.99	4.4 – 14.4	—	4.38	0	9.61
BF-MW-E4	01/27/03	13.88	4.6 – 14.6	—	4.22	0	9.66
BF-MW-E5	01/27/03	14.00	4.8 – 14.8	4.44	4.54	0.1	9.55[a]
BF-MW-E6	01/27/03	13.76	3.7 – 13.7	—	3.87	0	9.89
Third Semiannual Monitoring Event – July 2004							
BF-MW-01	07/16/04	15.47	3.5 – 12.5	—	4.42	0	11.05
BF-MW-02	07/16/04	16.24	3.5 – 13.0	—	4.06	0	12.18
BF-MW-03	07/16/04	16.39	3.6 – 13.1	—	4.01	0	12.38
BF-MW-04	07/16/04	17.11	2.8 – 12.3	—	4.72	0	12.39
BF-MW-05	07/16/04	16.99	2.9 – 12.4	—	4.52	0	12.47
BF-MW-06	07/16/04	16.80	2.7 – 12.2	—	5.42	0	11.38
BF-MW-07	07/16/04	16.74	2.9 – 12.4	—	4.46	0	12.28
BF-MW-08	07/16/04	16.40	2.3 – 11.8	—	4.18	0	12.22
BF-MW-09	07/16/04	16.60	2.9 – 12.4	—	4.52	0	12.08

NOTES:
[a] Corrected groundwater elevation based on a product density of 880 kg/m^3.
AMSL Above mean sea level.
BGS Below ground surface.
BTOC Below top of casing.

Table 1. Groundwater Elevations (continued)

Well Number	Date Measured	Top of Casing Elevation (ft AMSL)	Depth of Screened Interval (ft BGS)	Depth to Free Product (ft BTOC)	Depth to Water (ft BTOC)	Product Thickness (ft)	Corrected Groundwater Elevation[a] (ft AMSL)
BF-MW-10	07/16/04	15.33	2.3 – 11.8	—	3.53	0	11.80
BF-MW-11	07/16/04	15.42	2.3 – 11.8	—	3.32	0	12.10
BF-MW-12	07/16/04	16.35	3.0 – 12.5	—	4.77	0	11.58
BF-MW-13	07/16/04	13.72	2.3 – 11.8	—	5.00	0	8.72
BF-MW-14	07/16/04	15.26	28 – 12.3	—	5.14	0	10.12
BF-MW-15	07/16/04	15.01	2.5 – 12.0	NM	NM	NM	NM
BF-MW-16	07/16/04	12.61	2.7 – 12.2	NM	NM	NM	NM
BF-MW-17	07/16/04	13.15	3.0 – 12.5	—	3.14	0	10.01
BF-MW-18	07/16/04	12.99	3.4 – 12.9	—	4.02	0	8.97
BF-MW-19	07/16/04	13.88	2.0 – 11.5	—	3.98	0	9.90
BF-MW-20	07/16/04	14.79	2.2 – 11.7	—	3.27	0	11.52
BF-MW-21R	07/16/04	14.57	4.8 – 14.8	—	3.56	0	11.01
BF-MW-22	07/16/04	14.60	2.4 – 11.9	—	3.02	0	11.58
BF-MW-23	07/16/04	14.74	2.7 – 12.2	—	3.09	0	11.65
BF-MW-25	07/16/04	13.60	3.6 – 13.1	NM	NM	NM	NM
BF-MW-27	07/16/04	14.90	2.5 – 12.0	—	2.74	0	12.16
BF-MW-28	07/16/04	15.49	2.0 – 11.5	—	4.02	0	11.47
BF-MW-29	07/16/04	14.49	2.0 – 11.5	—	2.71	0	11.78
BF-MW-30	07/16/04	14.19	1.9 – 11.4	—	2.84	0	11.35
BF-MW-31	07/16/04	14.46	1.5 – 11.0	—	3.46	0	11.00
BF-MW-32	07/16/04	15.74	1.4 – 11.2	—	5.24	0	10.50
BF-MW-33	07/16/04	13.95	1.6 – 11.4	—	4.88	0	9.07
BF-MW-34	07/16/04	14.87	3.1 – 13.1	—	4.92	0	9.95
BF-MW-35	07/16/04	14.94	2.4 – 12.4	—	3.91	0	11.03
BF-MW-36	07/16/04	15.16	2.6 – 12.6	—	5.90	0	9.26
BF-MW-37	07/16/04	16.07	2.3 – 12.3	—	5.07	0	11.00
BF-MW-E1	07/16/04	14.00	4.6 – 14.6	—	3.92	0	10.08
BF-MW-E2	07/16/04	13.76	3.94 – 13.94	—	4.64	0	9.12
BF-MW-E3	07/16/04	13.99	4.4 – 14.4	—	4.64	0	9.35
BF-MW-E4	07/16/04	13.88	4.6 – 14.6	—	4.80	0	9.08
BF-MW-E5	07/16/04	14.00	4.8 – 14.8	4.48	5.71	1.23	9.37[a]
BF-MW-E6	07/16/04	13.76	3.7 – 13.7	—	3.87	0	9.89
Fourth Semiannual Monitoring Event – January 2005							
BF-MW-01	01/12/05	15.47	3.5 – 12.5	—	3.90	0	11.57
BF-MW-02	01/12/05	16.24	3.5 – 13.0	—	3.85	0	12.39
BF-MW-03	01/12/05	16.39	3.6 – 13.1	—	3.80	0	12.59
BF-MW-04	01/12/05	17.11	2.8 – 12.3	—	4.56	0	12.55
BF-MW-05	01/12/05	16.99	2.9 – 12.4	—	4.51	0	12.48
BF-MW-06	01/12/05	16.80	2.7 – 12.2	—	3.91	0	12.89

NOTES:

[a] Corrected groundwater elevation based on a product density of 880 kg/m^3.

AMSL Above mean sea level.
BGS Below ground surface.
BTOC Below top of casing.
NM Not measured.

Table 1. Groundwater Elevations (continued)

Well Number	Date Measured	Top of Casing Elevation (ft AMSL)	Depth of Screened Interval (ft BGS)	Depth to Free Product (ft BTOC)	Depth to Water (ft BTOC)	Product Thickness (ft)	Corrected Groundwater Elevation[a] (ft AMSL)
BF-MW-07	01/12/05	16.74	2.9 – 12.4	—	4.43	0	12.31
BF-MW-08	01/12/05	16.40	2.3 – 11.8	—	3.93	0	12.47
BF-MW-09	01/12/05	16.60	2.9 – 12.4	—	4.56	0	12.04
BF-MW-10	01/12/05	15.33	2.3 – 11.8	—	3.48	0	11.85
BF-MW-11	01/12/05	15.42	2.3 – 11.8	—	3.38	0	12.04
BF-MW-12	01/12/05	16.35	3.0 – 12.5	—	4.63	0	11.72
BF-MW-13	01/12/05	13.72	2.3 – 11.8	—	3.49	0	10.23
BF-MW-14	01/12/05	15.26	28 – 12.3	—	4.41	0	10.85
BF-MW-15	01/12/05	15.01	2.5 – 12.0	NM	NM	NM	NM
BF-MW-16	01/12/05	12.61	2.7 – 12.2	NM	NM	NM	NM
BF-MW-17	01/12/05	13.15	3.0 – 12.5	—	3.07	0	10.08
BF-MW-18	01/12/05	12.99	3.4 – 12.9	—	3.83	0	9.16
BF-MW-19	01/12/05	13.88	2.0 – 11.5	—	3.85	0	10.03
BF-MW-20	01/12/05	14.79	2.2 – 11.7	—	3.22	0	11.57
BF-MW-21R	01/12/05	14.57	4.8 – 14.8	—	3.55	0	11.02
BF-MW-22	01/12/05	14.60	2.4 – 11.9	—	3.20	0	11.40
BF-MW-23	01/12/05	14.74	2.7 – 12.2	—	3.19	0	11.55
BF-MW-25	01/12/05	13.60	3.6 – 13.1	—	4.28	0	9.32
BF-MW-27	01/12/05	14.90	2.5 – 12.0	—	3.27	0	11.63
BF-MW-28	01/12/05	15.49	2.0 – 11.5	—	4.21	0	11.28
BF-MW-29	01/12/05	14.49	2.0 – 11.5	—	2.78	0	11.71
BF-MW-30	01/12/05	14.19	1.9 – 11.4	—	2.90	0	11.29
BF-MW-31	01/12/05	14.46	1.5 – 11.0	—	3.39	0	11.07
BF-MW-32	01/12/05	15.74	1.4 – 11.2	—	5.02	0	10.72
BF-MW-33	01/12/05	13.95	1.6 – 11.4	NM	NM	NM	NM
BF-MW-34	01/12/05	14.87	3.1 – 13.1	—	4.95	0	9.92
BF-MW-35	01/12/05	14.94	2.4 – 12.4	—	3.76	0	11.18
BF-MW-36	01/12/05	15.16	2.6 – 12.6	—	5.69	0	9.47
BF-MW-37	01/12/05	16.07	2.3 – 12.3		4.87	0	11.20
BF-MW-E1	01/12/05	14.00	4.6 – 14.6		4.09	0	9.91
BF-MW-E2	01/12/05	13.76	3.94 – 13.94	—	4.28	0	9.48
BF-MW-E3	01/12/05	13.99	4.4 – 14.4	—	4.72	0	9.27
BF-MW-E4	01/12/05	13.88	4.6 – 14.6	—	5.18	0	8.70
BF-MW-E5	01/12/05	14.00	4.8 – 14.8	sheen	4.90	sheen	9.10
BF-MW-E6	01/12/05	13.76	3.7 – 13.7	—	3.99	0	9.77

NOTES:
[a] Corrected groundwater elevation based on a product density of 880 kg/m^3.
AMSL Above mean sea level.
BGS Below ground surface.
BTOC Below top of casing.
NM Not measured.

Table 2a. Groundwater Analytical Results (Volatile Organic Compounds)

Sample Location	Sample ID	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	Total BTEX (µg/L)
Corrective Action Plan–Part B Investigation (Release #1) – 2000							
BF-MW-19	BF1922	12/02/00	1 U	1 U	1 U	3 U	ND
BF-MW-20	BF2022	12/03/00	3.1 =	1 U	2.1 =	7.3 =	12.5
BF-MW-21	BF2122	12/02/00	**251 =**	1.3 =	17.4 =	734 =	1,003.7
BF-MW-22	BF2222	12/02/00	**174 =**	5.7 =	128 =	662 =	969.7
BF-MW-32	BF3222	12/01/00	**109 J**	0.65 J	1.1 =	115 =	225.75
BF-MW-33	BF3322	12/01/00	1 =	1 U	1 U	3 U	1
BF-MW-34	BF3422	12/01/00	1 U	1 U	1 U	0.36 J	0.36
First Semiannual Sampling Event (Release #1) – July 2002							
BF-MW-19	BF1932	07/11/02	1 U	1 U	1 U	3 U	ND
BF-MW-20	BF2032	07/11/02	2.5 =	6 =	32.1 =	136 =	176.6
BF-MW-21R	BF2132	07/11/02	**178 =**	1.2 =	11.6 =	356 =	546.8
BF-MW-22	BF2232	07/11/02	45 =	2.5 =	207 =	911 =	1,165.5
BF-MW-32	BF3232	07/11/02	1.7 =	1 U	20.7 =	103 =	125.4
BF-MW-33	BF3332	07/11/02	0.99 J	1 U	1 U	3 U	0.99
BF-MW-34	BF3432	07/11/02	1 U	1 U	1 U	3 U	ND
Second Semiannual Sampling Event (Release #1) – January 2003							
BF-MW-19	BF1942	01/24/03	1 U	1 U	1 U	1 U	ND
BF-MW-20	BF2042	01/24/03	3.6 =	1 U	20.4 =	130 =	154
BF-MW-21R	BF2142	01/24/03	**183 =**	1.2 =	9.9 =	296 =	490
BF-MW-22	BF2242	01/24/03	47 =	1 J	105 =	328 =	481
BF-MW-32	BF3242	01/24/03	1 U	1 U	1 U	1 U	ND
BF-MW-33	BF3342	01/24/03	1.8 =	0.56 J	1 U	1 U	2.36
BF-MW-34	BF3442	01/24/03	1 U	1 U	1 U	1 U	ND
In-Stream Water Quality Standards (Georgia Rule 391-3-6)			71.28	200,000	28,718	NRC	NRC
Alternate Concentration Limits			634	—	—	—	—

NOTES:
Bold values exceed In-Stream Water Quality Standards.
BTEX Benzene, toluene, ethylbenzene, and xylenes.
ND Not detected.
NRC No regulatory criteria.

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

Table 2a. Groundwater Analytical Results (Volatile Organic Compounds) (continued)

Sample Location	Sample ID	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	Total BTEX (µg/L)
CAP–Part B Investigation (Release #2) – 2000							
BF-MW-04	BF0422	12/02/00	1 U	1 U	1 U	3 U	ND
BF-MW-25	BF2522	12/02/00	1 U	1 U	1 U	3 U	ND
BF-MW-26	BF2622	12/02/00	1 U	1 U	1 U	3 U	ND
BF-MW-27	BF2722	12/03/00	1 U	1 U	1 U	3 U	ND
BF-MW-E1	BFE122	12/01/00	1 U	1 U	0.99 J	0.45 J	1.44
BF-MW-E2	BFE222	12/02/00	1 U	0.3 J	1 U	3 U	0.3
BF-MW-E3	BFE322	12/02/00	1 U	0.48 J	1 U	0.3 J	0.78
BF-MW-E4	BFE422	12/02/00	0.29 J	0.27 J	0.28 J	0.36 J	1.2
BF-MW-E5	BFE522	12/02/00	3.6 =	1 =	17.2 =	19 =	40.8
BF-MW-E6	BFE622	12/01/00	1 U	1 U	1 U	3 U	ND
Third Semiannual Sampling Event (Release #2) – July 2004							
BF-MW-04	BF0452	07/16/04	1 U	1 U	1 U	1 U	ND
BF-MW-25	BF2552	07/16/04	1 U	1 U	1 U	1 U	ND
BF-MW-26	BF2652	07/16/04	1 U	1 U	1 U	1 U	ND
BF-MW-27	BF2752	07/16/04	1 U	1 U	1 U	1 U	ND
BF-MW-35	BF3552	07/17/04	1 U	1 U	1 U	1 U	ND
BF-MW-36	BF3652	07/17/04	1 U	1 U	1 U	1 U	ND
BF-MW-37	BF3752	07/17/04	1 U	1 U	1 U	1 U	ND
BF-MW-E1	BFE152	07/16/04	1 U	1 U	1 U	1 U	ND
BF-MW-E2	BFE252	07/16/04	1 U	1 U	1 U	1 U	ND
BF-MW-E3	BFE352	07/16/04	1 U	1 U	1 U	1 U	ND
BF-MW-E4	BFE452	07/16/04	1 U	1 U	1 U	1 U	ND
BF-MW-E5	BFE552	07/16/04	2 =	1 U	17.3 =	42.7 =	62.0
BF-MW-E6	BFE652	07/16/04	1 U	1 U	1 U	1 U	ND
In-Stream Water Quality Standards (Georgia Rule 391-3-6)			71.28	200,000	28,718	NRC	NRC
Alternate Concentration Limits			634	—	—	—	—

NOTES:

BTEX Benzene, toluene, ethylbenzene, and xylenes.
ND Not detected.
NRC No regulatory criteria.

Data Qualifiers

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

Table 2a. Groundwater Analytical Results (Volatile Organic Compounds) (continued)

Sample Location	Sample ID	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	Total BTEX (µg/L)
Fourth Semiannual Sampling Event (Release #2) – January 2005							
BF-MW-04	BF0462	01/12/05	1 U	1 U	1 U	1 U	ND
BF-MW-25	BF2562	01/12/05	1 U	1 U	1 U	1 U	ND
BF-MW-26	BF2662	01/13/05	1 U	1 U	1 U	1 U	ND
BF-MW-27	BF2762	01/13/05	1 U	1 U	1 U	1 U	ND
BF-MW-35	BF3562	01/14/05	1 U	1 U	1 U	1 U	ND
BF-MW-36	BF3662	01/14/05	1 U	1 U	1 U	1 U	ND
BF-MW-37	BF3762	01/14/05	1 U	1 U	1 U	1 U	ND
BF-MW-E1	BFE162	01/13/05	1 U	1 U	1 U	1 U	ND
BF-MW-E2	BFE262	01/13/05	1 U	1 U	1 U	1 U	ND
BF-MW-E3	BFE362	01/13/05	1 U	1 U	1 U	1 U	ND
BF-MW-E4	BFE462	01/13/05	1 U	1 U	1 U	0.9 J	0.9
BF-MW-E5	BFE562	01/13/05	1 U	0.43 J	10.4 =	34.9 =	45.73
BF-MW-E6	BFE662	01/13/05	1 U	0.47 J	1 U	1 U	ND
In-Stream Water Quality Standards (Georgia Rule 391-3-6)			71.28	200,000	28,718	NRC	NRC
Alternate Concentration Limits			634	—	—	—	—

NOTES:

BTEX Benzene, toluene, ethylbenzene, and xylenes.
ND Not detected.
NRC No regulatory criteria.

Data Qualifiers

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

Table 2b. Groundwater Analytical Results (Polynuclear Aromatic Compounds)

Sample Location	Sample ID	Date Sampled	Detected Compounds				
			2-Methylnaphthalene (µg/L)	2-Choronaphthalene (µg/L)	Acenaphthylene (µg/L)	Fluorene (µg/L)	Naphthalene (µg/L)
Corrective Action Plan–Part B Investigation (Release #1) – 2000							
BF-MW-19	BF1922	12/02/00	0.98 U	0.98 U	0.98 U	0.98 U	0.98 U
BF-MW-20	BF2022	12/03/00	0.99 U	0.99 U	0.99 U	0.99 U	7.8 =
BF-MW-21	BF2122	12/02/00	1 U	1 U	1 U	1 U	22 =
BF-MW-22	BF2222	12/02/00	19 U	19 U	19 U	19 U	528 =
BF-MW-32	BF3222	12/01/00	1.1 U	1.1 U	1.1 U	1.1 U	2 =
BF-MW-33	BF3322	12/01/00	1 U	1 U	1 U	1 U	1 U
BF-MW-34	BF3422	12/01/00	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U
First Semiannual Sampling Event (Release #1) – July 2002							
BF-MW-19	BF1932	07/11/02	0.98 U	0.98 U	0.98 U	0.98 U	1 =
BF-MW-20	BF2032	07/11/02	11.2 =	0.98 U	0.98 U	0.98 U	19.9 =
BF-MW-21R	BF2132	07/11/02	1.8 =	41.5 =	1.8 =	5.9 =	19 =
BF-MW-22	BF2232	07/11/02	133 =	9.8 U	9.8 U	9.8 U	168 =
BF-MW-32	BF3232	07/11/02	2.2 =	0.98 U	0.98 U	0.98 U	7.1 =
BF-MW-33	BF3332	07/11/02	0.98 U	0.98 U	0.98 U	0.98 U	0.98 U
BF-MW-34	BF3432	07/11/02	2.6 =	0.98 U	0.98 U	0.98 U	5.8 =
Second Semiannual Sampling Event (Release #1) – January 2003							
BF-MW-19	BF1942	01/24/03	0.98 U	0.98 U	0.98 U	0.98 U	0.98 U
BF-MW-20	BF2042	01/24/03	32 =	0.98 U	0.98 U	0.98 U	40.5 =
BF-MW-21R	BF2142	01/24/03	2.4 =	0.99 U	0.99 U	0.99 U	37.9 =
BF-MW-22	BF2242	01/24/03	42 =	0.99 U	0.99 U	0.99 U	110 =
BF-MW-32	BF3242	01/24/03	0.99 U	0.99 U	0.99 U	0.99 U	0.78 J
BF-MW-33	BF3342	01/24/03	0.98 U	0.98 U	0.98 U	0.98 U	0.22 J
BF-MW-34	BF3442	01/24/03	0.98 U	0.98 U	0.98 U	0.98 U	1.1 =
In-Stream Water Quality Standards (Georgia Rule 391-3-6)			NRC	NRC	NRC	14,000	NRC
Alternate Concentration Limits			—	—	—	—	820

NOTES:
NRC No regulatory criteria.

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

Table 2b. Groundwater Analytical Results (Polynuclear Aromatic Compounds) (continued)

Sample Location	Sample ID	Date Sampled	Detected Compounds				
			2-Methylnaphthalene (µg/L)	Acenaphthene (µg/L)	Fluorene (µg/L)	Naphthalene (µg/L)	Phenanthrene (µg/L)
CAP–Part B Investigation (Release #2) – 2000							
BF-MW-04	BF0422	12/2/00	0.99 U	0.99 U	0.99 U	0.99 U	0.99 U
BF-MW-25	BF2522	12/2/00	0.98 U	0.98 U	0.98 U	0.98 U	0.98 U
BF-MW-26	BF2622	12/2/00	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
BF-MW-27	BF2722	12/3/00	1 U	1 U	1 U	1 U	1 U
BF-MW-E1	BFE122	12/1/00	1 U	2.2 =	4 =	9.1 =	1 U
BF-MW-E2	BFE222	12/2/00	0.98 U	0.98 U	0.98 U	0.98 U	0.98 U
BF-MW-E3	BFE322	12/2/00	0.96 U	0.96 U	0.96 U	0.96 U	0.96 U
BF-MW-E4	BFE422	12/2/00	0.98 U	0.98 U	0.98 U	0.98 U	0.98 U
BF-MW-E5	BFE522	12/2/00	NA	0.55 J	1 =	16.6 =	0.73 J
BF-MW-E6	BFE622	12/1/00	1 U	1 U	1 U	1 U	1 U
Third Semiannual Sampling Event (Release #2) – July 2004							
BF-MW-04	BF0452	7/16/04	1 U	1 U	1 U	1 U	1 U
BF-MW-25	BF2552	7/16/04	0.6 J	0.99 U	0.99 U	0.56 J	0.99 U
BF-MW-26	BF2652	7/16/04	0.66 J	1.1 U	1.1 U	0.65 J	1.1 U
BF-MW-27	BF2752	7/16/04	0.96 U	0.96 U	0.96 U	0.96 U	0.96 U
BF-MW-35	BF3552	7/17/04	1 U	1 U	1 U	1 U	1 U
BF-MW-36	BF3652	7/17/04	0.98 U	0.98 U	0.98 U	0.98 U	0.98 U
BF-MW-37	BF3752	7/17/04	1 U	1 U	1 U	1 U	1 U
BF-MW-E1	BFE152	7/16/04	1 U	2.8 =	5.7 =	1 U	5.8 =
BF-MW-E2	BFE252	7/16/04	1 U	1 U	1 U	1 U	1 U
BF-MW-E3	BFE352	7/16/04	1 U	1 U	1 U	1 U	1 U
BF-MW-E4	BFE452	7/16/04	0.64 J	0.97 U	0.97 U	0.49 J	0.97 U
BF-MW-E5	BFE552	7/16/04	8.4 =	1.6 =	2.6 =	17.3 =	0.57 J
BF-MW-E6	BFE652	7/16/04	1 U	1 U	1 U	1 U	1 U
In-Stream Water Quality Standards (Georgia Rule 391-3-6)			NRC	NRC	14,000	NRC	NRC
Alternate Concentration Limits			—	—	—	—	820

NOTES:
NRC No regulatory criteria.

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

Table 2b. Groundwater Analytical Results (Polynuclear Aromatic Compounds) (continued)

Sample Location	Sample ID	Date Sampled	Detected Compounds					
			2-Methylnaphthalene (µg/L)	Acenaphthene (µg/L)	Fluorene (µg/L)	Naphthalene (µg/L)	Phenanthrene (µg/L)	Pyrene (µg/L)
Fourth Semiannual Sampling Event (Release #2) – January 2005								
BF-MW-04	BF0462	01/12/05	1 U	1 U	1 U	1 U	1 U	1 U
BF-MW-25	BF2562	01/12/05	1 U	1 U	1 U	1 U	1 U	1 U
BF-MW-26	BF2662	01/13/05	1 U	1 U	1 U	1 U	1 U	1 U
BF-MW-27	BF2762	01/13/05	1 U	1 U	1 U	1 U	1 U	1 U
BF-MW-35	BF3562	01/14/05	1 U	1 U	1 U	1 U	1 U	1 U
BF-MW-36	BF3662	01/14/05	1 U	1 U	1 U	1 U	1 U	1 U
BF-MW-37	BF3762	01/14/05	1 U	1 U	1 U	1 U	1 U	1 U
BF-MW-E1	BFE162	01/13/05	1 U	1.6 =	3.1 =	1 U	1.2 =	1 U
BF-MW-E2	BFE262	01/13/05	0.99 U	0.99 U	0.99 U	0.99 U	0.99 U	0.99 U
BF-MW-E3	BFE362	01/13/05	1.4 =	1 U	1 U	0.31 J	1 U	1 U
BF-MW-E4	BFE462	01/13/05	1.5 J	1 U	1 U	0.61 J	1 U	1 U
BF-MW-E5	BFE562	01/13/05	43.2 =	5.4 =	10.3 =	32.9 =	10.7 =	2.4 =
BF-MW-E6	BFE662	01/13/05	1 U	1 U	1 U	1 U	1 U	1 U
In-Stream Water Quality Standards (Georgia Rule 391-3-6)			NRC	NRC	14,000	NRC	NRC	11,000
Alternate Concentration Limits			—	—	—	—	820	—

NOTES:
NRC No regulatory criteria.

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

Table 3. Well Construction Details

Boring/Well Number	Date Installed	Boring Depth (ft BGS)	Screened Interval (ft BGS)	Type of Completion	Coordinates (NAD83)		Elevation (NAVD88)	
					Northing	Easting	Ground Surface	Top of Casing
Additional Well Installation – June 2002								
BF-MW-21R	06/21/02	15.0	4.8 – 14.8	2-in. PVC	739331.22	973250.78	14.7	14.57
Additional Well Installation – June 2004								
BR-MW-35	06/22/04	13.0	2.4 – 12.4	2-in. PVC	739834.57	973604.28	15.14	14.94
BR-MW-36	06/23/04	13.0	2.6 – 12.6	2-in. PVC	739725.51	973679.39	15.45	15.16
BR-MW-37	06/23/04	13.0	2.3 – 12.3	2-in. PVC	739657.72	973622.11	16.10	16.07

NOTES:
BGS Below ground surface.
NAD North American Datum.
PVC Polyvinyl chloride.

Table 4a. Free Product Removal Activities at BF-MW-E5

Well Number	Date	Depth of Screened Interval (ft BTOC)	Depth to Free Product (ft BTOC)	Depth to Water (ft BTOC)	Product Thickness (ft)	Description
BF-MW-E5	06/18/04	4.7 – 14.7	4.51	7.65	3.14	40 gal of water/product mixture pumped from well. An absorbent sock was placed in the well upon completion of pumping.
BF-MW-E5	07/16/04	4.7 – 14.7	4.48	5.71	1.23	2 gal of water/product mixture pumped from well prior to sampling. Absorbent socks were not placed in the well because the free product was removed during well purging.
BF-MW-E5	08/23/04	4.7 – 14.7	4.57	**4.64**	0.07	40 gal of water/product mixture pumped from well. Absorbent socks were not placed in the well because the free product was removed during pumping.
BF-MW-E5	09/20/04	4.7 – 14.7	—	**4.09**	0	No pumping of the well was conducted. Absorbent socks were not placed in the well because free product was not present.
BF-MW-E5	10/18/04	4.7 – 14.7	—	**4.07**	0	50 gal of water/product mixture pumped from well. Absorbent socks were not placed in the well because free product was not present.
BF-MW-E5	11/19/04	4.7 – 14.7	sheen	5.08	sheen	No pumping of the well was conducted. Absorbent socks were not placed in the well because only a sheen of free product was present.
BF-MW-E5	12/16/04	4.7 – 14.7	sheen	5.11	sheen	40 gal of water/product mixture pumped from well. Absorbent socks were not placed in the well because only a sheen of free product was present.
BF-MW-E5	01/13/05	4.7 – 14.7	—	4.81	0	1 gal of water/product mixture pumped from well prior to sampling. Absorbent socks were not placed in the well because free product was not present.
BF-MW-E5	02/16/05	4.7 – 14.7	4.54	**4.55**	0.01	40 gal of water/product mixture pumped from well. Absorbent socks were not placed in the well because free product was removed during pumping.
BF-MW-E5	03/16/05	4.7 – 14.7	sheen	**3.92**	sheen	No pumping of the well was conducted. Absorbent socks were not placed in the well because only a sheen of free product was present.
BF-MW-E5	04/28/05	4.7 – 14.7	4.06	**4.13**	0.07	~35 gal of water/product mixture pumped from well. Absorbent socks were not placed in the well because free product was removed during pumping.
BF-MW-E5	05/16/05	4.7 – 14.7	—	**3.95**	0	No pumping of the well was conducted. Absorbent socks were not placed in the well because free product was not present.

NOTES:
Bold indicates the water table is above the screened interval.
BTOC Below top of casing.

Table 4a. Free Product Removal Activities at BF-MW-E5 (continued)

Well Number	Date	Depth of Screened Interval (ft BTOC)	Depth to Free Product (ft BTOC)	Depth to Water (ft BTOC)	Product Thickness (ft)	Description
BF-MW-E5	06/16/05	4.7 – 14.7	3.68	**3.70**	0.02	45 gal of water/product mixture pumped from well. Absorbent socks were not placed in the well because free product was removed during pumping.
BF-MW-E5	07/19/05	4.7 – 14.7	—	**4.09**	0	No pumping of the well was conducted. Absorbent socks were not placed in the well because free product was not present.
BF-MW-E5	Aug. 2005	4.7 – 14.7	—			No free product pumping or measurements were conducted due to activities taking place at the site.
BF-MW-E5	09/20/05	4.7 – 14.7	—	4.98	0	No pumping of the well was conducted. Absorbent socks were not placed in the well because free product was not present.
BF-MW-E5	10/13/05	4.7 – 14.7	—	3.71	0	30 gal of water/product mixture pumped from well. Absorbent socks were not placed in the well because free product was removed during pumping.
BF-MW-E5	11/17/05	4.7 – 14.7	--	5.22	0	No pumping of the well was conducted. Absorbent socks were not placed in the well because free product was not present.
BF-MW-E5	01/14/06	4.7 – 14.7	--	**4.27**	0	40 gal of water/product mixture pumped from well. Absorbent socks were not placed in the well because free product was not present.
BF-MW-E5	02/15/06	4.7 – 14.7	--	**3.71**	0	No pumping of the well was conducted. Absorbent socks were not placed in the well because free product was not present.
BF-MW-E5	March 2006	4.7 – 14.7				No field activities were conducted at Fort Stewart/Hunter in March 2006, thus no pumping of the well was conducted.
BF-MW-E5	04/20/06	4.7 – 14.7	--	**4.30**	0	40 gal of water/product mixture pumped from well. Absorbent socks were not placed in the well because free product was not present.
BF-MW-E5	May 2006	4.7 – 14.7				No field activities were conducted at Fort Stewart/Hunter in May 2006, thus no pumping of the well was conducted.
BF-MW-E5	06/20/06	4.7 – 14.7	4.91	4.93	0.02	No pumping of the well was conducted. Absorbent socks were not placed in the well because free product will be addressed during the next pumping event.
BF-MW-E5	07/19/06	4.7 – 14.7	5.34	5.36	0.02	65 gal of water/product mixture was pumped from well. Absorbent socks were not placed in the well because free product was removed during pumping.

NOTES:
Bold indicates the water table is above the screened interval.
BTOC Below top of casing.

Table 4a. Free Product Removal Activities at BF-MW-E5 (continued)

Well Number	Date	Depth of Screened Interval (ft BTOC)	Depth to Free Product (ft BTOC)	Depth to Water (ft BTOC)	Product Thickness (ft)	Description
BF-MW-E5	Aug 2006	4.7 – 14.7				No field activities were conducted at Fort Stewart/Hunter in August 2006, thus no pumping of the well was conducted.
BF-MW-E5	Sept 2006	4.7 – 14.7				No field activities were conducted at Fort Stewart/Hunter in September 2006, thus no pumping of the well was conducted.
BF-MW-E5	10/20/06	4.7 – 14.7	--	5.57	0	40 gal of water/product mixture pumped from well. Absorbent socks were not placed in the well because free product was not present.
BF-MW-E5	11/14/06	4.7 – 14.7	5.6	8.17	2.57	50 gal of water/product mixture pumped from well. Two absorbent socks were placed in the well.
BF-MW-E5	12/18/06	4.7 – 14.7	5.27	9.59	4.32	Both absorbent socks were saturated. Two new absorbent socks were placed in the well.

NOTES:
Bold indicates the water table is above the screened interval.
BTOC Below top of casing.

Table 4b. Free Product Removal Activities for Sumps

August 2006 Measurements							
Date	**Position**	**Free Product**	**Water**	**Fuel**	**ft**	**cft Fuel**	**Gallons**
8/2/06 8:00	1	19.5	10	9.5	0.79	2.49	18.58
	2	19	18	1	0.08	0.26	1.96
	3	27.5	26.5	1	0.08	0.26	1.96
	4	5.5	0	5.5	0.46	1.44	10.76
							33.25
8/2/06 11:30	1	13.5	6	7.5	0.63	1.96	14.67
	2	17.5	17.5	0	0.00	0.00	0.00
	3	26	26	0	0.00	0.00	0.00
	4	4.5	0	4.5	0.38	1.18	8.80
							23.47
8/2/06 15:00	1	19	10	9	0.75	2.36	17.60
	2	18	18	0	0.00	0.00	0.00
	3	27	26.5	0.5	0.04	0.13	0.98
	4	5.5	0	5.5	0.46	1.44	10.76
							29.34
8/3/2006 8:00	1	20	10	10	0.83	2.62	19.56
	2	18.5	17.5	1	0.08	0.26	1.96
	3	27	26	1	0.08	0.26	1.96
	4	5.5	0	5.5	0.46	1.44	10.76
							34.22
8/3/2006 11:30	1	17	7	10	0.83	2.62	19.56
	2	17	17	0	0.00	0.00	0.00
	3	26	26	0	0.00	0.00	0.00
	4	4.5	0	4.5	0.38	1.18	8.80
							28.36
8/3/2006 15:00	1	18	9.5	8.5	0.71	2.23	16.62
	2	18	18	0	0.00	0.00	0.00
	3	26.5	26	0.5	0.04	0.13	0.98
	4	5	0	5	0.42	1.31	9.78
							27.38
8/4/2006 8:00	1	19.5	9.5	10	0.83	2.62	19.56
	2	18.5	17.5	1	0.08	0.26	1.96
	3	27	26	1	0.08	0.26	1.96
	4	5.5	0	5.5	0.46	1.44	10.76
							34.22

Table 4b. Free Product Removal Activities for Sumps (continued)

August 2006 Measurements							
Date	**Position**	**Free Product**	**Water**	**Fuel**	**ft**	**cft Fuel**	**Gallons**
8/4/2006 11:30	1	14	7	7	0.58	1.83	13.69
	2	17.5	17.5	0	0.00	0.00	0.00
	3	25	25	0	0.00	0.00	0.00
	4	4.5	0	4.5	0.38	1.18	8.80
							22.49
8/4/2006 11:30	1	19	10	9	0.75	2.36	17.60
	2	18	17.5	0.5	0.04	0.13	0.98
	3	26	25.5	0.5	0.04	0.13	0.98
	4	5	0	5	0.42	1.31	9.78
							29.34
8/7/2006 8:00	1	20	10	10	0.83	2.62	19.56
	2	16.5	16	0.5	0.04	0.13	0.98
	3	25.5	25	0.5	0.04	0.13	0.98
	4	6	0	6	0.50	1.57	11.73
							33.25
8/7/2006 11:30	1	20.5	10	10.5	0.88	2.75	20.53
	2	16.5	16	0.5	0.04	0.13	0.98
	3	25.5	25	0.5	0.04	0.13	0.98
	4	6	0	6	0.50	1.57	11.73
							34.22
8/7/2006 11:30	1	12.5	6	6.5	0.54	1.70	12.71
	2	16	15.5	0.5	0.04	0.13	0.98
	3	26	26	0	0.00	0.00	0.00
	4	4	0	4	0.33	1.05	7.82
							21.51
8/8/2006 8:00	1	20	10	10	0.83	2.62	19.56
	2	17	16.5	0.5	0.04	0.13	0.98
	3	25	24.5	0.5	0.04	0.13	0.98
	4	5.5	0	5.5	0.46	1.44	10.76
							32.27
8/8/2006 11:30	1	20	9.5	10.5	0.88	2.75	20.53
	2	17	16.5	0.5	0.04	0.13	0.98
	3	25.5	25	0.5	0.04	0.13	0.98
	4	6	0	6	0.50	1.57	11.73
							34.22
8/8/2006 3:00	1	8	5	3	0.25	0.79	5.87
	2	15	15	0	0.00	0.00	0.00
	3	25	25	0	0.00	0.00	0.00
	4	3.5	0	3.5	0.29	0.92	6.84
							12.71

Table 4b. Free Product Removal Activities for Sumps (continued)

August 2006 Measurements							
Date	**Position**	**Free Product**	**Water**	**Fuel**	**ft**	**cft Fuel**	**Gallons**
8/9/2006 8:00	1	20.5	10.5	10	0.83	2.62	19.56
	2	17.5	17	0.5	0.04	0.13	0.98
	3	24	23.5	0.5	0.04	0.13	0.98
	4	5.5	0.5	5	0.42	1.31	9.78
							31.29
8/9/2006 11:30	1	20.5	10.5	10	0.83	2.62	19.56
	2	17.5	17	0.5	0.04	0.13	0.98
	3	24	23.5	0.5	0.04	0.13	0.98
	4	6	1	5	0.42	1.31	9.78
							31.29
8/9/2006 3:00	1	10	9.5	0.5	0.04	0.13	0.98
	2	15	15	0	0.00	0.00	0.00
	3	22	22	0	0.00	0.00	0.00
	4	4	0	4	0.33	1.05	7.82
							8.80
8/10/2006 8:00	1	19	10	9	0.75	2.36	17.60
	2	17.5	17	0.5	0.04	0.13	0.98
	3	25	24.5	0.5	0.04	0.13	0.98
	4	6	1	5	0.42	1.31	9.78
							29.34
8/10/2006 11:30	1	19	9	10	0.83	2.62	19.56
	2	17.5	17	0.5	0.04	0.13	0.98
	3	25	24.5	0.5	0.04	0.13	0.98
	4	6	1	5	0.42	1.31	9.78
							31.29
8/10/2006 3:00	1	9	4.5	4.5	0.38	1.18	8.80
	2	14.5	14.5	0	0.00	0.00	0.00
	3	23	23	0	0.00	0.00	0.00
	4	4	0	4	0.33	1.05	7.82
							16.62
8/11/2006 8:00	1	19	10	9	0.75	2.36	17.60
	2	17.5	17	0.5	0.04	0.13	0.98
	3	25	24.5	0.5	0.04	0.13	0.98
	4	6	1.5	4.5	0.38	1.18	8.80
							28.36
8/11/2006 11:30	1	19	9.5	9.5	0.79	2.49	18.58
	2	18	17.5	0.5	0.04	0.13	0.98
	3	26	25.5	0.5	0.04	0.13	0.98
	4	6	1.5	4.5	0.38	1.18	8.80
							29.34

Table 4b. Free Product Removal Activities for Sumps (continued)

August 2006 Measurements							
Date	**Position**	**Free Product**	**Water**	**Fuel**	**ft**	**cft Fuel**	**Gallons**
8/11/2006 3:00	1	11	5.5	5.5	0.46	1.44	10.76
	2	17	17	0	0.00	0.00	0.00
	3	25	25	0	0.00	0.00	0.00
	4	4	0	4	0.33	1.05	7.82
							18.58
8/14/2006 8:00	1	21.5	11.5	10	0.83	2.62	19.56
	2	17.5	17	0.5	0.04	0.13	0.98
	3	24.5	24	0.5	0.04	0.13	0.98
	4	6	1	5	0.42	1.31	9.78
							31.29
8/14/2006 11:30	1	17.5	9	8.5	0.71	2.23	16.62
	2	16.5	16.5	0	0.00	0.00	0.00
	3	23.5	23.5	0	0.00	0.00	0.00
	4	4.5	0	4.5	0.38	1.18	8.80
							25.42
8/14/2006 3:00	1	20.5	10.5	10	0.83	2.62	19.56
	2	17	16.5	0.5	0.04	0.13	0.98
	3	26	25.5	0.5	0.04	0.13	0.98
	4	5.5	0.5	5	0.42	1.31	9.78
							31.29
8/28/2006 3:00	1	21	11	10	0.83	2.62	19.56
	2	16	15.75	0.25	0.02	0.07	0.49
	3	23.5	23	0.5	0.04	0.13	0.98
	4	5.25	0.25	5	0.42	1.31	9.78
							30.80

APPENDIX III

LABORATORY ANALYTICAL RESULTS

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No laboratory analysis performed during this reporting period.

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APPENDIX IV

SITE RANKING FORM

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THIRD ANNUAL REPORT

FREE PRODUCT MONITORING THROUGH DECEMBER 2006

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SITE RANKING FORM

Facility Name: **Former UST 117, Building 7002** **Ranked by:** **J. Longaker**

County: **Chatham** **Facility ID #:** **9-025113*2** **Date Ranked:** **3/12/07**

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

** CAP-Part B sample from Well MW-E5 (Release #2)*

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

** CAP-Part B sample from Well MW-E5 (Release #2)*

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._0_) = (_25_) x (C._10_) = (D._250_)**

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 + 1900		

** 2.57 ft measured in BF-MW-E5 (AST 7009) in Nov 2006*

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	= 1,500

** Sample BFE562 (January 2005)*

Fill in the blanks: **(E.2900) + (F._0_) = (G.2900)**

Facility Name: Former UST 117, Building 7002 **County:** Chatham **Facility ID #:** 9-025113*2

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.

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

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

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. 2,900) x (L. 50) = M. 145,000

(M. 145,000) + (D. 250) = N. 145,250

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. 145,250) x (P. 1) = (145,250) + (Q. 0)

= 145,250 (December 2006 – Third Annual Monitoring Report; associated with the plume in the vicinity of BF-MW-E5, AST 7009)

ENVIRONMENTAL SENSITIVITY SCORE

ADDITIONAL GEOLOGIC AND HYDROGEOLOGIC DATA

The following is presented to provide supplemental information to Item H of the Site Ranking Form and details relating to the geologic and hydrogeologic conditions at Hunter Army Airfield (HAAF), which support HAAF's determination that the water withdrawal points located at the airfield cannot be hydraulically connected to the surficial aquifer.

1.0 REGIONAL GEOLOGY

Southeast Georgia is located within the coastal plain physiographic province of the southeast United States (Clark and Zisa 1976). In this region, the thickness of the southeastward-dipping subsurface strata ranges from 0 ft at the fall line, located approximately 350 miles inland from the Atlantic coast, to approximately 4,200 ft below ground surface (BGS) at the coast. Herrick (1961) provides detailed lithologic descriptions of the stratigraphic units encountered during the installation of water and petroleum exploration wells in Chatham County. The well log of GGS Well 125, located on White Bluff Road, 700 ft west and 0.3 mile north of Buckhalter Road, Savannah, Georgia, provides one of the more complete lithologic descriptions of upper Eocene, Miocene, and Pliocene to Recent sedimentary strata in Chatham County.

The upper Eocene (Ocala Limestone) section of GGS Well 125 is approximately 225 ft thick and dominated by light gray to white fossiliferous limestone. The Miocene section is approximately 250 ft thick and consists of limestone, with a 160-ft-thick cap of dark green phosphatic clay. This clay is regionally extensive and is known to occupy the Coosawatchie Formation of the Hawthorn Group (Furlow 1969; Arora 1984; Huddlestun 1988). The interval from approximately 80 ft to the surface is Pliocene to Recent in age and composed primarily of sand interbedded with clay and silt. This section is occupied by the Satilla and Cypresshead Formations (Huddlestun 1988).

2.0 LOCAL GEOLOGY

HAAF is located within the barrier island sequence district of the coastal plain physiographic province of the southeast United States (Clark and Zisa 1976). The barrier island sequence district in Chatham and Bryan Counties is characterized by the existence of several marine terraces (step-like topographic surfaces that decrease in elevation toward the coast). These marine terraces, and their associated deposits, are the result of sea-level fluctuations that occurred during the Pleistocene epoch. The surficial (Quaternary) deposits in Chatham and Bryan Counties, in decreasing elevation and age, are part of the Okefenokee, Wicomico, Penholoway, Pamlico, and Silver Bluff Terrace Complexes (Wilkes et al. 1974; GA DNR 1976; Huddlestun 1988).

HAAF, as well as most of Chatham County, is underlain by the Pleistocene Pamlico Terrace. The Pleistocene Satilla Formation (formerly known as the Pamlico Formation) consists of deposits of the Pamlico Terrace Complex and other terrace complexes in the region (Huddlestun 1988). The Satilla Formation is a lithologically heterogeneous unit that consists of variably bedded to nonbedded sand and variably bedded silty to sandy clay. During the Pleistocene epoch, these sand and clay deposits were formed in offshore and inner continental shelf, barrier island, and marsh/lagoonal-type environments (Huddlestun 1988). According to the *Geologic Map of Georgia* (GA DNR 1976), clay beds of marsh origin, which were deposited on the northwestern side of the former Pamlico Barrier Island Complex, exist in the western quarter of HAAF. Very fine- to coarse-grained sand deposits of barrier island origin are more common throughout the remaining areas of HAAF.

Based on the coring and sampling of unconsolidated strata at HAAF during the Corrective Action Plan–Part A investigations, it was concluded that all former underground storage tanks (USTs) were buried within the Satilla Formation, which is overlain by various soil types. Soil groups at HAAF include the Chipley, Leon, Ellabelle, Kershaw, Pelham, Albany, Wahee, and Ogeechee (Wilkes et al. 1974).

3.0 REGIONAL AND LOCAL HYDROGEOLOGY

The hydrogeology in the vicinity of HAAF is mostly influenced by two aquifer systems. These are referred to as the Principal Artesian (Floridan) Aquifer and the surficial aquifer (Miller 1990). 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, approximately 800 ft in total thickness, is composed primarily of Tertiary-age limestone, including the Bug Island Formation, Ocala Group, and Suwannee Limestone. Groundwater from the Floridan is used primarily for drinking water (Arora 1984). According to Miller (1990), one of the largest cones of depression produced in the Upper Floridan Aquifer exists directly beneath Savannah, Georgia. Net water-level decline in the Floridan system between the predevelopment period and 1980 exceeded 80 ft beneath Savannah. In addition, according to 1980 estimates, more than 500 million gal of water per day were withdrawn from the Floridan for public and industrial use in southeast Georgia, more than in any other region.

The confining layer for the Principal Artesian (Floridan) Aquifer is the phosphatic clay of the Hawthorn Group. There are minor occurrences of aquifer material within the Hawthorn Group; however, they have limited use (Miller 1990). The surficial aquifer overlies the Hawthorn confining unit.

The surficial aquifer consists of widely varying amounts of sand and clay, ranging from 55 to 150 ft in thickness, and is composed primarily of the Satilla and Cypresshead Formations in the Savannah vicinity (Arora 1984). This aquifer is primarily used for domestic lawn and agricultural irrigation. The top of the water table ranges from approximately 2 to 10 ft BGS (Miller 1990). Groundwater in the surficial aquifer system is under unconfined, or water table, conditions. Locally, however, thin clay beds create confined or semiconfined conditions, as is the case at HAAF where thin, surficial clay beds are present in the western quadrant (GA DNR 1976).

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 HAAF.

4.0 REFERENCES

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

Clark, W.Z., Jr. and A.C. Zisa 1976. *Physiographic Map of Georgia*, Department of Natural Resources, Environmental Protection Division, Georgia Geologic Survey (reprinted 1988).

Furlow, J.W. 1969. *Stratigraphy and Economic Geology of the Eastern Chatham County Phosphate Deposit, Department of Mines and Mining*, Division of Conservation, Georgia Geologic Survey, Bulletin 82.

GA DNR (Georgia Department of Natural Resources) 1976. *Geologic Map of Georgia*, Department of Natural Resources, Environmental Protection Division, Georgia Geologic Survey (reprinted 1997).

Herrick, S.M. 1961. *Well Logs of the Coastal Plain of Georgia*, Department of Natural Resources, Environmental Protection Division, Georgia Geologic Survey.

Huddlestun, P.F. 1988. *A Revision of the Lithostratigraphic Units of the Coastal Plain of Georgia, The Miocene through Holocene*, Department of Natural Resources, Environmental Protection Division, Georgia Geologic Survey, Bulletin 104.

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

Wilkes, R.L., J.H. Johnson, H.T. Stoner, and D.D. Bacon 1974. *Soil Survey of Bryan and Chatham Counties, Georgia*, U. S. Department of Agriculture Soil Conservation Service.

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APPENDIX V

REIMBURSEMENT APPLICATION

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Hunter Army Airfield is a federally owned facility and has funded the investigation for the former Underground Storage Tank (UST) 117 site, Facility ID #9-025113*2, using U. S. Department of Defense Environmental Restoration Account Funds. Application for Georgia UST Trust Fund reimbursement is not being pursued at this time.

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ATTACHMENT A

SUMMARY OF FATE AND TRANSPORT MODELING

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FATE AND TRANSPORT MODELING

The Seasonal Soil Compartment Model was used to simulate the vertical transport of contaminants from the source area down through the vadose zone to the shallow groundwater table. The Analytical Transient 1-, 2-, 3-Dimensional Model was used to model contaminant migration to a potential downgradient receptor, an underground storm drain located approximately 120 ft southwest of the site. Benzene and naphthalene were the only two constituents to exceed their respective In-Stream Water Quality Standards (IWQSs) or risk-based screening levels during the Corrective Action Plan (CAP)–Parts A and B investigations. A steady-state source for each constituent was assumed for conservatism, and the source was shut off after a steady-state condition had been achieved.

A.1 SUMMARY OF THE CORRECTIVE ACTION PLAN–PART B REPORT FATE AND TRANSPORT MODELING RESULTS FOR BENZENE

The fate and transport modeling that was conducted as part of the CAP–Part B Report (SAIC 2001) was based on the analytical data collected during the CAP–Parts A and B investigations. The assumption of a continuous source of contamination of infinite duration at the site was based on the maximum observed benzene concentration in groundwater at Release #1 (i.e., 553 µg/L in well BF-MW-22 in December 1999) during the CAP–Parts A and B investigations. The modeling was performed to develop alternate concentration limits (ACLs) for the site. Because benzene was the only volatile organic compound at the site that exceeded its IWQS, an ACL of 634 µg/L was developed for benzene based on a dilution attenuation factor (DAF) of 8.9.

No fate and transport modeling of benzene was preformed with respect to Release #2 because it did not exist during the CAP-Parts A and Part B investigations.

A.2 SUMMARY OF THE CORRECTIVE ACTION PLAN–PART B REPORT FATE AND TRANSPORT MODELING RESULTS FOR NAPHTHALENE

The fate and transport modeling that was conducted as part of the CAP–Part B Report (SAIC 2001) was based on the analytical data collected during the CAP–Parts A and B investigations. The assumption of a continuous source of contamination of infinite duration at the site was based on the maximum observed naphthalene concentration in groundwater at Release #1 (i.e., 528 µg/L in well BF-MW-22 in December 2000) during the CAP–Parts A and B investigations. The modeling was performed to develop ACLs for the site. Because naphthalene was the only polynuclear aromatic hydrocarbon at the site that exceeded its risk-based screening level, an ACL of 820 µg/L was developed for naphthalene based on a DAF of 126.3.

No fate and transport modeling of benzene was preformed with respect to Release #2 because it did not exist during the CAP-Parts A and Part B investigations.

A.3 CONCLUSIONS BASED ON FATE AND TRANSPORT MODELING RESULTS

The conclusions below are based on fate and transport modeling of analytical data collected during the CAP–Parts A and B investigations and assuming a steady-state source at the site. The fate and transport modeling results associated with Release #1 are applicable to Release #2 because of the similar proximity of the closest receptor and the concentrations for Release #1 are much higher than Release #2.

- Benzene concentrations in groundwater associated with Release #2 did not exceed the benzene ACL of 624 µg/L or the IWQS of 71.28 µg/L in July 2004 or January 2005, respectively.

- Naphthalene concentrations in groundwater associated with Release #2 did not exceed the naphthalene ACL of 820 µg/L in July 2004 or January 2005.

- Fate and transport modeling for Release #2 has not been performed due to the very low benzene and naphthalene concentrations.

A.4 REFERENCES

SAIC (Science Applications International Corporation) 2001. *Corrective Action Plan–Part B Report for Former Underground Storage Tank 117, Building 7002, Facility ID 9-025113*1, Bulk Fuel Facility (HAA-09), Hunter Army Airfield, Georgia,* July.

ATTACHMENT B

REFERENCES

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REFERENCES

Lewis, Lisa L. 2003. Letter from Thomas C. Fry (Fort Stewart Directorate of Public Works Environmental Branch), October 6.

SAIC (Science Applications International Corporation) 1999. *Soil Gas Survey Report for the Bulk Fuel Facility (HAA-09) at Hunter Army Airfield, Georgia*, November.

SAIC 2000. *Corrective Action Plan–Part A Report for Former Underground Storage Tank 117, Building 7002, Facility ID 9-025113*1, Bulk Fuel Facility (HAA-09), Hunter Army Airfield, Georgia,* June.

SAIC 2001. *Corrective Action Plan–Part B Report for Former Underground Storage Tank 117, Building 7002, Facility ID 9-025113*1, Bulk Fuel Facility (HAA-09), Hunter Army Airfield, Georgia,* July.

SAIC 2003. *First Annual Monitoring Only Report for Former Underground Storage Tank 117, Building 7002, Facility ID 9-025113*1, Bulk Fuel Facility (HAA-09), Hunter Army Airfield, Georgia,* July.

SAIC 2006. *Completion Report for Former UST 117, Bulk Fuel Facility (HAA-09), Facility ID #9-025113*2, Hunter Army Airfield, Georgia,* April.

Stevenson, Algeana 2006. Letter from William Logan (Georgia Environmental Protection Division, UST Management Program), May 16.

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ATTACHMENT C

CERTIFICATES OF ANALYSIS

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No laboratory analysis performed during this reporting period.

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ATTACHMENT D

SOIL BORING LOGS AND FREE PRODUCT MONITORING WELL CONSTRUCTION DIAGRAMS

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SOIL BORING LOGS

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4

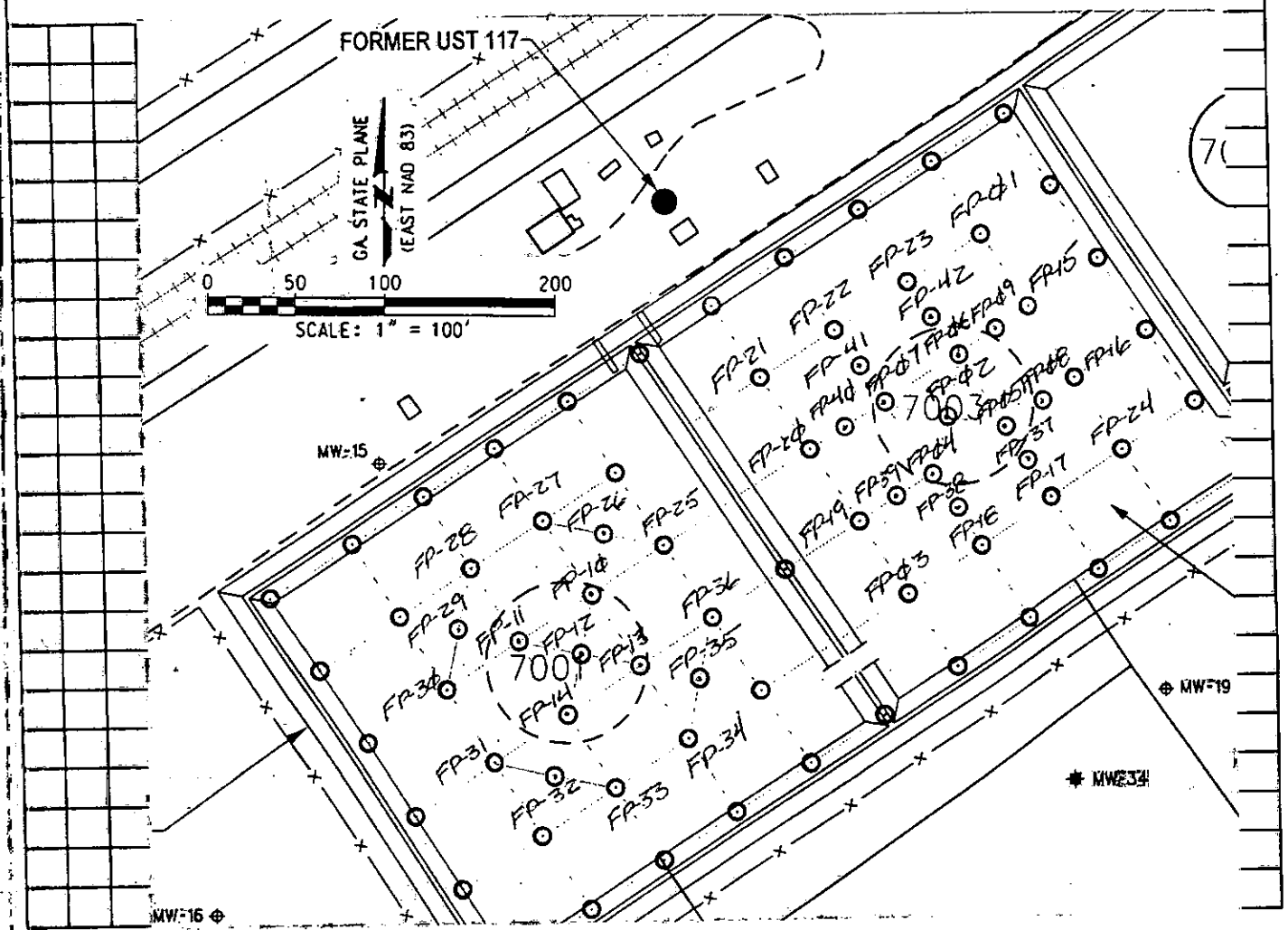
HTRW DRILLING LOG

	DISTRICT: Savannah	HOLE NUMBER FP-01
1. COMPANY NAME: SAIC	2. DRILL SUBCONTRACTOR: SAIC	SHEET 1 OF 2

3. PROJECT: Bulk Fuels Product Delineation	4. LOCATION: HAAF/Bulk Fuels Facility
5. NAME OF DRILLER: W. Parker/R. Ledbetter	6. MANUFACTURERS DESIGNATION OF DRILL: General 21Φ Hole Digger
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: General 21Φ Hole Digger with 2-in. diam. solid-stem auger.	8. HOLE LOCATION: Tank 7003 Site.
	9. SURFACE ELEVATION:
	10. DATE STARTED: 11/10/06 — 11. DATE COMPLETED: 11/12/06
12. OVERBURDEN THICKNESS: N/A	15. DEPTH GROUNDWATER ENCOUNTERED:
13. DEPTH DRILLED INTO ROCK: N/A	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED:
14. TOTAL DEPTH OF HOLE: 6.0 Ft	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY):

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

LOCATION SKETCH/COMMENTS — SCALE:



Hole Digger

HTRW DRILLING LOG

HOLE NUMBER FP-01

PROJECT: Bulk Fuels Product Del. INSPECTOR Mary H. Pan

SHEET 2 OF 2

5

ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	HEADSPACE SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	0	0-1.5 Poorly graded sand with clay (SP-SC) Trace gravel, loose moist, medium grained subangular yellowish brown				
	1					
	2	1.5-5.0 ~~Poorly graded sand~~ Clayey sand (SC) fine grained, subangular firm moist, gray ± 40% fines				
	3					
	4					
	5	TD = 5.0 BLS				
	6					
	7					
	8					
	9					
	10					

HTRW DRILLING LOG

DISTRICT: Savannah		HOLE NUMBER FP-07
1. COMPANY NAME: SAIC	2. DRILL SUBCONTRACTOR: SAIC	SHEET 1 OF 2
3. PROJECT: Bulk Fuels Product Delineation	4. LOCATION: HAAF / Bulk Fuels Facility	
5. NAME OF DRILLER: W. Parker/R. Ledbetter	6. MANUFACTURERS DESIGNATION OF DRILL: General 21Φ	Hole Digger
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: General 21Φ Hole Digger with 2-in. diam. solid-stem auger.	8. HOLE LOCATION: Tank 7003 Site.	
	9. SURFACE ELEVATION:	
	10. DATE STARTED: 11/10/06	11. DATE COMPLETED: 11/10/06
12. OVERBURDEN THICKNESS: N/A	15. DEPTH GROUNDWATER ENCOUNTERED:	
13. DEPTH DRILLED INTO ROCK: N/A	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED:	
14. TOTAL DEPTH OF HOLE: 5.0 Ft	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY):	

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

LOCATION SKETCH/COMMENTS — SCALE:

See page 4, this logbook, for location sketch.

HTRW DRILLING LOG

HOLE NUMBER FP-02

PROJECT: Bulk Fuels Product Del. | INSPECTOR Wayne H. Rue | SHEET 2 OF 2

ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	HEADSPACE SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	0	0.0 - 0.5 Poorly graded sand with clay (SP-SC) Trace gravel, fine grained, subangular loose, moist to dry 0.5 - 5.0 Clayey sand (SC) ≈ 35-45% fines subangular, firm moist, light brown				
	1					
	2					
	3					
	4					
	5					
	6	TD = 5.0 BLS				
	7					
	8					
	9					
	10					

WHR 11/10/06

HTRW DRILLING LOG

DISTRICT: ~~Mobile~~ Savanah

HOLE NUMBER: FP-03

SHEET 1 OF 2

1. COMPANY NAME: SAIC

2. DRILL SUBCONTRACTOR: SAIC

3. PROJECT: Bulk Fuels Product Delineation.

4. LOCATION: HAAF

5. NAME OF DRILLER: W. Parker / K. Ledbetter

6. MANUFACTURERS DESIGNATION OF DRILL: General 210

7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: General 210 Hole Digger with 2-in. diam. solid-stem auger.

8. HOLE LOCATION: Tank 7003 Site

9. SURFACE ELEVATION:

10. DATE STARTED: 11/11/06

11. DATE COMPLETED: 11/11/06

12. OVERBURDEN THICKNESS: N/A

13. DEPTH DRILLED INTO ROCK: N/A

14. TOTAL DEPTH OF HOLE: 5.0 Ft

15. DEPTH GROUNDWATER ENCOUNTERED: N/A

16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: Dry / 3 days

17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY):

18. GEOTECHNICAL SAMPLES: ~~DISTURBED~~ N/A ~~UNDISTURBED~~ N/A

19. TOTAL NUMBER OF CORE BOXES: N/A

20. SAMPLES FOR CHEMICAL ANALYSIS: VOC N/A; METALS N/A; OTHER (SPECIFY) N/A; OTHER (SPECIFY); OTHER (SPECIFY)

21. TOTAL CORE RECOVERY %

22. DISPOSITION OF HOLE: BACKFILLED; MONITORING WELL; OTHER (SPECIFY) Fuel Point

23. SIGNATURE OF INSPECTOR: Timothy Colley

LOCATION SKETCH/COMMENTS

SCALE:

See page 11, this logbook, for location sketch.

HTRW DRILLING LOG

HOLE NUMBER FP-03

PROJECT: Bulk Fuels Product Del. | INSPECTOR Timothy Coffey | SHEET 2 OF 2

15

ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	HEADSPACE SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	1	Yellowish-brown (10YR 5/8) silty sand; dry, rel. loose, F- to M-grnd.				Auger screwed into ground, stuck first attempt.
	2	Black (10YR 2/1) silty sand, massive/ uniform, sl. packed, "dirty", F-grnd.	N/A	N/A	N/A	
	3					
	4	Greenish-gray (5G 5/1) Sandy clay; moist to wet, sl. to med. plast., rel. soft, mass.				
	5	End of Boring		TD = 5 Ft		
	6					
	7					
	8					
	9					
	10					

HTRW DRILLING LOG

DISTRICT: Mobile Savannah

HOLE NUMBER: FP-04

1. COMPANY NAME: SAIC

2. DRILL SUBCONTRACTOR: SAIC

SHEET 1 OF 2

3. PROJECT: Bulk Fuels Product Delineation.

4. LOCATION: HAAF/Bulk Fuels Fac.

5. NAME OF DRILLER: W. Parker/K. Ledbetter

6. MANUFACTURERS DESIGNATION OF DRILL: General 210 Hole Digger

7. TYPES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: General 210 Hole Digger with 2-in. diam. solid-stem auger.

8. HOLE LOCATION: Tank 7003 Site

9. SURFACE ELEVATION:

10. DATE STARTED: 11/11/06

11. DATE COMPLETED: 11/11/06

12. OVERBURDEN THICKNESS: N/A

13. DEPTH DRILLED INTO ROCK: N/A

14. TOTAL DEPTH OF HOLE: 5.0 Ft

15. DEPTH GROUNDWATER ENCOUNTERED: N/A

16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: Dry/3 days

17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY):

18. GEOTECHNICAL SAMPLES: ~~DISTURBED~~ N/A | UNDISTURBED N/A

19. TOTAL NUMBER OF CORE BOXES: N/A

20. SAMPLES FOR CHEMICAL ANALYSIS: VOC N/A | METALS N/A | OTHER (SPECIFY) N/A | OTHER (SPECIFY) | OTHER (SPECIFY)

21. TOTAL CORE RECOVERY %

22. DISPOSITION OF HOLE: BACKFILLED | MONITORING WELL | OTHER (SPECIFY) Fuel Point

23. SIGNATURE OF INSPECTOR: Timothy Coffey

LOCATION SKETCH/COMMENTS

SCALE:

See Page 4, this logbook, for location sketch.

HTRW DRILLING LOG

HOLE NUMBER FP-04

PROJECT: Bulk Fuels Product Del. INSPECTOR Timothy Colley

SHEET 2 OF 2

ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	HEADSPACE SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	1	Very dark gray (10YR 3/1) silty sand: moist, sl. packed, F- to M-grnd.		N/A	N/A	
	2					
	3					
	4	Greenish-gray (10BG 5/1) sandy clay: moist, rel. soft, med. plast.; sand ≤ 20%.	PID reading at B/H collar = 953 ppm.			Very moist.
	5	Moisture content incr. ↓				
	6	End of Boring.		TD = 5 Ø Ft		
	7					
	8					
	9					
	10					

HTRW DRILLING LOG

DISTRICT: Mobile Savannah

HOLE NUMBER: FP-05

1. COMPANY NAME: SAIC

2. DRILL SUBCONTRACTOR: SAIC

SHEET 1 OF 2

3. PROJECT: Bulk Fuels Product Delineation.

4. LOCATION: HAAF / Bulk Fuels Fac.

5. NAME OF DRILLER: W. Parker / K. Ledbetter

6. MANUFACTURERS DESIGNATION OF DRILL: General 210 Hole Digger

7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: General 210 Hole Digger with 2-in. diam. solid-stem auger.

8. HOLE LOCATION: Tank 7003 Site

9. SURFACE ELEVATION:

10. DATE STARTED: 11/11/06

11. DATE COMPLETED: 11/11/06

12. OVERBURDEN THICKNESS: N/A

15. DEPTH GROUNDWATER ENCOUNTERED: N/A

13. DEPTH DRILLED INTO ROCK: N/A

16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: Dry / 3 days.

14. TOTAL DEPTH OF HOLE: 5.0 Ft

17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY):

18. GEOTECHNICAL SAMPLES	DISTURBED: N/A	UNDISTURBED: N/A	19. TOTAL NUMBER OF CORE BOXES: N/A			
20. SAMPLES FOR CHEMICAL ANALYSIS	VOC: N/A	METALS: N/A	OTHER (SPECIFY): N/A	OTHER (SPECIFY):	OTHER (SPECIFY):	21. TOTAL CORE RECOVERY %
22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY): Fuel Plant	23. SIGNATURE OF INSPECTOR: [signature]		

LOCATION SKETCH/COMMENTS

SCALE:

See page 4, this logbook, for location sketch.

HTRW DRILLING LOG

HOLE NUMBER FP-05

PROJECT: Bulk Fuels Product Del.

INSPECTOR Timothy Coffey

SHEET 2 OF 2

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ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	HEADSPACE SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	1	Very dark gray (10YR 3/1) silty sand: dry rel. loose, F- to M-grnd.				
	2					
	3	Dark yellowish-brown (10YR 4/6) silty sand: moist, sl. packed, F- to M-grnd.	PID reading at B/H collar = 427 ppm.	N/A	N/A	
	4					
	5					
	6	End of Boring.		TD = 5.0 Ft.		
	7					
	8					
	9					
	10					

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HTRW DRILLING LOG

DISTRICT: Savannah

HOLE NUMBER: FP-06

1. COMPANY NAME: SAIC

2. DRILL SUBCONTRACTOR: SAIC

SHEET 1 OF 2

3. PROJECT: Bulk Fuels Product Delineation

4. LOCATION: HAAF / Bulk Fuels Fac.

5. NAME OF DRILLER: W. Parker / K. Ledbetter

6. MANUFACTURERS DESIGNATION OF DRILL: General 210 Hole Digger

7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: General 210 Hole Digger, with 2-in. diam. solid-stem auger.

8. HOLE LOCATION: Tank 7003 Site

9. SURFACE ELEVATION:

10. DATE STARTED: 11/11/06

11. DATE COMPLETED: 11/11/06

12. OVERBURDEN THICKNESS: N/A

15. DEPTH GROUNDWATER ENCOUNTERED: N/A

13. DEPTH DRILLED INTO ROCK: N/A

16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: Dry / 3 days.

14. TOTAL DEPTH OF HOLE: 5.0 ft

17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY):

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

LOCATION SKETCH/COMMENTS

SCALE:

See page 4, this logbook, for location sketch.

HTRW DRILLING LOG

HOLE NUMBER FP-4C 30

PROJECT: Product Delineation. INSPECTOR Timothy Coffey SHEET 2 OF 2

ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	HEADSPACE SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	1	Black (10YR 2/1) silty sand: dry, rel. loose, massive.				
	2					
	3	Yellow-brown (10YR 5/8) sand: moist to wet, rel. loose, m-grnd.	N/A	N/A	N/A	Strong Fuel odor.
	4					
	5	Very dark gray (10YR 3/1) sandy clay: moist, sl. plastic.				
	6	End of Boring.		TD =	5.0	ft
	7					
	8					
	9					
	10					

HTRW DRILLING LOG

DISTRICT: Savannah

HOLE NUMBER: FP-Φ7

1. COMPANY NAME: SAIC

2. DRILL SUBCONTRACTOR: SAIC

SHEET 1 OF 2

3. PROJECT: Bulk Fuels Product Delineation

4. LOCATION: HAAF / Bulk Fuels Fac.

5. NAME OF DRILLER: W. Parker / R. Ledbetter

6. MANUFACTURERS DESIGNATION OF DRILL: General 21Φ Hole Digger

7. TYPES AND SIZES OF DRILLING AND SAMPLING EQUIPMENT: General 21Φ Hole Digger with 2-in. diam. Solid-stem auger.

8. HOLE LOCATION: Tank 7Φ03 Site,

9. SURFACE ELEVATION:

10. DATE STARTED: 11/11/Φ6

11. DATE COMPLETED: 11/11/Φ6

12. OVERBURDEN THICKNESS: N/A

15. DEPTH GROUNDWATER ENCOUNTERED: N/A

13. DEPTH DRILLED INTO ROCK: N/A

16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: Dry 3 days.

14. TOTAL DEPTH OF HOLE: 5.Φ ft

17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY):

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

LOCATION SKETCH/COMMENTS

SCALE:

See Page 41, this logbook, for location sketch.

HTRW DRILLING LOG

HOLE NUMBER FP-07

PROJECT: Bulk Fuels Product Del.

INSPECTOR Timothy Coffey

SHEET 2 OF 2

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ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	HEADSPACE SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	0	Very dark gray (10YR 3/1) silty sand; dry, rel. loose, F- to M-grnd, mnr organics.				Gravelly
	1					
	2	Moisture content increases with depth.		N/A	N/A	
	3		PID reading at B/H collar = 1300 ppm.			
	4					
	5	Greenish-gray (5G 5/1) sandy clay; moist to wet, med. plast.		TD = 5.0 Ft.		
		End of Boring				
	6					
	7					
	8					
	9					
	10					

HTRW DRILLING LOG

DISTRICT: Savannah

HOLE NUMBER: FP-08

1. COMPANY NAME: SAIC

2. DRILL SUBCONTRACTOR: SAIC

SHEET 1 OF 2

3. PROJECT: Bulk Fuels Product Delineation

4. LOCATION: HAAF / Bulk Fuels Fac.

5. NAME OF DRILLER: W. Parker / K. Ledbetter

6. MANUFACTURERS DESIGNATION OF DRILL: General 210 Hole Digger

7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: General 210 Hole Digger with 2-in. diam. solid-stem auger.

8. HOLE LOCATION: Tank 7003 Site.

9. SURFACE ELEVATION:

10. DATE STARTED: 11/11/06

11. DATE COMPLETED: 11/11/06

12. OVERBURDEN THICKNESS: N/A

15. DEPTH GROUNDWATER ENCOUNTERED: N/A

13. DEPTH DRILLED INTO ROCK: N/A

16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: Dry / 3 days.

14. TOTAL DEPTH OF HOLE: 5.0 Ft

17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY):

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

LOCATION SKETCH/COMMENTS

SCALE:

See page 41 this logbook for location sketch.

HTRW DRILLING LOG

HOLE NUMBER FP-08

PROJECT: Bulk Fuels Product Del. | INSPECTOR Timothy Coffey | SHEET 2 OF 2

ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	HEADSPACE SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	1	Very dark gray (10YR 3/1) silty sand: dry to moist, F-to M-grnd, mel. loose, gravelly.				Gravelly
		Black silty sand				
	2	Very dark gray sand (As Above)		N/A	N/A	
	3		PID reading at B/H collar = 1070 ppm.			
	4					Strong product odor.
	5	Green-gray (5G 5/1) clay: moist, med. plast				
		End of Boring.		TD = 5.0 Ft.		
	6					
	7					
	8					
	9					
	10					

HTRW DRILLING LOG

DISTRICT: Savannah		HOLE NUMBER FP-09
1. COMPANY NAME: SAIC	2. DRILL SUBCONTRACTOR: SAIC	SHEET 1 OF 2
3. PROJECT: Bulk Fuels Product Delineation.	4. LOCATION: HAAF / Bulk Fuels Fac.	
5. NAME OF DRILLER: W. Parker / K. Ledbetter	6. MANUFACTURERS DESIGNATION OF DRILL: General 210	Hole Digger
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: General 210 Hole Digger with 2-in. diam. solid-stem auger.	8. HOLE LOCATION: Tank 7003 Site.	
	9. SURFACE ELEVATION:	
	10. DATE STARTED: 11/11/06	11. DATE COMPLETED: 11/11/06
12. OVERBURDEN THICKNESS: N/A	15. DEPTH GROUNDWATER ENCOUNTERED: N/A	
13. DEPTH DRILLED INTO ROCK: N/A	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: Dry / 3days	
14. TOTAL DEPTH OF HOLE: 6.0 Ft	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY):	

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES: N/A				
20. SAMPLES FOR CHEMICAL ANALYSIS	VOC: N/A	METALS: N/A	OTHER (SPECIFY): N/A	OTHER (SPECIFY):	OTHER (SPECIFY):	21. TOTAL CORE RECOVERY %	
22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY): Foot Point	23. SIGNATURE OF INSPECTOR: [signature]			

LOCATION SKETCH/COMMENTS — SCALE:

See Page 4, this logbook, for location sketch.

HTRW DRILLING LOG

HOLE NUMBER FP-09

PROJECT: Bulk Foods Product Del. | INSPECTOR Timothy Coffey | SHEET 2 OF 2

ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	HEADSPACE SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	1	Very dark gray (10YR 3/1) silty sand: dry, rel. loose, F- to M-grnd.				gravelly
	2	Black (10YR 2/1) silty sand: moist, F-grnd, sl. packed, "dirty".		N/A	N/A	
	3		PID reading at B/H collar = 275 ppm			
	4					
	5	Very dark gray (10YR 3/1) sandy clay: moist, sl. plastic.				
		End of Boring.		TD =	5.0	Ft.
	6					
	7					
	8					
	9					
	10					

HTRW DRILLING LOG

1. COMPANY NAME: SAIC.	2. DRILL SUBCONTRACTOR: SAIC	DISTRICT: Savannah / HOLE NUMBER: FP-10 / SHEET 1 OF 2
3. PROJECT: Bulk Fuels Product Delineations.	4. LOCATION: HAAF / Bulk Fuels Fac.	
5. NAME OF DRILLER: W. Parker / K. Ledbetter	6. MANUFACTURERS DESIGNATION OF DRILL:	
7. TYPES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: General 2¼ Hole Digger with 2-in. diam. Solid-stem auger.	8. HOLE LOCATION: Tank 7001 Site.	
	9. SURFACE ELEVATION:	
	10. DATE STARTED: 11/11/06	11. DATE COMPLETED: 11/11/06
12. OVERBURDEN THICKNESS: N/A	15. DEPTH GROUNDWATER ENCOUNTERED: N/A	
13. DEPTH DRILLED INTO ROCK: N/A	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: Dry / 3 days.	
14. TOTAL DEPTH OF HOLE: 5.0 ft.	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY):	

18. GEOTECHNICAL SAMPLES	~~UNDISTURBED~~ N/A	~~UNDISTURBED~~ N/A	19. TOTAL NUMBER OF CORE BOXES: N/A				
SAMPLES FOR CHEMICAL ANALYSIS	VOC: N/A	METALS: N/A	OTHER (SPECIFY): N/A	OTHER (SPECIFY):	OTHER (SPECIFY):	21. TOTAL CORE RECOVERY %	
20. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY): Fuel Point	23. SIGNATURE OF INSPECTOR: [signature]			

LOCATION SKETCH/COMMENTS — SCALE:

See Page 4, this logbook, for location sketch.

HTRW DRILLING LOG

HOLE NUMBER FP-14 (50)

PROJECT: Bulk Fuels Product Del. | INSPECTOR Timothy Coffay | SHEET 2 OF 2

ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	HEADSPACE SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	0–1	Brownish-yellow (10YR 6/6) sand; dry, rel. loose, F- to mt-grnd.		↑	↑	
	1–2	Very dark gray (10YR 3/1) silty sand: dry to moist, loose, F-grnd.		↑	↑	Esp. loose sand (caving)
	2–3			N/A	N/A	
	3–4	Black (10YR 2/1) silty sand: moist to wet, sl. packed, F-grnd, "dirty".	PID reading at B/H Collar = 17 ppm.	↓	↓	
	4–5	Very dark gray clay to sandy clay.				
	5–6	End of Boring		TD =	5.0 ft	
	6–7					
	7–8					
	8–9					
	9–10					

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ITRW DRILLING LOG

DISTRICT: Savannah		HOLE NUMBER FP-11
1. COMPANY NAME: SAIC	2. DRILL SUBCONTRACTOR: SAIC	SHEET 1 OF 2
3. PROJECT: Bulk Fuels Product Delineation.	4. LOCATION: HAAF/Bulk Fuels Fac.	
5. NAME OF DRILLER: W. Parker/K. Ledbetter	6. MANUFACTURERS DESIGNATION OF DRILL: General 21¢	Hole Digger.
7. TYPES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: General 21¢ Hole Digger with 2-in. diam. & solid-stem auger.	8. HOLE LOCATION: Tank 7¢01 Site.	
	9. SURFACE ELEVATION:	
	10. DATE STARTED: 11/11/¢6	11. DATE COMPLETED: 11/11/¢6
12. OVERBURDEN THICKNESS: N/A	15. DEPTH GROUNDWATER ENCOUNTERED: N/A	
13. DEPTH DRILLED INTO ROCK: N/A	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: Dry / 3days	
14. TOTAL DEPTH OF HOLE: 5.¢ Ft	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY):	

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

LOCATION SKETCH/COMMENTS SCALE:

See page 4, this logbook, for location sketch.

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HTRW DRILLING LOG

HOLE NUMBER FP-11

PROJECT: Bulk Fuels Product Del. INSPECTOR Timothy Coffey SHEET 2 OF 2

ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	HEADSPACE SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	1	Brownish-yellow (10YR 6/6) sand: dry, rel. loose, F- to M-grnd, gravelly.				
	2			N/A	N/A	
	3		PID reading at B/H collar = 20 ppm			
	4	Black (10YR 2/1) silty sand: moist to wet, F-grnd, sl. packed, "dirty", massive/uniform				
	5					
	6	End of Boring.		TD = 5.0 Ft		
	7					
	8					
	9					
	10					

HTRW DRILLING LOG

1. COMPANY NAME: SAIC	DISTRICT: Savannah	HOLE NUMBER FP-12
	2. DRILL SUBCONTRACTOR: SAIC	SHEET 1 OF 2

3. PROJECT: Bulk Fuels Product Delineation.	4. LOCATION: HAAF / Bulk Fuels Fac.
5. NAME OF DRILLER: W. Parker / K. Ledbetter	6. MANUFACTURERS DESIGNATION OF DRILL: General 21Φ
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: General 21Φ Hole Digger with 2-in. diam. solid-stem auger.	8. HOLE LOCATION: Tank 70001 Site.
	9. SURFACE ELEVATION:
	10. DATE STARTED: 11/11/06 — 11. DATE COMPLETED: 11/11/06
12. OVERBURDEN THICKNESS: N/A	15. DEPTH GROUNDWATER ENCOUNTERED: N/A
13. DEPTH DRILLED INTO ROCK: N/A	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: Dry / 3 days.
14. TOTAL DEPTH OF HOLE: 5.0 Ft.	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY):

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

LOCATION SKETCH/COMMENTS — SCALE:

See page 4, this logbook, for location sketch.

Hole Digger

HTRW DRILLING LOG

HOLE NUMBER FP-12

PROJECT: Bulk Fuels Product Del. | INSPECTOR Timothy Coffey | SHEET 2 OF 2

ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	HEADSPACE SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	1	Brownish-yellow (10YR 6/6) sand: dry, F- to M-grnd, rel. loose, gravelly.				
	2	Yellow (10YR 7/8) sand: dry, mass/unif.		N/A	N/A	
	3	Black (10YR 2/1) silty sand: moist, to wet, F-grnd, sl. packed, "dirty".	PID reading at B/H collar = 92 ppm			
	4					
	5					
	6	End of Boring.		TD=	5.0	Ft.
	7					
	8					
	9					
	10					

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HTRW DRILLING LOG

DISTRICT: Savannah

HOLE NUMBER: FP-13

1. COMPANY NAME: SAIC

2. DRILL SUBCONTRACTOR: SAIC

SHEET 1 OF 2

3. PROJECT: Bulk Fuels Product Delineation

4. LOCATION: HAAF / Bulk Fuels Fac.

5. NAME OF DRILLER: W. Parker / K. Ledbetter

6. MANUFACTURERS DESIGNATION OF DRILL: General 21¢ Hole Digger

7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: General 21¢ Hole Digger with 2-in. diam. solid-stem auger.

8. HOLE LOCATION: Tank 7¢¢1 Site.

9. SURFACE ELEVATION:

10. DATE STARTED: 11/11/¢6

11. DATE COMPLETED: 11/11/¢6

12. OVERBURDEN THICKNESS: N/A

15. DEPTH GROUNDWATER ENCOUNTERED: N/A

13. DEPTH DRILLED INTO ROCK: N/A

16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: Dry / 3 days.

14. TOTAL DEPTH OF HOLE: 5.¢ Ft

17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY):

18. GEOTECHNICAL SAMPLES: DISTURBED N/A; UNDISTURBED N/A

19. TOTAL NUMBER OF CORE BOXES: N/A

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %
	N/A	N/A	N/A			

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
			Fuel Point	

LOCATION SKETCH/COMMENTS

SCALE:

See page 4, this logbook, for location sketch.

HTRW DRILLING LOG

HOLE NUMBER FP-13

PROJECT: Bulk Fuels Product Del. | INSPECTOR Timothy Coffey | SHEET 2 OF 2

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ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	HEADSPACE SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	1	Brownish-yellow (10YR 6/6) sand: dry, rel. loose, F- to m-grnd, gravelly, mnr organics.				Gravel lens/ layer
	2			N/A	N/A	
	3	Black (10YR 2/1) silty sand: moist, massive/uniform, sl. packed, F-grnd, "dirty".	PID reading at B/H Collar = 1340 ppm			
	4					
	5					Strong product odor.
	6	End of Boring		TD=	5.0 Ft.	
	7					
	8					
	9					
	10					

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HTRW DRILLING LOG

DISTRICT: Savannah

HOLE NUMBER: FP-14

1. COMPANY NAME: SAIC

2. DRILL SUBCONTRACTOR: SAIC

SHEET 1 OF 2

3. PROJECT: Bulk Fuels Product Delineation.

4. LOCATION: HAAF / Bulk Fuels Fac.

5. NAME OF DRILLER: W. Parker / K. Ledbetter

6. MANUFACTURERS DESIGNATION OF DRILL: General 210 Hole Digger

7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: General 210 Hole Digger with 2-in. diam. solid-stem auger.

8. HOLE LOCATION: Tank 7001 Site.

9. SURFACE ELEVATION:

10. DATE STARTED: 11/11/06

11. DATE COMPLETED: 11/11/06

12. OVERBURDEN THICKNESS: N/A

15. DEPTH GROUNDWATER ENCOUNTERED: N/A

13. DEPTH DRILLED INTO ROCK: N/A

16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: Dry / 3 days.

14. TOTAL DEPTH OF HOLE: 5.0 Ft.

17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY):

18. GEOTECHNICAL SAMPLES	~~DISTURBED~~ N/A	~~UNDISTURBED~~ N/A	19. TOTAL NUMBER OF CORE BOXES: N/A			
20. SAMPLES FOR CHEMICAL ANALYSIS	VOC: N/A	METALS: N/A	OTHER (SPECIFY): N/A	OTHER (SPECIFY):	OTHER (SPECIFY):	21. TOTAL CORE RECOVERY %
22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY): Fuel Point	23. SIGNATURE OF INSPECTOR: [signature]		

LOCATION SKETCH/COMMENTS

SCALE:

See page 4 this logbook, for location sketch.

HTRW DRILLING LOG

HOLE NUMBER FP-14

PROJECT: Bulk Fuels Product Del. INSPECTOR Timothy Coffey

SHEET 2 OF 2

ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	HEADSPACE SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	1	Brownish-yellow (10YR 6/6) sand: dry, rel. loose, F- to M-grnd, gravelly, minr org-anics.		↑	↑	
	2			N/A	N/A	
	3	Black (10YR 2/1), silty sand: moist, massive/uniform, F-grnd, sl. packed, "dirty".	PID reading at B/H collar = 32 ppm	↓	↓	
	4					
	5					
	6	End of Boring		TD =	5.0	Rt.
	7					
	8					
	9					
	10					

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HTRW DRILLING LOG

1. COMPANY NAME: SAIC	2. DRILL SUBCONTRACTOR: SAIC	DISTRICT: Savannah / HOLE NUMBER: FP-15 / SHEET 1 OF 2
3. PROJECT: Bulk Fuels Product Delineation	4. LOCATION: HAAF / Bulk Fuels Fac.	
5. NAME OF DRILLER: W. Parker / K. Ledbetter	6. MANUFACTURERS DESIGNATION OF DRILL: General 210	Hole Digger
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: General 210 Hole Digger with 2-in. diam. solid-stem auger.	8. HOLE LOCATION: Tank 7003 Site.	
	9. SURFACE ELEVATION:	
	10. DATE STARTED: 11/11/06 / 11. DATE COMPLETED: 11/11/06	
12. OVERBURDEN THICKNESS: N/A	15. DEPTH GROUNDWATER ENCOUNTERED: N/A	
13. DEPTH DRILLED INTO ROCK: N/A	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: Dry / 3 days.	
14. TOTAL DEPTH OF HOLE: 5.0 Ft	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY):	

18. GEOTECHNICAL SAMPLES	DISTURBED: N/A	UNDISTURBED: N/A	19. TOTAL NUMBER OF CORE BOXES: N/A				
20. SAMPLES FOR CHEMICAL ANALYSIS	VOC: N/A	METALS: N/A	OTHER (SPECIFY): N/A	OTHER (SPECIFY):	OTHER (SPECIFY):	21. TOTAL CORE RECOVERY %	
22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY): Fuel Point	23. SIGNATURE OF INSPECTOR: [signature]			

LOCATION SKETCH/COMMENTS — SCALE:

See page 4, this logbook, for location sketch.

HTRW DRILLING LOG

HOLE NUMBER FP-15

PROJECT: Bulk Fuels Product Del. INSPECTOR Timothy Coffey SHEET 2 OF 2

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ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	HEADSPACE SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	1	Yellowish-brown (10YR 5/6) sand: dry, F- to M-grnd, rel. loose; mnr organics.				
	2	Black (10YR 2/1) silty sand: moist, sl. packed, massive/ uniform, "dirty".		N/A	N/A	
	3		PID reading at B/H collar = 7 ppm			
	4					
	5	Very dark gray (10YR 3/1) sandy clay: moist, sl. plastic.				
	6	End of Boring.		TD =	5.0 Ft	
	7					
	8					
	9					
	10					

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HTRW DRILLING LOG

DISTRICT: Savannah		HOLE NUMBER FP-16
1. COMPANY NAME: SAIC	2. DRILL SUBCONTRACTOR: SAIC	SHEET 1 OF 2
3. PROJECT: Bulk Fuels Product Delineation.	4. LOCATION: HAAF / Bulk Fuels Fac.	
5. NAME OF DRILLER: W. Parker / K. Ledbetter	6. MANUFACTURERS DESIGNATION OF DRILL: General 21Φ	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: General 21Φ Hole Digger with 2-in. diameter solid-stem auger.	8. HOLE LOCATION: Tank 7003 Site.	
	9. SURFACE ELEVATION:	
	10. DATE STARTED: 11/11/06	11. DATE COMPLETED: 11/11/06
12. OVERBURDEN THICKNESS: N/A	15. DEPTH GROUNDWATER ENCOUNTERED: N/A	
13. DEPTH DRILLED INTO ROCK: N/A	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: Dry / 3 days.	
14. TOTAL DEPTH OF HOLE: 5.0 Ft	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY):	

18. GEOTECHNICAL SAMPLES	~~DISTURBED~~ N/A	~~UNDISTURBED~~ N/A	19. TOTAL NUMBER OF CORE BOXES N/A			
20. SAMPLES FOR CHEMICAL ANALYSIS	VOC N/A	METALS N/A	OTHER (SPECIFY) N/A	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %
22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY) Fuel Point	23. SIGNATURE OF INSPECTOR: [signature]		

LOCATION SKETCH/COMMENTS — SCALE:

See page 41 this logbook, for location sketch.

HTRW DRILLING LOG

HOLE NUMBER FP-16

PROJECT: Bulk Fuels Product Del. | INSPECTOR Timothy Coffey | SHEET 2 OF 2

ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	HEADSPACE SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	1	Very dark gray (10YR 3/1) silty sand: dry, rel. loose, gravelly.				Very hard/packed gravel layer
	2	Black (10YR 2/1) silty sand: dry to moist, massive.				
	3	Very dark gray (10YR 3/1) sandy clay: moist to wet, sl. plastic.	PID reading at B/H collar = 65 ppm.			
	4					
	5	Greenish-gray (5G 5/1) clay: moist to wet, med. plast.				
	6	End of Boring.		TD =	5.0 Ft.	
	7					
	8					
	9					
	10					

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HTRW DRILLING LOG

DISTRICT: Savannah

HOLE NUMBER: FP-17

1. COMPANY NAME: SAIC

2. DRILL SUBCONTRACTOR: SAIC

SHEET 1 OF 2

3. PROJECT: Bulk Fuels Product Delineation.

4. LOCATION: HAAF/Bulk Fuels Fac.

5. NAME OF DRILLER: W. Parker/K. Ledbetter

6. MANUFACTURERS DESIGNATION OF DRILL: General 214 Hole Digger

7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: General 214 Hole Digger with 2-in. diam. solid-stem auger

8. HOLE LOCATION: Tank 7003 Site.

9. SURFACE ELEVATION:

10. DATE STARTED: 11/11/06

11. DATE COMPLETED: 11/11/06

12. OVERBURDEN THICKNESS: N/A

15. DEPTH GROUNDWATER ENCOUNTERED: N/A

13. DEPTH DRILLED INTO ROCK: N/A

16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: Dry/ 3 days.

14. TOTAL DEPTH OF HOLE: 5.0 ft.

17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY):

18. GEOTECHNICAL SAMPLES	DISTURBED: N/A	UNDISTURBED: N/A	19. TOTAL NUMBER OF CORE BOXES: N/A			
20. SAMPLES FOR CHEMICAL ANALYSIS	VOC: N/A	METALS: N/A	OTHER (SPECIFY): N/A	OTHER (SPECIFY):	OTHER (SPECIFY):	21. TOTAL CORE RECOVERY %
22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY): Fuel Point	23. SIGNATURE OF INSPECTOR: [signature]		

LOCATION SKETCH/COMMENTS

SCALE:

See page 4, this logbook, for location sketch.

HTRW DRILLING LOG

HOLE NUMBER FP-17

PROJECT: Bulk Fuels Product Del. INSPECTOR Timothy Coffey

SHEET 2 OF 2

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ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	HEADSPACE SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	0	Yellowish-brown (10YR 6/4) sand: dry, loose, F- to M-grnd.				
	1	Black (10YR 2/1) silty sand: dry to moist, massive/unif, F-grnd, "dirty".				
	2			N/A	N/A	
	3		PID reading at B/H collar = 907 ppm.			
	4	Very dark gray (10YR 3/1) sandy clay: moist to wet, sl. plastic.				
	5					
	6	End of Boring.		TD = 5.0 ft.		
	7					
	8					
	9					
	10					

HTRW DRILLING LOG

DISTRICT: Savannah		HOLE NUMBER: FP-18
1. COMPANY NAME: SAIC	2. DRILL SUBCONTRACTOR: SAIC	SHEET 1 OF 2
3. PROJECT: Bulk Fuels Product Delineation	4. LOCATION: HAAF / Bulk Fuels Fac.	
5. NAME OF DRILLER: W. Parker / K. Ledbetter	6. MANUFACTURERS DESIGNATION OF DRILL: General 210	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: General 210 Hole Digger with 2-in. solid stem auger	8. HOLE LOCATION: Tank 7003 Site.	
	9. SURFACE ELEVATION:	
	10. DATE STARTED: 11/11/06	11. DATE COMPLETED: 11/11/06
12. OVERBURDEN THICKNESS: N/A	15. DEPTH GROUNDWATER ENCOUNTERED: N/A	
13. DEPTH DRILLED INTO ROCK: N/A	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: Dry / 3days.	
14. TOTAL DEPTH OF HOLE: 5.0 Ft	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY):	

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

LOCATION SKETCH/COMMENTS — SCALE:

See page 4, this logbook, for location sketch.

HTRW DRILLING LOG

HOLE NUMBER FP-18

PROJECT: Bulk Fuels Product Del. INSPECTOR Timothy Coffey SHEET 2 OF 2

ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	HEADSPACE SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	1	Yellowish brown (10YR 5/8) silty sand: dry, rel. loose, F- to M- grnd; organics.				
	2	Black (10YR 2/1) silty sand: moist, sl. packed, "dirty", massive/uniform, F- grnd, "dirty".		N/A	N/A	
	3		PID reading at B/H collar = 91 ppm			
	4	Very dark gray (5G 3/1) Sandy clay: moist to wet, med. plast., soft, massive.				
	5					
	6	End of Boring.		TD =	5.0	ft.
	7					
	8					
	9					
	10					

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HTRW DRILLING LOG

DISTRICT: Savanna		HOLE NUMBER FP-19
1. COMPANY NAME: SAIC	2. DRILL SUBCONTRACTOR: SAIC	SHEET 1 OF 2
3. PROJECT: Bulk Fuels Product Delineations	4. LOCATION: HAAF / Bulk Fuels Fac	
5. NAME OF DRILLER: W. Parker / K. Ledbetter	6. MANUFACTURERS DESIGNATION OF DRILL: General 216	Hole Digger
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: General 216 Hole Digger with 2-in. diam. solid-stem auger.	8. HOLE LOCATION: Tank 7003 Site.	
	9. SURFACE ELEVATION:	
	10. DATE STARTED: 11/11/06	11. DATE COMPLETED: 11/11/06
12. OVERBURDEN THICKNESS: N/A	15. DEPTH GROUNDWATER ENCOUNTERED: N/A	
13. DEPTH DRILLED INTO ROCK: N/A	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: Dry / 3 days	
14. TOTAL DEPTH OF HOLE: 5.0 Ft	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY):	

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

LOCATION SKETCH/COMMENTS — SCALE:

See page 4, this logbook, for location sketch.

HTRW DRILLING LOG

HOLE NUMBER FP-19

PROJECT: Bulk Fuels Prod. Delineation INSPECTOR Timothy Coffey SHEET 2 OF 2

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ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	HEADSPACE SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	1	Yellowish-brown (10YR 5/8) sand: dry; F- to M-grnd, rel. loose, mnr organics				
	2	grades to: Very dark gray (10YR 3/1) silty sand, sl. packed, moist, F- to m-grnd.		N/A	N/A	
	3	Black (10YR 2/1) silty sand.	PID reading at B/H collar = 35ppm			
	4	Gray (10YR 5/1) clay sand: moist to wet.				
	5	Very dark gray (10YR 3/1) silty sandy clay: moist to wet, sl. plast.				
	6	End of Boring.		TD = 5.0 Ft.		
	7					
	8					
	9					
	10					

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HTRW DRILLING LOG

DISTRICT: Savannah

HOLE NUMBER: FP-24

1. COMPANY NAME: SAIC

2. DRILL SUBCONTRACTOR: SAIC

SHEET 1 OF 2

3. PROJECT: Bulk Fuels Product Delineation.

4. LOCATION: HAAF / Bulk Fuels Fac.

5. NAME OF DRILLER: W. Parker / K. Ledbetter

6. MANUFACTURERS DESIGNATION OF DRILL: General 24 Hole Digger

7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: General 24 Hole Digger with 2-in. diam. solid-stem auger.

8. HOLE LOCATION: Tank 7003 Site.

9. SURFACE ELEVATION:

10. DATE STARTED: 11/11/06

11. DATE COMPLETED: 11/11/06

12. OVERBURDEN THICKNESS: N/A

15. DEPTH GROUNDWATER ENCOUNTERED: N/A

13. DEPTH DRILLED INTO ROCK: N/A

16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: Dry / 3 days.

14. TOTAL DEPTH OF HOLE: 5.0 ft

17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY):

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

LOCATION SKETCH/COMMENTS

SCALE:

See page 4, this logbook, for location sketch.

HTRW DRILLING LOG

HOLE NUMBER FP26

PROJECT: Bulk Fuels Product Del. | INSPECTOR Timothy Coffey | SHEET 2 OF 2

ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	HEADSPACE SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	1	Very dark gray (10YR 3/1) silty sand: dry, F- to M-grnd, rel. loose, mnr organics.				
	2	Lt. brownish-gray (10YR 6/2) sand: dry, loose, massive, M-grnd.		N/A	N/A	
	3	Very dark gray silty sand (As Above).	PID reading at B/H collar = 118 ppm			
	4					
	5	Greenish-gray (5G5/1) clay to sandy clay.				
	6	End of Boring.		TD = 5.0 Ft.		
	7					
	8					
	9					
	10					

4

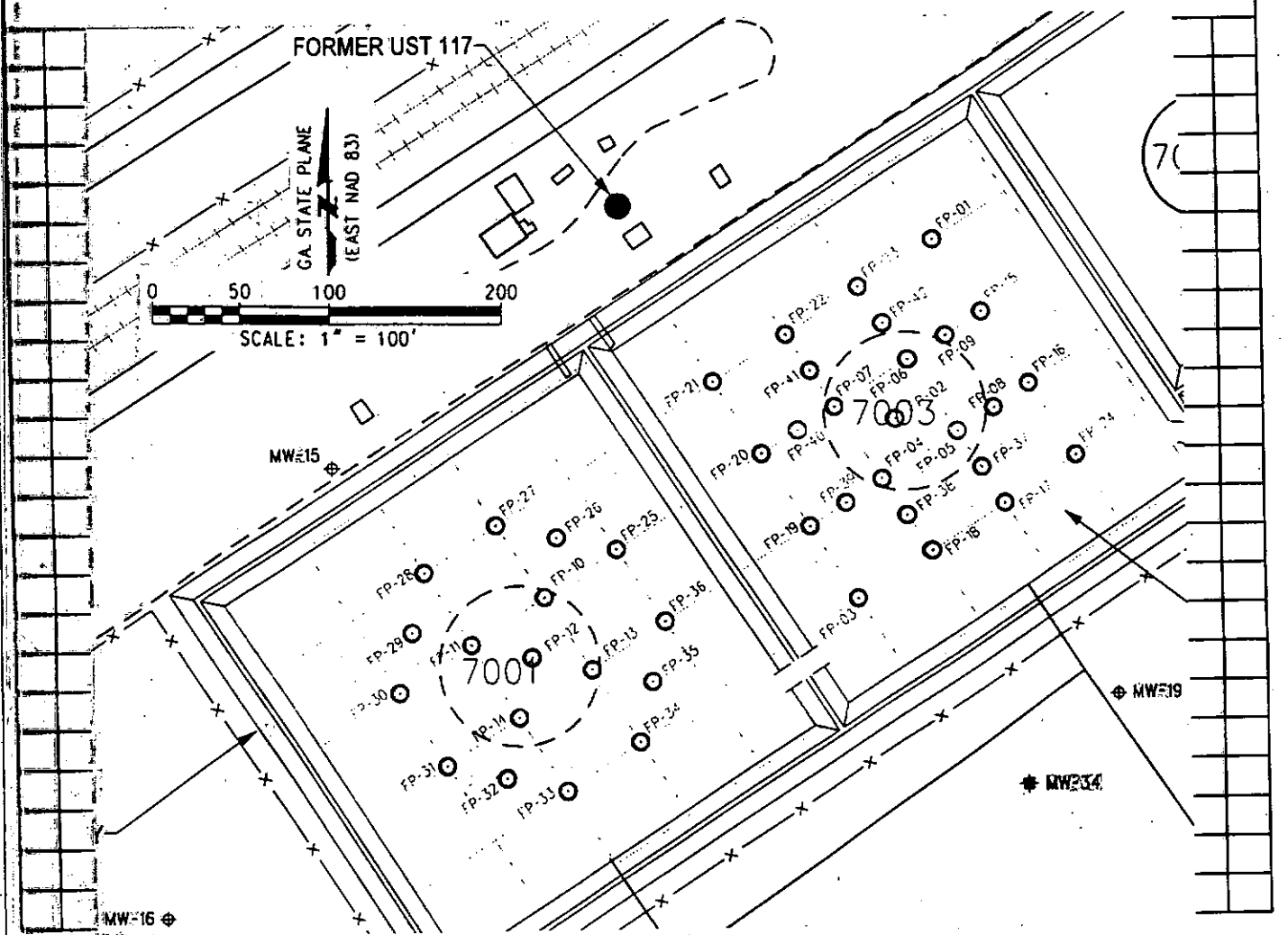
HTRW DRILLING LOG

DISTRICT: Savannah		HOLE NUMBER: FP-21
1. COMPANY NAME: SAIC	2. DRILL SUBCONTRACTOR: SAIC	SHEET 1 OF 2
3. PROJECT: Bulk Fuels Product Delineation	4. LOCATION: HAAF / Bulk Fuels Fac.	
5. NAME OF DRILLER: W. Parker / K. Ledbetter	6. MANUFACTURERS DESIGNATION OF DRILL: General 210	Hole Digger
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: General 210 Hole Digger with 2-in. dia. Solid Stem auger.	8. HOLE LOCATION: Tank 7003 Site	
	9. SURFACE ELEVATION:	
	10. DATE STARTED: 11/11/06	11. DATE COMPLETED: 11/11/06
12. OVERBURDEN THICKNESS: N/A	15. DEPTH GROUNDWATER ENCOUNTERED: N/A	
13. DEPTH DRILLED INTO ROCK: N/A	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: Dry / 3 days	
14. TOTAL DEPTH OF HOLE: 5.0 Ft	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY):	
18. GEOTECHNICAL SAMPLES: ~~DISTURBED~~ N/A	~~UNDISTURBED~~ N/A	19. TOTAL NUMBER OF CORE BOXES: N/A

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %
	N/A	N/A	N/A			
22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY) Fuel Point	23. SIGNATURE OF INSPECTOR		

LOCATION SKETCH/COMMENTS

SCALE:



HTRW DRILLING LOG

HOLE NUMBER FP-21

PROJECT: Bulk Fuels Product Del. | INSPECTOR - Timothy Coffey

SHEET 2 OF 2

5

ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	HEADSPACE SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	1	Black (10YR 2/1) silty sand: dry, F-grnd, rel. loose, mnr organics.				
	2	Very dark gray (10YR 3/1) silty sand (As Above)		N/A	N/A	
	3	Brownish-yellow (10YR 6/8) to gray (10YR 5/1) sand to clay sand: dry to moist, non- to sl. plastic, F- to M-grnd.	PID reading at B/H collar = 7 ppm			
	4					
	5	Brown-yellow sandy clay: moist to wet, mottled				
		End of Boring.		TD = 5.0 Ft.		
	6					
	7					
	8					
	9					
	10					

HTRW DRILLING LOG

DISTRICT: Savannah

HOLE NUMBER: FP-22

1. COMPANY NAME: SAIC

2. DRILL SUBCONTRACTOR: SAIC

SHEET 1 OF 2

3. PROJECT: Bulk Fuels Product Delineation

4. LOCATION: HAAF / Bulk Fuels Fac.

5. NAME OF DRILLER: W. Parker / K. Ledbetter

6. MANUFACTURERS DESIGNATION OF DRILL: General 210 Hole Digger

7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: General 210 Hole Digger with 2-in. Diam. solid stem auger.

8. HOLE LOCATION: Tank 7003 Site.

9. SURFACE ELEVATION:

10. DATE STARTED: 11/11/06

11. DATE COMPLETED: 11/11/06

12. OVERBURDEN THICKNESS: N/A

15. DEPTH GROUNDWATER ENCOUNTERED: N/A

13. DEPTH DRILLED INTO ROCK: N/A

16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: Dry / 3 days.

14. TOTAL DEPTH OF HOLE: 5.0 Ft

17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY):

18. GEOTECHNICAL SAMPLES: ~~DISTURBED~~ N/A | ~~UNDISTURBED~~ N/A

19. TOTAL NUMBER OF CORE BOXES: N/A

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %
	N/A	N/A	N/A			

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
			Fuel Point	[signature]

LOCATION SKETCH/COMMENTS

SCALE:

See page 4, this logbook, for location sketch.

HTRW DRILLING LOG

HOLE NUMBER FP-22

PROJECT: Bulk Fuels Product Del. | INSPECTOR Timothy Coffey | SHEET 2 OF 2

ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	HEADSPACE SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	0–2	Very dark gray (10YR 3/1) silty sand; dry, F- to M-grnd, rel. loose, mnr organics.				
	2–4	Black (10YR 2/1) silty sand: dry to moist, rel. packed, V. F-grnd.	PID reading at B/H collar = 3 ppm	N/A	N/A	
	4–5	Dark brown-gray (10YR 4/2) clay sand: moist to wet, soft, non-plast.				
	5–10	End of Boring.		TD = 5.0 ft		

14

HTRW DRILLING LOG

DISTRICT: Savannah

HOLE NUMBER: FP-23

1. COMPANY NAME: SAIC

2. DRILL SUBCONTRACTOR: SAIC

SHEET 1 OF 2

3. PROJECT: Bulk Fuels Product Delineation.

4. LOCATION: HAAF/Bulk Fuels Fac.

5. NAME OF DRILLER: W. Parker/K. Ledbetter

6. MANUFACTURERS DESIGNATION OF DRILL: General 210

Hole Digger

7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: General 210 Hole Digger with 2-in. and 3-in. diam. solid-stem augers.

8. HOLE LOCATION: Tank 7003 Site.

9. SURFACE ELEVATION:

10. DATE STARTED: 11/11/06

11. DATE COMPLETED: 11/11/06

12. OVERBURDEN THICKNESS: N/A

15. DEPTH GROUNDWATER ENCOUNTERED: N/A

13. DEPTH DRILLED INTO ROCK: N/A

16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: Dry/3 days.

14. TOTAL DEPTH OF HOLE: 5.0 ft

17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY):

18. GEOTECHNICAL SAMPLES: DISTURBED: N/A; UNDISTURBED: N/A

19. TOTAL NUMBER OF CORE BOXES: N/A

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %
	N/A	N/A	N/A			

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
			Fuel Point	

LOCATION SKETCH/COMMENTS

SCALE:

See page 14, this logbook, for location sketch.

HTRW DRILLING LOG

HOLE NUMBER FP-23

PROJECT: Bulk Fuels Product Del. | INSPECTOR Timothy Coffey | SHEET 2 OF 2

ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	HEADSPACE SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	1	Very dark gray (10YR 3/1) silty sand: dry, F- to M-grnd, rel. loose, mnr organics.				
	2	Gravel layer		N/A	N/A	Hard-packed gravel.
	3	Gray (10YR 6/1) sand: dry, M-grnd, massive/uniform, loose/friable.	PID reading at B/H collar = 0.0ppm			
	4					
	5	Gray (10YR 6/1) and brown-yellow (10YR 6/8) mottled sandy clay: moist, plastic.				
	6	End of Boring.		TD =	5.0	ft.
	7					
	8					
	9					
	10					

HTRW DRILLING LOG

DISTRICT: Savannah

HOLE NUMBER: FP-24

1. COMPANY NAME: SAIC

2. DRILL SUBCONTRACTOR: SAIC

SHEET 1 OF 2

3. PROJECT: Bulk Fuels Product Delineation.

4. LOCATION: HAAF/Bulk Fuels Fac.

5. NAME OF DRILLER: W. Parker/K. Ledbetter

6. MANUFACTURERS DESIGNATION OF DRILL: General 216 Hole Digger

7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: General 210 Hole Digger with 2-in. and 3-in. diam. solid-stem augers.

8. HOLE LOCATION: Tank 7003 Site,

9. SURFACE ELEVATION:

10. DATE STARTED: 11/12/06

11. DATE COMPLETED: 11/12/06

12. OVERBURDEN THICKNESS: N/A

15. DEPTH GROUNDWATER ENCOUNTERED: N/A

13. DEPTH DRILLED INTO ROCK: N/A

16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: Dry/2 days.

14. TOTAL DEPTH OF HOLE: 5.0 Ft

17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY):

18. GEOTECHNICAL SAMPLES: DISTURBED N/A | UNDISTURBED N/A

19. TOTAL NUMBER OF CORE BOXES: N/A

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %
	N/A	N/A	N/A			

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
			Fuel Point	

LOCATION SKETCH/COMMENTS

SCALE:

See page 4, this logbook, for location sketch.

HTRW DRILLING LOG

HOLE NUMBER FP-24 2 of 2

PROJECT: Bulk Fuels Product Del. INSPECTOR Timothy Coffey SHEET 2 OF 2

ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	HEADSPACE SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	1	Dark yellow-brown (10YR 4/6) sand: dry, rel. loose, F- to M-grnd.				
	2	Black (10YR 2/1) silty sand: dry to moist, v. F-grnd, rel. packed, "dirty".		N/A	N/A	
	3		PID reading at B/H collar = <1ppm.			
	4					
	5	Dark bluish-gray (10B 4/1) clay: moist to wet, sticky, plastic, <20% sand.				
		End of Boring.		TD =	5.0 ft.	
	6					
	7					
	8					
	9					
	10					

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HTRW DRILLING LOG

1. COMPANY NAME: SAIC	DISTRICT: Savannah	HOLE NUMBER: HP-25
	2. DRILL SUBCONTRACTOR: SAIC	SHEET 1 OF 2
3. PROJECT: Bulk Fuels Product Delineation.	4. LOCATION: HAAF/Bulk Fuels Fac.	
5. NAME OF DRILLER: W. Parker/K. Ledbetter	6. MANUFACTURERS DESIGNATION OF DRILL: General 210	Hole Digger.
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: General 210 Hole Digger with 2-in. diam. solid-stem auger.	8. HOLE LOCATION: Tank 7003 Site.	
	9. SURFACE ELEVATION: 7001	
	10. DATE STARTED: 11/12/06	11. DATE COMPLETED: 11/12/06
12. OVERBURDEN THICKNESS: N/A	15. DEPTH GROUNDWATER ENCOUNTERED: N/A	
13. DEPTH DRILLED INTO ROCK: N/A	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: Dry / 2 days.	
14. TOTAL DEPTH OF HOLE: 5.0 Ft.	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY):	

18. GEOTECHNICAL SAMPLES	~~DISTURBED~~ N/A	~~UNDISTURBED~~ N/A	19. TOTAL NUMBER OF CORE BOXES N/A			
20. SAMPLES FOR CHEMICAL ANALYSIS	VOC N/A	METALS N/A	OTHER (SPECIFY) N/A	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %
22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY) Fuel Point	23. SIGNATURE OF INSPECTOR [signature]		

LOCATION SKETCH/COMMENTS

SCALE:

See page 4, this logbook, for location sketch.

HTRW DRILLING LOG

HOLE NUMBER FP-25

PROJECT: Bulk Fuels Product Del. | INSPECTOR Timothy Coffey | SHEET 2 OF 2

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ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	HEADSPACE SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	1	Dark yellow-brown (10YR 4/6) sand: dry, F- to M-grnd, silty, rel. loose; mnr gravel.				
	2	Black (10YR 2/1) silty sand: dry to moist, massive, sl. packed, "dirty".		N/A	N/A	Gravel layer
	3		PID reading at B/H collar = <1 ppm.			
	4	Very dark gray (10YR 3/1) clay/sandy clay: moist, med. plast, rel. soft; ≈30% sand.				
	5					
	6	End of Boring.		TD = 5.0 Ft.		
	7					
	8					
	9					
	10					

HTRW DRILLING LOG

DISTRICT: Savannah		HOLE NUMBER FP-26
1. COMPANY NAME: SAIC	2. DRILL SUBCONTRACTOR: SAIC	SHEET 1 OF 2
3. PROJECT: Bulk Fuels Product Delineation.	4. LOCATION: HAAF / Bulk Fuels Fac.	
5. NAME OF DRILLER: W. Parker / K. Ledbetter	6. MANUFACTURERS DESIGNATION OF DRILL: General 210	Hole Digga-
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: General 210 Hole Digger with 2-in. diam. solid-stem auger.	8. HOLE LOCATION: Tank 7001 Site.	
	9. SURFACE ELEVATION:	
	10. DATE STARTED: 11/12/06	11. DATE COMPLETED: 11/12/06
12. OVERBURDEN THICKNESS: N/A	15. DEPTH GROUNDWATER ENCOUNTERED: N/A	
13. DEPTH DRILLED INTO ROCK: N/A	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: Dry / 2 days.	
14. TOTAL DEPTH OF HOLE: 5.0 ft	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY):	

18. GEOTECHNICAL SAMPLES	~~N/A~~ DISTURBED	~~N/A~~ UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES: N/A			
20. SAMPLES FOR CHEMICAL ANALYSIS	VOC: N/A	METALS: N/A	OTHER (SPECIFY): N/A	OTHER (SPECIFY):	OTHER (SPECIFY):	21. TOTAL CORE RECOVERY %
22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY): Fuel Point	23. SIGNATURE OF INSPECTOR: Jonathan Colley		

LOCATION SKETCH/COMMENTS

SCALE:

See page 4, this logbook, for location sketch.

HTRW DRILLING LOG

HOLE NUMBER FP-ZA

PROJECT: Bulk Fuels Product Del. | INSPECTOR Timothy Coffay | SHEET 2 OF 2

ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	HEADSPACE SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	0–3	Very dark gray (10YR 3/1) silty sand: dry, rel. loose, F- to M-grnd; gravelly.		N/A	N/A	
	3–5	Dark gray (10YR 4/1) sandy clay: moist, med. plast, rel. soft.	PID reading at B/H collar = <1 ppm			
	5	End of Boring.		TD = 5.0 Ft		

HTRW DRILLING LOG

DISTRICT: Savannah

HOLE NUMBER: FP-27

1. COMPANY NAME: SAIC

2. DRILL SUBCONTRACTOR: SAIC

SHEET 1 OF 2

3. PROJECT: Bulk Fuels Product Delineations

4. LOCATION: HAAF/Bulk Fuels Fac,

5. NAME OF DRILLER: W. Parker/K. Ledbetter

6. MANUFACTURERS DESIGNATION OF DRILL: General 210

Hole Digger

7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: General 210 Hole Digger with 2-in. diam. solid-stem auger.

8. HOLE LOCATION: Tank 7001 Site.

9. SURFACE ELEVATION:

10. DATE STARTED: 11/12/06

11. DATE COMPLETED: 11/12/06

12. OVERBURDEN THICKNESS: N/A

15. DEPTH GROUNDWATER ENCOUNTERED: N/A

13. DEPTH DRILLED INTO ROCK: N/A

16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: Dry / 2 days.

14. TOTAL DEPTH OF HOLE: 5.0 ft

17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY):

18. GEOTECHNICAL SAMPLES: ~~N/A~~ DISTURBED ~~N/A~~ UNDISTURBED

19. TOTAL NUMBER OF CORE BOXES: N/A

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %
	N/A	N/A	N/A			

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
			Fuel Point	

LOCATION SKETCH/COMMENTS

SCALE:

See page 4, this logbook, for location sketch.

HTRW DRILLING LOG

HOLE NUMBER FP-27 35

PROJECT: Bulk Fuels Product Del. | INSPECTOR Timothy Coffey | SHEET 2 OF 2

ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	HEADSPACE SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	0	Dark yellow-brown (10YR 4/6) sand: dry, loose.				
	1	Very dark gray (10YR 3/1) silty sand: dry to moist, rel. loose, F. to M-grnd.				
	2			N/A	N/A	
	3		PID reading at B/H collar = < 1 ppm			
	4	Dark gray (10YR 4/1) sandy clay: moist, plastic.				
	5					
	6	End of Boring.		TD = 5.0 Ft.		
	7					
	8					
	9					
	10					

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HTRW DRILLING LOG

DISTRICT: Savannah		HOLE NUMBER FP-28
1. COMPANY NAME: SAIC	2. DRILL SUBCONTRACTOR: SAIC	SHEET 1 OF 2
3. PROJECT: Bulk Fuels Product Delineation	4. LOCATION: HAAF/Bulk Fuels Fac.	
5. NAME OF DRILLER: W. Parker/K. Ledbetter	6. MANUFACTURERS DESIGNATION OF DRILL: General 210	Hole Digger
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: General 210 Hole Digger with 2-in. diam. solid-stem auger.	8. HOLE LOCATION: Tank 7001 Site.	
	9. SURFACE ELEVATION:	
	10. DATE STARTED: 11/12/06	11. DATE COMPLETED: 11/12/06
12. OVERBURDEN THICKNESS: N/A	15. DEPTH GROUNDWATER ENCOUNTERED: N/A	
13. DEPTH DRILLED INTO ROCK: N/A	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: Dry / 2 days.	
14. TOTAL DEPTH OF HOLE: 5.0 ft	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY):	

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

LOCATION SKETCH/COMMENTS SCALE:

See page 4, this logbook, for location sketch.

HTRW DRILLING LOG

HOLE NUMBER FP-28

PROJECT: Bulk Fuels Product Del. INSPECTOR Timothy Coffay

SHEET 2 OF 2

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ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	HEADSPACE SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	1	Very dark gray (10YR 3/1) silty sand; dry to moist, F- to M-grnd, rel. loose				
	2			N/A	N/A	
	3		PID reading at B/H collar = 1 ppm.			
	4	Dark gray (10YR 4/1) sandy clay; moist, plastic.				
	5					
	6	End of Boring		TD = 5.0 ft.		
	7					
	8					
	9					
	10					

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TRW DRILLING LOG

1. COMPANY NAME: SAIC	DISTRICT: Savannah	HOLE NUMBER FP-29
	2. DRILL SUBCONTRACTOR: SAIC	SHEET 1 OF 2

3. PROJECT: Bulk Fuels Product Delineation
4. LOCATION: HAAF / Bulk Fuels Fac.
5. NAME OF DRILLER: W. Parker / K. Ledbetter
6. MANUFACTURERS DESIGNATION OF DRILL: General 21Φ Hole Digger
7. TYPES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: General 21Φ Hole Digger with 2-in. diam. solid-stem auger.
8. HOLE LOCATION: Tank 7001 Site.
9. SURFACE ELEVATION:
10. DATE STARTED: 11/12/06
11. DATE COMPLETED: 11/12/06
12. OVERBURDEN THICKNESS: N/A
13. DEPTH DRILLED INTO ROCK: N/A
14. TOTAL DEPTH OF HOLE: 5.0 Ft
15. DEPTH GROUNDWATER ENCOUNTERED: N/A
16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: Dry / 2 days.
17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY):
18. GEOTECHNICAL SAMPLES: ~~DISTURBED~~ ~~UNDISTURBED~~
19. TOTAL NUMBER OF CORE BOXES: N/A

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %
	N/A	N/A	N/A			
22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY) Fuel Point	23. SIGNATURE OF INSPECTOR		

LOCATION SKETCH/COMMENTS — SCALE:

See page 4, this logbook, for location sketch.

HTRW DRILLING LOG

HOLE NUMBER FP-29

PROJECT: Bulk Fuels Product Del. | INSPECTOR Timothy Coffey | SHEET 2 OF 2

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ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	HEADSPACE SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	0	Dark gray (10YR 4/1) clay sand: moist.				
	1	Very dark gray (10YR 3/1) silty sand: dry to moist, F- to M-grnd, rd. loose.				
	2			N/A	N/A	
	3	Dark gray (10YR 4/1) sandy clay: moist, plastic.	PID reading at B/H collar = <1 ppm			
	4	Greenish-gray (5G 5/1) clay / sandy clay: moist, soft, plastic.				
	5	End of Boring.		TD = 5.0 ft		
	6					
	7					
	8					
	9					
	10					

USACE/TRW DRILLING LOG

1. COMPANY NAME: SAIC	DISTRICT: Savannah	HOLE NUMBER: FP-30
	2. DRILL SUBCONTRACTOR: SAIC	SHEET 1 OF 2
3. PROJECT: Bulk Fuels Product Delineation	4. LOCATION: HAAF / Bulk Fuels Fac.	
5. NAME OF DRILLER: W. Parker / K. Ledbetter	6. MANUFACTURERS DESIGNATION OF DRILL: General 216	Hole Digger.
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: General 216 Hole Digger with 2-in. diam. solid-stem auger.	8. HOLE LOCATION: Tank 7001 Site.	
	9. SURFACE ELEVATION:	
	10. DATE STARTED: 11/12/06	11. DATE COMPLETED: 11/12/06
12. OVERBURDEN THICKNESS: N/A	15. DEPTH GROUNDWATER ENCOUNTERED: N/A	
13. DEPTH DRILLED INTO ROCK: N/A	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: Dry / 2 days.	
14. TOTAL DEPTH OF HOLE: 5.0 ft	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY):	

18. GEOTECHNICAL SAMPLES	~~DISTURBED~~ N/A	~~UNDISTURBED~~ N/A	19. TOTAL NUMBER OF CORE BOXES: N/A				
20. SAMPLES FOR CHEMICAL ANALYSIS	VOC: N/A	METALS: N/A	OTHER (SPECIFY): N/A	OTHER (SPECIFY):	OTHER (SPECIFY):	21. TOTAL CORE RECOVERY %	
22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY): Fuel Point	23. SIGNATURE OF INSPECTOR: [signature]			

LOCATION SKETCH/COMMENTS

SCALE:

See page 4, this logbook, for location sketch.

HTRW DRILLING LOG

HOLE NUMBER FP-30

PROJECT: Bulk Fuels Product Del. INSPECTOR Timothy Coffey

SHEET 2 OF 2

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ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	HEADSPACE SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	1	Very dark gray (10YR 3/1) silty sand: dry to moist, F- to M- grnd, rel. loose.				Gravel layer
	2			N/A	N/A	
	3	Dark gray (10YR 4/1) sandy clay: moist,	PID reading at B/H collar = <1 ppm			
	4	Lt. olive brown (2.5Y 5/6) clay: moist, rel. stiff, plastic, mottled, sand < 20%.				
	5					
		End of Boring.		TD = 5.0 Ft		
	6					
	7					
	8					
	9					
	10					

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TRW DRILLING LOG

COMPANY NAME: SAIC	DISTRICT: Savannah	HOLE NUMBER FP-31
	2. DRILL SUBCONTRACTOR: SAIC	SHEET 1 OF 2

3. PROJECT: Bulk Fuels Product Delineation.	4. LOCATION: HAAF/ Bulk Fuels Fac.
5. NAME OF DRILLER: W. Parker/K. Ledbetter	6. MANUFACTURERS DESIGNATION OF DRILL: General 210
7. TYPES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: General 210 Hole Digger with 2-in. diam. solid-stem auger.	8. HOLE LOCATION: Tank 7001 Site
	9. SURFACE ELEVATION:
	10. DATE STARTED: 11/12/96 — 11. DATE COMPLETED: 11/12/96
12. OVERBURDEN THICKNESS: N/A	15. DEPTH GROUNDWATER ENCOUNTERED: N/A
13. DEPTH DRILLED INTO ROCK: N/A	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: Dry/ 2 days.
14. TOTAL DEPTH OF HOLE: 5.0 ft	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY):

Hole Digger

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

LOCATION SKETCH/COMMENTS — SCALE:

See page 4, this logbook, for location sketch.

HTRW DRILLING LOG

HOLE NUMBER FP-31

PROJECT: Bulk Fuels Product Del. | INSPECTOR Timothy Coffey | SHEET 2 OF 2

ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	HEADSPACE SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	1	Dark yellow-brown (10YR 4/6) silty sand.				
		Black (10YR 2/1) silty sand.				
	2	Dark gray (10YR 4/1) silty sand: dry to moist, F. to M-grnd, rel. loose.		N/A	N/A	
	3		PID reading at B/H collar = 2 ppm.			
	4	Dark gray (10YR 4/1) sandy clay: moist, rel. stiff, plastic.				
	5					
	6	End of Boring		TD =	5.0 Ft.	
	7					
	8					
	9					
	10					

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HTRW DRILLING LOG

DISTRICT: Savannah		HOLE NUMBER FP-32
1. COMPANY NAME: SAIC	2. DRILL SUBCONTRACTOR: SAIC	SHEET 1 OF 2
3. PROJECT: Bulk Fuels Product Delineation.	4. LOCATION: HAAF/Bulk Fuels Fac.	
5. NAME OF DRILLER: W. Parker/K. Ledbetter	6. MANUFACTURERS DESIGNATION OF DRILL: General 210	Hole Digger
7. TYPE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: General 210 Hole Digger with 2-in. diam. solid-stem auger.	8. HOLE LOCATION: Tank 7001 Site.	
	9. SURFACE ELEVATION:	
	10. DATE STARTED: 11/12/06	11. DATE COMPLETED: 11/12/06
12. OVERBURDEN THICKNESS: N/A	15. DEPTH GROUNDWATER ENCOUNTERED: N/A	
13. DEPTH DRILLED INTO ROCK: N/A	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: Dry / 2 days.	
14. TOTAL DEPTH OF HOLE: 5.0 Ft	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY):	

18. GEOTECHNICAL SAMPLES	DISTURBED: N/A	UNDISTURBED: N/A	19. TOTAL NUMBER OF CORE BOXES: N/A				
20. SAMPLES FOR CHEMICAL ANALYSIS	VOC: N/A	METALS: N/A	OTHER (SPECIFY): N/A	OTHER (SPECIFY):	OTHER (SPECIFY):	21. TOTAL CORE RECOVERY: %	
DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY): Fuel Paint	23. SIGNATURE OF INSPECTOR: Timothy Coffey			

LOCATION SKETCH/COMMENTS — SCALE:

See page 4, this logbook, for location sketch.

HTRW DRILLING LOG

HOLE NUMBER FP-32

PROJECT: Bulk Fuels Product Del. | INSPECTOR Timothy Coffey | SHEET 2 OF 2

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ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	HEADSPACE SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	1	Very dark gray (10YR 3/1) silty clay sand: moist, massive, F- to M-grnd, non-plastic, sl. packed.				
	2			N/A	N/A	
	3		PID reading at B/H collar = 89 ppm			
	4	Bluish-gray (10B 5/1) clay: moist, soft, plastic, sand ≤ 10%.				
	5					
	6	End of Boring.		TD = 5.0 Ft.		
	7					
	8					
	9					
	10					

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HTRW DRILLING LOG

DISTRICT: Savannah		HOLE NUMBER FD-33
1. COMPANY NAME: SAIC	2. DRILL SUBCONTRACTOR: SAIC	SHEET 1 OF 2

3. PROJECT: Bulk Fuels Product Delineation.	4. LOCATION: HAAF/Bulk Fuels Fac.
5. NAME OF DRILLER: W. Parker/K. Ledbetter	6. MANUFACTURERS DESIGNATION OF DRILL: General 21Φ
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: General 21Φ Hole Digger with 2-in. diam. Solid-stem auger.	8. HOLE LOCATION: Tank 7Φ01 Site,
	9. SURFACE ELEVATION:
	10. DATE STARTED: 11/12/Φ6 — 11. DATE COMPLETED: 11/12/Φ6
12. OVERBURDEN THICKNESS: N/A	15. DEPTH GROUNDWATER ENCOUNTERED: N/A
13. DEPTH DRILLED INTO ROCK: N/A	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: Dry / 2 days
14. TOTAL DEPTH OF HOLE: 5.Φ Ft	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY):

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

LOCATION SKETCH/COMMENTS — SCALE:

See page 4, this logbook, for location sketch.

Hole Digger

HTRW DRILLING LOG

HOLE NUMBER FP-33

PROJECT: Bulk Fuels Product Del. | INSPECTOR Timothy Coffey | SHEET 2 OF 2

ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	HEADSPACE SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	1	Very dark grey-brown (10YR 3/2) silty clay sand: dry to moist, F. to M-grnd, rel loose, mnr organics.				
	2			N/A	N/A	
	3		PID reading at B/H collar =			
	4	Dark bluish-gray (10B 4/1) clay: moist, plastic, sand ≤ 10%	2 ppm.			
	5	Dark green-gray (10G 4/1) clay/sandy clay: moist, plastic, sand ≤ 25%.				
	6	End of Boring.		TD=	6.0 Ft.	
	7					
	8					
	9					
	10					

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HTRW DRILLING LOG

DISTRICT: Savannah		HOLE NUMBER: FP-34
1. COMPANY NAME: SAIC	2. DRILL SUBCONTRACTOR: SAIC	SHEET 1 OF 2
3. PROJECT: Bulk Fuels Product Delineations	4. LOCATION: HAAF/Bulk Fuels Fac.	
5. NAME OF DRILLER: W. Parker/K. Ledbetter	6. MANUFACTURERS DESIGNATION OF DRILL: General 21Φ	Hole Diggen.
7. SIZES AND TYPES OF DRILLING OR SAMPLING EQUIPMENT: General 21Φ Hole Digger with 2-in. diam. solid-stem auger.	8. HOLE LOCATION: Tank 7001 Site	
	9. SURFACE ELEVATION:	
	10. DATE STARTED: 11/12/06	11. DATE COMPLETED: 11/12/06
12. OVERBURDEN THICKNESS: N/A	15. DEPTH GROUNDWATER ENCOUNTERED: N/A	
13. DEPTH DRILLED INTO ROCK: N/A	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: Dry / 2 days.	
14. TOTAL DEPTH OF HOLE: 5.0 Ft	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY):	

18. GEOTECHNICAL SAMPLES	DISTURBED: N/A	UNDISTURBED: N/A	19. TOTAL NUMBER OF CORE BOXES: N/A			
20. SAMPLES FOR CHEMICAL ANALYSIS	VOC: N/A	METALS: N/A	OTHER (SPECIFY): N/A	OTHER (SPECIFY):	OTHER (SPECIFY):	21. TOTAL CORE RECOVERY %
22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY): Fuel Point	23. SIGNATURE OF INSPECTOR: [signature]		

LOCATION SKETCH/COMMENTS — SCALE:

See page 4, this logbook, for location sketch.

HTRW DRILLING LOG

HOLE NUMBER FP-34

PROJECT: Bulk Fuels Product Del. | INSPECTOR Timothy Coffey | SHEET 2 OF 2

ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	HEADSPACE SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	1	Very dark gray-brn (10YR 3/2) silty clay sand: moist, non-plastic, F- to M-grnd, sl. packed.				
	2	grades to: sandy clay: moist to wet, sl. plastic.		N/A	N/A	
	3	Dark bluish-gray (10B 4/1) clay: moist, plastic, ≤10% sand,	PID reading at B/H color = 3ppm			
	4	Dark green-gray (10Y 4/1) sandy clay: moist, plastic, ≤20% sand.				
	5					
	6	End of Boring.		TD = 5.0 ft.		
	7					
	8					
	9					
	10					

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HTRW DRILLING LOG

DISTRICT: Savannah		HOLE NUMBER FP-35
1. COMPANY NAME: SAIC	2. DRILL SUBCONTRACTOR: SAIC	SHEET 1 OF 2

3. PROJECT: Bulk Fuels Product Delineation.
4. LOCATION: HAAF / Bulk Fuels Fac.
5. NAME OF DRILLER: W. Parker / K. Ledbetter
6. MANUFACTURERS DESIGNATION OF DRILL: General 210
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: General 210 Hole Digger with 2-in. diam. solid-stem auger.
8. HOLE LOCATION: Tank 7001 Site
9. SURFACE ELEVATION:
10. DATE STARTED: 11/12/06
11. DATE COMPLETED: 11/12/06
12. OVERBURDEN THICKNESS: N/A
15. DEPTH GROUNDWATER ENCOUNTERED: N/A
13. DEPTH DRILLED INTO ROCK: N/A
16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: Dry / 2 days.
14. TOTAL DEPTH OF HOLE: 5.0 ft
17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY):

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
	N/A	N/A	N/A

SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %
	N/A	N/A	N/A			

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
			Fuel Points	

LOCATION SKETCH/COMMENTS — SCALE:

See page 4, this logbook, for location sketch.

Hole Digger.

HTRW DRILLING LOG

HOLE NUMBER FP-35

PROJECT: Bulk Fuels Product Del. INSPECTOR Timothy Coffey

SHEET 2 OF 2

ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	HEADSPACE SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	1	Very dark gray-brown (10YR 3/2) silty clay sand; moist, non-plastic, F- to M-grnd, sl. packed.				
	2			N/A	N/A	
	3	Dark bluish-gray (10B 4/1) clay; moist, plastic,	PID reading at B/H collar = <1 ppm			
	4	Dark green-gray (10Y 4/1) and brown-yellow (10YR 6/8) mottled sandy clay.				
	5	End of Boring.		TD = 5.0 Ft.		
	6					
	7					
	8					
	9					
	10					

HTRW DRILLING LOG

DISTRICT: Savannah

HOLE NUMBER: FP-36

1. COMPANY NAME: SAIC

2. DRILL SUBCONTRACTOR: SAIC

SHEET 1 OF 3

3. PROJECT: Bulk Feds Product Delineation

4. LOCATION: HAAF/Bulk Feds Fac.

5. NAME OF DRILLER: W. Parker/K. Ledbetter

6. MANUFACTURERS DESIGNATION OF DRILL: General 216

Hdr Digger

7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: General 216 Hole Digger with 2-in. diam. solid-stem auger.

8. HOLE LOCATION: Tank 7001 Site

9. SURFACE ELEVATION:

10. DATE STARTED: 11/12/96

11. DATE COMPLETED: 11/12/96

12. OVERBURDEN THICKNESS: N/A

15. DEPTH GROUNDWATER ENCOUNTERED: N/A

13. DEPTH DRILLED INTO ROCK: N/A

16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: Dry/2 days.

14. TOTAL DEPTH OF HOLE: 5.0 Ft

17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY):

18. GEOTECHNICAL SAMPLES: ~~DISTURBED~~ N/A ~~UNDISTURBED~~ N/A

19. TOTAL NUMBER OF CORE BOXES: N/A

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %
	N/A	N/A	N/A			

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
			Fuel Point	

LOCATION SKETCH/COMMENTS

SCALE:

See page 4, this logbook, for location sketch.

HTRW DRILLING LOG

HOLE NUMBER FP-36

PROJECT: Bulk Fuels Product Del. INSPECTOR Timothy Coffey

SHEET 2 OF 2

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ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	HEADSPACE SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	1	Dark yellow-brown (10YR 4/6) sand: dry, F- to M-grnd, rel. loose; gravelly.				Gravelly
	2	Brown-yellow (10YR 6/8) sand: dry, F-to M-grnd, rel. loose.		N/A	N/A	
	3	Very dark gray (10YR 3/1) silty sand: moist, F- to M-grn, sl. packed.	PID reading at B/H collar = <1 ppm			
	4	Dark gray (10YR 4/1) to v. dark gray (10YR 3/1) clay: rel. stiff, moist, sticky, plastic.				Very tough drilling.
	5					
	6	End of Boring.		TD = 5.0 ft.		
	7					
	8					
	9					
	10					

HTRW DRILLING LOG

DISTRICT: Savannah		HOLE NUMBER FP-37
1. COMPANY NAME: SAIC	2. DRILL SUBCONTRACTOR: SAIC	SHEET 1 OF 2
3. PROJECT: Bulk Fuels Product Delineation	4. LOCATION: HAAF/Bulk Fuels Facility	
5. NAME OF DRILLER: W. Parker/R. Ledbetter	6. MANUFACTURERS DESIGNATION OF DRILL: General 21Φ	Hole Digger
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: General 21Φ Hole Digger with 2-in. diam. solid-stem auger.	8. HOLE LOCATION: Tank 7003 Site.	
	9. SURFACE ELEVATION:	
	10. DATE STARTED: 11/12/06	11. DATE COMPLETED: 11/12/06
12. OVERBURDEN THICKNESS: N/A	15. DEPTH GROUNDWATER ENCOUNTERED: N/A	
13. DEPTH DRILLED INTO ROCK: N/A	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: Dry/ 2days	
14. TOTAL DEPTH OF HOLE: 5.0 ft	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY):	

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

LOCATION SKETCH/COMMENTS SCALE:

See page 4, this logbook, for location sketch.

HTRW DRILLING LOG

HOLE NUMBER FP-37

PROJECT: Bulk Fuels Product Del. | INSPECTOR Timothy Coffey | SHEET 2 OF 2

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ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	HEADSPACE SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	1	Dark yellowish-brown (10YR 4/6) sand: dry, F- to M-grnd, rel. loose.				
	2	Very dark gray (10YR 3/1) sand; moist, F- to M-grnd, sl. packed.				
	3	Dark yellowish-brown (10YR 4/6) sand/silty sand: moist, sl. packed, F- to M-grnd.	PID reading at B/H collar = 1220 ppm.	N/A	N/A	Strong product odor.
	4					
	5					
	6	End of Boring.		TD =	5.0 Ft.	
	7					
	8					
	9					
	10					

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HTRW DRILLING LOG

DISTRICT: Savannah		HOLE NUMBER FP-38
1. COMPANY NAME: SAIC	2. DRILL SUBCONTRACTOR: SAIC	SHEET 1 OF 2
3. PROJECT: Bulk Fuels Product Delineation	4. LOCATION: HAAF / Bulk Fuels Facility	
5. NAME OF DRILLER: W. Parker / K. Ledbetter	6. MANUFACTURERS DESIGNATION OF DRILL: General 21Φ	Hole Digger
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: General 21Φ Hole Digger with 2-in. diam. solid-stem auger.	8. HOLE LOCATION: Tank 7003 Site.	
	9. SURFACE ELEVATION:	
	10. DATE STARTED: 11/12/06	11. DATE COMPLETED: 11/12/06
12. OVERBURDEN THICKNESS: N/A	15. DEPTH GROUNDWATER ENCOUNTERED: N/A	
13. DEPTH DRILLED INTO ROCK: N/A	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: Dry / 2 days	
14. TOTAL DEPTH OF HOLE: 5.0 Ft.	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY):	

18. GEOTECHNICAL SAMPLES	~~DISTURBED~~	~~UNDISTURBED~~	19. TOTAL NUMBER OF CORE BOXES: N/A			
20. SAMPLES FOR CHEMICAL ANALYSIS	VOC: N/A	METALS: N/A	OTHER (SPECIFY): N/A	OTHER (SPECIFY):	OTHER (SPECIFY):	21. TOTAL CORE RECOVERY %
22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY): Fuel Point	23. SIGNATURE OF INSPECTOR: Timothy Jeffrey		

LOCATION SKETCH/COMMENTS — SCALE:

See page 4, this logbook, for location sketch.

HTRW DRILLING LOG

HOLE NUMBER FP-38

PROJECT: Bulk Fuels Product Del. | INSPECTOR Timothy Coffey | SHEET 2 OF 2

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ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	HEADSPACE SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	1	Dark yellow-brown (10YR 4/6) sand: dry, rel. loose, F- to M-grnd.				
	2	Very dark gray (10YR 3/1) sand: sl. packed, F- to M-grnd.				
	3	Black (10YR 2/1) silty sand: dry to moist, F- grnd, sl. packed.		N/A	N/A	
	4	Very dark gray (10YR 3/1) sand: moist to wet, sl. packed, F- to M-grnd.	PID reading at B/H collar = 1400 ppm			Very strong product odor.
	5					
	6	End of Boring.		TD = 5.0 Ft.		
	7					
	8					
	9					
	10					

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HTRW DRILLING LOG

DISTRICT: Savannah		HOLE NUMBER FP-39
1. COMPANY NAME: SAIC	2. DRILL SUBCONTRACTOR: SAIC	SHEET 1 OF 2

3. PROJECT: Bulk Fuels Product Delineations.	4. LOCATION: HAAF/Bulk Fuels Facility.
5. NAME OF DRILLER: W. Parker/K. Ledbetter	6. MANUFACTURERS DESIGNATION OF DRILL: General 21Φ Hole Digger
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: General 21Φ Hole Digger with 2-in. diam. solid-stem auger.	8. HOLE LOCATION: Tank 7003 Site.
	9. SURFACE ELEVATION:
	10. DATE STARTED: 11/12/06 / 11. DATE COMPLETED: 11/12/06
12. OVERBURDEN THICKNESS: N/A	15. DEPTH GROUNDWATER ENCOUNTERED: N/A
13. DEPTH DRILLED INTO ROCK: N/A	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: Dry/ 2 days
14. TOTAL DEPTH OF HOLE: 6.0 Ft	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY):

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

LOCATION SKETCH/COMMENTS — SCALE:

See page 4, this logbook, for location sketch.

HTRW DRILLING LOG

HOLE NUMBER FP-39

PROJECT: Bulk Fuels Product Del. INSPECTOR Timothy Coffey SHEET 2 OF 2

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ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	HEADSPACE SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	0–3	Very dark gray (10YR 3/1) silty sand: moist, sl. packed, F- to M-grnd.		N/A	N/A	
	3–5	Greenish-gray (10 BG 5/1) sandy clay: moist, rel. soft, med. plast.	PID reading at B/H collar = 144 ppm			strong product odor.
	5	End of Boring.		TD = 5.0 ft.		

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HTRW DRILLING LOG

DISTRICT: Savannah

HOLE NUMBER: FP-40

1. COMPANY NAME: SAIC

2. DRILL SUBCONTRACTOR: SAIC

SHEET 1 OF 2

3. PROJECT: Bulk Fuels Product Delineation

4. LOCATION: HAAF/Bulk Fuels Fac.

5. NAME OF DRILLER: W. Parker/K. Ledbetter

6. MANUFACTURERS DESIGNATION OF DRILL: General 210 Hole Digger

7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: General 210 Hole Digger with 2-in. diam. solid-stem auger.

8. HOLE LOCATION: Tank 7003 Site

9. SURFACE ELEVATION:

10. DATE STARTED: 11/12/06

11. DATE COMPLETED: 11/12/06

12. OVERBURDEN THICKNESS: N/A

15. DEPTH GROUNDWATER ENCOUNTERED: N/A

13. DEPTH DRILLED INTO ROCK: N/A

16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: Dry / 2 days.

14. TOTAL DEPTH OF HOLE: 5.0 ft

17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY):

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

LOCATION SKETCH/COMMENTS

SCALE:

See page 41, this logbook, for location sketch.

HTRW DRILLING LOG

HOLE NUMBER FP-40

PROJECT: Bulk Fuels Product Del. INSPECTOR Timothy Coffey SHEET 2 OF 2

ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	HEADSPACE SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	1	~~Very~~ dark yell-brn (10YR 4/6) sand: dry, F- to M-grnd, rel. loose.				
	2	Very pale brown (10YR 7/4) sand; dry, v. loose, massive, M-grnd.		N/A	N/A	
	3	Olive brown (2.5Y 4/3) sand: moist, sl. packed, F. to M-grnd.	PID reading at B/H collar = 140 ppm			
	4					
	5	olive brown sandy clay: moist, med. plast.				
	6	End of Boring.		TD = 5.0 ft.		
	7					
	8					
	9					
	10					

HTRW DRILLING LOG

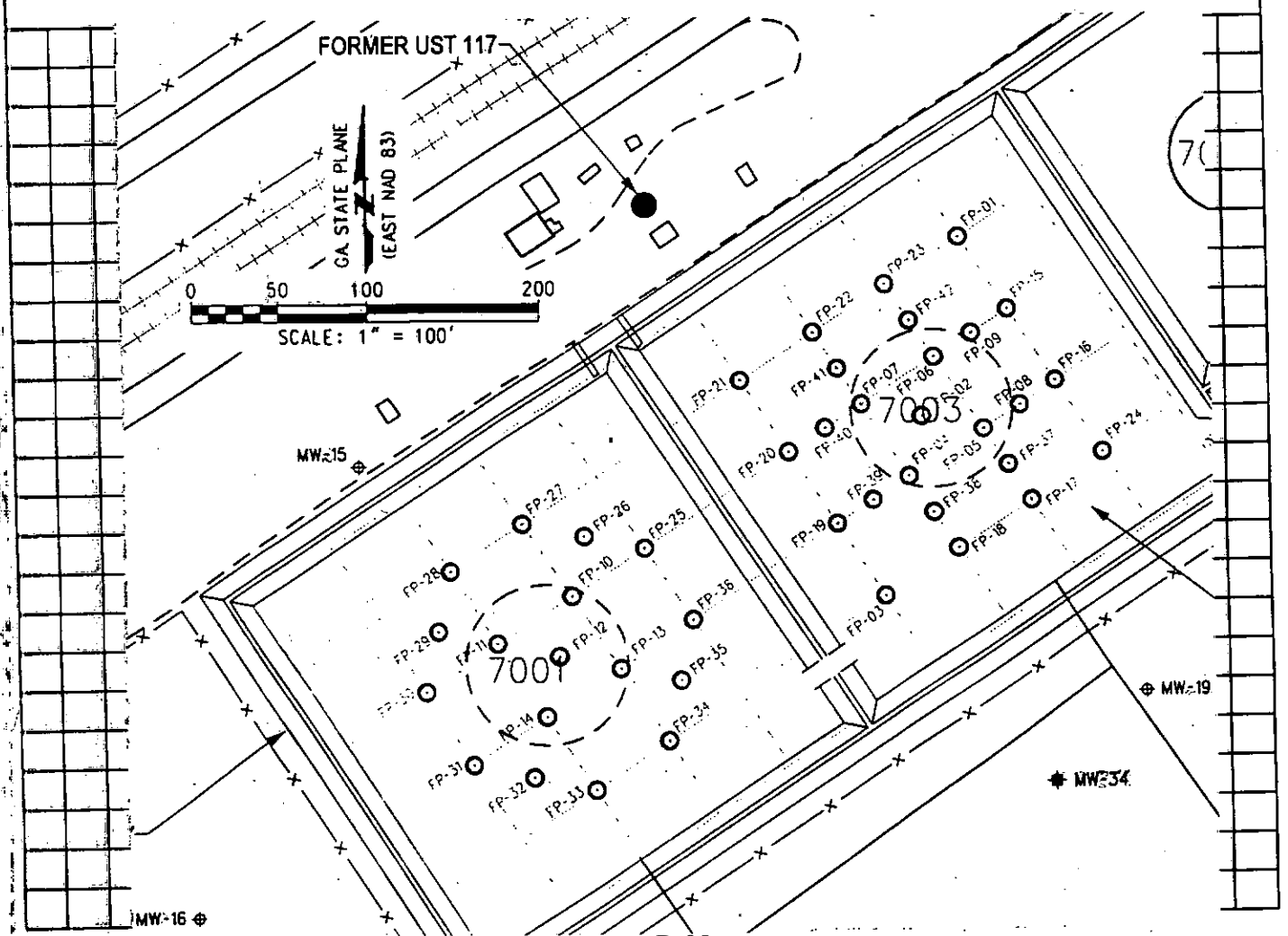
	DISTRICT: Savannah	HOLE NUMBER FP-41
1. COMPANY NAME: SAIC	2. DRILL SUBCONTRACTOR: SAIC	SHEET 1 OF 2

3. PROJECT: Bulk Fuels Product Delineation	4. LOCATION: HAAF / Bulk Fuels Fac.
5. NAME OF DRILLER: W. Parker / K. Ledbetter	6. MANUFACTURERS DESIGNATION OF DRILL: General 21Φ Hole Digger
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: General 21Φ Hole Digger with 2-in. diam. solid-stem auger.	8. HOLE LOCATION: Tank 7003 Site.
	9. SURFACE ELEVATION:
	10. DATE STARTED: 11/12/06 — 11. DATE COMPLETED: 11/12/06
12. OVERBURDEN THICKNESS: N/A	15. DEPTH GROUNDWATER ENCOUNTERED: N/A
13. DEPTH DRILLED INTO ROCK: N/A	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: Dry / 2 days.
14. TOTAL DEPTH OF HOLE: 5.0 Ft.	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY):

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

LOCATION SKETCH/COMMENTS

SCALE:



HTRW DRILLING LOG

HOLE NUMBER FP-41

PROJECT: Bulk Fuels Product Del. | INSPECTOR Timothy Coffey | SHEET 2 OF 2

ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	HEADSPACE SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	0	Dark yellow-brn (10YR 4/6) sand: dry, rel. loose, F- to M-grnd.				
	1	Very dark gray (10YR 3/1) silty sand: dry to moist, F- to M-grnd, sl. packed.				
	2			N/A	N/A	
	3		PID reading at B/H collar = 6 ppm			
	4	Olive brown (2.5Y 4/3) sandy clay: moist, sl. soft, sl. plast, mottled.				
	5	End of Boring.		TD = 5.0 Ft		
	6					
	7					
	8					
	9					
	10					

HTRW DRILLING LOG

DISTRICT: Savannah		HOLE NUMBER FP-42
1. COMPANY NAME: SAIC	2. DRILL SUBCONTRACTOR: SAIC	SHEET 1 OF 2
3. PROJECT: Bulk Fuels Product Delineation	4. LOCATION: HAAF / Bulk Fuels Fac.	
5. NAME OF DRILLER: W. Parker / K. Ledbetter	6. MANUFACTURERS DESIGNATION OF DRILL: General 210	Hole Digger
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: General 210 Hole Digger with 2-in. diam. solid-stem auger.	8. HOLE LOCATION: Tank 7003 Site.	
	9. SURFACE ELEVATION:	
	10. DATE STARTED: 11/12/06	11. DATE COMPLETED: 11/12/06
12. OVERBURDEN THICKNESS: N/A	15. DEPTH GROUNDWATER ENCOUNTERED: N/A	
13. DEPTH DRILLED INTO ROCK: N/A	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: Dry / 2 days.	
14. TOTAL DEPTH OF HOLE: 5.0 Ft	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY):	

18. GEOTECHNICAL SAMPLES: ~~DISTURBED~~ N/A		UNDISTURBED N/A		19. TOTAL NUMBER OF CORE BOXES: N/A		
20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %
	N/A	N/A	N/A			
22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY) Fuel Point	23. SIGNATURE OF INSPECTOR: Matthew Coffey		

LOCATION SKETCH/COMMENTS

SCALE:

See page 4, this logbook, for location sketch.

HTRW DRILLING LOG

HOLE NUMBER FP-42

PROJECT: Bulk Fuels Product Del. | INSPECTOR Timothy Coffey | SHEET 2 OF 2

ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	HEADSPACE SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	1	Dark yellow-brown (10YR 4/6) sand: dry; rel. loose, F- to m-grnd.				
	2	Very dark gray (10YR 3/1) silty sand: dry to moist, F- to m-grnd.				
	3	Black (10YR 2/1) silty sand: moist, F-grnd, sl. packed, massive. becoming: clayey: moist; sl. plastic.	PID reading at B/H collar = 5 ppm	N/A	N/A	
	4	Bluish-gray (10B 5/1) clay: moist, plastic, rel. soft, sand ≤ 10%				
	5	End of Boring.		TD = 5.0 Ft.		
	6					
	7					
	8					
	9					
	10					

INSTALLATION LOGS AND WELL CONSTRUCTION DIAGRAMS

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MONITORING WELL INSTALLATION LOG

PROJECT: Bulk Fuel Facility **DELIVERY ORDER:** 0066

MONITORING WELL ID: FP-01

INSTALLATION START: DATE: 11/10/06 TIME: 1200

INSTALLATION FINISH: DATE: 11/10/06 TIME: 1330

ANNULAR SPACE MATERIALS INVENTORY:

GRANULAR FILTER PACK: TYPE: W.G. #1 QUANTITY: 5 lbs

BENTONITE SEAL: TYPE: DSI Easy Seal QUANTITY: 1-2 lbs

GROUT: TYPE: N/A QUANTITY: N/A

DESCRIPTION OF WELL SCREEN:

SLOT SIZE (inches): .01 SLOT CONFIGURATION: Horizontal

TOTAL OPEN AREA PER FOOT OF SCREEN: N/A

OUTSIDE DIAMETER: 1 7/8-in. NOMINAL INSIDE DIAMETER: 1 5/8-in.

SCHEDULE/THICKNESS: Sched. 40 COMPOSITION: PVC

MANUFACTURER: ECT Manufacturing.

TYPE OF MATERIAL BETWEEN BOTTOM OF BORING AND SCREEN: Native Formations

DESCRIPTION OF WELL CASING:

OUTSIDE DIAMETER: 1 7/8-in. NOMINAL INSIDE DIAMETER: 1 5/8-in.

SCHEDULE/THICKNESS: Sched. 40 COMPOSITION: PVC

MANUFACTURER: ECT Manufacturing

JOINT DESIGN AND COMPOSITION: Flush-threaded / slip-cap on bottom

CENTRALIZERS DESIGN AND COMPOSITION: N/A

DESCRIPTION OF PROTECTIVE CASING:

NOMINAL INSIDE DIAMETER: 6-in. COMPOSITION: Steel.

SPECIAL PROBLEMS ENCOUNTERED DURING WELL CONSTRUCTION AND THEIR RESOLUTION:

Was all well screen and casing material used for construction free of foreign matter (e.g., adhesive tape, labels, soil, etc.)? YES [✓] NO [ ]

Was all well screen and casing material used for construction free of unsecured couplings, ruptures, and other physical breakage and/or defects? YES [✓] NO [ ]

Is deformation or bending of the installed well screen and casing minimized to the point of allowing the insertion and retrieval of a 1.0-inch bailer throughout the entire length of the completed well? YES [✓] NO [ ]

QUANTITY OF APPROVED WATER USED FOR FILTER PACK ENPLACEMENT: NONE

RECORDED BY: Wyatt Tam 11/27/06 (Signature & Date) **QA CHECK BY:** (Signature & Date)

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MONITORING WELL

PROJECT: Bulk Fuel Facility

DELIVERY ORDER NO: 0066

WELL NUMBER: FP-01

BEGIN: 11/10/06

END: 11/10/06

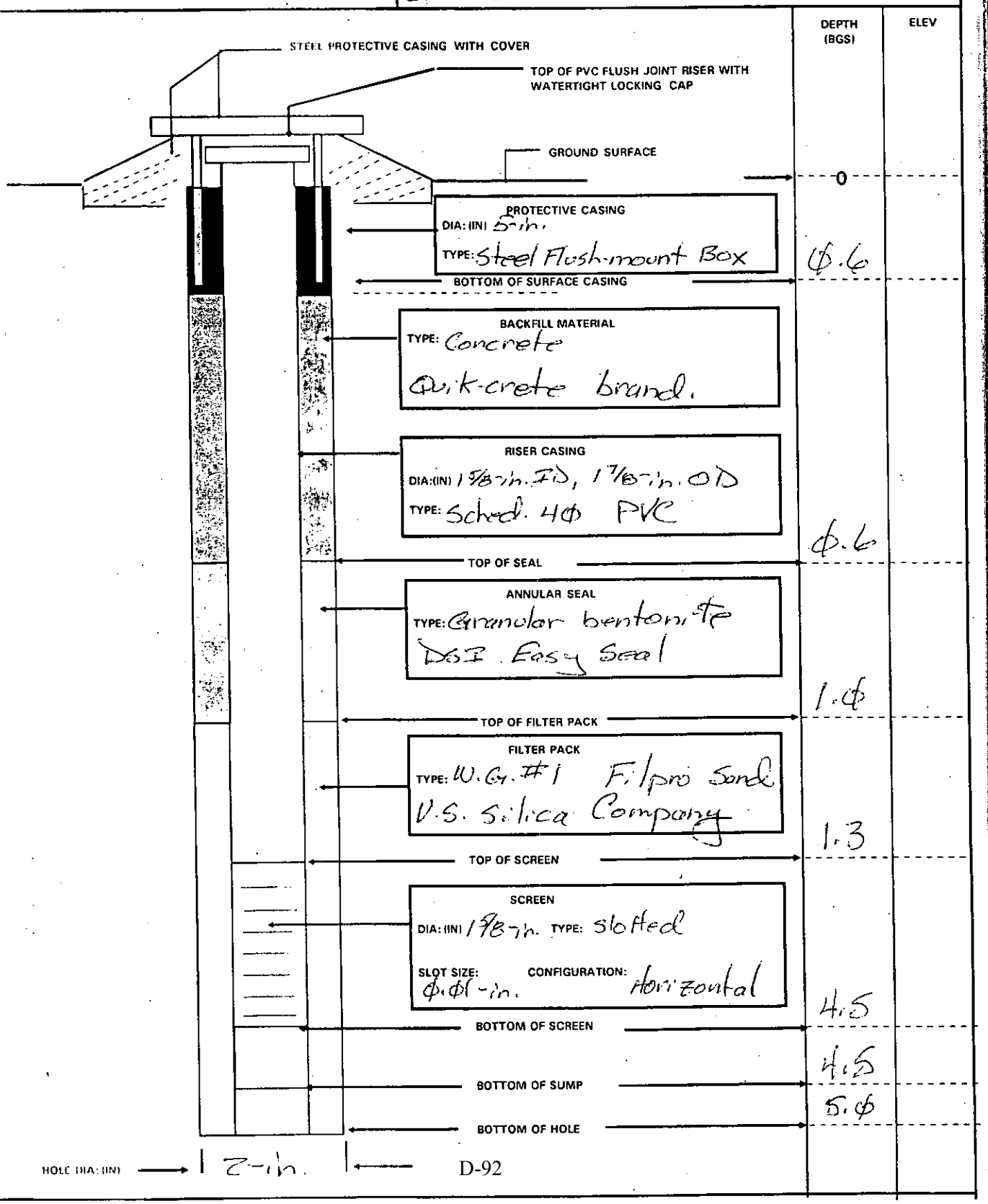
COORDINATES: N:
E:

DATUM/UNITS:

REFERENCE POINT: Ground Surface.

ELEVATION:

DATUM/UNITS:



MONITORING WELL INSTALLATION LOG

PROJECT: Bulk Fuel Facility **DELIVERY ORDER:** 0066

MONITORING WELL ID: FP-02

INSTALLATION START: DATE: 11/10/06 TIME: 1400

INSTALLATION FINISH: DATE: 11/10/06 TIME: 1545

ANNULAR SPACE MATERIALS INVENTORY:

GRANULAR FILTER PACK: TYPE: W.G. #1 QUANTITY: 5 lbs

BENTONITE SEAL: TYPE: DSI Easy Seal QUANTITY: 1-2 lbs

GROUT: TYPE: N/A QUANTITY: N/A

DESCRIPTION OF WELL SCREEN:

SLOT SIZE (inches): 0.01 SLOT CONFIGURATION: Horizontal

TOTAL OPEN AREA PER FOOT OF SCREEN: N/A

OUTSIDE DIAMETER: 1 7/8-in. NOMINAL INSIDE DIAMETER: 1 5/8-in.

SCHEDULE/THICKNESS: Sched. 40 COMPOSITION: PVC

MANUFACTURER: ECT Manufacturing

TYPE OF MATERIAL BETWEEN BOTTOM OF BORING AND SCREEN: Native Formations.

DESCRIPTION OF WELL CASING:

OUTSIDE DIAMETER: 1 7/8-in. NOMINAL INSIDE DIAMETER: 1 5/8-in.

SCHEDULE/THICKNESS: Sched. 40 COMPOSITION: PVC

MANUFACTURER: ECT Manufacturing.

JOINT DESIGN AND COMPOSITION: Flush-threaded/slip-cap on bottom.

CENTRALIZERS DESIGN AND COMPOSITION: N/A

DESCRIPTION OF PROTECTIVE CASING:

NOMINAL INSIDE DIAMETER: 5-in. COMPOSITION: steel.

SPECIAL PROBLEMS ENCOUNTERED DURING WELL CONSTRUCTION AND THEIR RESOLUTION:

Was all well screen and casing material used for construction free of foreign matter (e.g., adhesive tape, labels, soil, etc.)? YES [✓] NO [ ]

Was all well screen and casing material used for construction free of unsecured couplings, ruptures, and other physical breakage and/or defects? YES [✓] NO [ ]

Is deformation or bending of the installed well screen and casing minimized to the point of allowing the insertion and retrieval of a 1.0-inch bailer throughout the entire length of the completed well? YES [✓] NO [ ]

QUANTITY OF APPROVED WATER USED FOR FILTER PACK ENPLACEMENT: NONE

RECORDED BY: [signature] 11/27/06 (Signature & Date) **QA CHECK BY:** _____ (Signature & Date)

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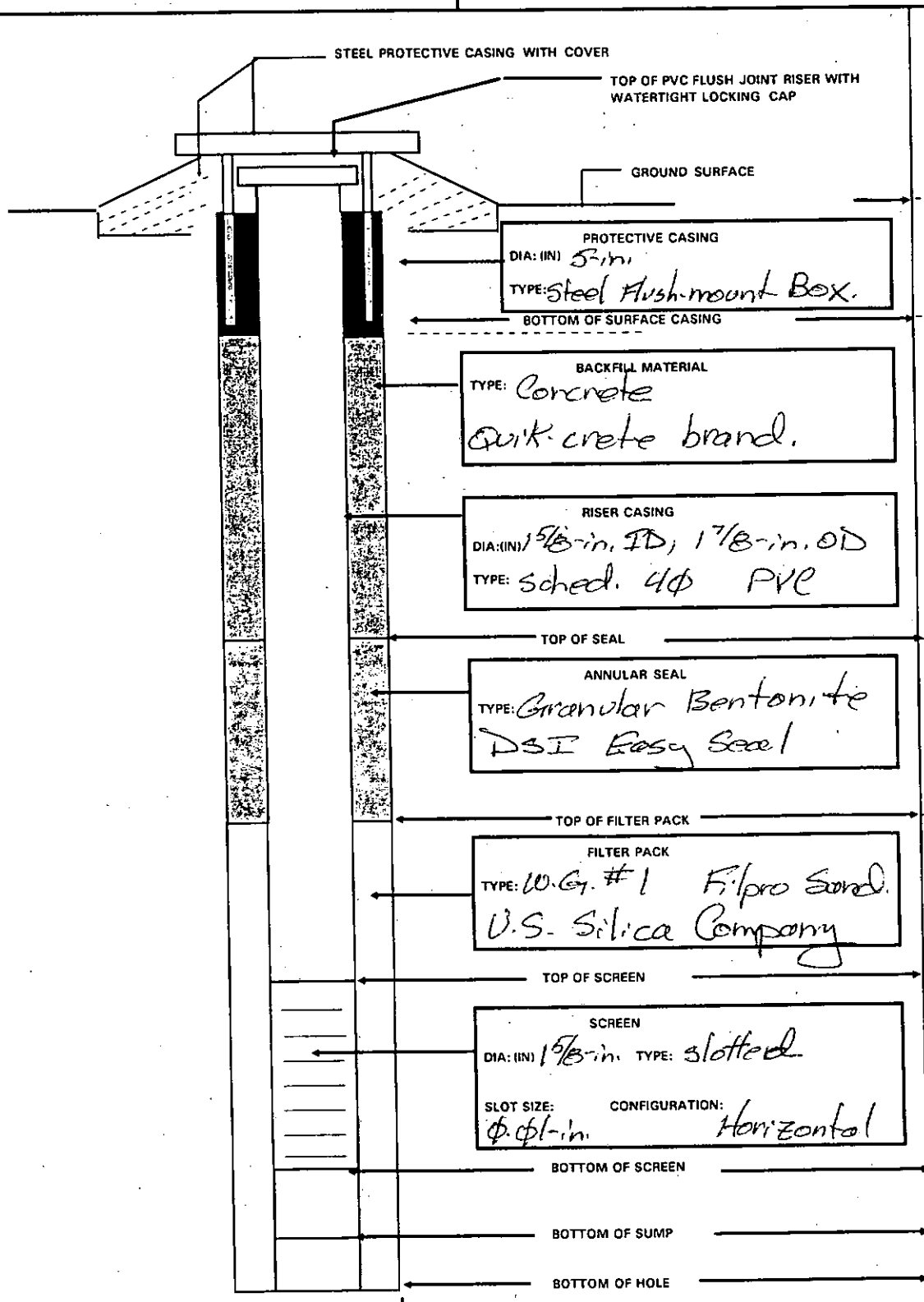
MONITORING WELL

PROJECT: Bulk Fuel Facility
DELIVERY ORDER NO: 0066

WELL NUMBER: FP-02
BEGIN: 11/10/06
END: 11/10/06
COORDINATES: N:
E:
DATUM/UNITS:
REFERENCE POINT: Ground Surface. **ELEVATION:** **DATUM/UNITS:**



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MONITORING WELL INSTALLATION LOG

PROJECT: Bulk Fuel Facility **DELIVERY ORDER:** 0066

MONITORING WELL ID: FP-03

INSTALLATION START: DATE: 11/11/06 TIME: 0745

INSTALLATION FINISH: DATE: 11/11/06 TIME: 0809

ANNULAR SPACE MATERIALS INVENTORY:

- **GRANULAR FILTER PACK:** TYPE: W.G. #1 QUANTITY: 5 lbs
- **BENTONITE SEAL:** TYPE: DSI Easy Seal QUANTITY: 1-2 lbs
- **GROUT:** TYPE: N/A QUANTITY: N/A

DESCRIPTION OF WELL SCREEN:

- **SLOT SIZE (inches):** 0.01 **SLOT CONFIGURATION:** Horizontal
- **TOTAL OPEN AREA PER FOOT OF SCREEN:** N/A
- **OUTSIDE DIAMETER:** 1 7/8-in. **NOMINAL INSIDE DIAMETER:** 1 5/8-in.
- **SCHEDULE/THICKNESS:** Sched. 40 **COMPOSITION:** PVC
- **MANUFACTURER:** ECT Manufacturing.

TYPE OF MATERIAL BETWEEN BOTTOM OF BORING AND SCREEN: _____

DESCRIPTION OF WELL CASING:

- **OUTSIDE DIAMETER:** 1 7/8-in. **NOMINAL INSIDE DIAMETER:** 1 5/8-in.
- **SCHEDULE/THICKNESS:** Sched. 40 **COMPOSITION:** PVC
- **MANUFACTURER:** ECT Manufacturing.

JOINT DESIGN AND COMPOSITION: Flush-threaded/slip-cap on bottom.

CENTRALIZERS DESIGN AND COMPOSITION: N/A

DESCRIPTION OF PROTECTIVE CASING:

- **NOMINAL INSIDE DIAMETER:** 5-in. **COMPOSITION:** Steel.

SPECIAL PROBLEMS ENCOUNTERED DURING WELL CONSTRUCTION AND THEIR RESOLUTION:

None.

Was all well screen and casing material used for construction free of foreign matter (e.g., adhesive tape, labels, soil, etc.)? YES [X] NO [ ]

Was all well screen and casing material used for construction free of unsecured couplings, ruptures, and other physical breakage and/or defects? YES [X] NO [ ]

Is deformation or bending of the installed well screen and casing minimized to the point of allowing the insertion and retrieval of a 1.0-inch bailer throughout the entire length of the completed well? YES [X] NO [ ]

QUANTITY OF APPROVED WATER USED FOR FILTER PACK ENPLACEMENT: None

RECORDED BY: [signature] 11/12/06 (Signature & Date) **QA CHECK BY:** Wayne H. Patton 11/27/06 (Signature & Date)

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MONITORING WELL

PROJECT: Bulk Fuel Facility

DELIVERY ORDER NO: 0066

WELL NUMBER: FP-03

BEGIN: 11/11/96

END: 11/11/96

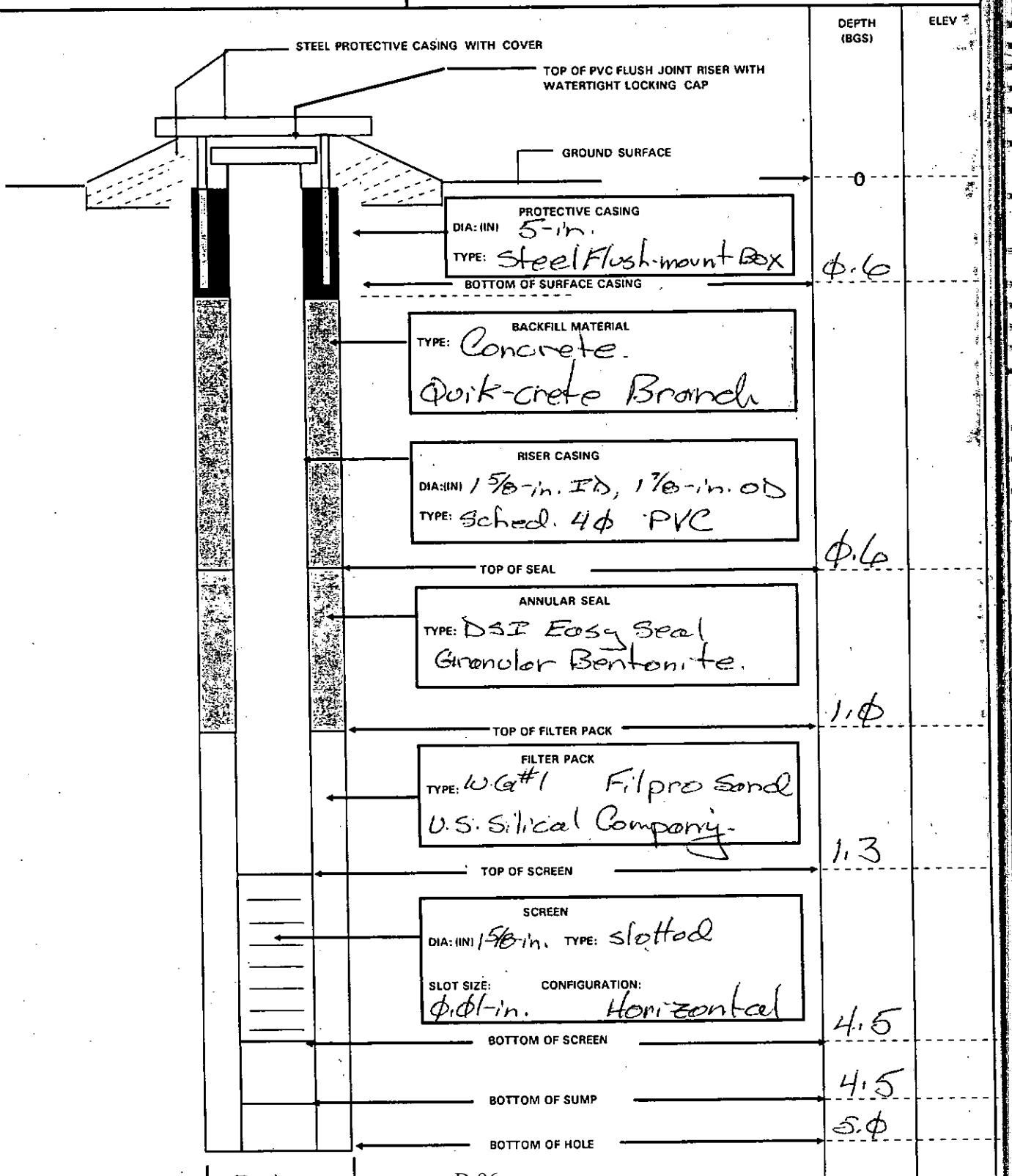
COORDINATES: N:
E:

DATUM/UNITS:

REFERENCE POINT: Ground Surface

ELEVATION:

DATUM/UNITS:



MONITORING WELL INSTALLATION LOG

PROJECT: Bulk Fuel Facility DELIVERY ORDER: 0066

MONITORING WELL ID: FP-04

INSTALLATION START: DATE: 11/11/06 TIME: 0820

INSTALLATION FINISH: DATE: 11/11/06 TIME: 0828

ANNULAR SPACE MATERIALS INVENTORY:

GRANULAR FILTER PACK: TYPE: #1 W.G. QUANTITY: 5 lbs.

BENTONITE SEAL: TYPE: DSI EasySeal QUANTITY: 1-2 lbs.

GROUT: TYPE: N/A QUANTITY: N/A

DESCRIPTION OF WELL SCREEN:

SLOT SIZE (inches): 0.01 SLOT CONFIGURATION: Horizontal

TOTAL OPEN AREA PER FOOT OF SCREEN: N/A

OUTSIDE DIAMETER: 1 7/8-in. NOMINAL INSIDE DIAMETER: 1 5/8-in.

SCHEDULE/THICKNESS: Sched. 40 COMPOSITION: PVC

MANUFACTURER: ECT Manufacturing.

TYPE OF MATERIAL BETWEEN BOTTOM OF BORING AND SCREEN: Native formations.

DESCRIPTION OF WELL CASING:

OUTSIDE DIAMETER: 1 7/8-in. NOMINAL INSIDE DIAMETER: 1 5/8-in.

SCHEDULE/THICKNESS: Sched. 40 COMPOSITION: PVC

MANUFACTURER: ECT Manufacturing.

JOINT DESIGN AND COMPOSITION: Flush-threaded/slip-cap on bottom

CENTRALIZERS DESIGN AND COMPOSITION: N/A

DESCRIPTION OF PROTECTIVE CASING:

NOMINAL INSIDE DIAMETER: 5-in. COMPOSITION: steel

SPECIAL PROBLEMS ENCOUNTERED DURING WELL CONSTRUCTION AND THEIR RESOLUTION:

None.

Was all well screen and casing material used for construction free of foreign matter (e.g., adhesive tape, labels, soil, etc.)? YES [X] NO [ ]

Was all well screen and casing material used for construction free of unsecured couplings, ruptures, and other physical breakage and/or defects? YES [X] NO [ ]

Is deformation or bending of the installed well screen and casing minimized to the point of allowing the insertion and retrieval of a 1.0-inch bailer throughout the entire length of the completed well? YES [X] NO [ ]

QUANTITY OF APPROVED WATER USED FOR FILTER PACK ENPLACEMENT: None.

RECORDED BY: [signature] 11/12/06 (Signature & Date)

QA CHECK BY: Wayne L. Parker 11/27/06 (Signature & Date)

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MONITORING WELL

PROJECT: Bulk Fuel Facility

DELIVERY ORDER NO: 0066

WELL NUMBER: FP-04

BEGIN: 11/11/06

END: 11/11/06

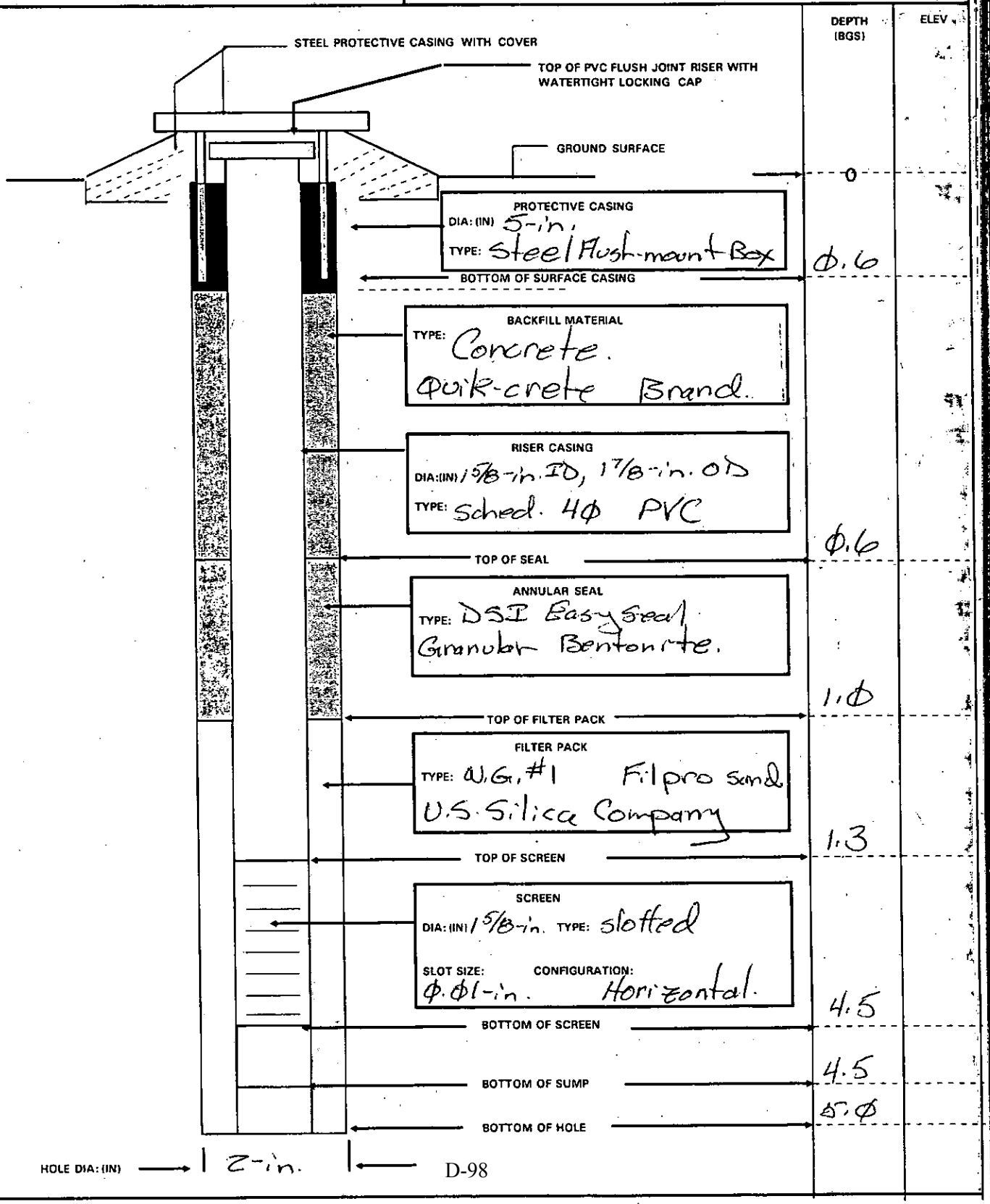
COORDINATES: N:
E:

DATUM/UNITS:

REFERENCE POINT: Ground Surface

ELEVATION:

DATUM/UNITS:



MONITORING WELL INSTALLATION LOG

PROJECT: Bulk Fuel Facility **DELIVERY ORDER:** 0066

MONITORING WELL ID: FP-05

INSTALLATION START: DATE: 11/11/06 TIME: 0837

INSTALLATION FINISH: DATE: 11/11/06 TIME: ~~0854~~ 0839 TSC 11/12/06

ANNULAR SPACE MATERIALS INVENTORY:

- GRANULAR FILTER PACK: TYPE: QG. #1 QUANTITY: 5 lbs.
- BENTONITE SEAL: TYPE: DSI Easy Seal QUANTITY: 1-2 lbs
- GROUT: TYPE: N/A QUANTITY: N/A

DESCRIPTION OF WELL SCREEN:

- SLOT SIZE (inches): 0.01 SLOT CONFIGURATION: Horizontal
- TOTAL OPEN AREA PER FOOT OF SCREEN: N/A
- OUTSIDE DIAMETER: 1 7/8-in. NOMINAL INSIDE DIAMETER: 1 5/8-in.
- SCHEDULE/THICKNESS: Sched. 40 COMPOSITION: PVC
- MANUFACTURER: ECT Manufacturing.

TYPE OF MATERIAL BETWEEN BOTTOM OF BORING AND SCREEN: Native Formations.

DESCRIPTION OF WELL CASING:

- OUTSIDE DIAMETER: 1 7/8-in. NOMINAL INSIDE DIAMETER: 1 5/8-in.
- SCHEDULE/THICKNESS: Sched. 40 COMPOSITION: PVC
- MANUFACTURER: ECT Manufacturing.

JOINT DESIGN AND COMPOSITION: Flush-threaded/slip-cap on bottom

CENTRALIZERS DESIGN AND COMPOSITION: N/A

DESCRIPTION OF PROTECTIVE CASING:

- NOMINAL INSIDE DIAMETER: 5-in. COMPOSITION: Steel.

SPECIAL PROBLEMS ENCOUNTERED DURING WELL CONSTRUCTION AND THEIR RESOLUTION:

None.

Was all well screen and casing material used for construction free of foreign matter (e.g., adhesive tape, labels, soil, etc.)? YES [X] NO [ ]

Was all well screen and casing material used for construction free of unsecured couplings, ruptures, and other physical breakage and/or defects? YES [X] NO [ ]

Is deformation or bending of the installed well screen and casing minimized to the point of allowing the insertion and retrieval of a 1.0-inch bailer throughout the entire length of the completed well? YES [X] NO [ ]

QUANTITY OF APPROVED WATER USED FOR FILTER PACK ENPLACEMENT: None.

RECORDED BY: [signature] 11/12/06 (Signature & Date) **QA CHECK BY:** Wayne A. Parker 11/22/06 (Signature & Date)

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MONITORING WELL

PROJECT: Bulk Fuel Facility

DELIVERY ORDER NO: 0066

WELL NUMBER: FP-05

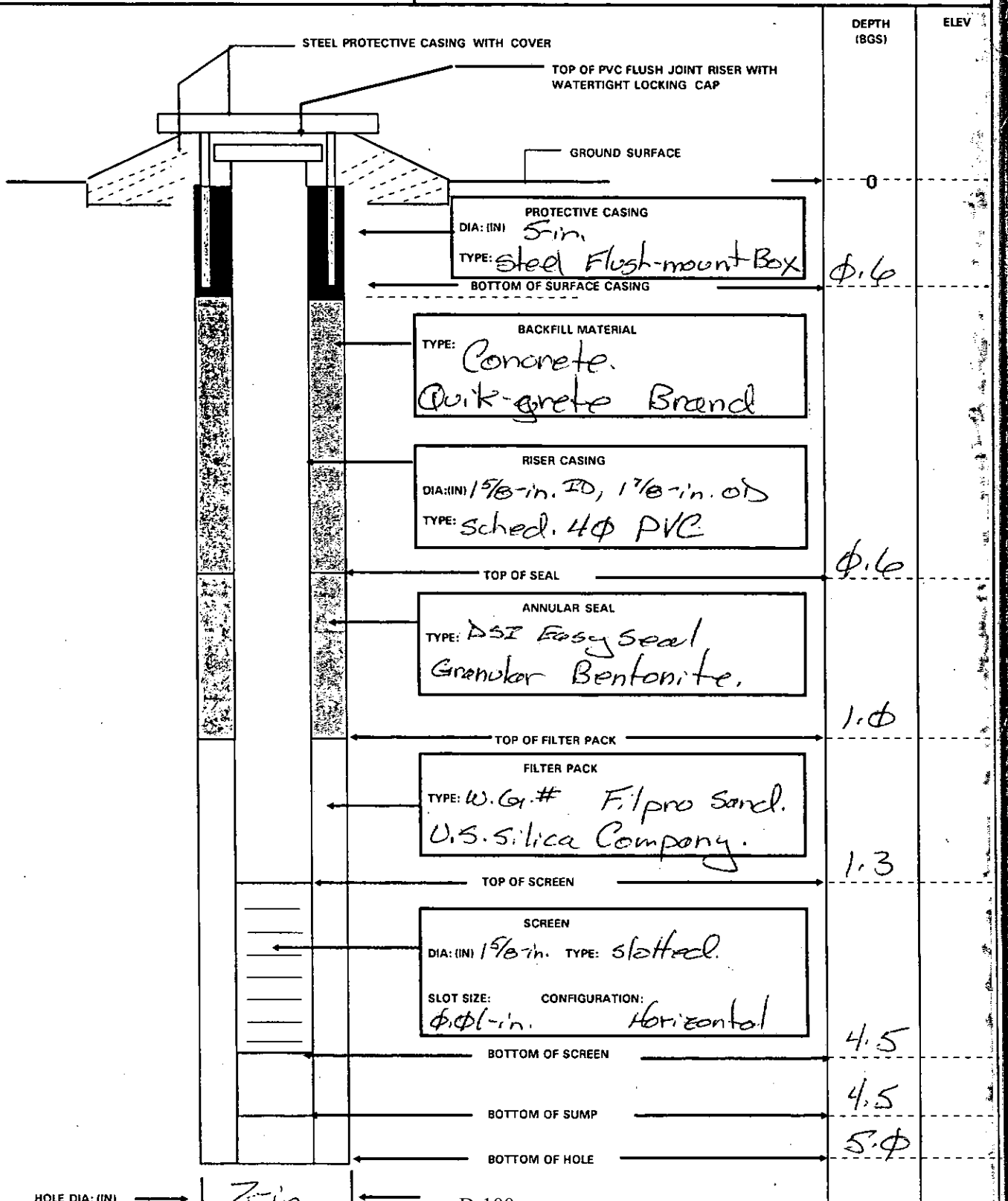
BEGIN: 11/11/06

END: 11/11/06

COORDINATES: N:
E:

DATUM/UNITS:

REFERENCE POINT: ELEVATION: DATUM/UNITS: Ground Surface.



MONITORING WELL INSTALLATION LOG

PROJECT: Bulk Fuel Facility **DELIVERY ORDER:** 0066

MONITORING WELL ID: FP-06

INSTALLATION START: DATE: 11/11/06 TIME: 0849

INSTALLATION FINISH: DATE: 11/11/06 TIME: 0854

ANNULAR SPACE MATERIALS INVENTORY:

- **GRANULAR FILTER PACK:** TYPE: W.G. #1 QUANTITY: 5 lbs
- **BENTONITE SEAL:** TYPE: DSI Easy Seal QUANTITY: 1-2 lbs
- **GROUT:** TYPE: N/A QUANTITY: N/A

DESCRIPTION OF WELL SCREEN:

- **SLOT SIZE (inches):** 0.01 **SLOT CONFIGURATION:** Horizontal
- **TOTAL OPEN AREA PER FOOT OF SCREEN:** N/A
- **OUTSIDE DIAMETER:** 1 7/8-in. **NOMINAL INSIDE DIAMETER:** 1 5/8-in.
- **SCHEDULE/THICKNESS:** Sched. 40 **COMPOSITION:** PVC
- **MANUFACTURER:** ECT Manufacturing

TYPE OF MATERIAL BETWEEN BOTTOM OF BORING AND SCREEN: Native Formations

DESCRIPTION OF WELL CASING:

- **OUTSIDE DIAMETER:** 1 7/8-in. **NOMINAL INSIDE DIAMETER:** 1 5/8-in.
- **SCHEDULE/THICKNESS:** Sched. 40 **COMPOSITION:** PVC
- **MANUFACTURER:** ECT Manufacturing

JOINT DESIGN AND COMPOSITION: Flush-threaded/slip-cap on bottom

CENTRALIZERS DESIGN AND COMPOSITION: None

DESCRIPTION OF PROTECTIVE CASING:

- **NOMINAL INSIDE DIAMETER:** 5-in. **COMPOSITION:** Steel

SPECIAL PROBLEMS ENCOUNTERED DURING WELL CONSTRUCTION AND THEIR RESOLUTION:

None.

Was all well screen and casing material used for construction free of foreign matter (e.g., adhesive tape, labels, soil, etc.)? YES [X] NO [ ]

Was all well screen and casing material used for construction free of unsecured couplings, ruptures, and other physical breakage and/or defects? YES [X] NO [ ]

Is deformation or bending of the installed well screen and casing minimized to the point of allowing the insertion and retrieval of a 1.0-inch bailer throughout the entire length of the completed well? YES [X] NO [ ]

QUANTITY OF APPROVED WATER USED FOR FILTER PACK ENPLACEMENT: None

RECORDED BY: [signature] 11/13/06 (Signature & Date)

QA CHECK BY: [signature] 11/27/06 (Signature & Date)

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MONITORING WELL

PROJECT: Bulk Fuel Facility

DELIVERY ORDER NO: 0066

WELL NUMBER: FP-06

BEGIN: 11/11/06

END: 11/11/06

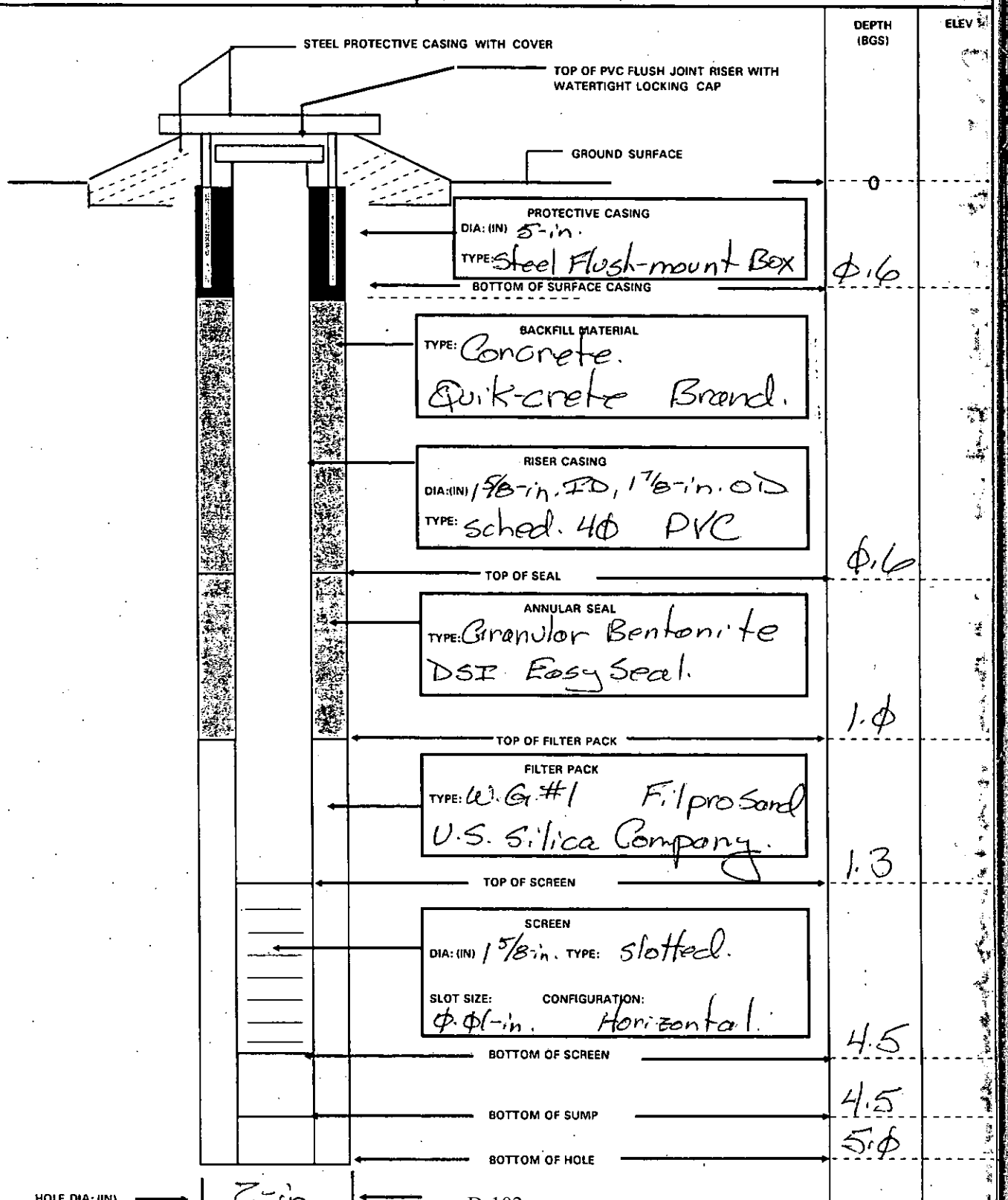
COORDINATES: N:

E:

DATUM/UNITS:

REFERENCE POINT: ELEVATION: DATUM/UNITS:

Ground Surface.



MONITORING WELL INSTALLATION LOG

PROJECT: Bulk Fuel Facility **DELIVERY ORDER:** 0066

MONITORING WELL ID: FP-07

INSTALLATION START: DATE: 11/11/06 TIME: 0901

INSTALLATION FINISH: DATE: 11/11/06 TIME: 0909

ANNULAR SPACE MATERIALS INVENTORY:

- **GRANULAR FILTER PACK:** TYPE: W.G. #1 QUANTITY: 5 lbs.
- **BENTONITE SEAL:** TYPE: DSI Easy Seal QUANTITY: 1-2 lbs.
- **GROUT:** TYPE: N/A QUANTITY: N/A

DESCRIPTION OF WELL SCREEN:

- **SLOT SIZE (inches):** 0.01 **SLOT CONFIGURATION:** Horizontal
- **TOTAL OPEN AREA PER FOOT OF SCREEN:** N/A
- **OUTSIDE DIAMETER:** 1 7/8-in. **NOMINAL INSIDE DIAMETER:** 1 5/8-in.
- **SCHEDULE/THICKNESS:** Sched. 40 **COMPOSITION:** PVC
- **MANUFACTURER:** ECT Manufacturing.

TYPE OF MATERIAL BETWEEN BOTTOM OF BORING AND SCREEN: Native Formations.

DESCRIPTION OF WELL CASING:

- **OUTSIDE DIAMETER:** 1 7/8-in. **NOMINAL INSIDE DIAMETER:** 1 5/8-in.
- **SCHEDULE/THICKNESS:** Sched. 40 **COMPOSITION:** PVC
- **MANUFACTURER:** ECT Manufacturing.

JOINT DESIGN AND COMPOSITION: Flush-threaded/slip-cap on bottom

CENTRALIZERS DESIGN AND COMPOSITION: N/A

DESCRIPTION OF PROTECTIVE CASING:

- **NOMINAL INSIDE DIAMETER:** 6-in. **COMPOSITION:** Steel

SPECIAL PROBLEMS ENCOUNTERED DURING WELL CONSTRUCTION AND THEIR RESOLUTION:

None.

Was all well screen and casing material used for construction free of foreign matter (e.g., adhesive tape, labels, soil, etc.)? YES [X] NO [ ]

Was all well screen and casing material used for construction free of unsecured couplings, ruptures, and other physical breakage and/or defects? YES [X] NO [ ]

Is deformation or bending of the installed well screen and casing minimized to the point of allowing the insertion and retrieval of a 1.0-inch bailer throughout the entire length of the completed well? YES [X] NO [ ]

QUANTITY OF APPROVED WATER USED FOR FILTER PACK EMPLACEMENT: None

RECORDED BY: [signature] 11/13/06 (Signature & Date) **QA CHECK BY:** Wayne M. Pash 11/27/06 (Signature & Date)

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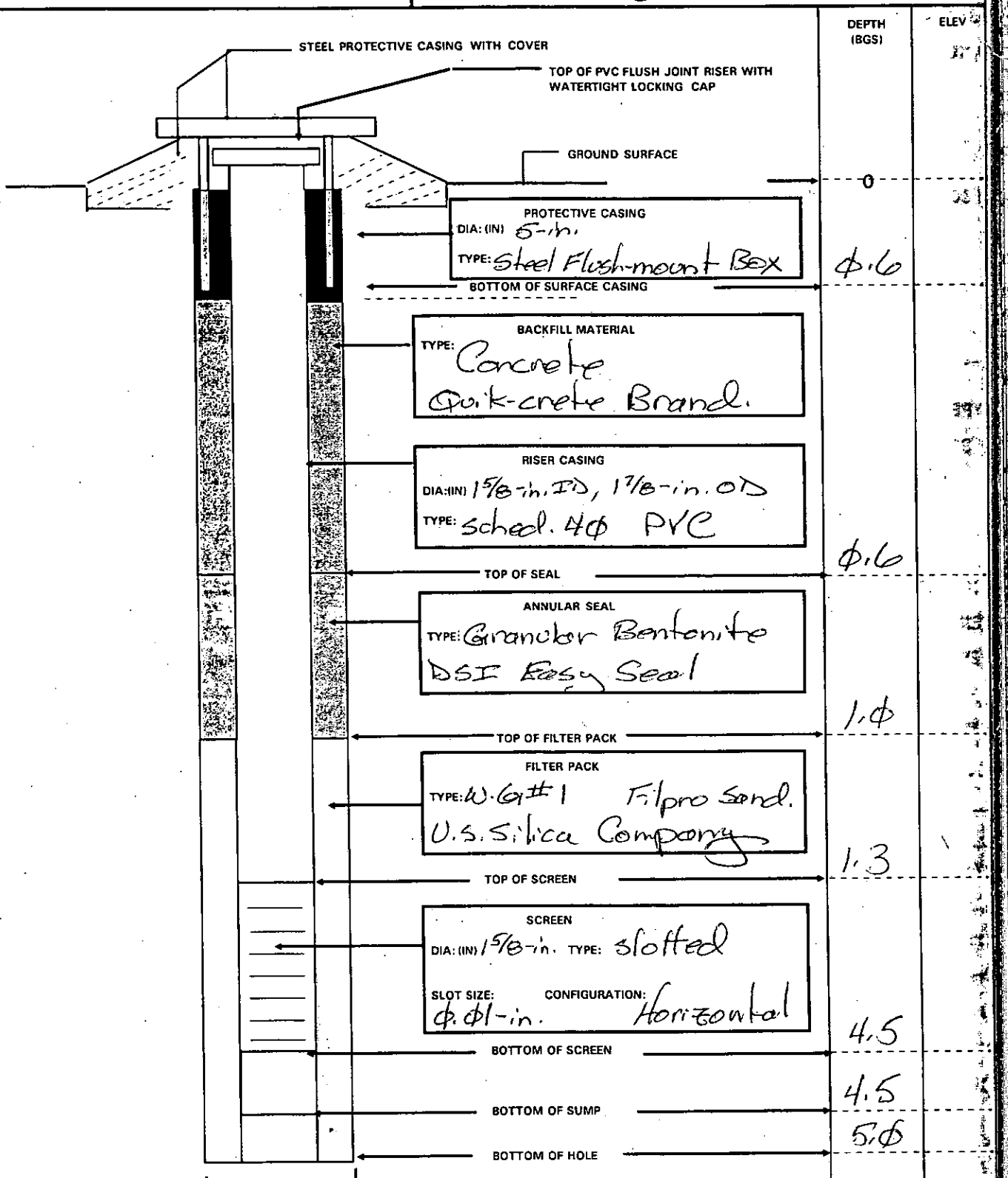
MONITORING WELL

PROJECT: Bulk Fuel Facility
DELIVERY ORDER NO: 0066

WELL NUMBER: FP-07
BEGIN: 11/11/96
END: 11/11/96

COORDINATES: N:
E:
DATUM/UNITS:

REFERENCE POINT: Ground Surface.
ELEVATION:
DATUM/UNITS:



MONITORING WELL INSTALLATION LOG

PROJECT: Bulk Fuel Facility **DELIVERY ORDER:** 0066

MONITORING WELL ID: FP-06

INSTALLATION START: DATE: 11/11/06 TIME: 0920

INSTALLATION FINISH: DATE: 11/11/06 TIME: 0924

ANNULAR SPACE MATERIALS INVENTORY:

- **GRANULAR FILTER PACK:** TYPE: W.G. #1 QUANTITY: 5 lbs
- **BENTONITE SEAL:** TYPE: DSI Easy Seal QUANTITY: 1-2 lbs
- **GROUT:** TYPE: N/A QUANTITY: N/A

DESCRIPTION OF WELL SCREEN:

- **SLOT SIZE (inches):** 0.01 **SLOT CONFIGURATION:** Horizontal
- **TOTAL OPEN AREA PER FOOT OF SCREEN:** N/A
- **OUTSIDE DIAMETER:** 1 7/8-in. **NOMINAL INSIDE DIAMETER:** 1 5/8-in.
- **SCHEDULE/THICKNESS:** Sched. 40 **COMPOSITION:** PVC
- **MANUFACTURER:** ECT Manufacturing.

TYPE OF MATERIAL BETWEEN BOTTOM OF BORING AND SCREEN: Native Formations.

DESCRIPTION OF WELL CASING:

- **OUTSIDE DIAMETER:** 1 7/8-in. **NOMINAL INSIDE DIAMETER:** 1 5/8-in.
- **SCHEDULE/THICKNESS:** Sched. 40 **COMPOSITION:** PVC
- **MANUFACTURER:** ECT Manufacturing.

JOINT DESIGN AND COMPOSITION: Flush-threaded/slip-cap on bottom

CENTRALIZERS DESIGN AND COMPOSITION: N/A

DESCRIPTION OF PROTECTIVE CASING:

- **NOMINAL INSIDE DIAMETER:** 5-in. **COMPOSITION:** Steel.

SPECIAL PROBLEMS ENCOUNTERED DURING WELL CONSTRUCTION AND THEIR RESOLUTION:

None.

Was all well screen and casing material used for construction free of foreign matter (e.g., adhesive tape, labels, soil, etc.)? YES [X] NO [ ]

Was all well screen and casing material used for construction free of unsecured couplings, ruptures, and other physical breakage and/or defects? YES [X] NO [ ]

Is deformation or bending of the installed well screen and casing minimized to the point of allowing the insertion and retrieval of a 1.0-inch bailer throughout the entire length of the completed well? YES [X] NO [ ]

QUANTITY OF APPROVED WATER USED FOR FILTER PACK ENPLACEMENT: None.

RECORDED BY: [signature] 11/13/06 (Signature & Date) **QA CHECK BY:** [signature] 11/27/06 (Signature & Date)

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MONITORING WELL

PROJECT: Bulk Fuel Facility

DELIVERY ORDER NO: 0066

WELL NUMBER: FP-08

BEGIN: 11/11/06

END: 11/11/06

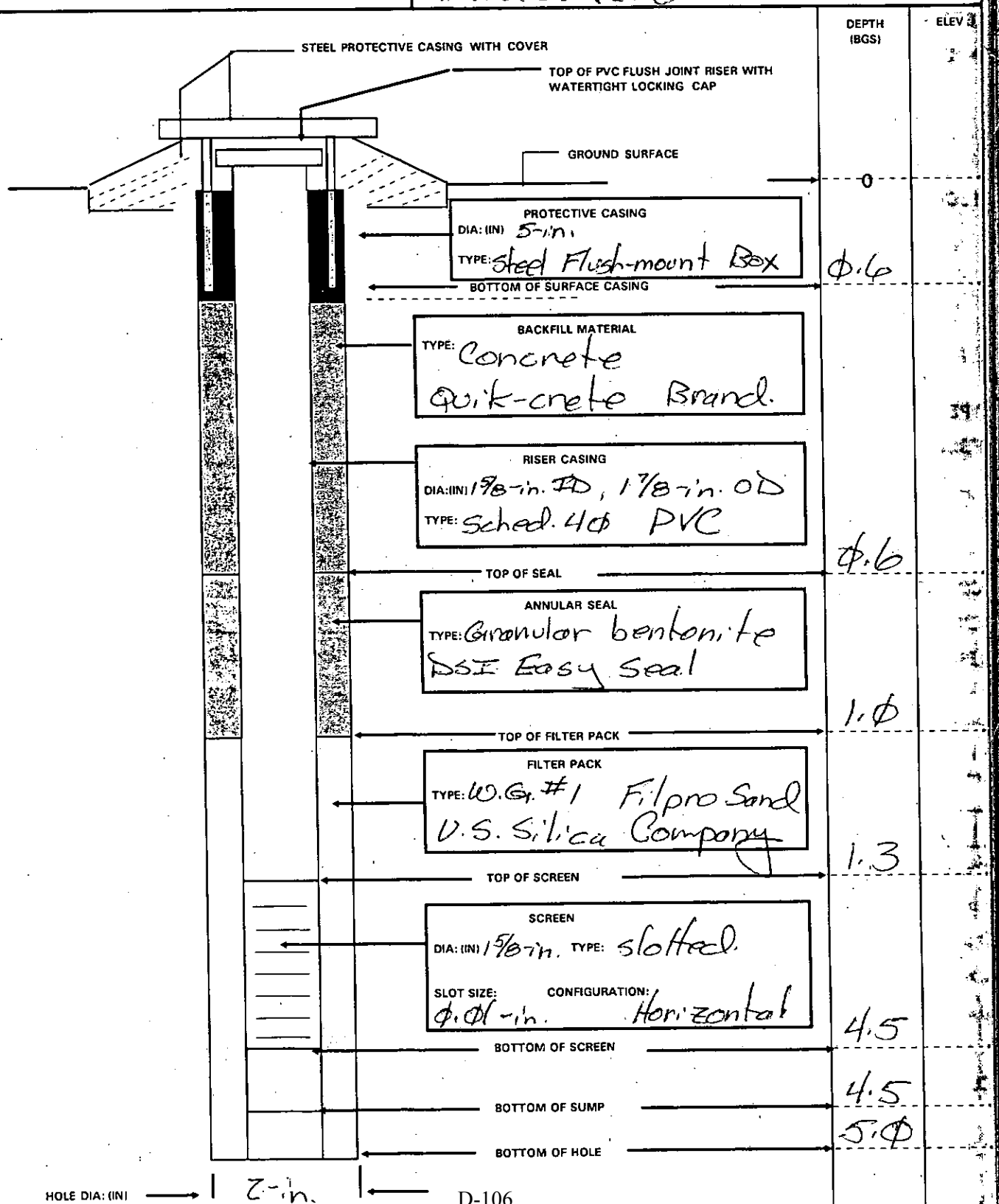
COORDINATES: N:
E:

DATUM/UNITS:

REFERENCE POINT: Ground Surface

ELEVATION:

DATUM/UNITS:



MONITORING WELL INSTALLATION LOG

PROJECT: Bulk Fuel Facility **DELIVERY ORDER:** 0066

MONITORING WELL ID: FP-09

INSTALLATION START: DATE: 11/11/06 TIME: 0933

INSTALLATION FINISH: DATE: 11/11/06 TIME: 0944

ANNULAR SPACE MATERIALS INVENTORY:

GRANULAR FILTER PACK: TYPE: W.G. #1 QUANTITY: 5 lbs.

BENTONITE SEAL: TYPE: DSI Easy Seal QUANTITY: 1-2 lbs.

GROUT: TYPE: N/A QUANTITY: N/A

DESCRIPTION OF WELL SCREEN:

SLOT SIZE (inches): 0.01 SLOT CONFIGURATION: Horizontal

TOTAL OPEN AREA PER FOOT OF SCREEN: N/A

OUTSIDE DIAMETER: 1 7/8-in. NOMINAL INSIDE DIAMETER: 1 5/8-in.

SCHEDULE/THICKNESS: Sched. 40 COMPOSITION: PVC

MANUFACTURER: ECT Manufacturing.

TYPE OF MATERIAL BETWEEN BOTTOM OF BORING AND SCREEN: Native Formations

DESCRIPTION OF WELL CASING:

OUTSIDE DIAMETER: 1 7/8-in. NOMINAL INSIDE DIAMETER: 1 5/8-in.

SCHEDULE/THICKNESS: Sched. 40 COMPOSITION: PVC

MANUFACTURER: ECT Manufacturing.

JOINT DESIGN AND COMPOSITION: Flush-Threaded/slip-cap on bottom

CENTRALIZERS DESIGN AND COMPOSITION: N/A

DESCRIPTION OF PROTECTIVE CASING:

NOMINAL INSIDE DIAMETER: 6-in. COMPOSITION: Steel.

SPECIAL PROBLEMS ENCOUNTERED DURING WELL CONSTRUCTION AND THEIR RESOLUTION:

None.

Was all well screen and casing material used for construction free of foreign matter (e.g., adhesive tape, labels, soil, etc.)? YES [X] NO [ ]

Was all well screen and casing material used for construction free of unsecured couplings, ruptures, and other physical breakage and/or defects? YES [X] NO [ ]

Is deformation or bending of the installed well screen and casing minimized to the point of allowing the insertion and retrieval of a 1.0-inch bailer throughout the entire length of the completed well? YES [X] NO [ ]

QUANTITY OF APPROVED WATER USED FOR FILTER PACK ENPLACEMENT: None

RECORDED BY: Timothy Coffey 11/13/06 **QA CHECK BY:** Wayne Ahrens 11/27/06

(Signature & Date) (Signature & Date)

4.5

MONITORING WELL

PROJECT: Bulk Fuel Facility

DELIVERY ORDER NO: 0066

WELL NUMBER: FR-09

BEGIN: 11/11/96

END: 11/11/96

COORDINATES: N:

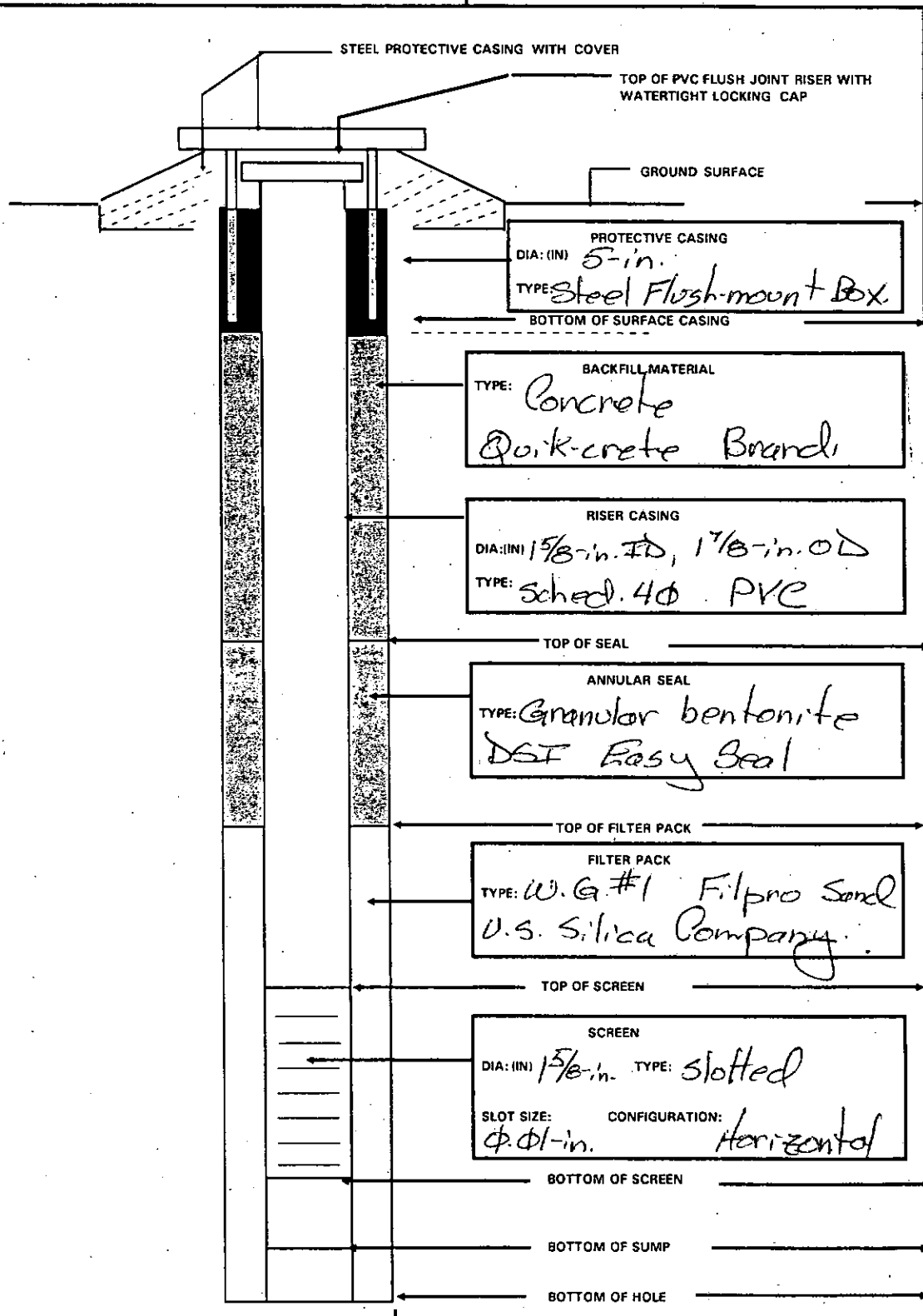
E:

DATUM/UNITS:

REFERENCE POINT: Ground Surface

ELEVATION:

DATUM/UNITS:



MONITORING WELL INSTALLATION LOG

PROJECT: Bulk Fuel Facility **DELIVERY ORDER:** 0066

MONITORING WELL ID: FP-1Φ

INSTALLATION START: DATE: 11/11/Φ6 TIME: 1ΦΦ6

INSTALLATION FINISH: DATE: 11/11/Φ6 TIME: 1Φ12

ANNULAR SPACE MATERIALS INVENTORY:

- GRANULAR FILTER PACK: TYPE: W.G. #1 QUANTITY: 5 lbs.
- BENTONITE SEAL: TYPE: DSI Easy Seal QUANTITY: 1-2 lbs.
- GROUT: TYPE: N/A QUANTITY: N/A

DESCRIPTION OF WELL SCREEN:

- SLOT SIZE (inches): Φ.Φ1 SLOT CONFIGURATION: Horizontal
- TOTAL OPEN AREA PER FOOT OF SCREEN: N/A
- OUTSIDE DIAMETER: 1 7/8-in. NOMINAL INSIDE DIAMETER: 1 5/8-in.
- SCHEDULE/THICKNESS: Sched. 4Φ COMPOSITION: PVC
- MANUFACTURER: ECT Manufacturing.

TYPE OF MATERIAL BETWEEN BOTTOM OF BORING AND SCREEN: Native Formations.

DESCRIPTION OF WELL CASING:

- OUTSIDE DIAMETER: 1 7/8-in. NOMINAL INSIDE DIAMETER: 1 5/8-in.
- SCHEDULE/THICKNESS: Sched. 4Φ COMPOSITION: PVC
- MANUFACTURER: ECT Manufacturing.

JOINT DESIGN AND COMPOSITION: Flush-threaded/slip-cap on bottom.

CENTRALIZERS DESIGN AND COMPOSITION: N/A

DESCRIPTION OF PROTECTIVE CASING:

- NOMINAL INSIDE DIAMETER: 6-in. COMPOSITION: Steel.

SPECIAL PROBLEMS ENCOUNTERED DURING WELL CONSTRUCTION AND THEIR RESOLUTION:

None.

Was all well screen and casing material used for construction free of foreign matter (e.g., adhesive tape, labels, soil, etc.)? YES [X] NO [ ]

Was all well screen and casing material used for construction free of unsecured couplings, ruptures, and other physical breakage and/or defects? YES [X] NO [ ]

Is deformation or bending of the installed well screen and casing minimized to the point of allowing the insertion and retrieval of a 1.0-inch bailer throughout the entire length of the completed well? YES [X] NO [ ]

QUANTITY OF APPROVED WATER USED FOR FILTER PACK ENPLACEMENT: None

RECORDED BY: [signature] 11/13/Φ6 (Signature & Date)

QA CHECK BY: Wayne H. Yates 11/27/06 (Signature & Date)

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MONITORING WELL

PROJECT: Bulk Fuel Facility

DELIVERY ORDER NO: 0066

WELL NUMBER: FP-10

BEGIN: 11/11/06

END: 11/11/06

COORDINATES: N:

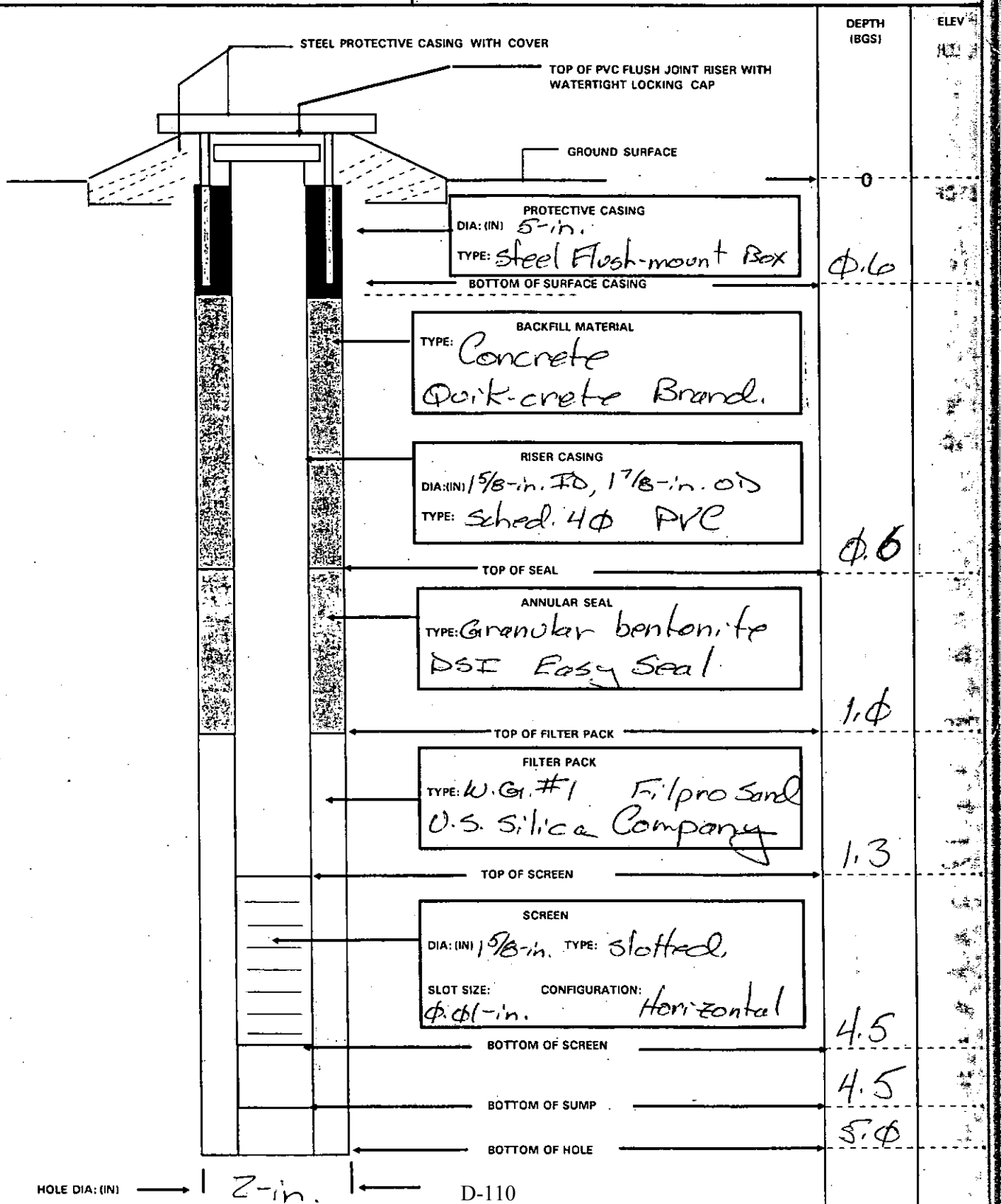
E:

DATUM/UNITS:

REFERENCE POINT: Ground Surface.

ELEVATION:

DATUM/UNITS:



MONITORING WELL INSTALLATION LOG

PROJECT: Bulk Fuel Facility **DELIVERY ORDER:** 0066

MONITORING WELL ID: FP-11

INSTALLATION START: DATE: 11/11/06 TIME: 1018

INSTALLATION FINISH: DATE: 11/11/06 TIME: 1023

ANNULAR SPACE MATERIALS INVENTORY:

- **GRANULAR FILTER PACK:** TYPE: W.G. #1 QUANTITY: 5 lbs.
- **BENTONITE SEAL:** TYPE: DSI Easy Seal QUANTITY: 1-2 lbs.
- **GROUT:** TYPE: N/A QUANTITY: N/A

DESCRIPTION OF WELL SCREEN:

- **SLOT SIZE (inches):** 0.01 **SLOT CONFIGURATION:** Horizontal
- **TOTAL OPEN AREA PER FOOT OF SCREEN:** N/A
- **OUTSIDE DIAMETER:** 1 7/8-in. **NOMINAL INSIDE DIAMETER:** 1 5/8-in.
- **SCHEDULE/THICKNESS:** Sched. 40 **COMPOSITION:** PVC
- **MANUFACTURER:** ECT Manufacturing.

TYPE OF MATERIAL BETWEEN BOTTOM OF BORING AND SCREEN: Native Formations.

DESCRIPTION OF WELL CASING:

- **OUTSIDE DIAMETER:** 1 7/8-in. **NOMINAL INSIDE DIAMETER:** 1 5/8-in.
- **SCHEDULE/THICKNESS:** Sched. 40 **COMPOSITION:** PVC
- **MANUFACTURER:** ECT Manufacturing.

JOINT DESIGN AND COMPOSITION: Flush-threaded / slip-cap on bottom.

CENTRALIZERS DESIGN AND COMPOSITION: N/A.

DESCRIPTION OF PROTECTIVE CASING:

- **NOMINAL INSIDE DIAMETER:** 6-in. **COMPOSITION:** Steel.

SPECIAL PROBLEMS ENCOUNTERED DURING WELL CONSTRUCTION AND THEIR RESOLUTION:

None.

Was all well screen and casing material used for construction free of foreign matter (e.g., adhesive tape, labels, soil, etc.)? YES [X] NO [ ]

Was all well screen and casing material used for construction free of unsecured couplings, ruptures, and other physical breakage and/or defects? YES [X] NO [ ]

Is deformation or bending of the installed well screen and casing minimized to the point of allowing the insertion and retrieval of a 1.0-inch bailer throughout the entire length of the completed well? YES [X] NO [ ]

QUANTITY OF APPROVED WATER USED FOR FILTER PACK ENPLACEMENT: None.

RECORDED BY: [signature] 11/13/06 (Signature & Date) **QA CHECK BY:** Wayne H. Pan 11/27/06 (Signature & Date)

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MONITORING WELL

PROJECT: Bulk Fuel Facility

DELIVERY ORDER NO: 0066

WELL NUMBER: FP-11

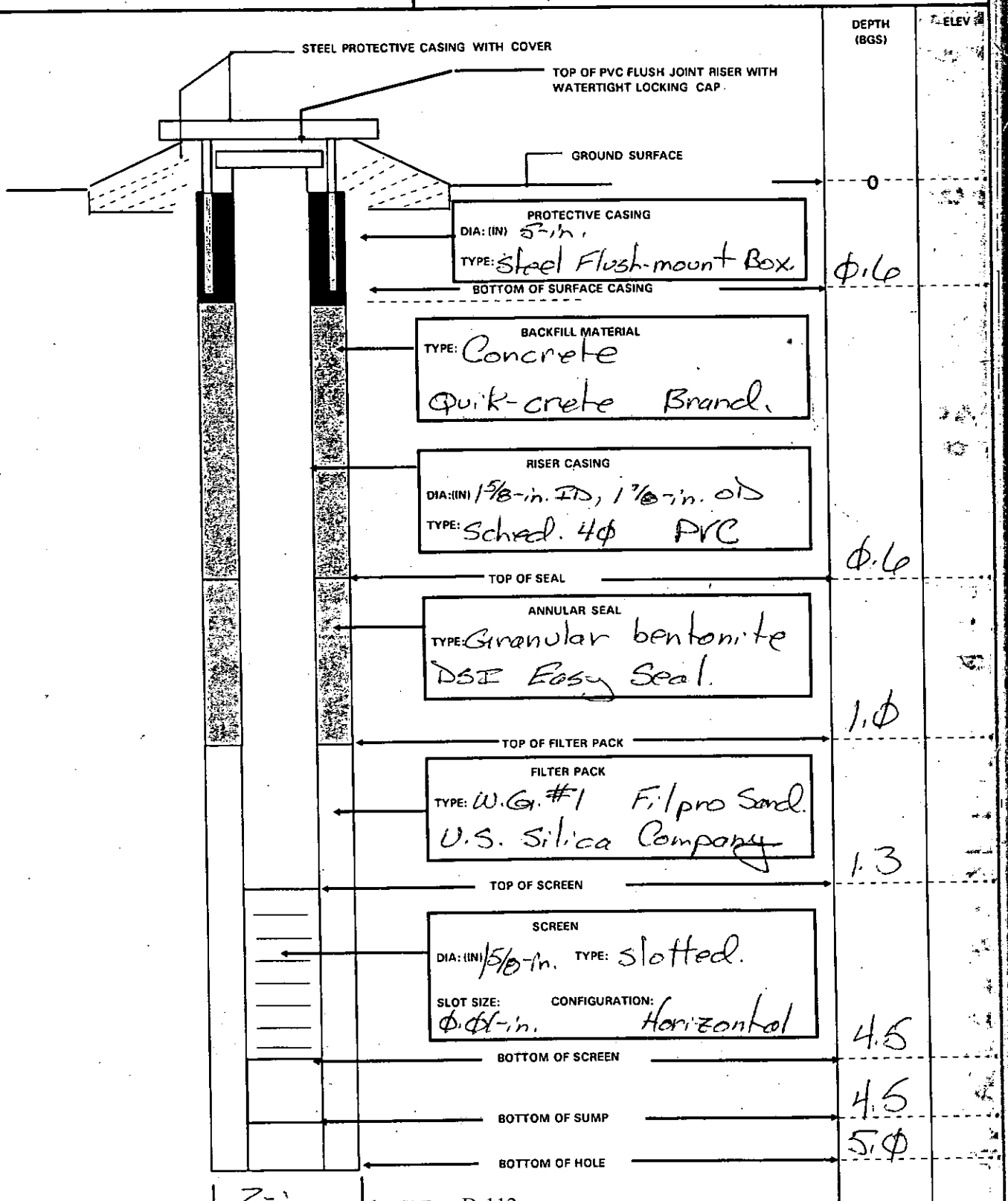
BEGIN: 11/11/06

END: 11/11/06

COORDINATES: N:
E:

DATUM/UNITS:

REFERENCE POINT: Ground Surface. ELEVATION: DATUM/UNITS:



MONITORING WELL INSTALLATION LOG

PROJECT: Bulk Fuel Facility DELIVERY ORDER: 0066

MONITORING WELL ID: FP-12

INSTALLATION START: DATE: 11/11/06 TIME: 1031

INSTALLATION FINISH: DATE: 11/11/06 TIME: 1046

ANNULAR SPACE MATERIALS INVENTORY:

- GRANULAR FILTER PACK: TYPE: W.G. #1 QUANTITY: 5lbs
- BENTONITE SEAL: TYPE: DSI Easy Seal QUANTITY: 1-2 lbs.
- GROUT: TYPE: N/A QUANTITY: N/A

DESCRIPTION OF WELL SCREEN:

- SLOT SIZE (inches): 0.01 SLOT CONFIGURATION: Horizontal
- TOTAL OPEN AREA PER FOOT OF SCREEN: N/A
- OUTSIDE DIAMETER: 1 7/8-in. NOMINAL INSIDE DIAMETER: 1 5/8-in.
- SCHEDULE/THICKNESS: Sched. 40 COMPOSITION: PVC
- MANUFACTURER: ECT Manufacturing

TYPE OF MATERIAL BETWEEN BOTTOM OF BORING AND SCREEN: Native Formations.

DESCRIPTION OF WELL CASING:

- OUTSIDE DIAMETER: 1 7/8-in. NOMINAL INSIDE DIAMETER: 1 5/8-in.
- SCHEDULE/THICKNESS: Sched. 40 COMPOSITION: PVC
- MANUFACTURER: ECT Manufacturing.

JOINT DESIGN AND COMPOSITION: Flush-Threaded/slip-cap on bottom.

CENTRALIZERS DESIGN AND COMPOSITION: N/A

DESCRIPTION OF PROTECTIVE CASING:

- NOMINAL INSIDE DIAMETER: 5-in. COMPOSITION: Steel.

SPECIAL PROBLEMS ENCOUNTERED DURING WELL CONSTRUCTION AND THEIR RESOLUTION:

- None.

Was all well screen and casing material used for construction free of foreign matter (e.g., adhesive tape, labels, soil, etc.)? YES [X] NO [ ]

Was all well screen and casing material used for construction free of unsecured couplings, ruptures, and other physical breakage and/or defects? YES [X] NO [ ]

Is deformation or bending of the installed well screen and casing minimized to the point of allowing the insertion and retrieval of a 1.0-inch bailer throughout the entire length of the completed well? YES [X] NO [ ]

QUANTITY OF APPROVED WATER USED FOR FILTER PACK ENPLACEMENT: None.

RECORDED BY: [signature] 11/13/06 QA CHECK BY: _____

(Signature & Date) (Signature & Date)

58

MONITORING WELL

PROJECT: Bulk Fuel Facility

DELIVERY ORDER NO: 0066

WELL NUMBER: FP-12

BEGIN: 11/11/96

END: 11/11/96

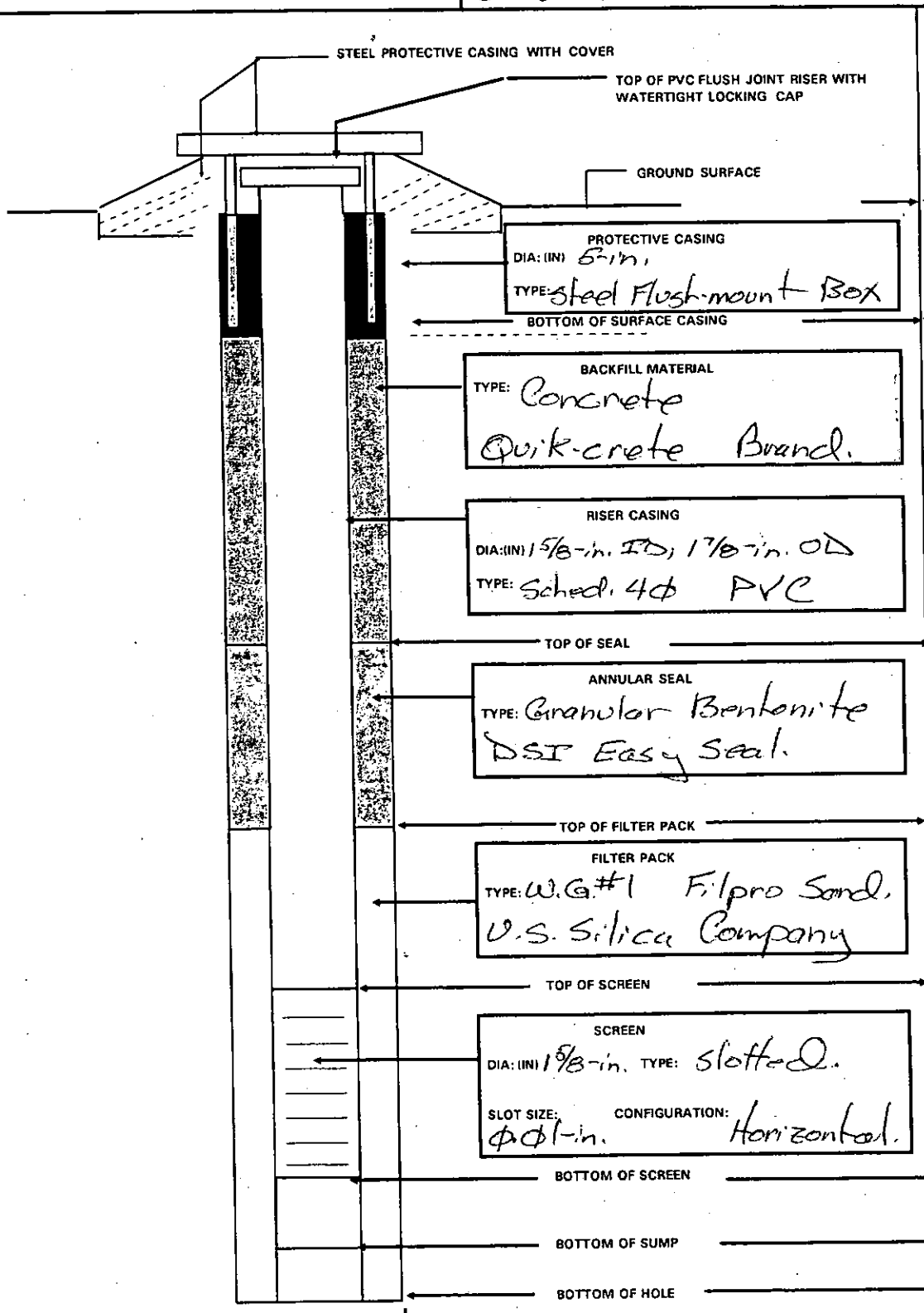
COORDINATES: N:
E:

DATUM/UNITS:

REFERENCE POINT: Ground Surface.

ELEVATION:

DATUM/UNITS:



DEPTH (BGS)	ELEV
0	
0.6	
0.6	
1.0	
1.3	
4.5	
4.5	
5.0	

MONITORING WELL INSTALLATION LOG

PROJECT: Bulk Fuel Facility **DELIVERY ORDER:** 0066

MONITORING WELL ID: FP-13

INSTALLATION START: DATE: 11/11/06 TIME: 1055

INSTALLATION FINISH: DATE: 11/11/06 TIME: 1059

ANNULAR SPACE MATERIALS INVENTORY:

- GRANULAR FILTER PACK: TYPE: W.G. #1 QUANTITY: 5 lbs
- BENTONITE SEAL: TYPE: DSI Easy Seal QUANTITY: 1-2 lbs
- GROUT: TYPE: N/A QUANTITY: N/A

DESCRIPTION OF WELL SCREEN:

- SLOT SIZE (inches): 0.01 SLOT CONFIGURATION: Horizontal
- TOTAL OPEN AREA PER FOOT OF SCREEN: N/A
- OUTSIDE DIAMETER: 1 7/8-in. NOMINAL INSIDE DIAMETER: 1 5/8-in.
- SCHEDULE/THICKNESS: Sched. 40 COMPOSITION: PVC
- MANUFACTURER: ECT Manufacturing.

TYPE OF MATERIAL BETWEEN BOTTOM OF BORING AND SCREEN: Native Formations.

DESCRIPTION OF WELL CASING:

- OUTSIDE DIAMETER: 1 7/8-in. NOMINAL INSIDE DIAMETER: 1 5/8-in.
- SCHEDULE/THICKNESS: Sched. 40 COMPOSITION: PVC
- MANUFACTURER: ECT Manufacturing.

JOINT DESIGN AND COMPOSITION: Flush-threaded/slip-cap on bottom.

CENTRALIZERS DESIGN AND COMPOSITION: N/A.

DESCRIPTION OF PROTECTIVE CASING:

- NOMINAL INSIDE DIAMETER: 5-in. COMPOSITION: Steel.

SPECIAL PROBLEMS ENCOUNTERED DURING WELL CONSTRUCTION AND THEIR RESOLUTION:

None.

Was all well screen and casing material used for construction free of foreign matter (e.g., adhesive tape, labels, soil, etc.)? YES [X] NO [ ]

Was all well screen and casing material used for construction free of unsecured couplings, ruptures, and other physical breakage and/or defects? YES [X] NO [ ]

Is deformation or bending of the installed well screen and casing minimized to the point of allowing the insertion and retrieval of a 1.0-inch bailer throughout the entire length of the completed well? YES [X] NO [ ]

QUANTITY OF APPROVED WATER USED FOR FILTER PACK ENPLACEMENT: None.

RECORDED BY: [signature] 11/13/06 (Signature & Date) **QA CHECK BY:** [signature] 11/27/06 (Signature & Date)

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MONITORING WELL

PROJECT: Bulk Fuel Facility

DELIVERY ORDER NO: 0066

WELL NUMBER: FP-13

BEGIN: 11/11/06

END: 11/11/06

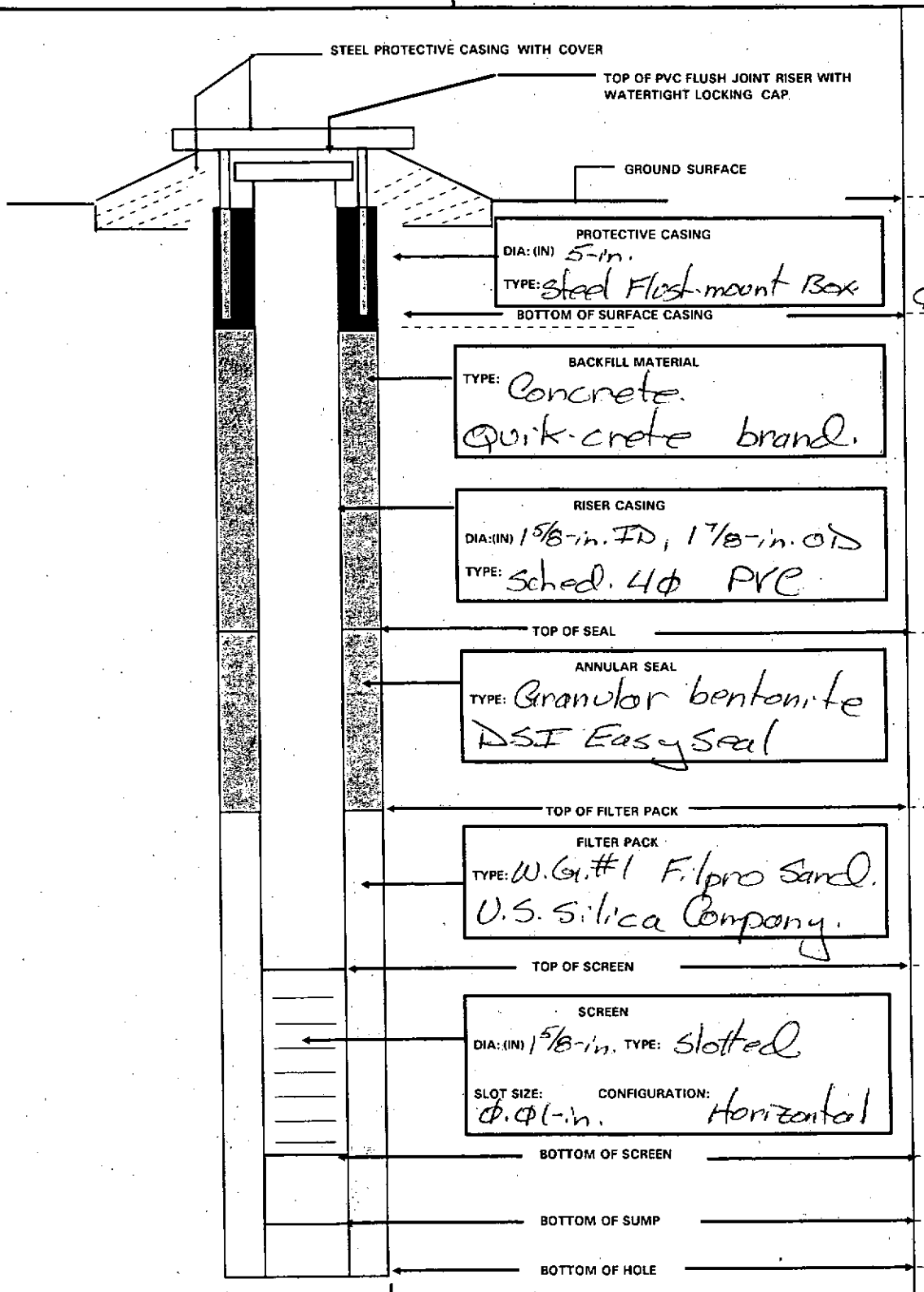
COORDINATES: N:
E:

DATUM/UNITS:

REFERENCE POINT: Ground Surface.

ELEVATION:

DATUM/UNITS:



MONITORING WELL INSTALLATION LOG

PROJECT: Bulk Fuel Facility **DELIVERY ORDER:** 0066

MONITORING WELL ID: FP-14

INSTALLATION START: DATE: 11/11/06 TIME: 1106

INSTALLATION FINISH: DATE: 11/11/06 TIME: 1115

ANNULAR SPACE MATERIALS INVENTORY:

- **GRANULAR FILTER PACK:** TYPE: W.G. #1 QUANTITY: 5 lbs.
- **BENTONITE SEAL:** TYPE: DSI Easy Seal QUANTITY: 1-2 lbs.
- **GROUT:** TYPE: N/A QUANTITY: N/A

DESCRIPTION OF WELL SCREEN:

- **SLOT SIZE (inches):** .01 **SLOT CONFIGURATION:** Horizontal
- **TOTAL OPEN AREA PER FOOT OF SCREEN:** N/A
- **OUTSIDE DIAMETER:** 1 7/8-in. **NOMINAL INSIDE DIAMETER:** 1 5/8-in.
- **SCHEDULE/THICKNESS:** Sched. 40 **COMPOSITION:** PVC
- **MANUFACTURER:** ECT Manufacturing.

TYPE OF MATERIAL BETWEEN BOTTOM OF BORING AND SCREEN: Native Formations.

DESCRIPTION OF WELL CASING:

- **OUTSIDE DIAMETER:** 1 7/8-in. **NOMINAL INSIDE DIAMETER:** 1 5/8-in.
- **SCHEDULE/THICKNESS:** Sched. 40 **COMPOSITION:** PVC
- **MANUFACTURER:** ECT Manufacturing.

JOINT DESIGN AND COMPOSITION: Flush-threaded/slip-cap on bottom.

CENTRALIZERS DESIGN AND COMPOSITION: N/A

DESCRIPTION OF PROTECTIVE CASING:

- **NOMINAL INSIDE DIAMETER:** 5-in. **COMPOSITION:** steel.

SPECIAL PROBLEMS ENCOUNTERED DURING WELL CONSTRUCTION AND THEIR RESOLUTION:

None.

Was all well screen and casing material used for construction free of foreign matter (e.g., adhesive tape, labels, soil, etc.)? YES [X] NO [ ]

Was all well screen and casing material used for construction free of unsecured couplings, ruptures, and other physical breakage and/or defects? YES [X] NO [ ]

Is deformation or bending of the installed well screen and casing minimized to the point of allowing the insertion and retrieval of a 1.0-inch bailer throughout the entire length of the completed well? YES [X] NO [ ]

QUANTITY OF APPROVED WATER USED FOR FILTER PACK ENPLACEMENT: None.

RECORDED BY: [signature] 11/13/06 (Signature & Date) **QA CHECK BY:** [signature] 11/27/06 (Signature & Date)

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MONITORING WELL

PROJECT: Bulk Fuel Facility

DELIVERY ORDER NO: 0066

WELL NUMBER: FP-14

BEGIN: 11/11/06

END: 11/11/06

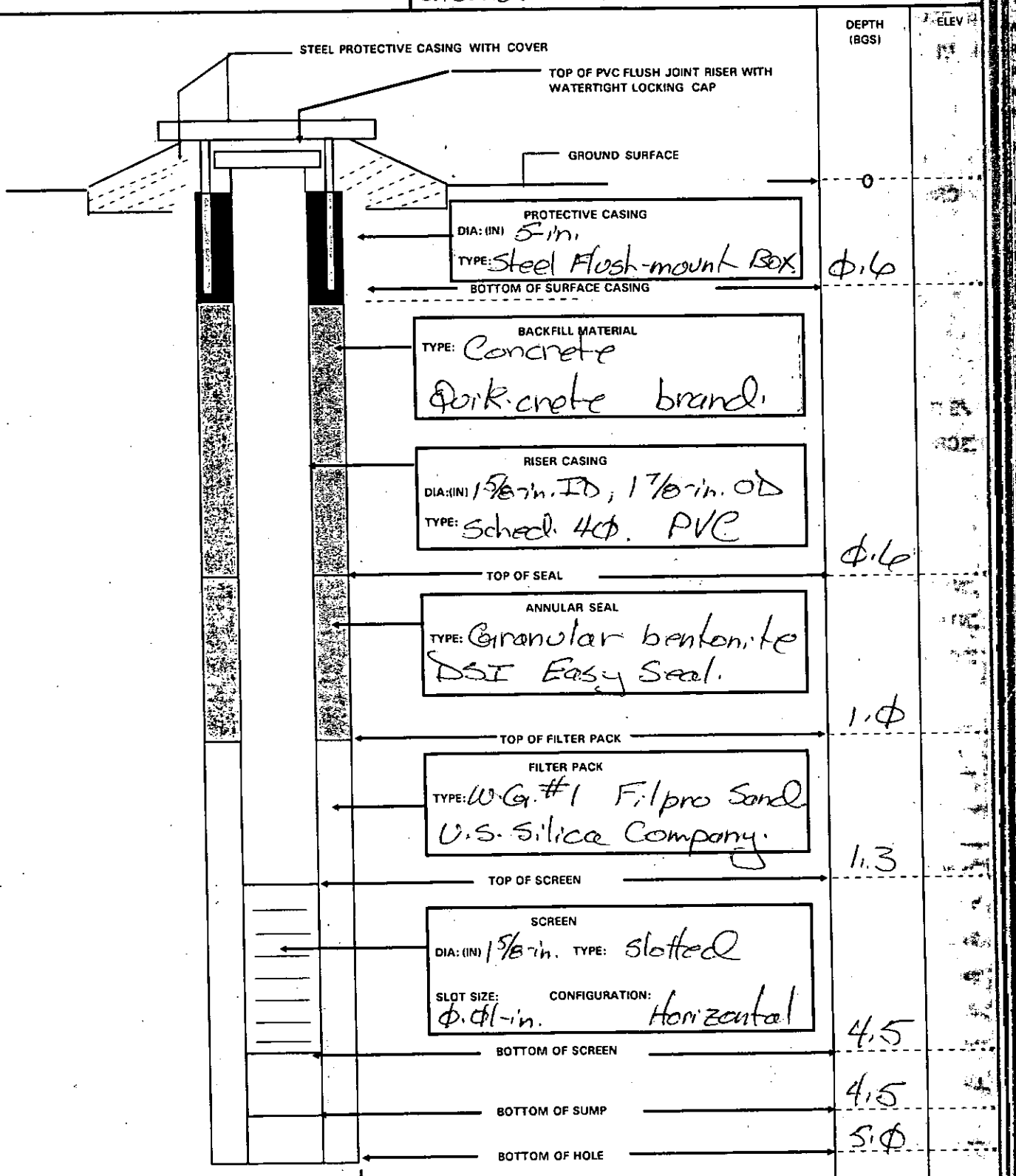
COORDINATES: N:
E:

DATUM/UNITS:

REFERENCE POINT: Ground Surface.

ELEVATION:

DATUM/UNITS:



MONITORING WELL INSTALLATION LOG

PROJECT: Bulk Fuel Facility **DELIVERY ORDER:** 0066

MONITORING WELL ID: FP-15

INSTALLATION START: DATE: 11/11/06 TIME: 1258

INSTALLATION FINISH: DATE: 11/11/06 TIME: 1307

ANNULAR SPACE MATERIALS INVENTORY:

- **GRANULAR FILTER PACK:** TYPE: W.G. #1 QUANTITY: 5 lbs
- **BENTONITE SEAL:** TYPE: DSI Easy Seal QUANTITY: 1-2 lbs.
- **GROUT:** TYPE: N/A QUANTITY: N/A

DESCRIPTION OF WELL SCREEN:

- **SLOT SIZE (inches):** .01 **SLOT CONFIGURATION:** Horizontal
- **TOTAL OPEN AREA PER FOOT OF SCREEN:** N/A
- **OUTSIDE DIAMETER:** 1 7/8-in. **NOMINAL INSIDE DIAMETER:** 1 5/8-in.
- **SCHEDULE/THICKNESS:** Sched. 40 **COMPOSITION:** PVC
- **MANUFACTURER:** ECT Manufacturing.

TYPE OF MATERIAL BETWEEN BOTTOM OF BORING AND SCREEN: Native Formations

DESCRIPTION OF WELL CASING:

- **OUTSIDE DIAMETER:** 1 7/8-in. **NOMINAL INSIDE DIAMETER:** 1 5/8-in.
- **SCHEDULE/THICKNESS:** Sched. 40 **COMPOSITION:** PVC.
- **MANUFACTURER:** ECT Manufacturing.

JOINT DESIGN AND COMPOSITION: Flush-threaded/slip-cap on bottom.

CENTRALIZERS DESIGN AND COMPOSITION: N/A

DESCRIPTION OF PROTECTIVE CASING:

- **NOMINAL INSIDE DIAMETER:** 5-in. **COMPOSITION:** Steel.

SPECIAL PROBLEMS ENCOUNTERED DURING WELL CONSTRUCTION AND THEIR RESOLUTION:
Very hard/packed gravel layer: move drilling location.

Was all well screen and casing material used for construction free of foreign matter (e.g., adhesive tape, labels, soil, etc.)? YES [X] NO [ ]

Was all well screen and casing material used for construction free of unsecured couplings, ruptures, and other physical breakage and/or defects? YES [X] NO [ ]

Is deformation or bending of the installed well screen and casing minimized to the point of allowing the insertion and retrieval of a 1.0-inch bailer throughout the entire length of the completed well? YES [X] NO [ ]

QUANTITY OF APPROVED WATER USED FOR FILTER PACK ENPLACEMENT: None

RECORDED BY: [signature] 11/13/06 **QA CHECK BY:** Wayne A. Parker
(~~Signature~~ & Date) (Signature & Date)

13

MONITORING WELL

PROJECT: Bulk Fuel Facility

DELIVERY ORDER NO: 0066

WELL NUMBER: FP-15

BEGIN: 11/11/06

END: 11/11/06

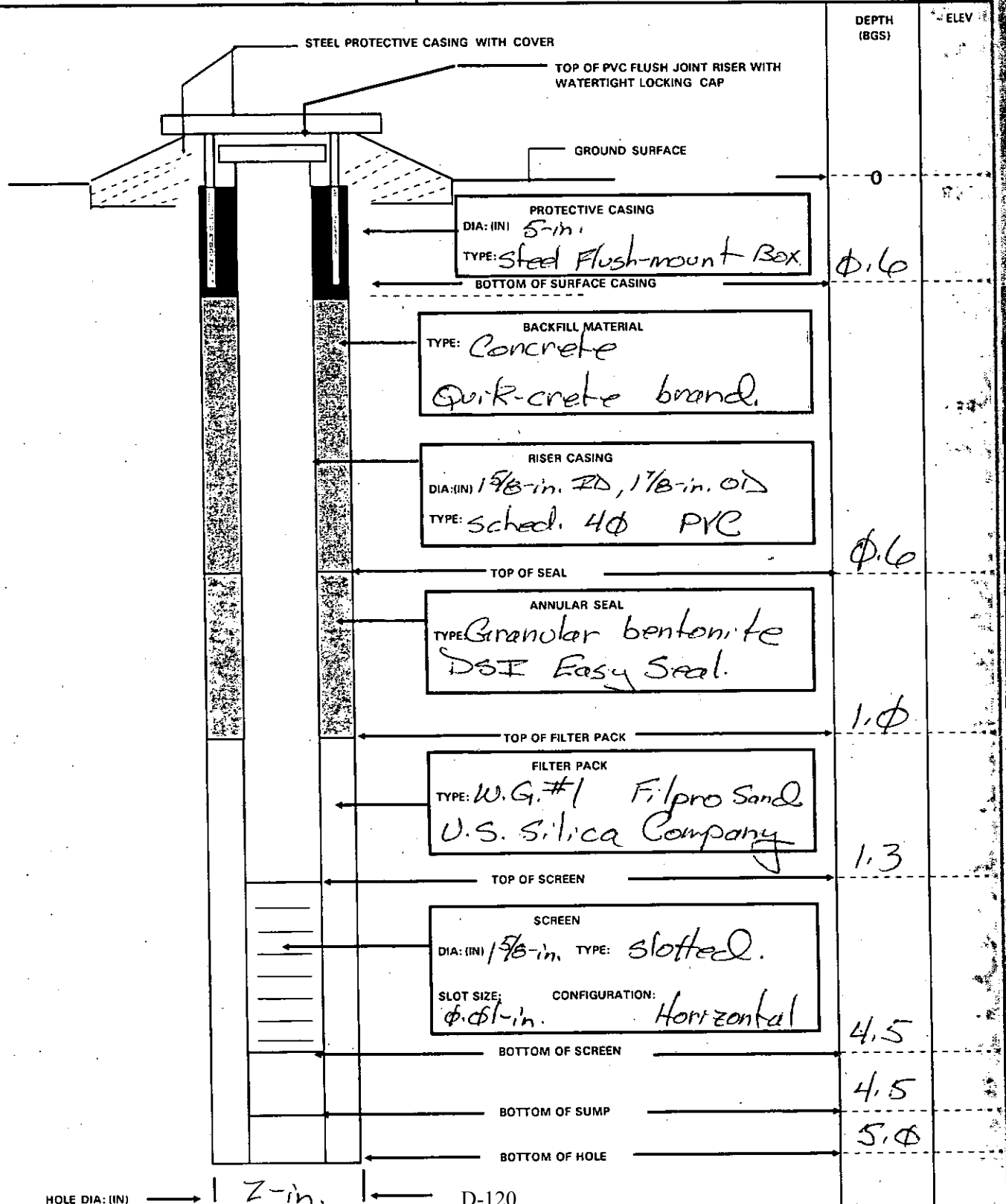
COORDINATES: N:
E:

DATUM/UNITS:

REFERENCE POINT: Ground Surface.

ELEVATION:

DATUM/UNITS:



MONITORING WELL INSTALLATION LOG

PROJECT: Bulk Fuel Facility **DELIVERY ORDER:** 0066

MONITORING WELL ID: FP-16

INSTALLATION START: DATE: 11/11/06 TIME: 1323

INSTALLATION FINISH: DATE: 11/11/06 TIME: 1330

ANNULAR SPACE MATERIALS INVENTORY:

- GRANULAR FILTER PACK: TYPE: W.G. #1 QUANTITY: 5 lbs.
- BENTONITE SEAL: TYPE: DSI Easy Seal QUANTITY: 1-2 lbs.
- GROUT: TYPE: N/A QUANTITY: N/A

DESCRIPTION OF WELL SCREEN:

- SLOT SIZE (inches): 0.01 SLOT CONFIGURATION: Horizontal
- TOTAL OPEN AREA PER FOOT OF SCREEN: N/A
- OUTSIDE DIAMETER: 1 7/8-in. NOMINAL INSIDE DIAMETER: 1 5/8-in.
- SCHEDULE/THICKNESS: Sched. 40 COMPOSITION: PVC
- MANUFACTURER: ECT Manufacturing.

TYPE OF MATERIAL BETWEEN BOTTOM OF BORING AND SCREEN: Native Formations,

DESCRIPTION OF WELL CASING:

- OUTSIDE DIAMETER: 1 7/8-in. NOMINAL INSIDE DIAMETER: 1 5/8-in.
- SCHEDULE/THICKNESS: Sched. 40 COMPOSITION: PVC
- MANUFACTURER: ECT Manufacturing.

JOINT DESIGN AND COMPOSITION: Flush-Threaded/slip-cap on bottom.

CENTRALIZERS DESIGN AND COMPOSITION: N/A.

DESCRIPTION OF PROTECTIVE CASING:

- NOMINAL INSIDE DIAMETER: 5-in. COMPOSITION: Steel.

SPECIAL PROBLEMS ENCOUNTERED DURING WELL CONSTRUCTION AND THEIR RESOLUTION:
Encounter hard/packed gravel layer: break up rocks using hammer and bar.

Was all well screen and casing material used for construction free of foreign matter (e.g., adhesive tape, labels, soil, etc.)? YES [X] NO [ ]

Was all well screen and casing material used for construction free of unsecured couplings, ruptures, and other physical breakage and/or defects? YES [X] NO [ ]

Is deformation or bending of the installed well screen and casing minimized to the point of allowing the insertion and retrieval of a 1.0-inch bailer throughout the entire length of the completed well? YES [X] NO [ ]

QUANTITY OF APPROVED WATER USED FOR FILTER PACK ENPLACEMENT: None.

RECORDED BY: [signature] 11/13/06 (Signature & Date) **QA CHECK BY:** [signature] 11/27/06 (Signature & Date)

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MONITORING WELL

PROJECT: Bulk Fuel Facility

DELIVERY ORDER NO: 0066

WELL NUMBER: FP-16

BEGIN: 11/11/96

END: 11/11/96

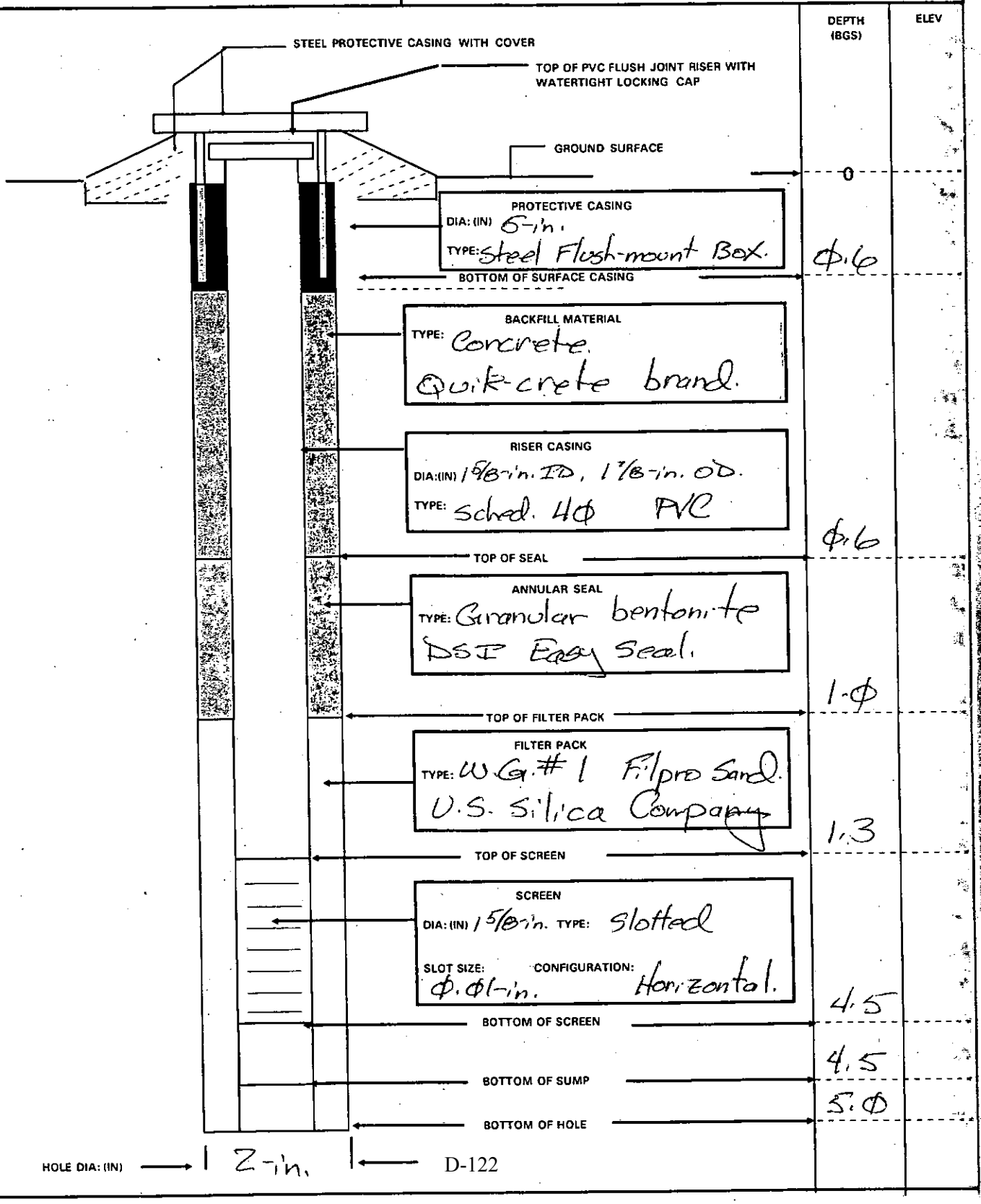
COORDINATES: N:
E:

DATUM/UNITS:

REFERENCE POINT: Ground Surface

ELEVATION:

DATUM/UNITS:



MONITORING WELL INSTALLATION LOG

PROJECT: Bulk Fuel Facility DELIVERY ORDER: 0066

MONITORING WELL ID: FP-17

INSTALLATION START: DATE: 11/11/06 TIME: 1338

INSTALLATION FINISH: DATE: 11/11/06 TIME: 1344

ANNULAR SPACE MATERIALS INVENTORY:

GRANULAR FILTER PACK: TYPE: W.G. #1 QUANTITY: 5 lbs.

BENTONITE SEAL: TYPE: DSI Easy Seal QUANTITY: 1-2 lbs.

GROUT: TYPE: N/A QUANTITY: N/A

DESCRIPTION OF WELL SCREEN:

SLOT SIZE (inches): .01 SLOT CONFIGURATION: Horizontal

TOTAL OPEN AREA PER FOOT OF SCREEN: N/A

OUTSIDE DIAMETER: 1 7/8-in. NOMINAL INSIDE DIAMETER: 1 5/8-in.

SCHEDULE/THICKNESS: Sched. 40 COMPOSITION: PVC

MANUFACTURER: ECT Manufacturing.

TYPE OF MATERIAL BETWEEN BOTTOM OF BORING AND SCREEN: Native Formations

DESCRIPTION OF WELL CASING:

OUTSIDE DIAMETER: 1 7/8-in. NOMINAL INSIDE DIAMETER: 1 5/8-in.

SCHEDULE/THICKNESS: Sched. 40 COMPOSITION: PVC

MANUFACTURER: ECT Manufacturing.

JOINT DESIGN AND COMPOSITION: Flush-threaded/slip-cap on bottom.

CENTRALIZERS DESIGN AND COMPOSITION: N/A

DESCRIPTION OF PROTECTIVE CASING:

NOMINAL INSIDE DIAMETER: 5-in. COMPOSITION: Steel.

SPECIAL PROBLEMS ENCOUNTERED DURING WELL CONSTRUCTION AND THEIR RESOLUTION:

None.

Was all well screen and casing material used for construction free of foreign matter (e.g., adhesive tape, labels, soil, etc.)? YES [X] NO [ ]

Was all well screen and casing material used for construction free of unsecured couplings, ruptures, and other physical breakage and/or defects? YES [X] NO [ ]

Is deformation or bending of the installed well screen and casing minimized to the point of allowing the insertion and retrieval of a 1.0-inch bailer throughout the entire length of the completed well? YES [X] NO [ ]

QUANTITY OF APPROVED WATER USED FOR FILTER PACK ENPLACEMENT: None.

RECORDED BY: [signature] 11/13/06 QA CHECK BY: [signature] 11/27/06

(Signature & Date) (Signature & Date)

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MONITORING WELL

PROJECT: Bulk Fuel Facility

DELIVERY ORDER NO: 0066

WELL NUMBER: FP-17

BEGIN: 11/11/96

END: 11/11/96

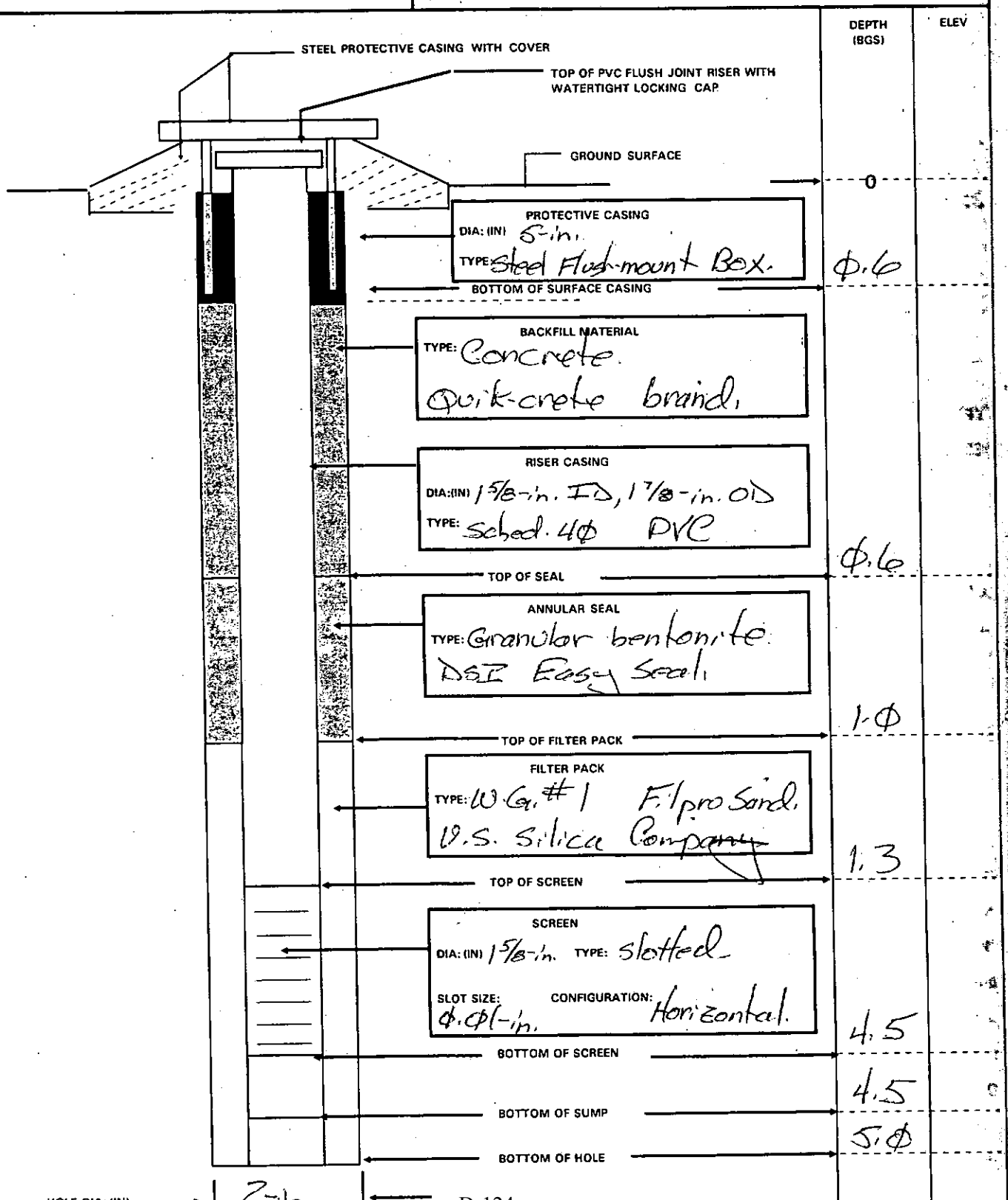
COORDINATES: N:
E:

DATUM/UNITS:

REFERENCE POINT: Ground surface.

ELEVATION:

DATUM/UNITS:



MONITORING WELL INSTALLATION LOG

PROJECT: Bulk Fuel Facility **DELIVERY ORDER:** 0066

MONITORING WELL ID: FP-18

INSTALLATION START: DATE: 11/11/06 TIME: 1357

INSTALLATION FINISH: DATE: 11/11/06 TIME: 1403

ANNULAR SPACE MATERIALS INVENTORY:

- GRANULAR FILTER PACK: TYPE: W.G. #1 QUANTITY: 5 lbs
- BENTONITE SEAL: TYPE: DSI Easy Seal QUANTITY: 1-2 lbs
- GROUT: TYPE: N/A QUANTITY: N/A

DESCRIPTION OF WELL SCREEN:

- SLOT SIZE (inches): 0.01 SLOT CONFIGURATION: Horizontal
- TOTAL OPEN AREA PER FOOT OF SCREEN: N/A
- OUTSIDE DIAMETER: 1 7/8-in. NOMINAL INSIDE DIAMETER: 1 5/8-in.
- SCHEDULE/THICKNESS: Sched. 40 COMPOSITION: PVC
- MANUFACTURER: ECT Manufacturing.

TYPE OF MATERIAL BETWEEN BOTTOM OF BORING AND SCREEN: Native Formations

DESCRIPTION OF WELL CASING:

- OUTSIDE DIAMETER: 1 7/8-in. NOMINAL INSIDE DIAMETER: 1 5/8-in.
- SCHEDULE/THICKNESS: Sched. 40 COMPOSITION: PVC
- MANUFACTURER: ECT Manufacturing.

JOINT DESIGN AND COMPOSITION: Flush-Threaded/slip-cap on bottom.

CENTRALIZERS DESIGN AND COMPOSITION: N/A

DESCRIPTION OF PROTECTIVE CASING:

- NOMINAL INSIDE DIAMETER: 5-in. COMPOSITION: Steel.

SPECIAL PROBLEMS ENCOUNTERED DURING WELL CONSTRUCTION AND THEIR RESOLUTION:

None.

Was all well screen and casing material used for construction free of foreign matter (e.g., adhesive tape, labels, soil, etc.)? YES [X] NO [ ]

Was all well screen and casing material used for construction free of unsecured couplings, ruptures, and other physical breakage and/or defects? YES [X] NO [ ]

Is deformation or bending of the installed well screen and casing minimized to the point of allowing the insertion and retrieval of a 1.0-inch bailer throughout the entire length of the completed well? YES [X] NO [ ]

QUANTITY OF APPROVED WATER USED FOR FILTER PACK ENPLACEMENT: None.

RECORDED BY: [signature] 11/14/06 (Signature & Date) **QA CHECK BY:** Wayd H. Patton 11/27/06 (Signature & Date)

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MONITORING WELL

PROJECT: Bulk Fuel Facility

DELIVERY ORDER NO: 0066

WELL NUMBER: FP-18

BEGIN: 11/11/96

END: 11/11/96

COORDINATES: N:

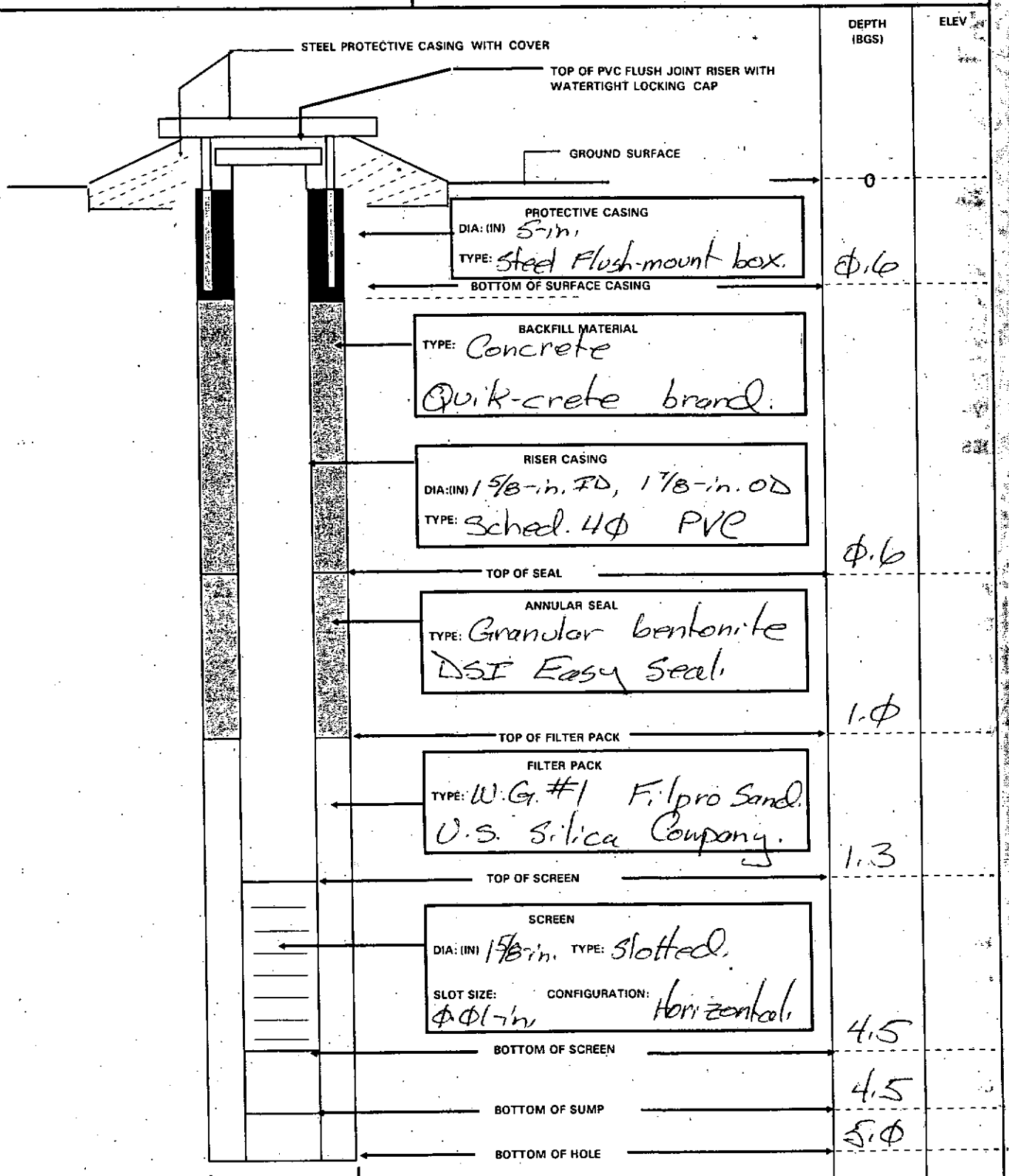
E:

DATUM/UNITS:

REFERENCE POINT: Ground Surface

ELEVATION:

DATUM/UNITS:



MONITORING WELL INSTALLATION LOG

PROJECT: Bulk Fuel Facility **DELIVERY ORDER:** 0066

MONITORING WELL ID: FP-19

INSTALLATION START: DATE: 11/11/06 TIME: 1437

INSTALLATION FINISH: DATE: 11/11/06 TIME: 1440

ANNULAR SPACE MATERIALS INVENTORY:

- GRANULAR FILTER PACK: TYPE: W.G. #1 QUANTITY: 5 lbs
- BENTONITE SEAL: TYPE: DSI Easy Seal QUANTITY: 1-2 lbs
- GROUT: TYPE: N/A QUANTITY: N/A

DESCRIPTION OF WELL SCREEN:

- SLOT SIZE (inches): 0.01 SLOT CONFIGURATION: Horizontal
- TOTAL OPEN AREA PER FOOT OF SCREEN: N/A
- OUTSIDE DIAMETER: 1 7/8-in. NOMINAL INSIDE DIAMETER: 1 5/8-in.
- SCHEDULE/THICKNESS: Sched. 40 COMPOSITION: PVC
- MANUFACTURER: ECT Manufacturing.

TYPE OF MATERIAL BETWEEN BOTTOM OF BORING AND SCREEN: Native Formations

DESCRIPTION OF WELL CASING:

- OUTSIDE DIAMETER: 1 7/8-in. NOMINAL INSIDE DIAMETER: 1 5/8-in.
- SCHEDULE/THICKNESS: Sched. 40 COMPOSITION: PVC
- MANUFACTURER: ECT Manufacturing.

JOINT DESIGN AND COMPOSITION: Flush - threaded / slip-cap on bottom.

CENTRALIZERS DESIGN AND COMPOSITION: N/A

DESCRIPTION OF PROTECTIVE CASING:

- NOMINAL INSIDE DIAMETER: 5-in. COMPOSITION: Steel.

SPECIAL PROBLEMS ENCOUNTERED DURING WELL CONSTRUCTION AND THEIR RESOLUTION:

None.

Was all well screen and casing material used for construction free of foreign matter (e.g., adhesive tape, labels, soil, etc.)? YES [X] NO [ ]

Was all well screen and casing material used for construction free of unsecured couplings, ruptures, and other physical breakage and/or defects? YES [X] NO [ ]

Is deformation or bending of the installed well screen and casing minimized to the point of allowing the insertion and retrieval of a 1.0-inch bailer throughout the entire length of the completed well? YES [X] NO [ ]

QUANTITY OF APPROVED WATER USED FOR FILTER PACK ENPLACEMENT: None.

RECORDED BY: [signature] 11/14/06 (Signature & Date) **QA CHECK BY:** [signature] 11/27/06 (Signature & Date)

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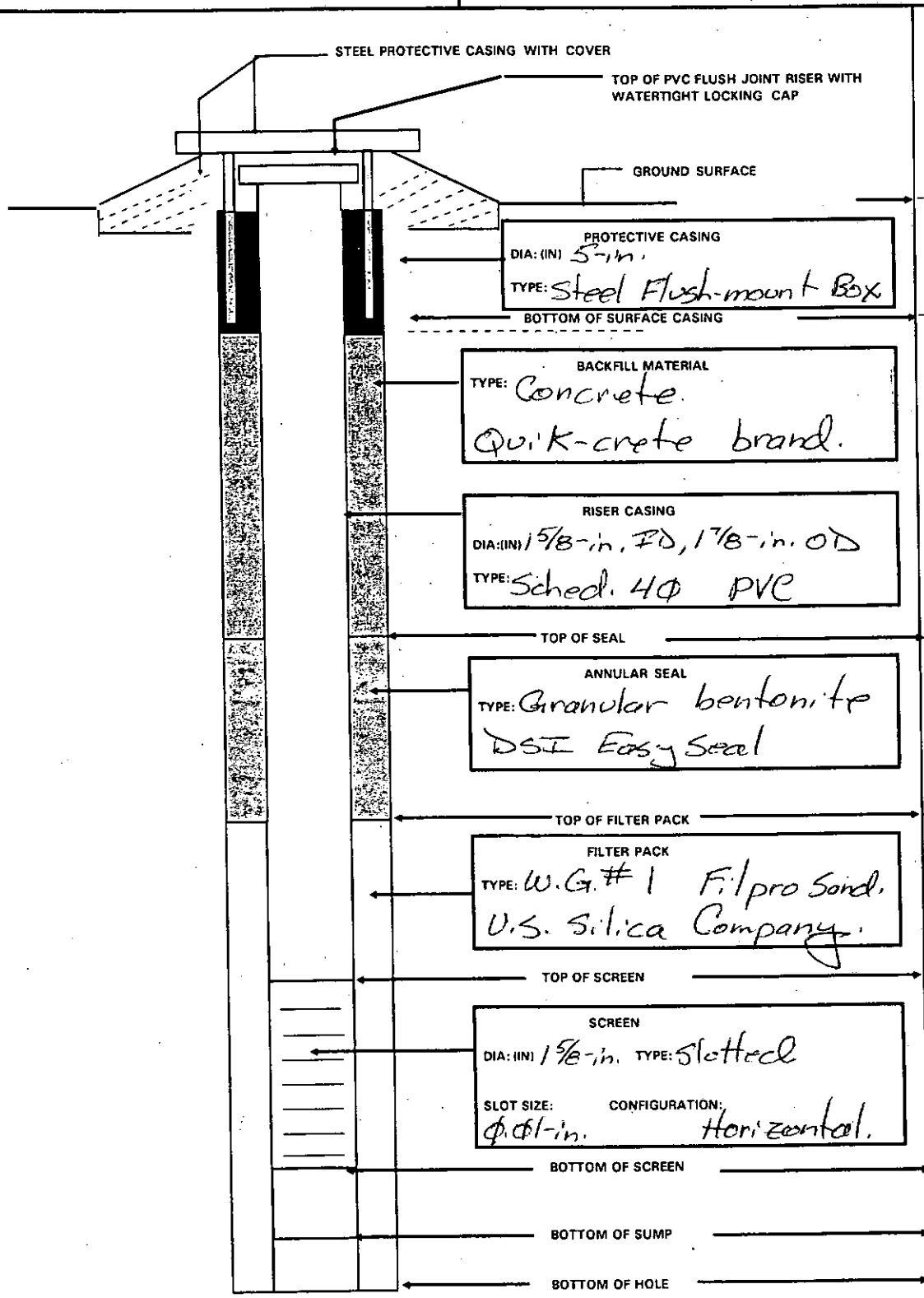
MONITORING WELL –
PROJECT: Bulk Fuel Facility
DELIVERY ORDER NO: 0066

WELL NUMBER: FP-19
BEGIN: 11/11/06
END: 11/11/06
COORDINATES: N:
E:
DATUM/UNITS:
REFERENCE POINT: Ground Surface,
ELEVATION:
DATUM/UNITS:



MONITORING WELL INSTALLATION LOG

PROJECT: Bulk Fuel Facility **DELIVERY ORDER:** 0066

MONITORING WELL ID: FP-20

INSTALLATION START: DATE: 11/11/06 TIME: 1502

INSTALLATION FINISH: DATE: 11/11/06 TIME: 1516

ANNULAR SPACE MATERIALS INVENTORY:

- **GRANULAR FILTER PACK:** TYPE: W.G. #1 QUANTITY: 5 lbs
- **BENTONITE SEAL:** TYPE: DSI Easy Seal QUANTITY: 1-2 lbs
- **GROUT:** TYPE: N/A QUANTITY: N/A

DESCRIPTION OF WELL SCREEN:

- **SLOT SIZE (inches):** 0.01 **SLOT CONFIGURATION:** Horizontal
- **TOTAL OPEN AREA PER FOOT OF SCREEN:** N/A
- **OUTSIDE DIAMETER:** 1 7/8-in. **NOMINAL INSIDE DIAMETER:** 1 5/8-in.
- **SCHEDULE/THICKNESS:** Sched. 40 **COMPOSITION:** PVC
- **MANUFACTURER:** ECT Manufacturing.

TYPE OF MATERIAL BETWEEN BOTTOM OF BORING AND SCREEN: Native Formations.

DESCRIPTION OF WELL CASING:

- **OUTSIDE DIAMETER:** 1 7/8-in. **NOMINAL INSIDE DIAMETER:** 1 5/8-in.
- **SCHEDULE/THICKNESS:** Sched. 40 **COMPOSITION:** PVC
- **MANUFACTURER:** ECT Manufacturing.

JOINT DESIGN AND COMPOSITION: Flush-threaded/slip-cap on bottom.

CENTRALIZERS DESIGN AND COMPOSITION: N/A.

DESCRIPTION OF PROTECTIVE CASING:

- **NOMINAL INSIDE DIAMETER:** 5-in. **COMPOSITION:** Steel.

SPECIAL PROBLEMS ENCOUNTERED DURING WELL CONSTRUCTION AND THEIR RESOLUTION:

None.

Was all well screen and casing material used for construction free of foreign matter (e.g., adhesive tape, labels, soil, etc.)? YES [X] NO [ ]

Was all well screen and casing material used for construction free of unsecured couplings, ruptures, and other physical breakage and/or defects? YES [X] NO [ ]

Is deformation or bending of the installed well screen and casing minimized to the point of allowing the insertion and retrieval of a 1.0-inch bailer throughout the entire length of the completed well? YES [X] NO [ ]

QUANTITY OF APPROVED WATER USED FOR FILTER PACK ENPLACEMENT: None

RECORDED BY: [signature] 11/14/06
(Signature & Date)

QA CHECK BY: [signature] 11/27/06
(Signature & Date)

98

MONITORING WELL

PROJECT: Bulk Fuel Facility

DELIVERY ORDER NO: 0066

WELL NUMBER: FP-2Φ

BEGIN: 11/11/Φ6

END: 11/11/Φ6

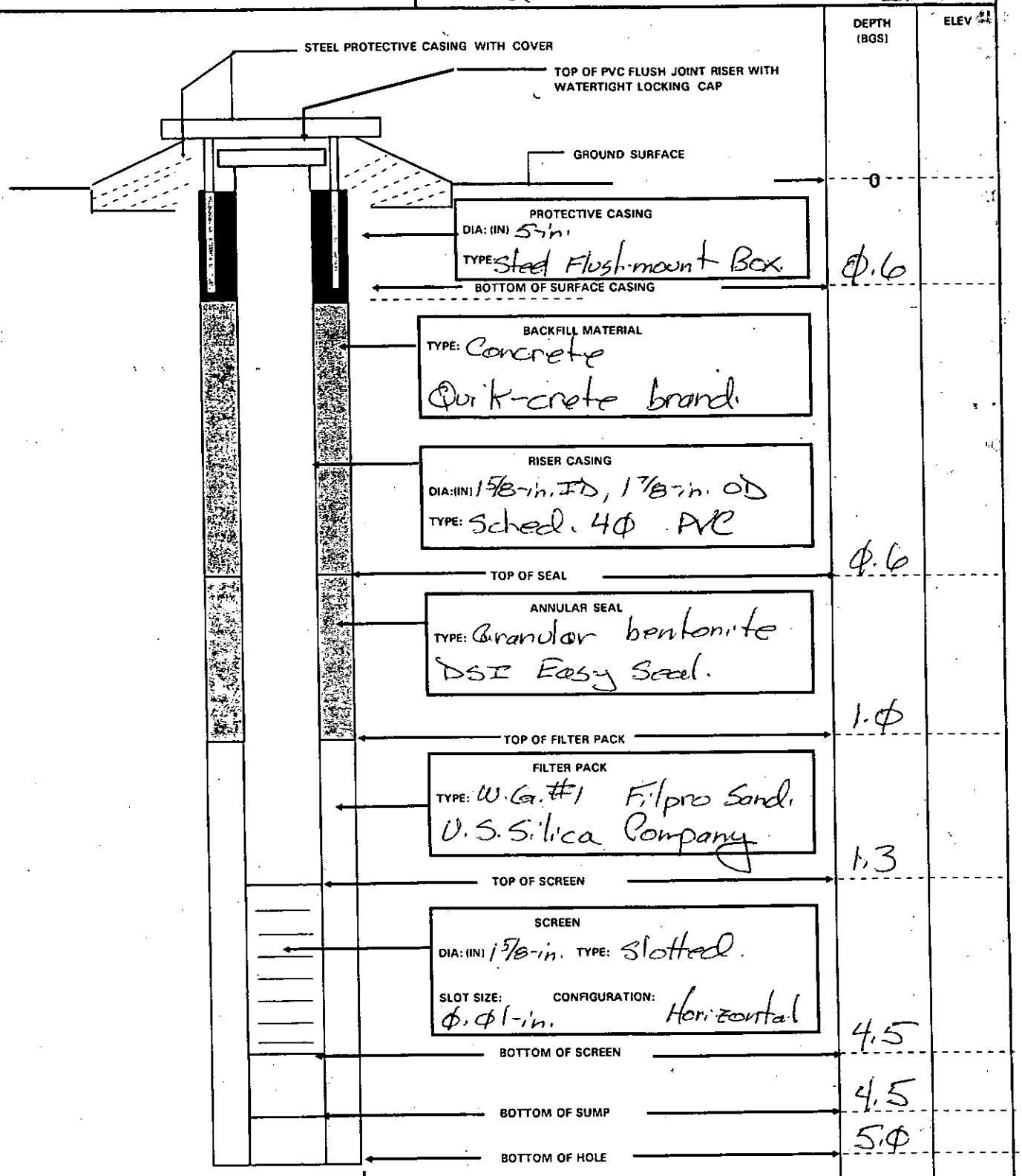
COORDINATES: N:
E:

DATUM/UNITS:

REFERENCE POINT: Ground Surface.

ELEVATION:

DATUM/UNITS:



MONITORING WELL INSTALLATION LOG

PROJECT: Bulk Fuel Facility **DELIVERY ORDER:** 0066

MONITORING WELL ID: FP-21

INSTALLATION START: DATE: 11/11/06 TIME: 1540

INSTALLATION FINISH: DATE: 11/11/06 TIME: 1545

ANNULAR SPACE MATERIALS INVENTORY:

- **GRANULAR FILTER PACK:** TYPE: W.G. #1 QUANTITY: 5 lbs.
- **BENTONITE SEAL:** TYPE: DSI Easy Seal QUANTITY: 1-2 lbs
- **GROUT:** TYPE: N/A QUANTITY: N/A

DESCRIPTION OF WELL SCREEN:

- **SLOT SIZE (inches):** 0.01 **SLOT CONFIGURATION:** Horizontal
- **TOTAL OPEN AREA PER FOOT OF SCREEN:** N/A
- **OUTSIDE DIAMETER:** 1 7/8-in. **NOMINAL INSIDE DIAMETER:** 1 5/8-in.
- **SCHEDULE/THICKNESS:** Sched. 40 **COMPOSITION:** PVC
- **MANUFACTURER:** ECT Manufacturing

TYPE OF MATERIAL BETWEEN BOTTOM OF BORING AND SCREEN: _____

DESCRIPTION OF WELL CASING:

- **OUTSIDE DIAMETER:** 1 7/8-in. **NOMINAL INSIDE DIAMETER:** 1 5/8-in.
- **SCHEDULE/THICKNESS:** Sched. 40 **COMPOSITION:** PVC
- **MANUFACTURER:** ECT Manufacturing

JOINT DESIGN AND COMPOSITION: Flush. threaded.

CENTRALIZERS DESIGN AND COMPOSITION: N/A

DESCRIPTION OF PROTECTIVE CASING:

- **NOMINAL INSIDE DIAMETER:** 6-in. **COMPOSITION:** Steel.

SPECIAL PROBLEMS ENCOUNTERED DURING WELL CONSTRUCTION AND THEIR RESOLUTION:

None.

Was all well screen and casing material used for construction free of foreign matter (e.g., adhesive tape, labels, soil, etc.)? YES [X] NO [ ]

Was all well screen and casing material used for construction free of unsecured couplings, ruptures, and other physical breakage and/or defects? YES [X] NO [ ]

Is deformation or bending of the installed well screen and casing minimized to the point of allowing the insertion and retrieval of a 1.0-inch bailer throughout the entire length of the completed well? YES [X] NO [ ]

QUANTITY OF APPROVED WATER USED FOR FILTER PACK ENPLACEMENT: None.

RECORDED BY: [signature] 11/14/06 (Signature & Date) **QA CHECK BY:** Wayne H. Parker 11/27/06 (Signature & Date)

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MONITORING WELL

PROJECT: Bulk Fuel Facility

DELIVERY ORDER NO: 0066

WELL NUMBER: FP-21

BEGIN: 11/11/96

END: 11/11/96

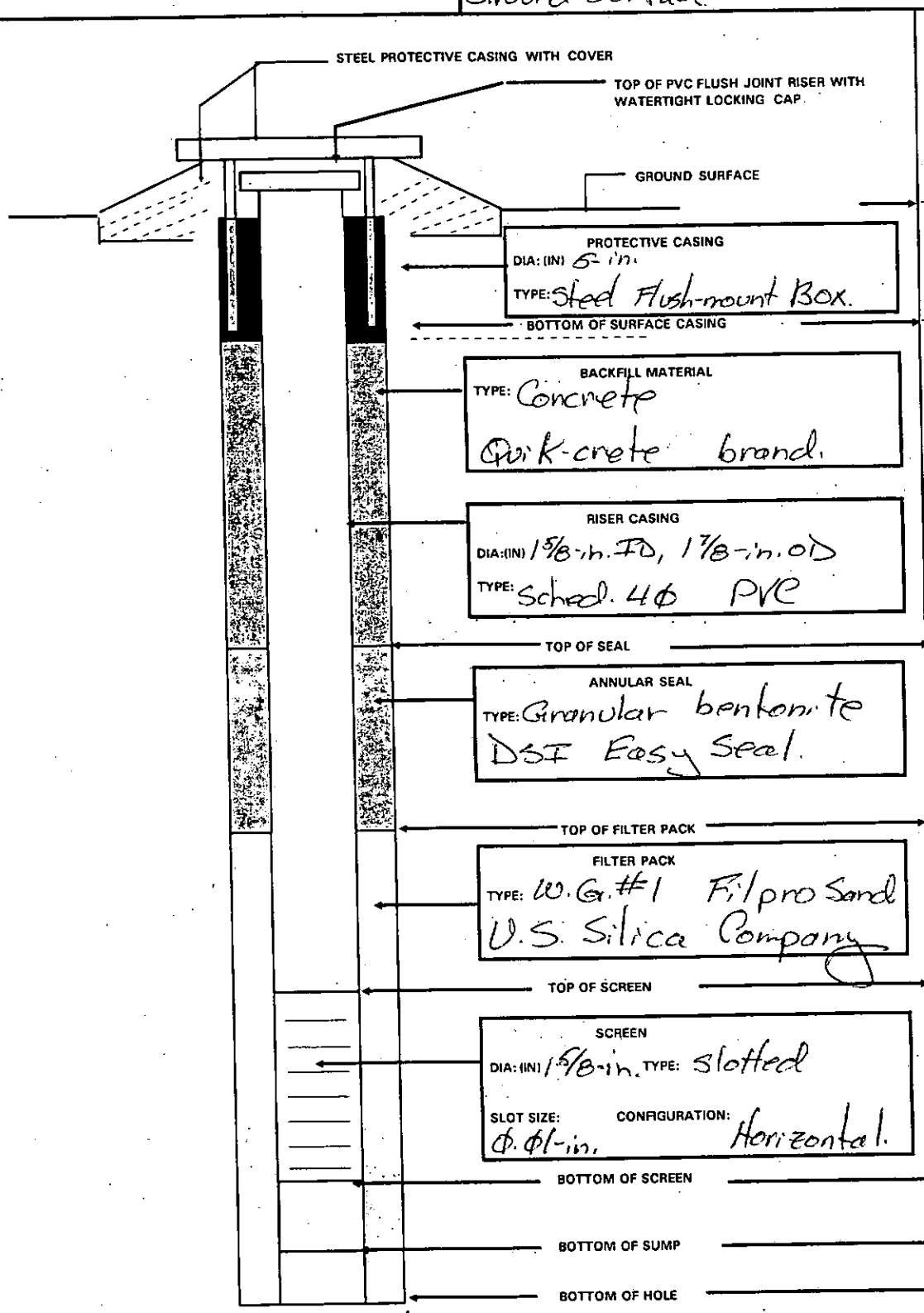
COORDINATES: N:
E:

DATUM/UNITS:

REFERENCE POINT: Ground Surface

ELEVATION:

DATUM/UNITS:



MONITORING WELL INSTALLATION LOG

PROJECT: Bulk Fuel Facility **DELIVERY ORDER:** 0066

MONITORING WELL ID: PP-22

INSTALLATION START: DATE: 11/11/06 TIME: 1554

INSTALLATION FINISH: DATE: 11/11/06 TIME: 1558

ANNULAR SPACE MATERIALS INVENTORY:

- **GRANULAR FILTER PACK:** TYPE: W.G. #1 QUANTITY: 5 lbs
- **BENTONITE SEAL:** TYPE: DSI Easy Seal QUANTITY: 1-2 lbs
- **GROUT:** TYPE: N/A QUANTITY: N/A

DESCRIPTION OF WELL SCREEN:

- **SLOT SIZE (inches):** .01 **SLOT CONFIGURATION:** Horizontal
- **TOTAL OPEN AREA PER FOOT OF SCREEN:** N/A
- **OUTSIDE DIAMETER:** 1 7/8-in. **NOMINAL INSIDE DIAMETER:** 1 5/8-in.
- **SCHEDULE/THICKNESS:** Sched. 40 **COMPOSITION:** PVC
- **MANUFACTURER:** ECT Manufacturing.

TYPE OF MATERIAL BETWEEN BOTTOM OF BORING AND SCREEN: Native Formations.

DESCRIPTION OF WELL CASING:

- **OUTSIDE DIAMETER:** 1 7/8-in. **NOMINAL INSIDE DIAMETER:** 1 5/8-in.
- **SCHEDULE/THICKNESS:** Sched. 40 **COMPOSITION:** PVC
- **MANUFACTURER:** ECT Manufacturing.

JOINT DESIGN AND COMPOSITION: Flush-Threaded/slip-cap on bottom.

CENTRALIZERS DESIGN AND COMPOSITION: N/A

DESCRIPTION OF PROTECTIVE CASING:

- **NOMINAL INSIDE DIAMETER:** 5-in. **COMPOSITION:** Steel

SPECIAL PROBLEMS ENCOUNTERED DURING WELL CONSTRUCTION AND THEIR RESOLUTION:

None.

Was all well screen and casing material used for construction free of foreign matter (e.g., adhesive tape, labels, soil, etc.)? YES [X] NO [ ]

Was all well screen and casing material used for construction free of unsecured couplings, ruptures, and other physical breakage and/or defects? YES [X] NO [ ]

Is deformation or bending of the installed well screen and casing minimized to the point of allowing the insertion and retrieval of a 1.0-inch bailer throughout the entire length of the completed well? YES [X] NO [ ]

QUANTITY OF APPROVED WATER USED FOR FILTER PACK ENPLACEMENT: None

RECORDED BY: [signature] 11/14/06 (Signature & Date)

QA CHECK BY: Wayne H. Parker 11/27/06 (Signature & Date)

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MONITORING WELL

PROJECT: Bulk Fuel Facility

DELIVERY ORDER NO: 0066

WELL NUMBER: FP-22

BEGIN: 11/11/06

END: 11/11/06

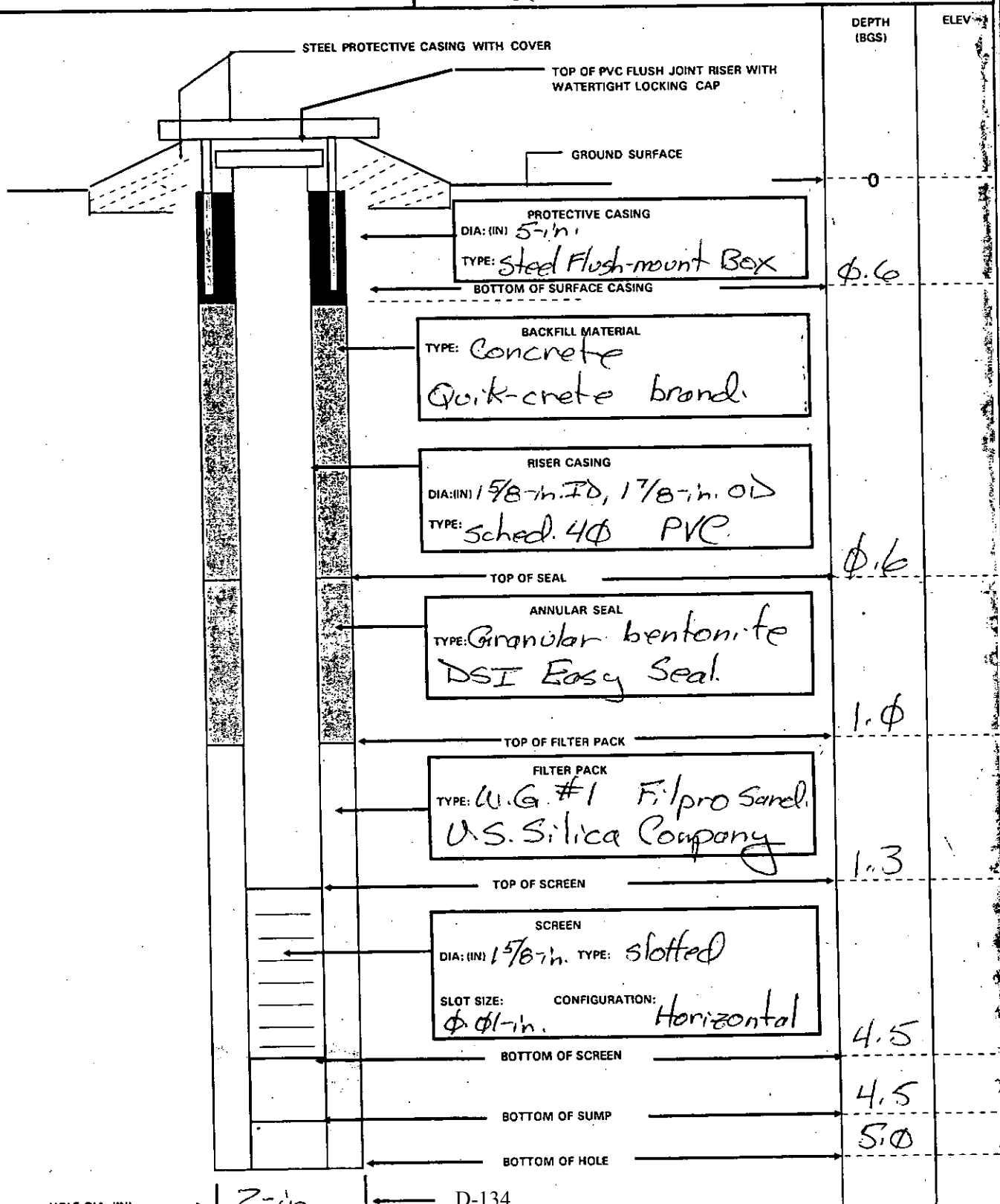
COORDINATES: N:
E:

DATUM/UNITS:

REFERENCE POINT: Ground Surface

ELEVATION:

DATUM/UNITS:



MONITORING WELL INSTALLATION LOG

PROJECT: Bulk Fuel Facility **DELIVERY ORDER:** 0066

MONITORING WELL ID: FP-23

INSTALLATION START: DATE: 11/11/06 TIME: 1639

INSTALLATION FINISH: DATE: 11/11/06 TIME: 1645

ANNULAR SPACE MATERIALS INVENTORY:

- **GRANULAR FILTER PACK:** TYPE: W.G. #1 QUANTITY: 30 lbs.
- **BENTONITE SEAL:** TYPE: DSI Easy Seal QUANTITY: 4-5 lbs.
- **GROUT:** TYPE: N/A QUANTITY: N/A

DESCRIPTION OF WELL SCREEN:

- **SLOT SIZE (inches):** 0.01 **SLOT CONFIGURATION:** Horizontal
- **TOTAL OPEN AREA PER FOOT OF SCREEN:** N/A
- **OUTSIDE DIAMETER:** 1 7/8-in. **NOMINAL INSIDE DIAMETER:** 1 5/8-in.
- **SCHEDULE/THICKNESS:** Sched. 40 **COMPOSITION:** PVC
- **MANUFACTURER:** ECT Manufacturing.

TYPE OF MATERIAL BETWEEN BOTTOM OF BORING AND SCREEN: Native Formations.

DESCRIPTION OF WELL CASING:

- **OUTSIDE DIAMETER:** 1 7/8-in. **NOMINAL INSIDE DIAMETER:** 1 5/8-in.
- **SCHEDULE/THICKNESS:** Sched. 40 **COMPOSITION:** PVC
- **MANUFACTURER:** ECT Manufacturing.

JOINT DESIGN AND COMPOSITION: Flush-Threaded/slip cap on bottom.

CENTRALIZERS DESIGN AND COMPOSITION: N/A

DESCRIPTION OF PROTECTIVE CASING:

- **NOMINAL INSIDE DIAMETER:** 5-in. **COMPOSITION:** steel

SPECIAL PROBLEMS ENCOUNTERED DURING WELL CONSTRUCTION AND THEIR RESOLUTION:
Encounter hard/packed gravel layer, or large rocks; use 3-in. diam. auger.

Was all well screen and casing material used for construction free of foreign matter (e.g., adhesive tape, labels, soil, etc.)? YES [X] NO [ ]

Was all well screen and casing material used for construction free of unsecured couplings, ruptures, and other physical breakage and/or defects? YES [X] NO [ ]

Is deformation or bending of the installed well screen and casing minimized to the point of allowing the insertion and retrieval of a 1.0-inch bailer throughout the entire length of the completed well? YES [X] NO [ ]

QUANTITY OF APPROVED WATER USED FOR FILTER PACK ENPLACEMENT: None.

RECORDED BY: [signature] 11/14/06 (Signature & Date) **QA CHECK BY:** [signature] 11/27/06 (Signature & Date)

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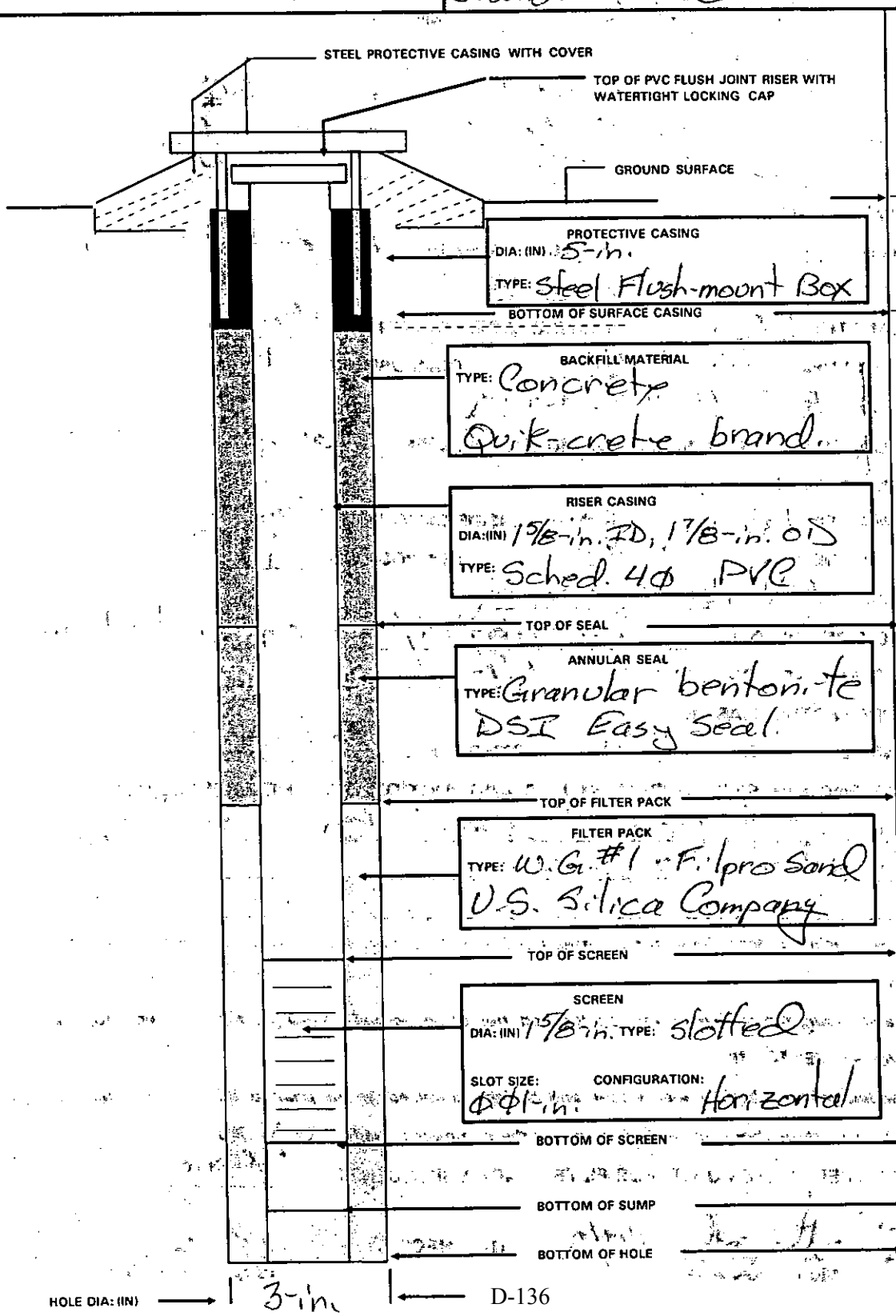
MONITORING WELL

PROJECT: Bulk Fuel Facility
DELIVERY ORDER NO: 0066

WELL NUMBER: FP-23
BEGIN: 11/11/06
END: 11/11/06

COORDINATES: N:
E:
DATUM/UNITS:

REFERENCE POINT: Ground Surface
ELEVATION:
DATUM/UNITS:



MONITORING WELL INSTALLATION LOG

PROJECT: Bulk Fuel Facility **DELIVERY ORDER:** 0066

MONITORING WELL ID: FP-24

INSTALLATION START: DATE: 11/12/06 TIME: 0745

INSTALLATION FINISH: DATE: 11/12/06 TIME: 0754

ANNULAR SPACE MATERIALS INVENTORY:

- **GRANULAR FILTER PACK:** TYPE: W.G. #1 QUANTITY: 30 lbs.
- **BENTONITE SEAL:** TYPE: DSI Easy Seal QUANTITY: 4-5 lbs
- **GROUT:** TYPE: N/A QUANTITY: N/A

DESCRIPTION OF WELL SCREEN:

- **SLOT SIZE (inches):** 0.01 **SLOT CONFIGURATION:** Horizontal
- **TOTAL OPEN AREA PER FOOT OF SCREEN:** N/A
- **OUTSIDE DIAMETER:** 1 7/8-in. **NOMINAL INSIDE DIAMETER:** 1 5/8-in.
- **SCHEDULE/THICKNESS:** Sched. 40 **COMPOSITION:** PVC
- **MANUFACTURER:** ECT Manufacturing.

TYPE OF MATERIAL BETWEEN BOTTOM OF BORING AND SCREEN: Native Formations.

DESCRIPTION OF WELL CASING:

- **OUTSIDE DIAMETER:** 1 7/8-in. **NOMINAL INSIDE DIAMETER:** 1 5/8-in.
- **SCHEDULE/THICKNESS:** Sched. 40 **COMPOSITION:** PVC
- **MANUFACTURER:** ECT Manufacturing.

JOINT DESIGN AND COMPOSITION: Flush-threaded/slip cap on bottom.

CENTRALIZERS DESIGN AND COMPOSITION: N/A

DESCRIPTION OF PROTECTIVE CASING:

- **NOMINAL INSIDE DIAMETER:** 5-in. **COMPOSITION:** Steel

SPECIAL PROBLEMS ENCOUNTERED DURING WELL CONSTRUCTION AND THEIR RESOLUTION:

Encounter hard/packed gravel layer; Use 3-in. diam. auger.

Was all well screen and casing material used for construction free of foreign matter (e.g., adhesive tape, labels, soil, etc.)? YES [X] NO [ ]

Was all well screen and casing material used for construction free of unsecured couplings, ruptures, and other physical breakage and/or defects? YES [X] NO [ ]

Is deformation or bending of the installed well screen and casing minimized to the point of allowing the insertion and retrieval of a 1.0-inch bailer throughout the entire length of the completed well? YES [X] NO [ ]

QUANTITY OF APPROVED WATER USED FOR FILTER PACK ENPLACEMENT: None.

RECORDED BY: [signature] 11/14/06 (Signature & Date)

QA CHECK BY: [signature] 11/27/06 (Signature & Date)

18

MONITORING WELL

PROJECT: Bulk Fuel Facility

DELIVERY ORDER NO: 0066

WELL NUMBER: FP-24

BEGIN: 11/12/06

END: 11/12/06

COORDINATES: N:

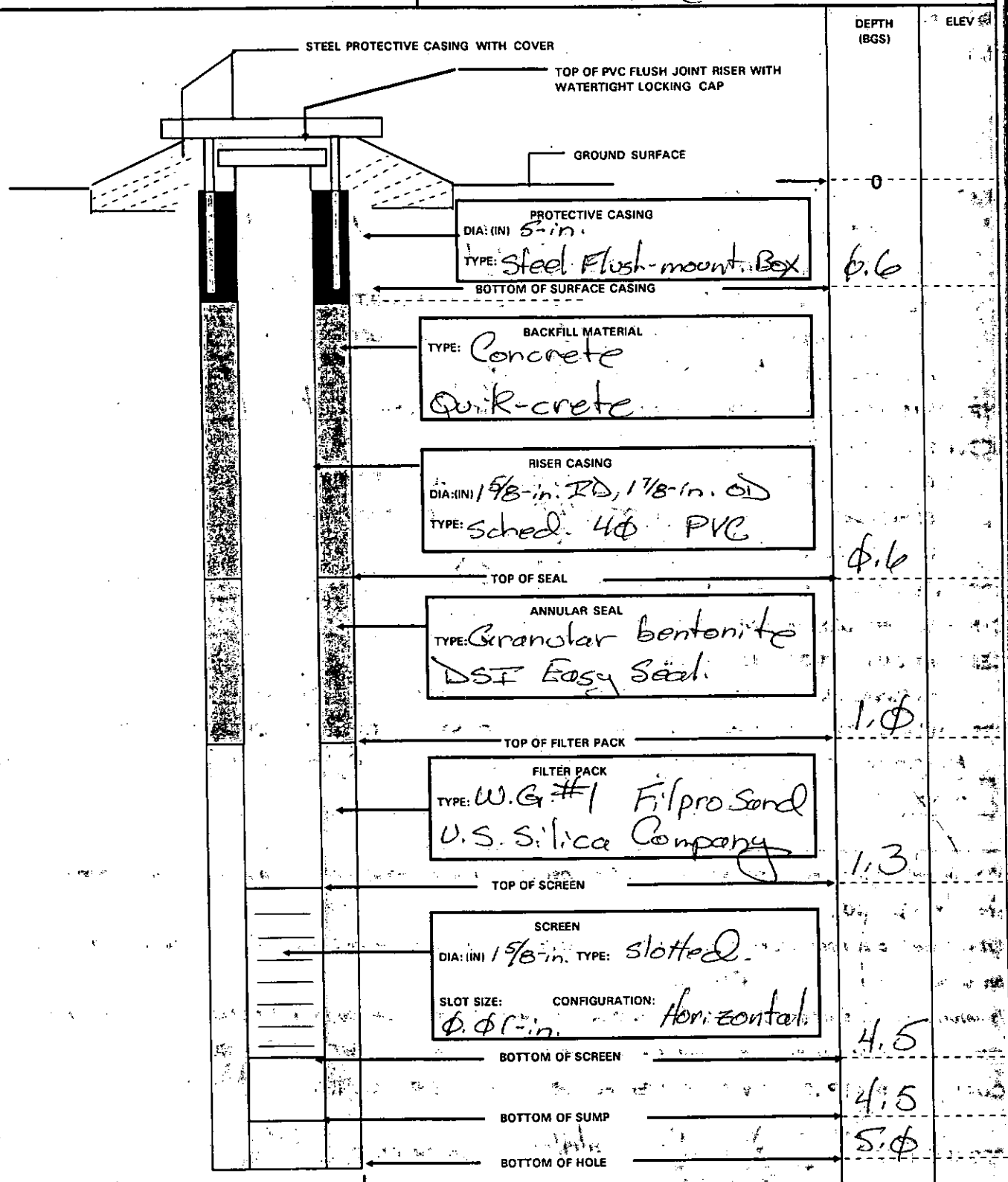
E:

DATUM/UNITS:

REFERENCE POINT: Ground Surface

ELEVATION:

DATUM/UNITS:



MONITORING WELL INSTALLATION LOG

PROJECT: Bulk Fuel Facility DELIVERY ORDER: 0066

MONITORING WELL ID: FP-25

INSTALLATION START: DATE: 11/12/06 TIME: 0845

INSTALLATION FINISH: DATE: 11/12/06 TIME: 0850

ANNULAR SPACE MATERIALS INVENTORY:

GRANULAR FILTER PACK: TYPE: W. Gr. #1 QUANTITY: 5 lbs.

BENTONITE SEAL: TYPE: DSI Easy Seal. QUANTITY: 1-2 lbs.

GROUT: TYPE: N/A QUANTITY: N/A

DESCRIPTION OF WELL SCREEN:

SLOT SIZE (inches): 0.01 SLOT CONFIGURATION: Horizontal

TOTAL OPEN AREA PER FOOT OF SCREEN: N/A

OUTSIDE DIAMETER: 1 7/8-in. NOMINAL INSIDE DIAMETER: 1 5/8-in.

SCHEDULE/THICKNESS: Sched. 40 COMPOSITION: PVC

MANUFACTURER: ECT Manufacturing.

TYPE OF MATERIAL BETWEEN BOTTOM OF BORING AND SCREEN: Native Formations.

DESCRIPTION OF WELL CASING:

OUTSIDE DIAMETER: 1 7/8-in. NOMINAL INSIDE DIAMETER: 1 5/8-in.

SCHEDULE/THICKNESS: Sched. 40 COMPOSITION: PVC

MANUFACTURER: ECT Manufacturing.

JOINT DESIGN AND COMPOSITION: Flush-threaded / slip-cap on bottom.

CENTRALIZERS DESIGN AND COMPOSITION: N/A

DESCRIPTION OF PROTECTIVE CASING:

NOMINAL INSIDE DIAMETER: 6-in. COMPOSITION: steel.

SPECIAL PROBLEMS ENCOUNTERED DURING WELL CONSTRUCTION AND THEIR RESOLUTION:

None.

Was all well screen and casing material used for construction free of foreign matter (e.g., adhesive tape, labels, soil, etc.)? YES [X] NO [ ]

Was all well screen and casing material used for construction free of unsecured couplings, ruptures, and other physical breakage and/or defects? YES [X] NO [ ]

Is deformation or bending of the installed well screen and casing minimized to the point of allowing the insertion and retrieval of a 1.0-inch bailer throughout the entire length of the completed well? YES [X] NO [ ]

QUANTITY OF APPROVED WATER USED FOR FILTER PACK ENPLACEMENT: None.

RECORDED BY: [signature] 11/14/06
(Signature & Date)

QA CHECK BY: Wayne H. Park 11/27/06
(Signature & Date)

23

MONITORING WELL

PROJECT: Bulk Fuel Facility

DELIVERY ORDER NO: 0066

WELL NUMBER: FP-25

BEGIN: 11/12/06

END: 11/12/06

COORDINATES: N:

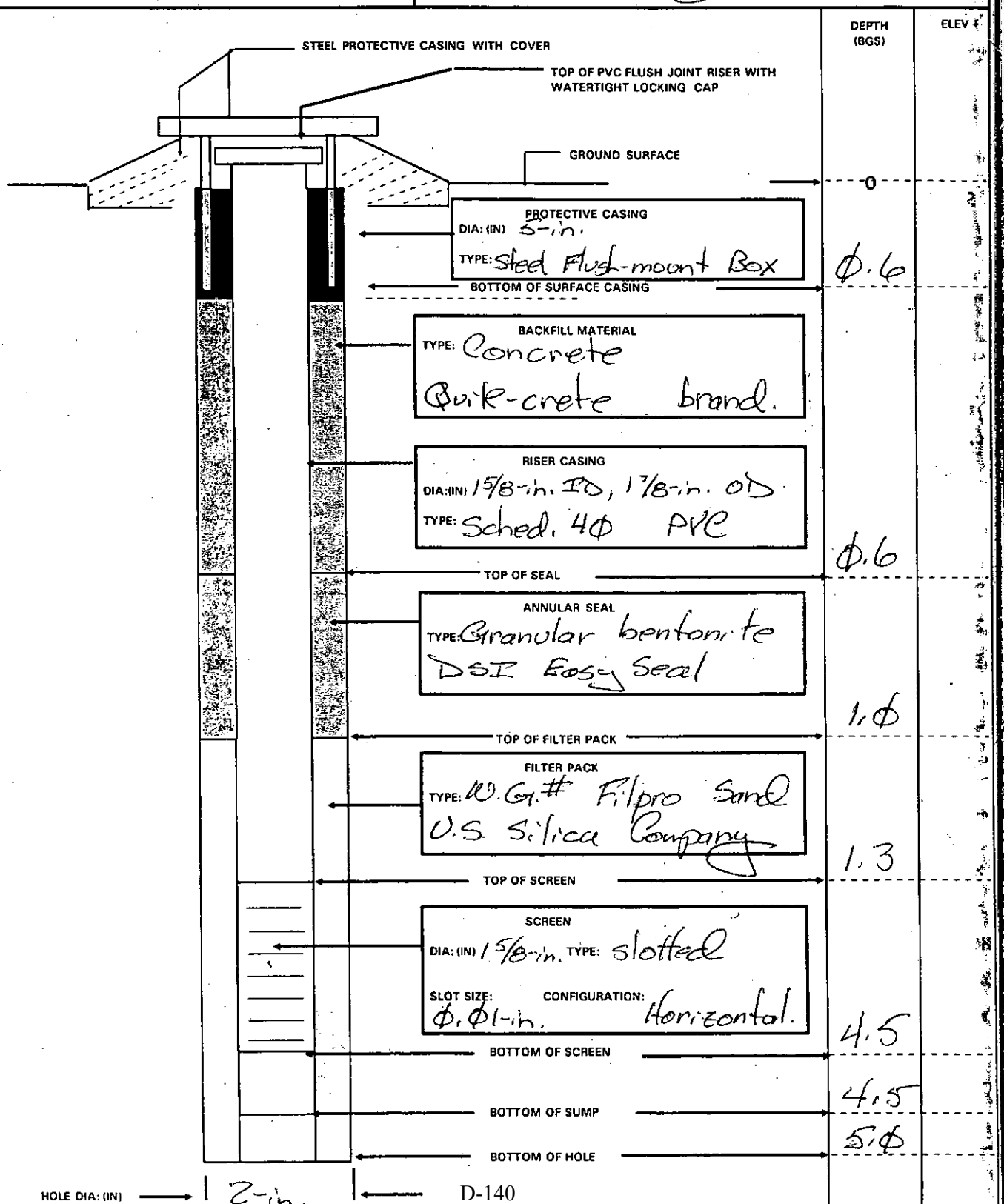
E:

DATUM/UNITS:

REFERENCE POINT: Ground Surface

ELEVATION:

DATUM/UNITS:



MONITORING WELL INSTALLATION LOG

PROJECT: Bulk Fuel Facility **DELIVERY ORDER:** 0066-

MONITORING WELL ID: FP-26

INSTALLATION START: DATE: 11/12/06 TIME: 0901

INSTALLATION FINISH: DATE: 11/12/06 TIME: 0906

ANNULAR SPACE MATERIALS INVENTORY:

- GRANULAR FILTER PACK: TYPE: W.G #1 QUANTITY: 5 lbs.
- BENTONITE SEAL: TYPE: DSI Easy Seal QUANTITY: 1-2 lbs.
- GROUT: TYPE: N/A QUANTITY: N/A

DESCRIPTION OF WELL SCREEN:

- SLOT SIZE (inches): 0.01 SLOT CONFIGURATION: Horizontal
- TOTAL OPEN AREA PER FOOT OF SCREEN: N/A
- OUTSIDE DIAMETER: 1 7/8-in. NOMINAL INSIDE DIAMETER: 1 5/8-in.
- SCHEDULE/THICKNESS: Sched. 40 COMPOSITION: PVC
- MANUFACTURER: ECT Manufacturing.

TYPE OF MATERIAL BETWEEN BOTTOM OF BORING AND SCREEN: Native Formations.

DESCRIPTION OF WELL CASING:

- OUTSIDE DIAMETER: 1 7/8-in. NOMINAL INSIDE DIAMETER: 1 5/8-in.
- SCHEDULE/THICKNESS: Sched. 40 COMPOSITION: PVC
- MANUFACTURER: ECT Manufacturing.

JOINT DESIGN AND COMPOSITION: Flush-threaded / slip-cap on bottom.

CENTRALIZERS DESIGN AND COMPOSITION: N/A

DESCRIPTION OF PROTECTIVE CASING:

- NOMINAL INSIDE DIAMETER: 6-in. COMPOSITION: Steel

SPECIAL PROBLEMS ENCOUNTERED DURING WELL CONSTRUCTION AND THEIR RESOLUTION:

None.

Was all well screen and casing material used for construction free of foreign matter (e.g., adhesive tape, labels, soil, etc.)? YES [X] NO [ ]

Was all well screen and casing material used for construction free of unsecured couplings, ruptures, and other physical breakage and/or defects? YES [X] NO [ ]

Is deformation or bending of the installed well screen and casing minimized to the point of allowing the insertion and retrieval of a 1.0-inch bailer throughout the entire length of the completed well? YES [X] NO [ ]

QUANTITY OF APPROVED WATER USED FOR FILTER PACK ENPLACEMENT: None

RECORDED BY: [signature] 11/14/06 (Signature & Date) **QA CHECK BY:** [signature] 11/22/06 (Signature & Date)

28

MONITORING WELL

PROJECT: Bulk Fuel Facility

DELIVERY ORDER NO: 0066

WELL NUMBER: FP-26

BEGIN: 11/12/96

END: 11/12/96

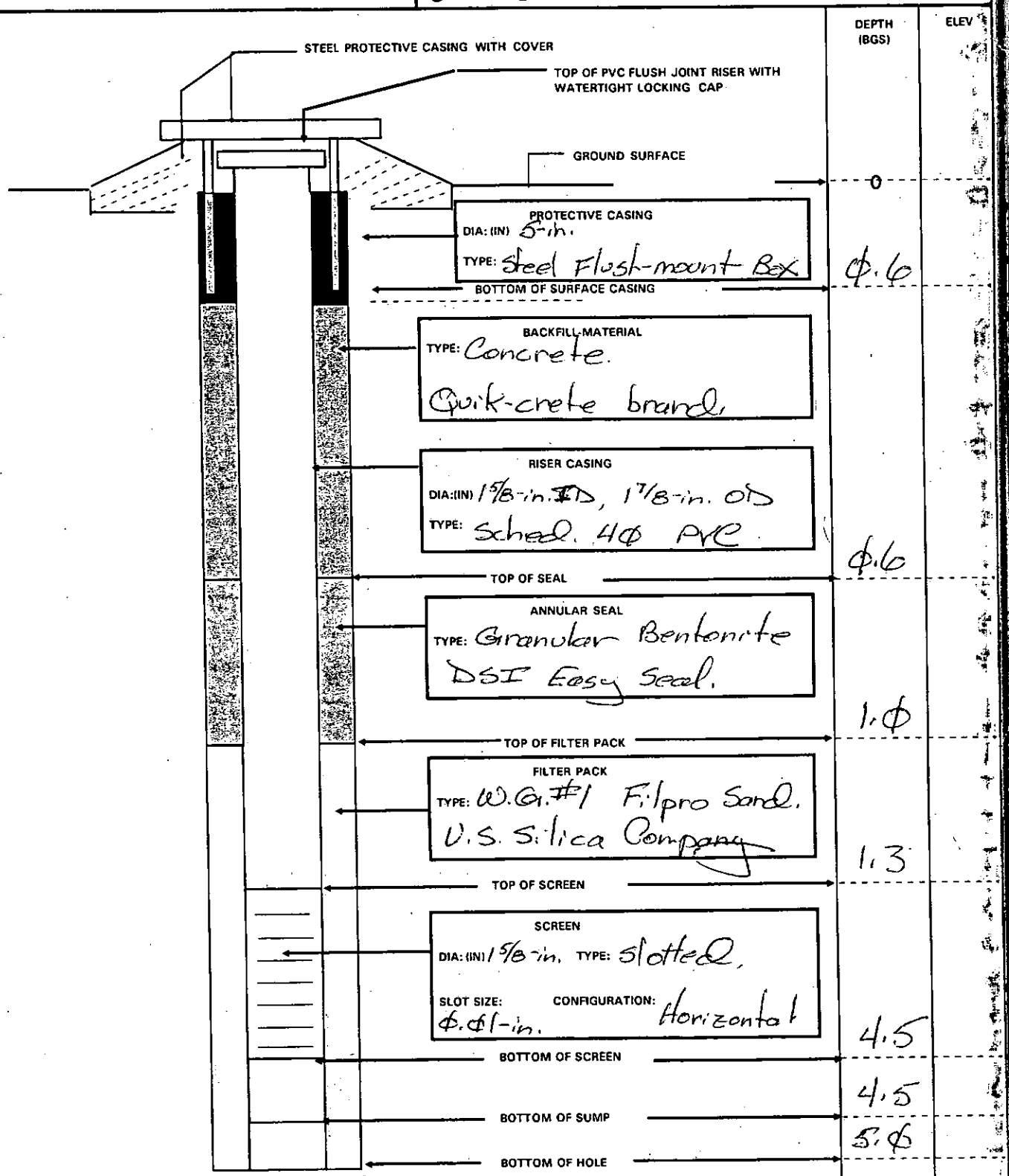
COORDINATES: N:
E:

DATUM/UNITS:

REFERENCE POINT: Ground Surface.

ELEVATION:

DATUM/UNITS:



MONITORING WELL INSTALLATION LOG

PROJECT: Bulk Fuel Facility DELIVERY ORDER: 0066

MONITORING WELL ID: RP-27

INSTALLATION START: DATE: 11/12/06 TIME: 0914

INSTALLATION FINISH: DATE: 11/12/06 TIME: 0919

ANNULAR SPACE MATERIALS INVENTORY:

GRANULAR FILTER PACK: TYPE: W.G.#1 QUANTITY: 5 lbs.

BENTONITE SEAL: TYPE: DSI Easy Seal QUANTITY: 1-2 lbs.

GROUT: TYPE: N/A QUANTITY: N/A

DESCRIPTION OF WELL SCREEN:

SLOT SIZE (inches): 0.01 SLOT CONFIGURATION: Horizontal

TOTAL OPEN AREA PER FOOT OF SCREEN: N/A

OUTSIDE DIAMETER: 1 7/8-in. NOMINAL INSIDE DIAMETER: 1 5/8-in.

SCHEDULE/THICKNESS: Sched. 40 COMPOSITION: PVC

MANUFACTURER: ECT Manufacturing.

TYPE OF MATERIAL BETWEEN BOTTOM OF BORING AND SCREEN: Native Formations.

DESCRIPTION OF WELL CASING:

OUTSIDE DIAMETER: 1 7/8-in. NOMINAL INSIDE DIAMETER: 1 5/8-in.

SCHEDULE/THICKNESS: Sched. 40 COMPOSITION: PVC

MANUFACTURER: ECT Manufacturing.

JOINT DESIGN AND COMPOSITION: Flush-threaded/slip-cap on bottom.

CENTRALIZERS DESIGN AND COMPOSITION:

DESCRIPTION OF PROTECTIVE CASING:

NOMINAL INSIDE DIAMETER: 5-in. COMPOSITION: Steel

SPECIAL PROBLEMS ENCOUNTERED DURING WELL CONSTRUCTION AND THEIR RESOLUTION:

None.

Was all well screen and casing material used for construction free of foreign matter (e.g., adhesive tape, labels, soil, etc.)? YES [X] NO [ ]

Was all well screen and casing material used for construction free of unsecured couplings, ruptures, and other physical breakage and/or defects? YES [X] NO [ ]

Is deformation or bending of the installed well screen and casing minimized to the point of allowing the insertion and retrieval of a 1.0-inch bailer throughout the entire length of the completed well? YES [X] NO [ ]

QUANTITY OF APPROVED WATER USED FOR FILTER PACK ENPLACEMENT: None.

RECORDED BY: [signature] 11/14/06 (Signature & Date)

QA CHECK BY: [signature] 11/27/06 (Signature & Date)

93

MONITORING WELL

PROJECT: Bulk Fuel Facility

DELIVERY ORDER NO: 0066

WELL NUMBER: FP-27

BEGIN: 11/12/96

END: 11/12/96

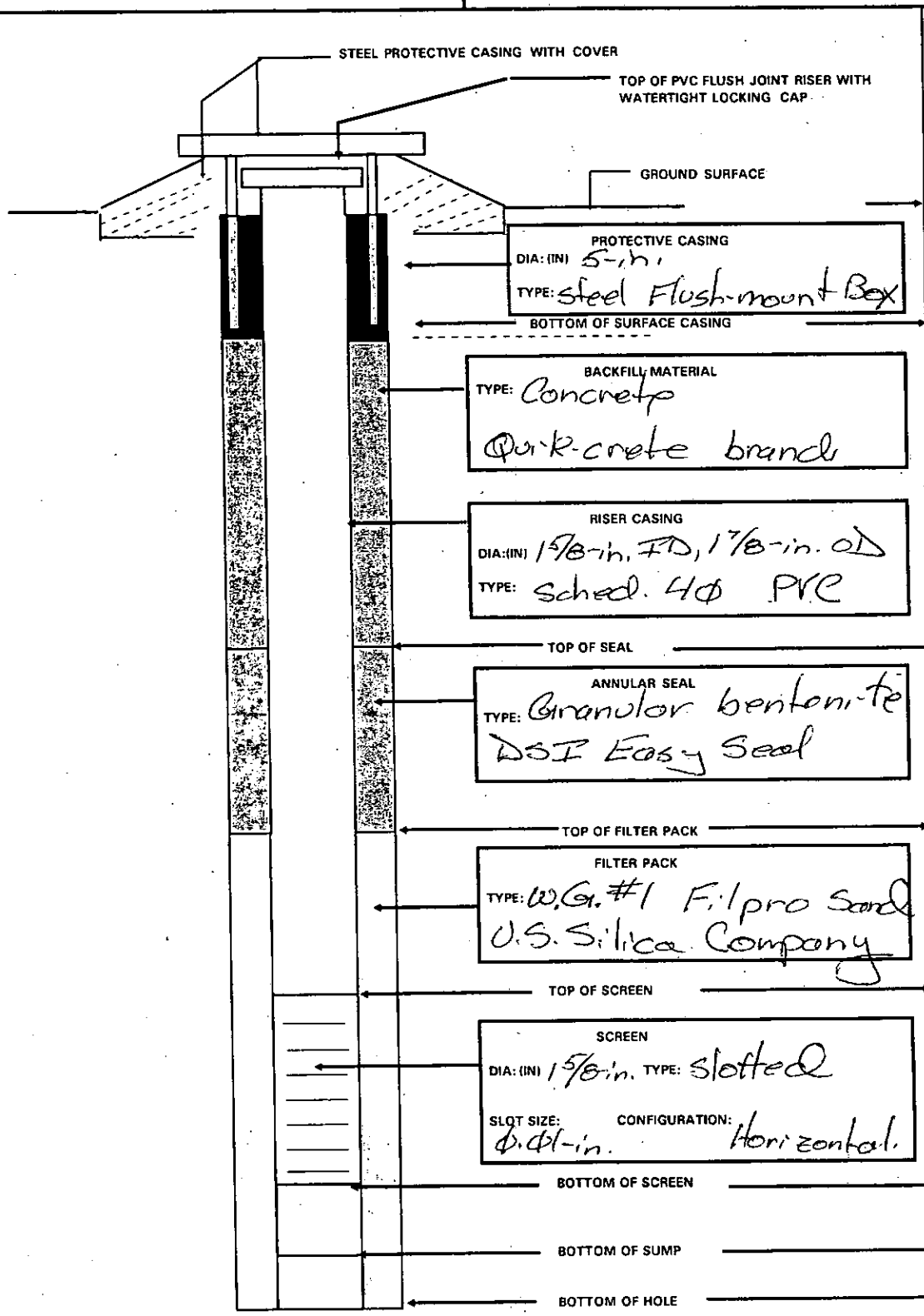
COORDINATES: N:
E:

DATUM/UNITS:

REFERENCE POINT: Ground Surface

ELEVATION:

DATUM/UNITS:



DEPTH (BGS)	ELEV
0	
0.6	
0.6	
1.0	
1.3	
4.5	
4.5	
5.0	

MONITORING WELL INSTALLATION LOG

PROJECT: Bulk Fuel Facility **DELIVERY ORDER:** 0066

MONITORING WELL ID: FP-28

INSTALLATION START: DATE: 11/12/06 TIME: 0926

INSTALLATION FINISH: DATE: 11/12/06 TIME: 0930

ANNULAR SPACE MATERIALS INVENTORY:

- GRANULAR FILTER PACK: TYPE: W.G. #1 QUANTITY: 5 lbs.
- BENTONITE SEAL: TYPE: DSI Easy Seal QUANTITY: 1-2 lbs
- GROUT: TYPE: N/A QUANTITY: N/A

DESCRIPTION OF WELL SCREEN:

- SLOT SIZE (inches): 0.01 SLOT CONFIGURATION: Horizontal
- TOTAL OPEN AREA PER FOOT OF SCREEN: N/A
- OUTSIDE DIAMETER: 1 7/8-in. NOMINAL INSIDE DIAMETER: 1 5/8-in.
- SCHEDULE/THICKNESS: Sched. 40 COMPOSITION: PVC
- MANUFACTURER: ECT Manufacturing.

TYPE OF MATERIAL BETWEEN BOTTOM OF BORING AND SCREEN: Native Formations.

DESCRIPTION OF WELL CASING:

- OUTSIDE DIAMETER: 1 7/8-in. NOMINAL INSIDE DIAMETER: 1 5/8-in.
- SCHEDULE/THICKNESS: Sched. 40 COMPOSITION: PVC.
- MANUFACTURER: ECT Manufacturing.

JOINT DESIGN AND COMPOSITION: Flush-threaded/slip-cap on bottom.

CENTRALIZERS DESIGN AND COMPOSITION: N/A

DESCRIPTION OF PROTECTIVE CASING:

- NOMINAL INSIDE DIAMETER: 5-in. COMPOSITION: steel.

SPECIAL PROBLEMS ENCOUNTERED DURING WELL CONSTRUCTION AND THEIR RESOLUTION:

None.

Was all well screen and casing material used for construction free of foreign matter (e.g., adhesive tape, labels, soil, etc.)? YES [X] NO [ ]

Was all well screen and casing material used for construction free of unsecured couplings, ruptures, and other physical breakage and/or defects? YES [X] NO [ ]

Is deformation or bending of the installed well screen and casing minimized to the point of allowing the insertion and retrieval of a 1.0-inch bailer throughout the entire length of the completed well? YES [X] NO [ ]

QUANTITY OF APPROVED WATER USED FOR FILTER PACK ENPLACEMENT: None.

RECORDED BY: [signature] 11/14/06 (Signature & Date) **QA CHECK BY:** [signature] 11/27/06 (Signature & Date)

38

MONITORING WELL

PROJECT: Bulk Fuel Facility

DELIVERY ORDER NO: 0066

WELL NUMBER: FP-28

BEGIN: 11/12/06

END: 11/12/06

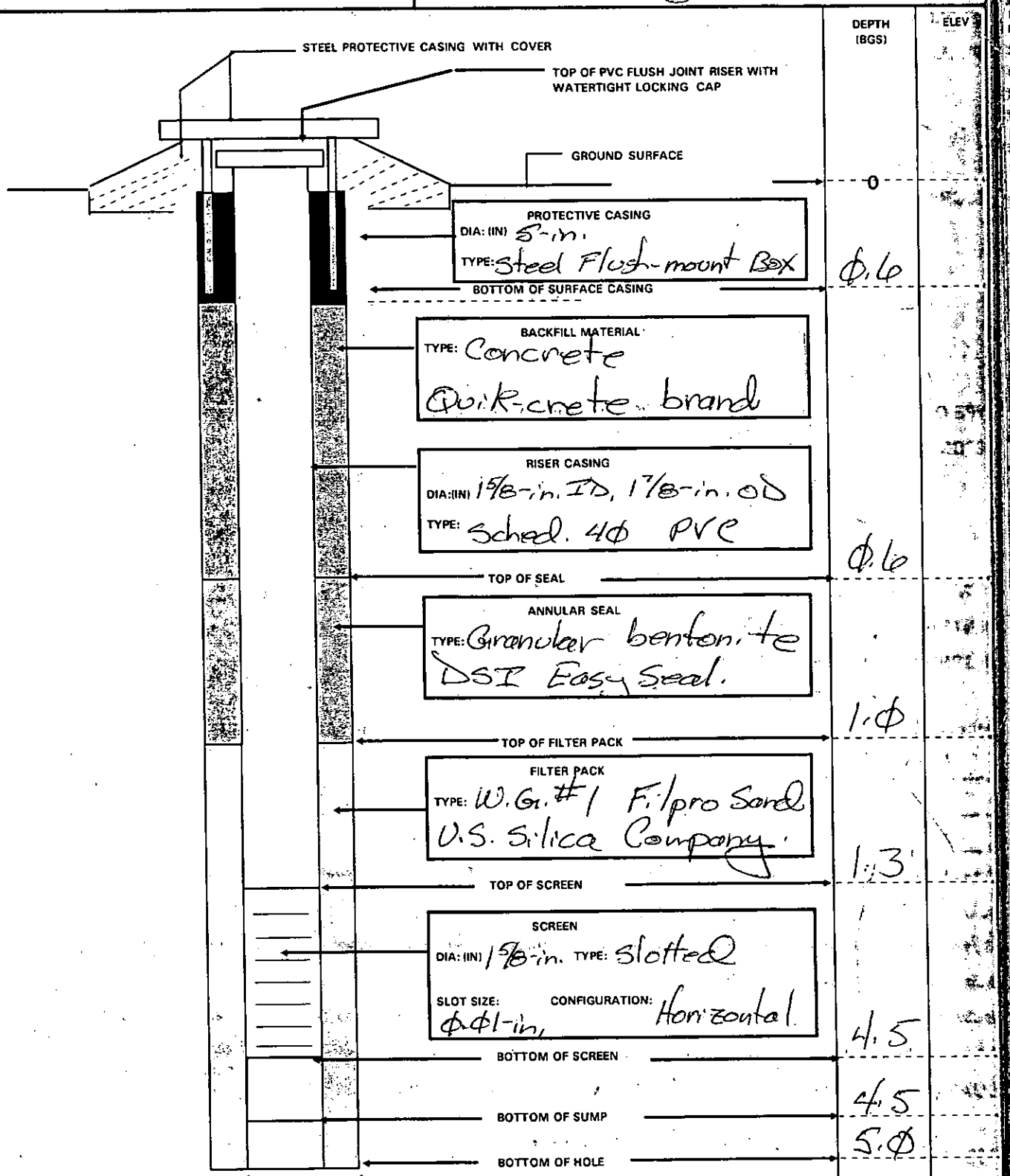
COORDINATES: N:
E:

DATUM/UNITS:

REFERENCE POINT: Ground Surface

ELEVATION:

DATUM/UNITS:



MONITORING WELL INSTALLATION LOG

PROJECT: Bulk Fuel Facility DELIVERY ORDER: 0066

MONITORING WELL ID: FP-29

INSTALLATION START: DATE: 11/12/06 TIME: 0939

INSTALLATION FINISH: DATE: 11/12/06 TIME: 0943

ANNULAR SPACE MATERIALS INVENTORY:

- GRANULAR FILTER PACK: TYPE: W.G.#1 QUANTITY: 5 lbs.
- BENTONITE SEAL: TYPE: DSI Easy Seal QUANTITY: 1-2 lbs.
- GROUT: TYPE: N/A QUANTITY: N/A

DESCRIPTION OF WELL SCREEN:

- SLOT SIZE (inches): 0.01 SLOT CONFIGURATION: Horizontal
- TOTAL OPEN AREA PER FOOT OF SCREEN: N/A
- OUTSIDE DIAMETER: 1 7/8-in. NOMINAL INSIDE DIAMETER: 1 5/8-in.
- SCHEDULE/THICKNESS: Sched. 40 COMPOSITION: PVC
- MANUFACTURER: ECT Manufacturing.

TYPE OF MATERIAL BETWEEN BOTTOM OF BORING AND SCREEN: Native Formations.

DESCRIPTION OF WELL CASING:

- OUTSIDE DIAMETER: 1 7/8-in. NOMINAL INSIDE DIAMETER: 1 5/8-in.
- SCHEDULE/THICKNESS: Sched. 40 COMPOSITION: PVC
- MANUFACTURER: ECT Manufacturing.

JOINT DESIGN AND COMPOSITION: Flush-threaded / slip-cap on bottom.

CENTRALIZERS DESIGN AND COMPOSITION: N/A

DESCRIPTION OF PROTECTIVE CASING:

- NOMINAL INSIDE DIAMETER: 5-in. COMPOSITION: Steel

SPECIAL PROBLEMS ENCOUNTERED DURING WELL CONSTRUCTION AND THEIR RESOLUTION:

None.

Was all well screen and casing material used for construction free of foreign matter (e.g., adhesive tape, labels, soil, etc.)? YES [X] NO [ ]

Was all well screen and casing material used for construction free of unsecured couplings, ruptures, and other physical breakage and/or defects? YES [X] NO [ ]

Is deformation or bending of the installed well screen and casing minimized to the point of allowing the insertion and retrieval of a 1.0-inch bailer throughout the entire length of the completed well? YES [X] NO [ ]

QUANTITY OF APPROVED WATER USED FOR FILTER PACK ENPLACEMENT: None

RECORDED BY: [signature] 11/14/06 (Signature & Date)

QA CHECK BY: [signature] 11/17/06 (Signature & Date)

43

MONITORING WELL

PROJECT: Bulk Fuel Facility

DELIVERY ORDER NO: 0066

WELL NUMBER: FP-29

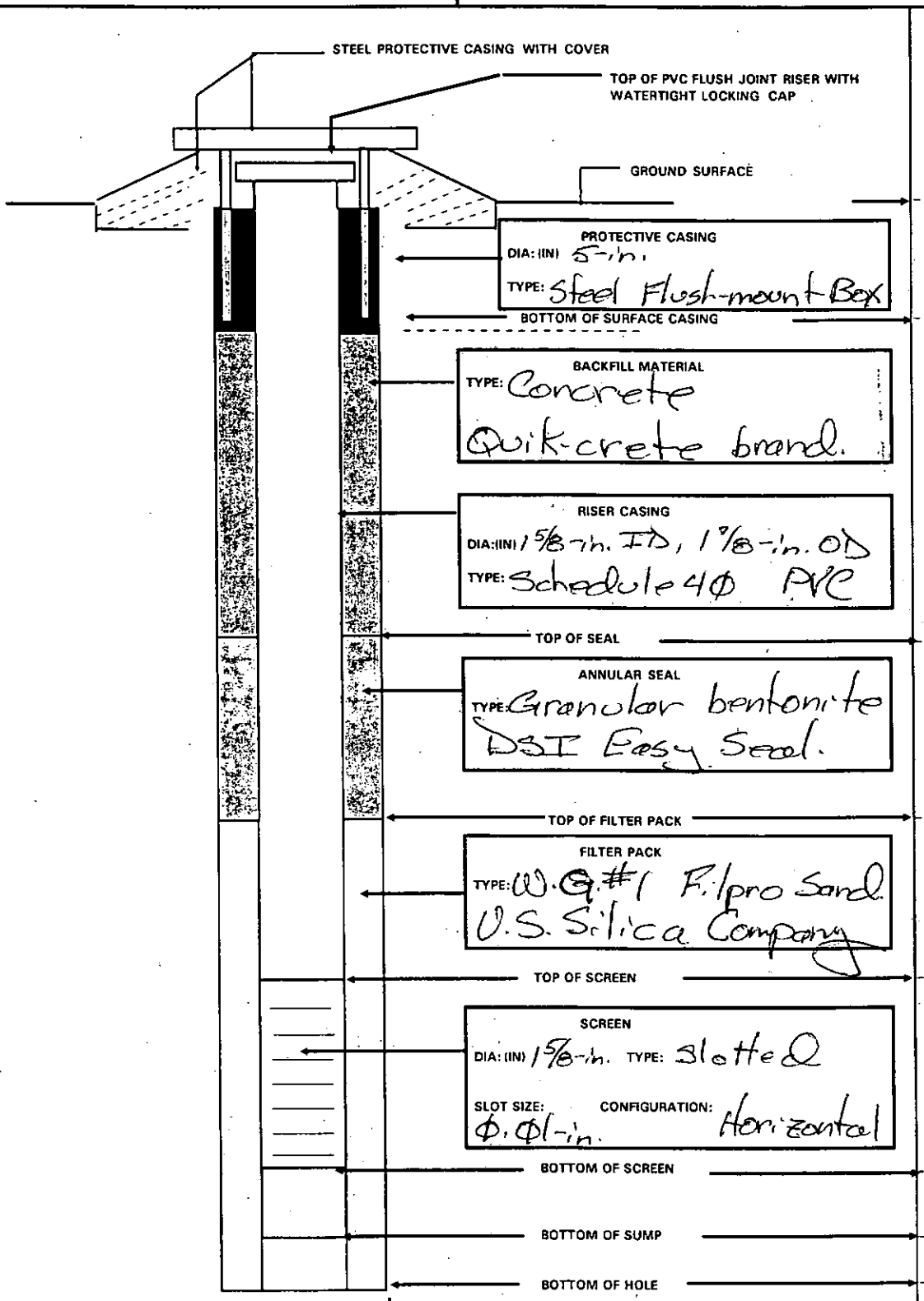
BEGIN: 11/12/06

END: 11/12/06

COORDINATES: N:
E:

DATUM/UNITS:

REFERENCE POINT: ELEVATION: DATUM/UNITS:
Ground Surface



DEPTH (BGS) | ELEV.

0

0.6

1.0

1.3

4.5

4.5

5.0

MONITORING WELL INSTALLATION LOG

PROJECT: Bulk Fuel Facility **DELIVERY ORDER:** 0066

MONITORING WELL ID: FP-3Φ

INSTALLATION START: DATE: 11/12/Φ6 TIME: Φ955

INSTALLATION FINISH: DATE: 11/12/Φ6 TIME: Φ958

ANNULAR SPACE MATERIALS INVENTORY:

- GRANULAR FILTER PACK: TYPE: W.G.#1 QUANTITY: 5 lbs.
- BENTONITE SEAL: TYPE: DSI Easy Seal QUANTITY: 1-2 lbs.
- GROUT: TYPE: N/A QUANTITY: N/A

DESCRIPTION OF WELL SCREEN:

- SLOT SIZE (inches): Φ.Φ1 SLOT CONFIGURATION: Horizontal
- TOTAL OPEN AREA PER FOOT OF SCREEN: N/A
- OUTSIDE DIAMETER: 1 7/8-in. NOMINAL INSIDE DIAMETER: 1 5/8-in.
- SCHEDULE/THICKNESS: Sched. 4Φ COMPOSITION: PVC
- MANUFACTURER: ECT Manufacturing.

TYPE OF MATERIAL BETWEEN BOTTOM OF BORING AND SCREEN: Native Formations.

DESCRIPTION OF WELL CASING:

- OUTSIDE DIAMETER: 1 7/8-in. NOMINAL INSIDE DIAMETER: 1 5/8-in.
- SCHEDULE/THICKNESS: Sched. 4Φ COMPOSITION: PVC
- MANUFACTURER: ECT Manufacturing.

JOINT DESIGN AND COMPOSITION: Flush-threaded / slip-cap on bottom.

CENTRALIZERS DESIGN AND COMPOSITION: N/A

DESCRIPTION OF PROTECTIVE CASING:

- NOMINAL INSIDE DIAMETER: 5-in. COMPOSITION: steel.

SPECIAL PROBLEMS ENCOUNTERED DURING WELL CONSTRUCTION AND THEIR RESOLUTION:
Stick the auger: use pipe wrench to unthread. Continue augering.

Was all well screen and casing material used for construction free of foreign matter (e.g., adhesive tape, labels, soil, etc.)? YES [X] NO [ ]

Was all well screen and casing material used for construction free of unsecured couplings, ruptures, and other physical breakage and/or defects? YES [X] NO [ ]

Is deformation or bending of the installed well screen and casing minimized to the point of allowing the insertion and retrieval of a 1.0-inch bailer throughout the entire length of the completed well? YES [X] NO [ ]

QUANTITY OF APPROVED WATER USED FOR FILTER PACK ENPLACEMENT: None.

RECORDED BY: [signature] 11/14/06 (Signature & Date) **QA CHECK BY:** [signature] 11/27/06 (Signature & Date)

48

MONITORING WELL

PROJECT: Bulk Fuel Facility

DELIVERY ORDER NO: 0066

WELL NUMBER: FP-3Φ

BEGIN: 11/12/Φ6

END: 11/12/Φ6

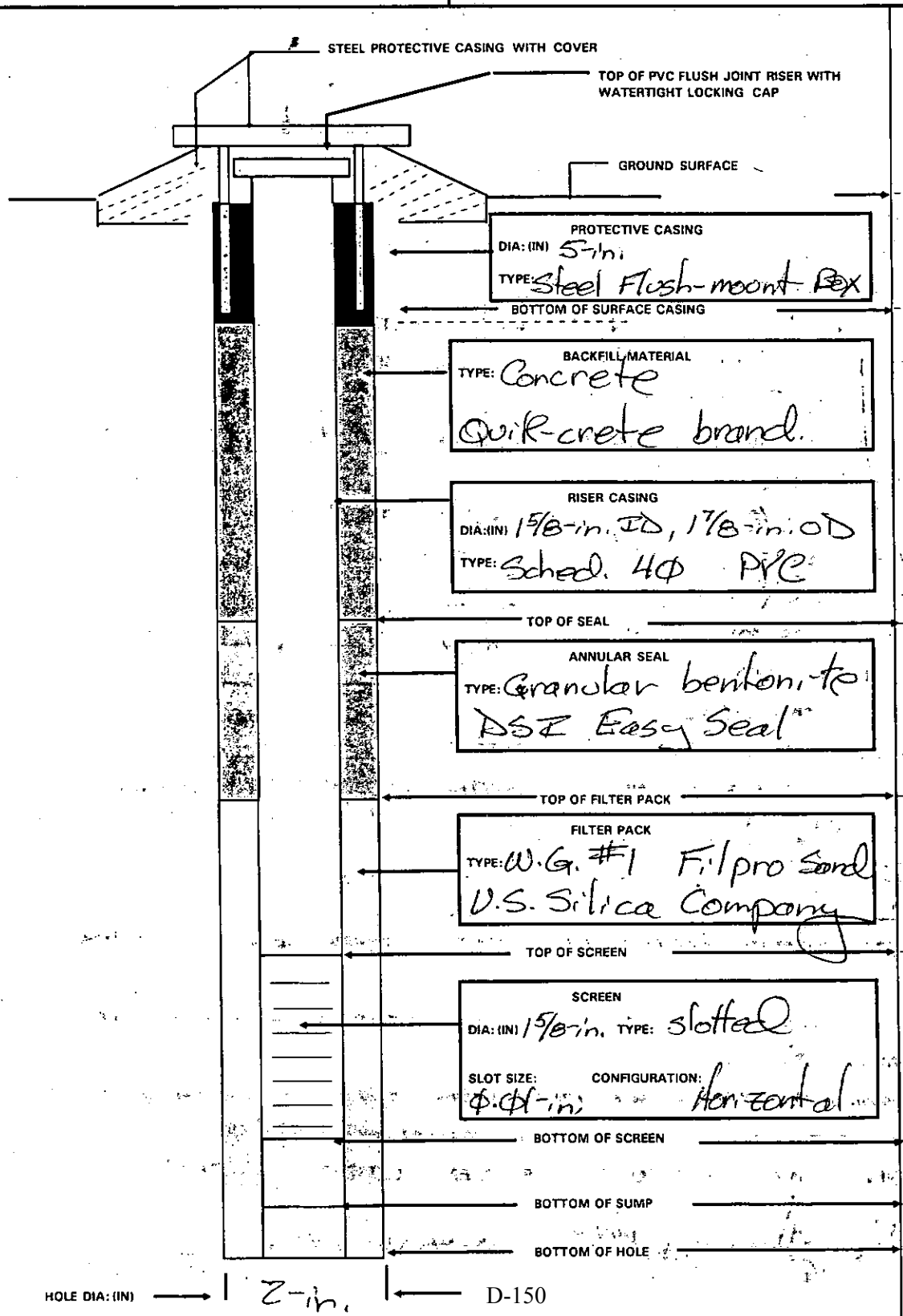
COORDINATES: N:

E:

DATUM/UNITS:

REFERENCE POINT: ELEVATION: DATUM/UNITS:

Ground Surface.



MONITORING WELL INSTALLATION LOG

PROJECT: Bulk Fuel Facility DELIVERY ORDER: 0066

MONITORING WELL ID: FP-31

INSTALLATION START: DATE: 11/12/06 TIME: 1013

INSTALLATION FINISH: DATE: 11/12/06 TIME: 1016

ANNULAR SPACE MATERIALS INVENTORY:

- GRANULAR FILTER PACK: TYPE: W.G #1 QUANTITY: 5 lbs
- BENTONITE SEAL: TYPE: DSI Easy Seal QUANTITY: 1-2 lbs.
- GROUT: TYPE: N/A. QUANTITY: N/A

DESCRIPTION OF WELL SCREEN:

- SLOT SIZE (inches): 0.01 SLOT CONFIGURATION: horizontal
- TOTAL OPEN AREA PER FOOT OF SCREEN: N/A
- OUTSIDE DIAMETER: 1 7/8-in. NOMINAL INSIDE DIAMETER: 1 5/8-in.
- SCHEDULE/THICKNESS: Sched. 40 COMPOSITION: PVC
- MANUFACTURER: ECT Manufacturing.

TYPE OF MATERIAL BETWEEN BOTTOM OF BORING AND SCREEN: Native Formations.

DESCRIPTION OF WELL CASING:

- OUTSIDE DIAMETER: 1 7/8-in. NOMINAL INSIDE DIAMETER: 1 5/8-in.
- SCHEDULE/THICKNESS: Sched. 40 COMPOSITION: PVC
- MANUFACTURER: ECT Manufacturing.

JOINT DESIGN AND COMPOSITION: Flush-threaded/slip-cap on bottom.

CENTRALIZERS DESIGN AND COMPOSITION: N/A

DESCRIPTION OF PROTECTIVE CASING:

- NOMINAL INSIDE DIAMETER: 5-in. COMPOSITION: Steel

SPECIAL PROBLEMS ENCOUNTERED DURING WELL CONSTRUCTION AND THEIR RESOLUTION:

None.

Was all well screen and casing material used for construction free of foreign matter (e.g., adhesive tape, labels, soil, etc.)? YES [X] NO [ ]

Was all well screen and casing material used for construction free of unsecured couplings, ruptures, and other physical breakage and/or defects? YES [X] NO [ ]

Is deformation or bending of the installed well screen and casing minimized to the point of allowing the insertion and retrieval of a 1.0-inch bailer throughout the entire length of the completed well? YES [X] NO [ ]

QUANTITY OF APPROVED WATER USED FOR FILTER PACK ENPLACEMENT: None.

RECORDED BY: [signature] 11/15/06 (Signature & Date)

QA CHECK BY: [signature] 11/27/06 (Signature & Date)

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MONITORING WELL

PROJECT: Bulk Fuel Facility

DELIVERY ORDER NO: 0066

WELL NUMBER: FP-31

BEGIN: 11/12/06

END: 11/12/06

COORDINATES: N:

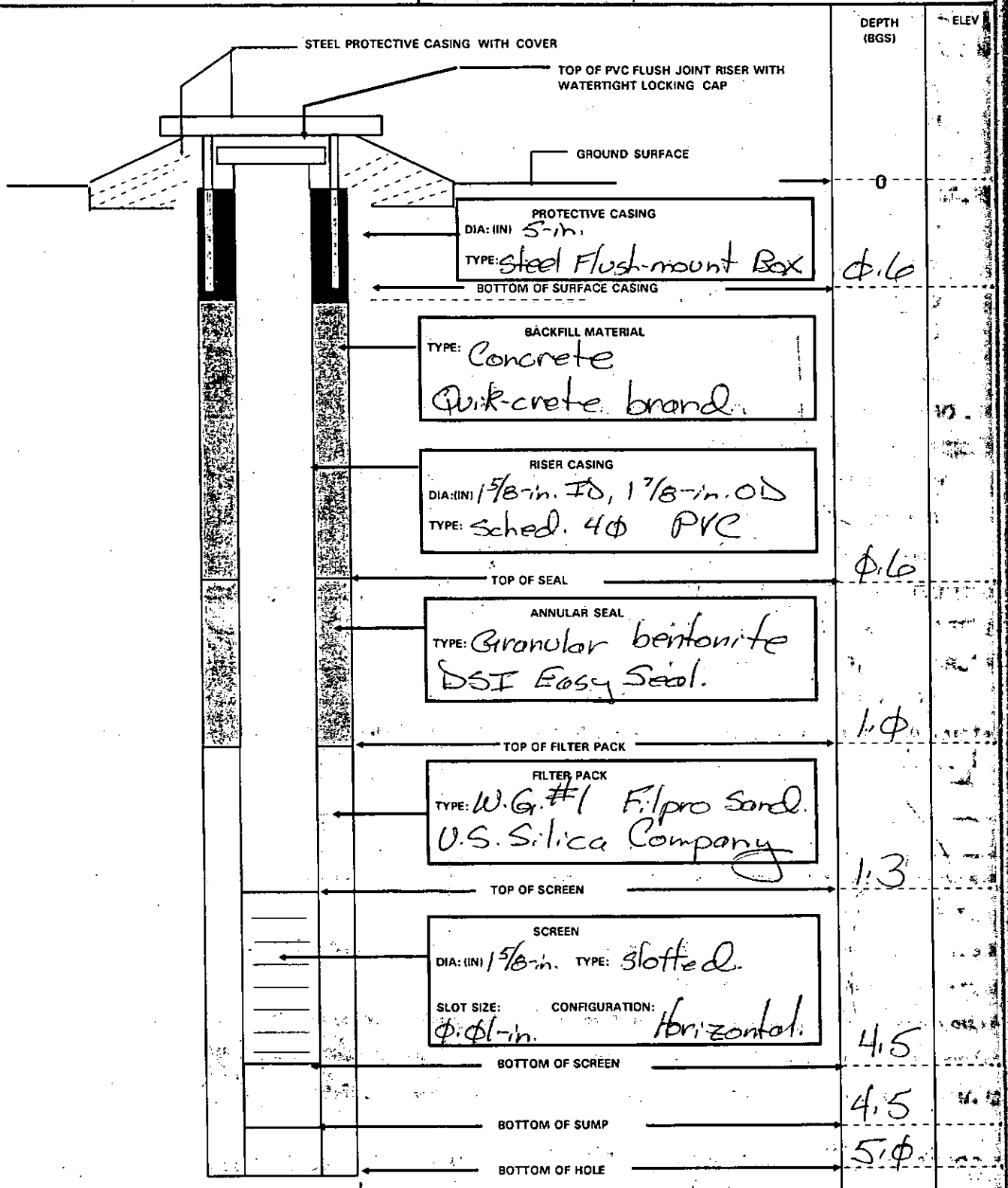
E:

DATUM/UNITS:

REFERENCE POINT: Ground Surface.

ELEVATION:

DATUM/UNITS:



MONITORING WELL INSTALLATION LOG

PROJECT: Bulk Fuel Facility **DELIVERY ORDER:** 0066

MONITORING WELL ID: FP-3Z

INSTALLATION START: DATE: 11/12/06 TIME: 1043

INSTALLATION FINISH: DATE: 11/12/06 TIME: 1047

ANNULAR SPACE MATERIALS INVENTORY:

- GRANULAR FILTER PACK: TYPE: W.G. #1 QUANTITY: 5 lbs.
- BENTONITE SEAL: TYPE: DSI Easy Seal QUANTITY: 1-2 lbs.
- GROUT: TYPE: N/A QUANTITY: N/A.

DESCRIPTION OF WELL SCREEN:

SLOT SIZE (inches): 0.01 SLOT CONFIGURATION: Horizontal

TOTAL OPEN AREA PER FOOT OF SCREEN: N/A

OUTSIDE DIAMETER: 1 7/8-in. NOMINAL INSIDE DIAMETER: 1 5/8-in.

SCHEDULE/THICKNESS: Sched. 40 COMPOSITION: PVC

MANUFACTURER: ECT Manufacturing.

TYPE OF MATERIAL BETWEEN BOTTOM OF BORING AND SCREEN: Native Formations.

DESCRIPTION OF WELL CASING:

OUTSIDE DIAMETER: 1 7/8-in. NOMINAL INSIDE DIAMETER: 1 5/8-in.

SCHEDULE/THICKNESS: Sched. 40 COMPOSITION: PVC

MANUFACTURER: ECT Manufacturing.

JOINT DESIGN AND COMPOSITION: Flush-Threaded/Slip-cap on bottom.

CENTRALIZERS DESIGN AND COMPOSITION: N/A

DESCRIPTION OF PROTECTIVE CASING:

NOMINAL INSIDE DIAMETER: 5-in. COMPOSITION: Steel

SPECIAL PROBLEMS ENCOUNTERED DURING WELL CONSTRUCTION AND THEIR RESOLUTION:

None.

Was all well screen and casing material used for construction free of foreign matter (e.g., adhesive tape, labels, soil, etc.)? YES [X] NO [ ]

Was all well screen and casing material used for construction free of unsecured couplings, ruptures, and other physical breakage and/or defects? YES [X] NO [ ]

Deformation or bending of the installed well screen and casing minimized to the point of allowing the insertion and retrieval of a 1.0-inch bailer throughout the entire length of the completed well? YES [X] NO [ ]

QUANTITY OF APPROVED WATER USED FOR FILTER PACK ENPLACEMENT: None.

RECORDED BY: [signature] 11/15/06 (Signature & Date)

QA CHECK BY: Wayne H. Pauken 11/22/06 (Signature & Date)

58

MONITORING WELL

PROJECT: Bulk Fuel Facility

DELIVERY ORDER NO: 0066

WELL NUMBER: FP-3C

BEGIN: 11/12/06

END: 11/12/06

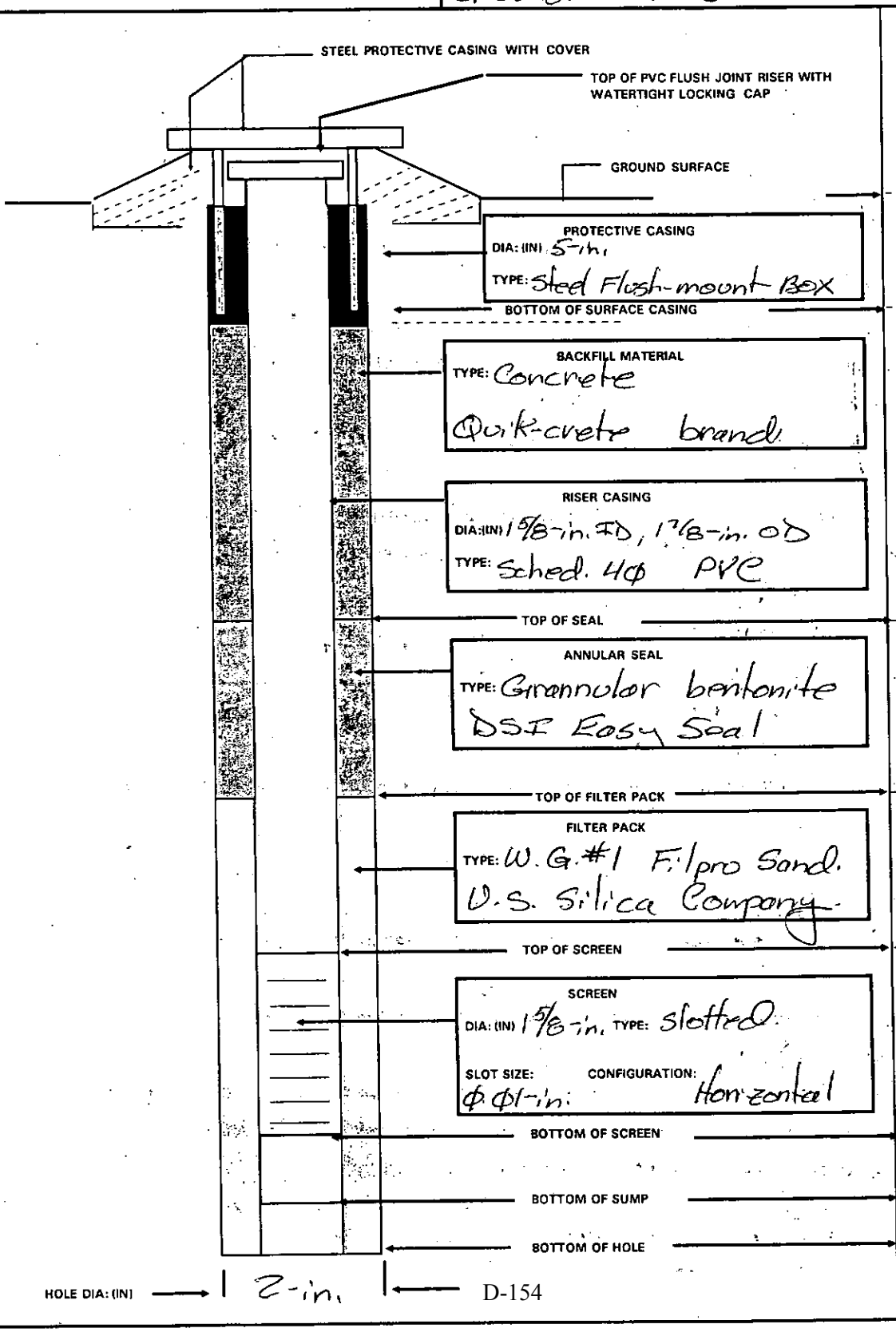
COORDINATES: N:
E:

DATUM/UNITS:

REFERENCE POINT: Ground Surface

ELEVATION:

DATUM/UNITS:



62

MONITORING WELL INSTALLATION LOG

PROJECT: Bulk Fuel Facility DELIVERY ORDER: 0066

MONITORING WELL ID: FP-33

INSTALLATION START: DATE: 11/12/06 TIME: 1058

INSTALLATION FINISH: DATE: 11/12/06 TIME: 1103

ANNULAR SPACE MATERIALS INVENTORY:

GRANULAR FILTER PACK: TYPE: W.G. #1 QUANTITY: 5 lbs.

BENTONITE SEAL: TYPE: DSI Easy Seal QUANTITY: 1-2 lbs.

GROUT: TYPE: N/A QUANTITY: N/A

DESCRIPTION OF WELL SCREEN:

SLOT SIZE (inches): 0.01 SLOT CONFIGURATION: Horizontal

TOTAL OPEN AREA PER FOOT OF SCREEN: N/A

OUTSIDE DIAMETER: 1 7/8-in. NOMINAL INSIDE DIAMETER: 1 5/8-in.

SCHEDULE/THICKNESS: Sched. 40 COMPOSITION: PVC

MANUFACTURER: ECT Manufacturing

TYPE OF MATERIAL BETWEEN BOTTOM OF BORING AND SCREEN: Native Formations,

DESCRIPTION OF WELL CASING:

OUTSIDE DIAMETER: 1 7/8-in. NOMINAL INSIDE DIAMETER: 1 5/8-in.

SCHEDULE/THICKNESS: Sched. 40 COMPOSITION: PVC

MANUFACTURER: ECT Manufacturing

JOINT DESIGN AND COMPOSITION: Flush-threaded/slip-cap on bottom,

CENTRALIZERS DESIGN AND COMPOSITION: N/A

DESCRIPTION OF PROTECTIVE CASING:

NOMINAL INSIDE DIAMETER: 5-in. COMPOSITION: Steel

SPECIAL PROBLEMS ENCOUNTERED DURING WELL CONSTRUCTION AND THEIR RESOLUTION:

None.

Was all well screen and casing material used for construction free of foreign matter (e.g., adhesive tape, labels, soil, etc.)? YES [X] NO [ ]

Was all well screen and casing material used for construction free of unsecured couplings, ruptures, and other physical breakage and/or defects? YES [X] NO [ ]

Is deformation or bending of the installed well screen and casing minimized to the point of allowing the insertion and retrieval of a 1.0-inch bailer throughout the entire length of the completed well? YES [X] NO [ ]

QUANTITY OF APPROVED WATER USED FOR FILTER PACK ENPLACEMENT: None.

RECORDED BY: [signature] 11/15/06 (Signature & Date)

QA CHECK BY: [signature] 11/27/06 (Signature & Date)

63

MONITORING WELL

PROJECT: Bulk Fuel Facility

DELIVERY ORDER NO: 0066

WELL NUMBER: FP-33

BEGIN: 11/12/06

END: 11/12/06

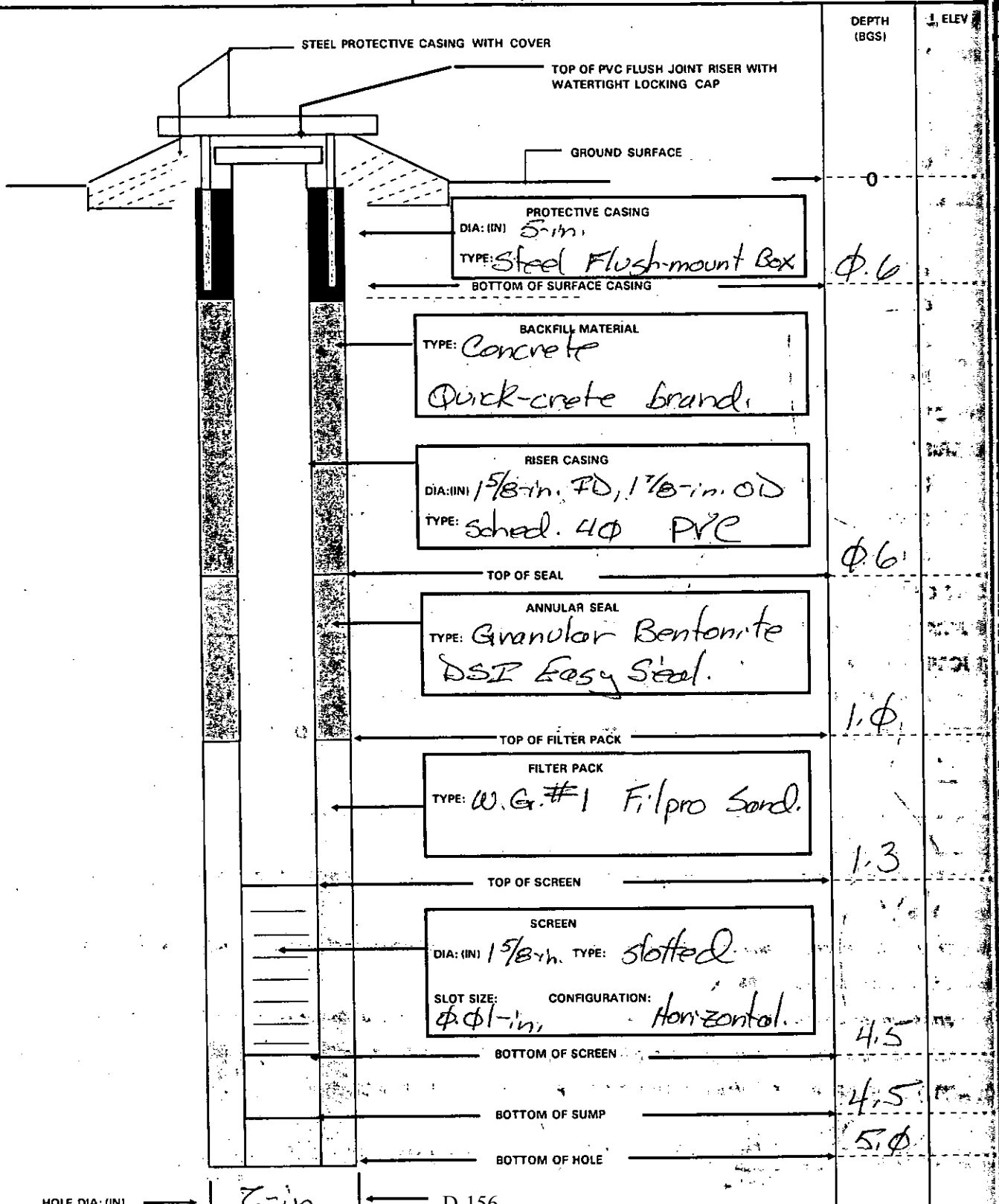
COORDINATES: N:
E:

DATUM/UNITS:

REFERENCE POINT: Ground Surface

ELEVATION:

DATUM/UNITS:



MONITORING WELL INSTALLATION LOG

PROJECT: Bulk Fuel Facility DELIVERY ORDER: 0066

MONITORING WELL ID: FP-34

INSTALLATION START: DATE: 11/12/06 TIME: 1112

INSTALLATION FINISH: DATE: 11/12/06 TIME: 1118

ANNULAR SPACE MATERIALS INVENTORY:

- GRANULAR FILTER PACK: TYPE: W.G. #1 QUANTITY: 5 lbs.
- BENTONITE SEAL: TYPE: DSI Easy Seal QUANTITY: 1-2 lbs.
- GROUT: TYPE: N/A QUANTITY: N/A

DESCRIPTION OF WELL SCREEN:

SLOT SIZE (inches): 0.01 SLOT CONFIGURATION: Horizontal

TOTAL OPEN AREA PER FOOT OF SCREEN: N/A

OUTSIDE DIAMETER: 1 7/8-in. NOMINAL INSIDE DIAMETER: 1 5/8-in.

SCHEDULE/THICKNESS: Sched. 40 COMPOSITION: PVC

MANUFACTURER: ECT Manufacturing.

TYPE OF MATERIAL BETWEEN BOTTOM OF BORING AND SCREEN: Native Formations,

DESCRIPTION OF WELL CASING:

OUTSIDE DIAMETER: 1 7/8-in. NOMINAL INSIDE DIAMETER: 1 5/8-in.

SCHEDULE/THICKNESS: Sched. 40 COMPOSITION: PVC

MANUFACTURER: ECT Manufacturing.

JOINT DESIGN AND COMPOSITION: Flush-threaded / slip-cap on bottom.

CENTRALIZERS DESIGN AND COMPOSITION: N/A.

DESCRIPTION OF PROTECTIVE CASING:

NOMINAL INSIDE DIAMETER: 6.0-in. COMPOSITION: Steel,

SPECIAL PROBLEMS ENCOUNTERED DURING WELL CONSTRUCTION AND THEIR RESOLUTION:

None.

Was all well screen and casing material used for construction free of foreign matter (e.g., adhesive tape, labels, soil, etc.)? YES [X] NO [ ]

Was all well screen and casing material used for construction free of unsecured couplings, ruptures, and other physical breakage and/or defects? YES [X] NO [ ]

Is deformation or bending of the installed well screen and casing minimized to the point of allowing the insertion and retrieval of a 1.0-inch bailer throughout the entire length of the completed well? YES [X] NO [ ]

QUANTITY OF APPROVED WATER USED FOR FILTER PACK ENPLACEMENT: None,

RECORDED BY: [signature] 11/15/06
(Signature & Date)

QA CHECK BY: [signature] 11/27/06
(Signature & Date)

68

MONITORING WELL

PROJECT: Bulk Fuel Facility

DELIVERY ORDER NO: 0066

WELL NUMBER: FP-34

BEGIN: 11/12/06

END: 11/12/06

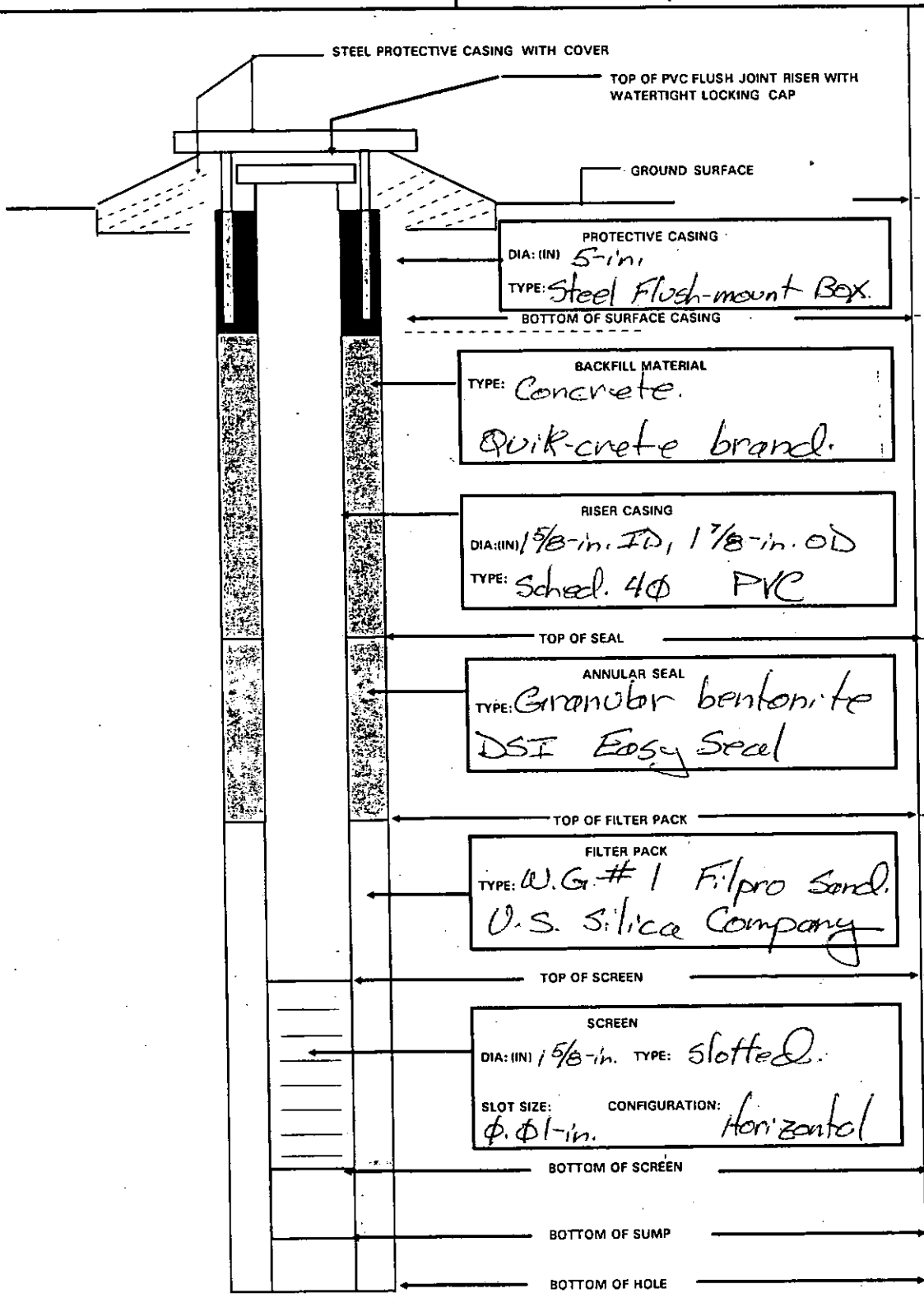
COORDINATES: N:
E:

DATUM/UNITS:

REFERENCE POINT: Ground Surface

ELEVATION:

DATUM/UNITS:



MONITORING WELL INSTALLATION LOG

PROJECT: Bulk Fuel Facility **DELIVERY ORDER:** 0066

MONITORING WELL ID: FP-35

INSTALLATION START: DATE: 11/12/06 TIME: 1142

INSTALLATION FINISH: DATE: 11/12/06 TIME: 1152

ANNULAR SPACE MATERIALS INVENTORY:

- GRANULAR FILTER PACK: TYPE: W.G. #1 QUANTITY: 5 lbs
- BENTONITE SEAL: TYPE: DSI Easy Seal QUANTITY: 1-2 lbs.
- GROUT: TYPE: N/A QUANTITY: N/A

DESCRIPTION OF WELL SCREEN:

- SLOT SIZE (inches): .01 SLOT CONFIGURATION: Horizontal
- TOTAL OPEN AREA PER FOOT OF SCREEN: N/A
- OUTSIDE DIAMETER: 1 7/8-in. NOMINAL INSIDE DIAMETER: 1 5/8-in.
- SCHEDULE/THICKNESS: Sched. 40 COMPOSITION: PVC
- MANUFACTURER: ECT Manufacturing.

TYPE OF MATERIAL BETWEEN BOTTOM OF BORING AND SCREEN: Native Formations.

DESCRIPTION OF WELL CASING:

- OUTSIDE DIAMETER: 1 7/8-in. NOMINAL INSIDE DIAMETER: 1 5/8-in.
- SCHEDULE/THICKNESS: Sched. 40 COMPOSITION: PVC
- MANUFACTURER: ECT Manufacturing.

JOINT DESIGN AND COMPOSITION: Flush-threaded / slip-cap on bottom.

CENTRALIZERS DESIGN AND COMPOSITION: N/A

DESCRIPTION OF PROTECTIVE CASING:

- NOMINAL INSIDE DIAMETER: 5-in. COMPOSITION: steel.

SPECIAL PROBLEMS ENCOUNTERED DURING WELL CONSTRUCTION AND THEIR RESOLUTION:
Auger gets stuck: loosen by unthreading using a pipe wrench. Continue.

Was all well screen and casing material used for construction free of foreign matter (e.g., adhesive tape, labels, soil, etc.)? YES [X] NO [ ]

Was all well screen and casing material used for construction free of unsecured couplings, ruptures, and other physical breakage and/or defects? YES [X] NO [ ]

Is deformation or bending of the installed well screen and casing minimized to the point of allowing the insertion and retrieval of a 1.0-inch bailer throughout the entire length of the completed well? YES [X] NO [ ]

QUANTITY OF APPROVED WATER USED FOR FILTER PACK ENPLACEMENT: None.

RECORDED BY: [signature] 11/15/06 (Signature & Date) **QA CHECK BY:** [signature] 11/22/06 (Signature & Date)

13

MONITORING WELL

PROJECT: Bulk Fuel Facility

DELIVERY ORDER NO: 0066

WELL NUMBER: FP-35

BEGIN: 11/12/96

END: 11/12/96

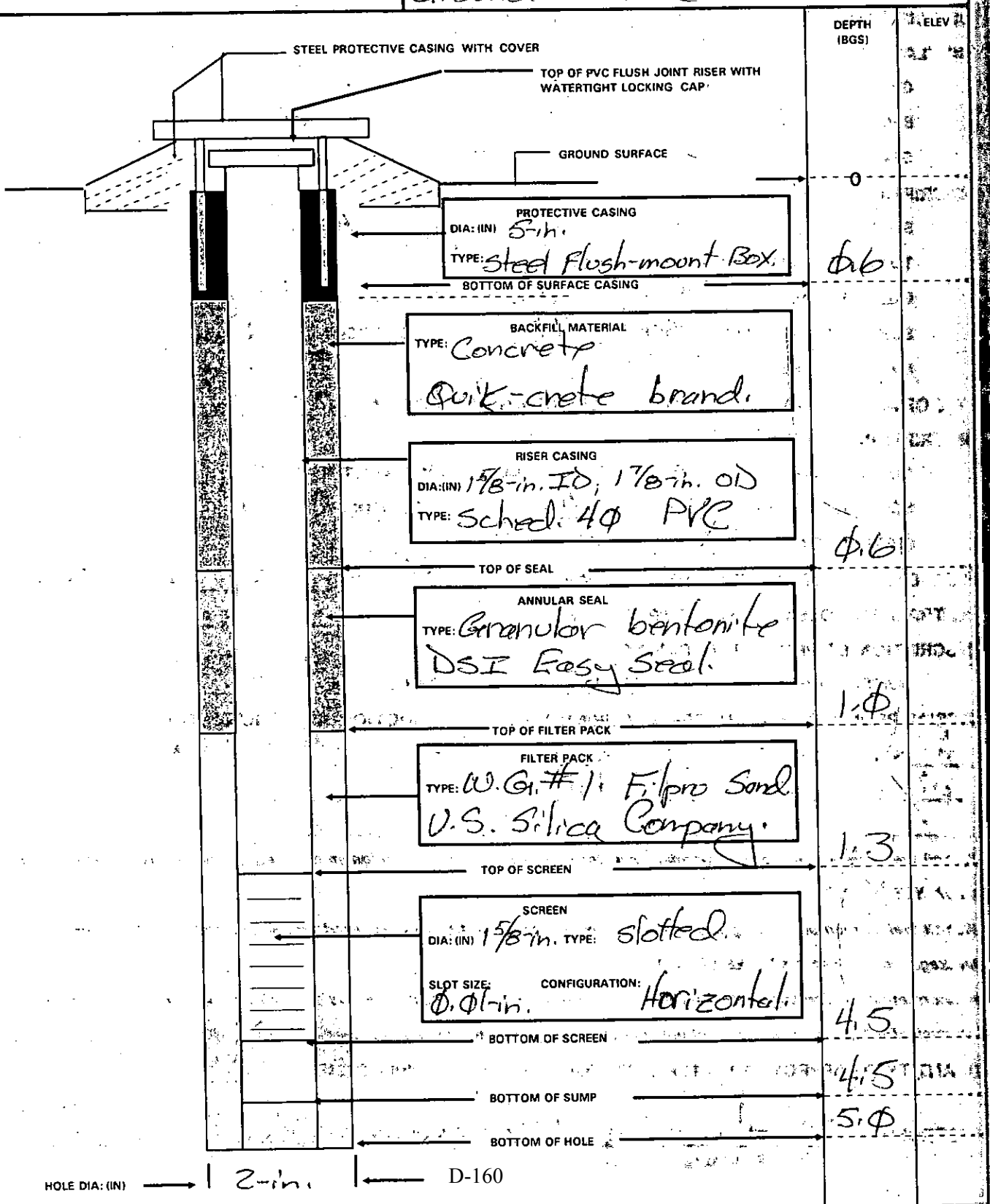
COORDINATES: N:
E:

DATUM/UNITS:

REFERENCE POINT: Ground Surface

ELEVATION:

DATUM/UNITS:



MONITORING WELL INSTALLATION LOG

PROJECT: Bulk Fuel Facility **DELIVERY ORDER:** 0066

MONITORING WELL ID: FP-36

INSTALLATION START: DATE: 11/12/06 TIME: 1326

INSTALLATION FINISH: DATE: 11/12/06 TIME: ~~1344~~ 1331
TDC 11/24/06

ANNULAR SPACE MATERIALS INVENTORY:

- GRANULAR FILTER PACK: TYPE: W.G#1 QUANTITY: 5 lbs
- BENTONITE SEAL: TYPE: DSI Easy Seal QUANTITY: 1-2 lbs
- GROUT: TYPE: N/A QUANTITY: N/A

DESCRIPTION OF WELL SCREEN:

SLOT SIZE (inches): .01 SLOT CONFIGURATION: Horizontal

TOTAL OPEN AREA PER FOOT OF SCREEN: N/A

OUTSIDE DIAMETER: 1 7/8-in. NOMINAL INSIDE DIAMETER: 1 5/8-in.

SCHEDULE/THICKNESS: Sched. 40 COMPOSITION: PVC

MANUFACTURER: ECT Manufacturing.

TYPE OF MATERIAL BETWEEN BOTTOM OF BORING AND SCREEN: Native Formations

DESCRIPTION OF WELL CASING:

OUTSIDE DIAMETER: 1 7/8-in. NOMINAL INSIDE DIAMETER: 1 5/8-in.

SCHEDULE/THICKNESS: Sched. 40 COMPOSITION: PVC

MANUFACTURER: ECT Manufacturing.

JOINT DESIGN AND COMPOSITION: Flush-Threaded / Slip-cap on bottom

CENTRALIZERS DESIGN AND COMPOSITION: N/A

DESCRIPTION OF PROTECTIVE CASING:

NOMINAL INSIDE DIAMETER: 6-in. COMPOSITION: Steel.

SPECIAL PROBLEMS ENCOUNTERED DURING WELL CONSTRUCTION AND THEIR RESOLUTION:

Auger got stuck; loosen using pipewrench, and continue.

Was all well screen and casing material used for construction free of foreign matter (e.g., adhesive tape, labels, soil, etc.)? YES [X] NO [ ]

Was all well screen and casing material used for construction free of unsecured couplings, ruptures, and other physical breakage and/or defects? YES [X] NO [ ]

Is deformation or bending of the installed well screen and casing minimized to the point of allowing the insertion and retrieval of a 1.0-inch bailer throughout the entire length of the completed well? YES [X] NO [ ]

QUANTITY OF APPROVED WATER USED FOR FILTER PACK ENPLACEMENT: None.

RECORDED BY: [signature] 11/24/06
(Signature & Date)

QA CHECK BY: [signature] 11/27/06
(Signature & Date)

MONITORING WELL

PROJECT: Bulk Fuel Facility

DELIVERY ORDER NO: 0066

WELL NUMBER: FP-36

BEGIN: 11/12/96

END: 11/12/96

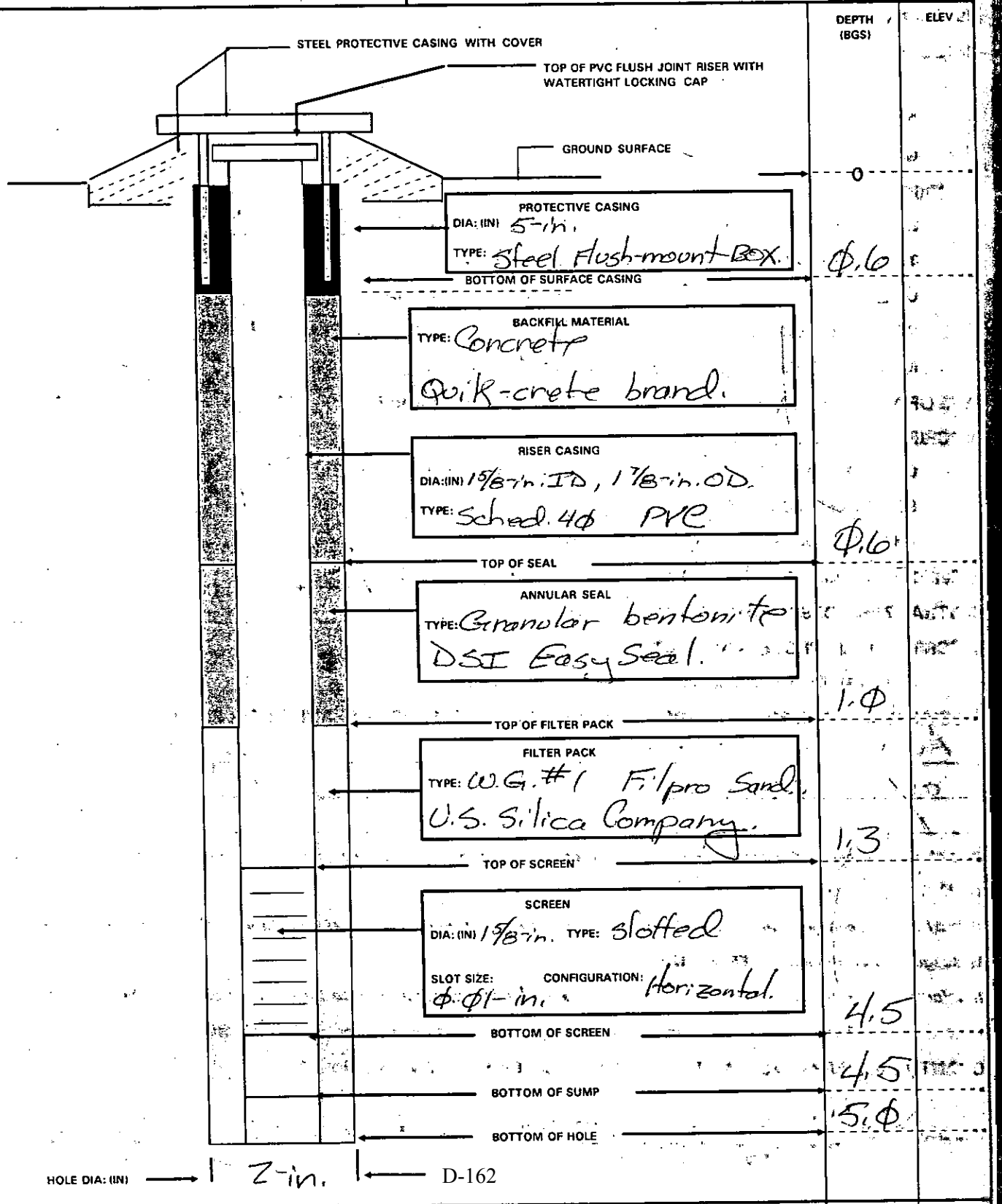
COORDINATES: N:
E:

DATUM/UNITS:

REFERENCE POINT: Ground Surface.

ELEVATION:

DATUM/UNITS:



MONITORING WELL INSTALLATION LOG

PROJECT: Bulk Fuel Facility **DELIVERY ORDER:** 0066

MONITORING WELL ID: FP-37

INSTALLATION START: DATE: 11/12/06 TIME: 1353

INSTALLATION FINISH: DATE: 11/12/06 TIME: 1356

ANNULAR SPACE MATERIALS INVENTORY:

- **GRANULAR FILTER PACK:** TYPE: W.G. #1 QUANTITY: 5 lbs.
- **BENTONITE SEAL:** TYPE: DSI Easy Seal QUANTITY: 1-2 lbs.
- **GROUT:** TYPE: N/A QUANTITY: N/A

DESCRIPTION OF WELL SCREEN:

- **SLOT SIZE (inches):** 0.01 **SLOT CONFIGURATION:** Horizontal
- **TOTAL OPEN AREA PER FOOT OF SCREEN:** N/A
- **OUTSIDE DIAMETER:** 1 7/8-in. **NOMINAL INSIDE DIAMETER:** 1 5/8-in.
- **SCHEDULE/THICKNESS:** Sched. 40 **COMPOSITION:** PVC
- **MANUFACTURER:** ECT Manufacturing.

TYPE OF MATERIAL BETWEEN BOTTOM OF BORING AND SCREEN: Native Formations

DESCRIPTION OF WELL CASING:

- **OUTSIDE DIAMETER:** 1 7/8-in. **NOMINAL INSIDE DIAMETER:** 1 5/8-in.
- **SCHEDULE/THICKNESS:** Sched. 40 **COMPOSITION:** PVC
- **MANUFACTURER:** ECT Manufacturing

JOINT DESIGN AND COMPOSITION: Flush-threaded/slip-cap on bottom.

CENTRALIZERS DESIGN AND COMPOSITION: N/A

DESCRIPTION OF PROTECTIVE CASING:

- **NOMINAL INSIDE DIAMETER:** 5-in. **COMPOSITION:** Steel

SPECIAL PROBLEMS ENCOUNTERED DURING WELL CONSTRUCTION AND THEIR RESOLUTION:

None.

Was all well screen and casing material used for construction free of foreign matter (e.g., adhesive tape, labels, soil, etc.)? YES [X] NO [ ]

Was all well screen and casing material used for construction free of unsecured couplings, ruptures, and other physical breakage and/or defects? YES [X] NO [ ]

Is deformation or bending of the installed well screen and casing minimized to the point of allowing the insertion and retrieval of a 1.0-inch bailer throughout the entire length of the completed well? YES [X] NO [ ]

QUANTITY OF APPROVED WATER USED FOR FILTER PACK ENPLACEMENT: None

RECORDED BY: [signature] 11/24/06 (Signature & Date) **QA CHECK BY:** [signature] 11/27/06 (Signature & Date)

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MONITORING WELL

PROJECT: Bulk Fuel Facility

DELIVERY ORDER NO: 0066

WELL NUMBER: FP-37

BEGIN: 11/12/06

END: 11/12/06

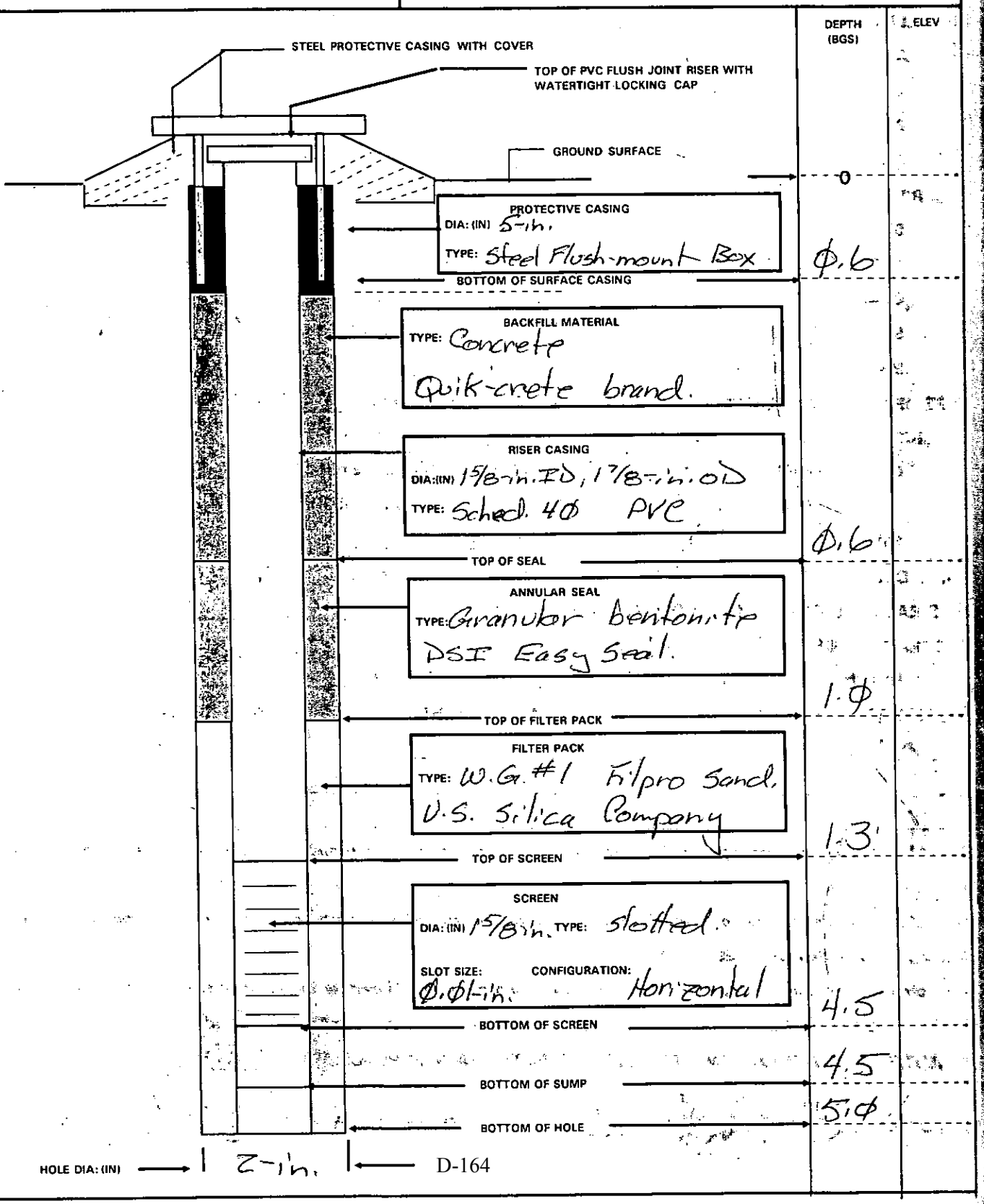
COORDINATES: N:
E:

DATUM/UNITS:

REFERENCE POINT: Ground Surface.

ELEVATION:

DATUM/UNITS:



MONITORING WELL INSTALLATION LOG

PROJECT: Bulk Fuel Facility **DELIVERY ORDER:** 0066

MONITORING WELL ID: FP-38

INSTALLATION START: DATE: 11/12/06 TIME: 1403

INSTALLATION FINISH: DATE: 11/12/06 TIME: 1407

ANNULAR SPACE MATERIALS INVENTORY:

- **GRANULAR FILTER PACK:** TYPE: W.G. #1 QUANTITY: 5 lbs.
- **BENTONITE SEAL:** TYPE: DSI Easy Seal QUANTITY: 1-2 lbs.
- **GROUT:** TYPE: N/A QUANTITY: N/A

DESCRIPTION OF WELL SCREEN:

- **SLOT SIZE (inches):** .01 **SLOT CONFIGURATION:** Horizontal
- **TOTAL OPEN AREA PER FOOT OF SCREEN:** N/A
- **OUTSIDE DIAMETER:** 1 7/8-in. **NOMINAL INSIDE DIAMETER:** 1 5/8-in.
- **SCHEDULE/THICKNESS:** Sched. 40 **COMPOSITION:** PVC
- **MANUFACTURER:** ECT Manufacturing

TYPE OF MATERIAL BETWEEN BOTTOM OF BORING AND SCREEN: Native Formations

DESCRIPTION OF WELL CASING:

- **OUTSIDE DIAMETER:** 1 7/8-in. **NOMINAL INSIDE DIAMETER:** 1 5/8-in.
- **SCHEDULE/THICKNESS:** Sched. 40 **COMPOSITION:** PVC
- **MANUFACTURER:** ECT Manufacturing

JOINT DESIGN AND COMPOSITION: Flush-threaded / slip-cap on bottom.

CENTRALIZERS DESIGN AND COMPOSITION: N/A

DESCRIPTION OF PROTECTIVE CASING:

- **NOMINAL INSIDE DIAMETER:** 5-in. **COMPOSITION:** Steel.

SPECIAL PROBLEMS ENCOUNTERED DURING WELL CONSTRUCTION AND THEIR RESOLUTION:

None.

Was all well screen and casing material used for construction free of foreign matter (e.g., adhesive tape, labels, soil, etc.)? YES [X] NO [ ]

Was all well screen and casing material used for construction free of unsecured couplings, ruptures, and other physical breakage and/or defects? YES [X] NO [ ]

Is deformation or bending of the installed well screen and casing minimized to the point of allowing the insertion and retrieval of a 1.0-inch bailer throughout the entire length of the completed well? YES [X] NO [ ]

QUANTITY OF APPROVED WATER USED FOR FILTER PACK ENPLACEMENT: None.

RECORDED BY: [signature] 11/14/06 (Signature & Date) **QA CHECK BY:** [signature] 11/27/06 (Signature & Date)

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MONITORING WELL

PROJECT: Bulk Fuel Facility

DELIVERY ORDER NO: 0066

WELL NUMBER: FP-38

BEGIN: 11/12/96

END: 11/12/96

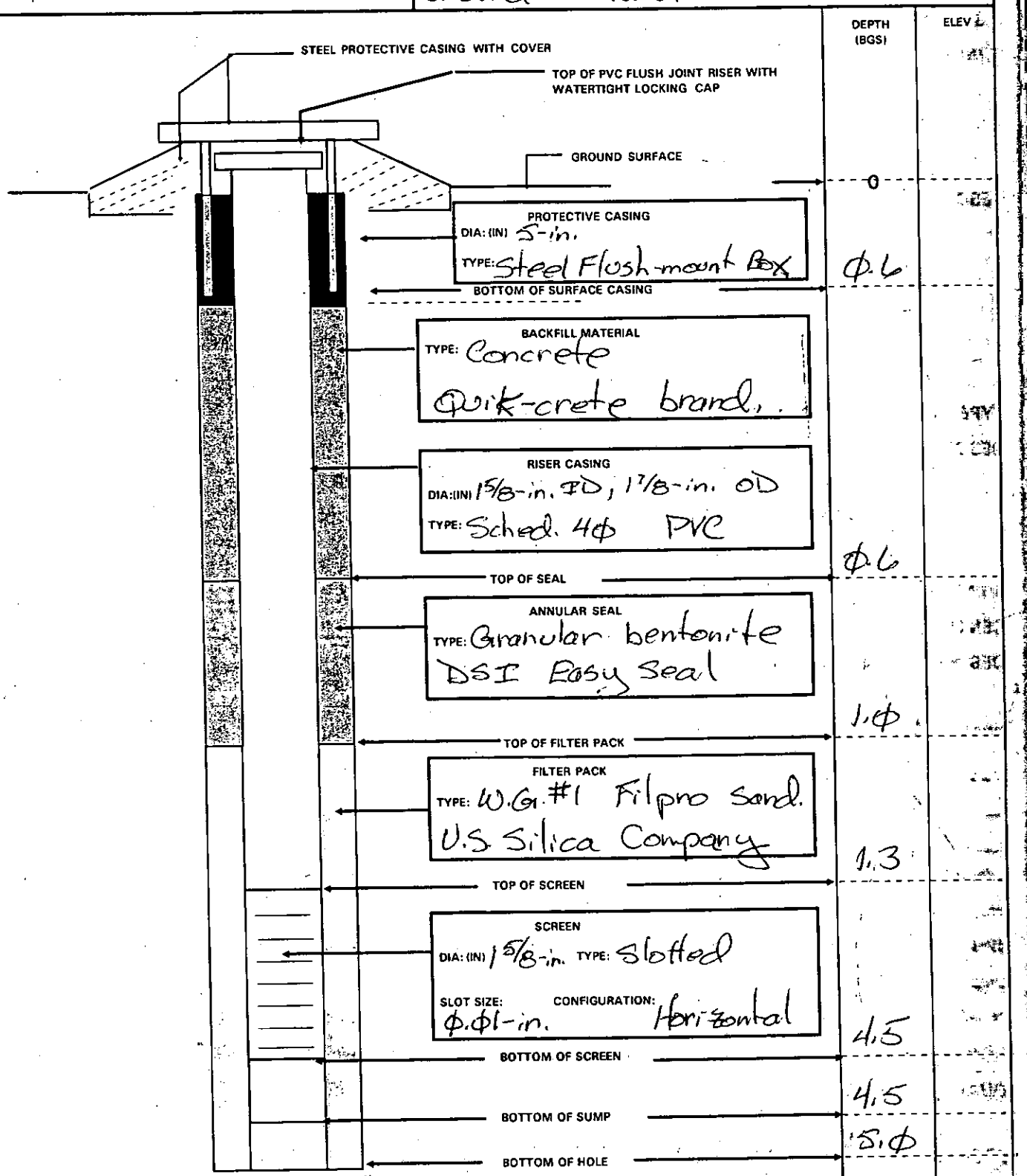
COORDINATES: N:
E:

DATUM/UNITS:

REFERENCE POINT: Ground Surface.

ELEVATION:

DATUM/UNITS:



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MONITORING WELL INSTALLATION LOG

PROJECT: Bulk Fuel Facility **DELIVERY ORDER:** 0066

MONITORING WELL ID: FP-39

INSTALLATION START: DATE: 11/12/06 TIME: 1414

INSTALLATION FINISH: DATE: 11/12/06 TIME: 1418

ANNULAR SPACE MATERIALS INVENTORY:

- GRANULAR FILTER PACK: TYPE: W.G.#1 QUANTITY: 5 lbs.
- BENTONITE SEAL: TYPE: DSI Easy Seal QUANTITY: 1-2 lbs.
- GROUT: TYPE: N/A QUANTITY: N/A

DESCRIPTION OF WELL SCREEN:

- SLOT SIZE (inches): .01 SLOT CONFIGURATION: Horizontal
- TOTAL OPEN AREA PER FOOT OF SCREEN: N/A
- OUTSIDE DIAMETER: 1 7/8-in. NOMINAL INSIDE DIAMETER: 1 5/8-in.
- SCHEDULE/THICKNESS: Sched. 40 COMPOSITION: PVC
- MANUFACTURER: ECT Manufacturing.

TYPE OF MATERIAL BETWEEN BOTTOM OF BORING AND SCREEN: Native Formations.

DESCRIPTION OF WELL CASING:

- OUTSIDE DIAMETER: 1 7/8-in. NOMINAL INSIDE DIAMETER: 1 5/8-in.
- SCHEDULE/THICKNESS: Sched. 40 COMPOSITION: PVC
- MANUFACTURER: ECT Manufacturing.

JOINT DESIGN AND COMPOSITION: Flush-threaded/slip-cap on bottom.

CENTRALIZERS DESIGN AND COMPOSITION: N/A

DESCRIPTION OF PROTECTIVE CASING:

- NOMINAL INSIDE DIAMETER: 5-in. COMPOSITION: Steel.

SPECIAL PROBLEMS ENCOUNTERED DURING WELL CONSTRUCTION AND THEIR RESOLUTION:

None.

Was all well screen and casing material used for construction free of foreign matter (e.g., adhesive tape, labels, soil, etc.)? YES [X] NO [ ]

Was all well screen and casing material used for construction free of unsecured couplings, ruptures, and other physical breakage and/or defects? YES [X] NO [ ]

Is deformation or bending of the installed well screen and casing minimized to the point of allowing the insertion and retrieval of a 1.0-inch bailer throughout the entire length of the completed well? YES [X] NO [ ]

QUANTITY OF APPROVED WATER USED FOR FILTER PACK ENPLACEMENT: None.

RECORDED BY: [signature] 11/20/06 (Signature & Date) **QA CHECK BY:** [signature] 11/27/06 (Signature & Date)

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MONITORING WELL

PROJECT: Bulk Fuel Facility

DELIVERY ORDER NO: 0066

WELL NUMBER: FP-39

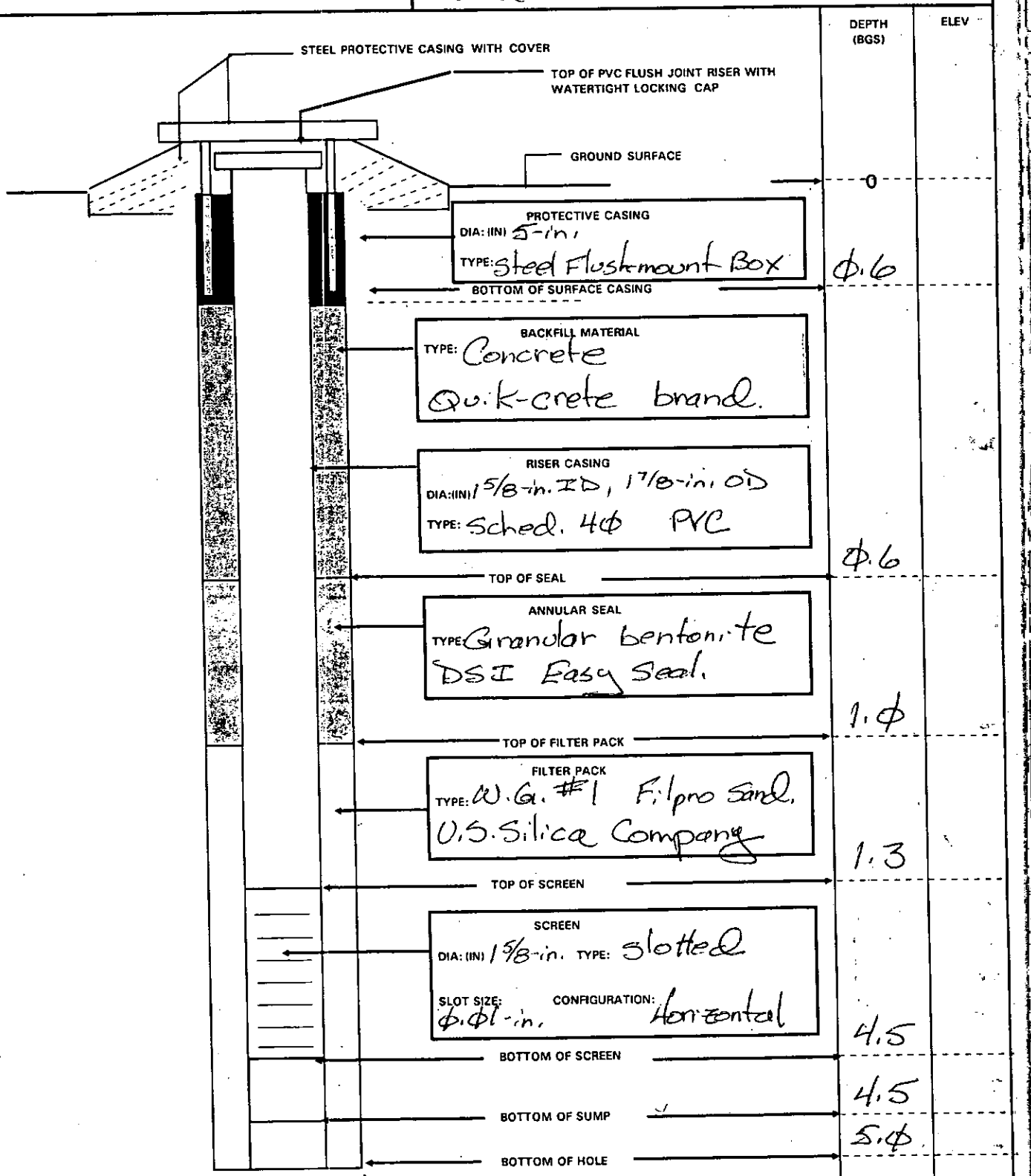
BEGIN: 11/12/06

END: 11/12/06

COORDINATES: N:
E:

DATUM/UNITS:

REFERENCE POINT: ELEVATION: DATUM/UNITS:
Ground Surface,



MONITORING WELL INSTALLATION LOG

PROJECT: Bulk Fuel Facility DELIVERY ORDER: 0066

MONITORING WELL ID: FP-40

INSTALLATION START: DATE: 11/12/06 TIME: 1425

INSTALLATION FINISH: DATE: 11/12/06 TIME: 1430

ANNULAR SPACE MATERIALS INVENTORY:

GRANULAR FILTER PACK: TYPE: W.G.#1 QUANTITY: 5 lbs.

BENTONITE SEAL: TYPE: DSI Easy Seal QUANTITY: 1-2 lbs.

GROUT: TYPE: N/A QUANTITY: N/A

DESCRIPTION OF WELL SCREEN:

SLOT SIZE (inches): 0.01 SLOT CONFIGURATION: Horizontal

TOTAL OPEN AREA PER FOOT OF SCREEN: N/A

OUTSIDE DIAMETER: 1 7/8-in. NOMINAL INSIDE DIAMETER: 1 5/8-in.

SCHEDULE/THICKNESS: Sched. 40 COMPOSITION: PVC

MANUFACTURER: ECT Manufacturing.

TYPE OF MATERIAL BETWEEN BOTTOM OF BORING AND SCREEN: Native Formations.

DESCRIPTION OF WELL CASING:

OUTSIDE DIAMETER: 1 7/8-in. NOMINAL INSIDE DIAMETER: 1 5/8-in.

SCHEDULE/THICKNESS: Sched. 40 COMPOSITION: PVC

MANUFACTURER: ECT Manufacturing.

JOINT DESIGN AND COMPOSITION: Flush-threaded/slip-cap on bottom.

CENTRALIZERS DESIGN AND COMPOSITION: N/A

DESCRIPTION OF PROTECTIVE CASING:

NOMINAL INSIDE DIAMETER: 5-in. COMPOSITION: Steel

SPECIAL PROBLEMS ENCOUNTERED DURING WELL CONSTRUCTION AND THEIR RESOLUTION:

None.

Was all well screen and casing material used for construction free of foreign matter (e.g., adhesive tape, labels, soil, etc.)? YES [X] NO [ ]

Was all well screen and casing material used for construction free of unsecured couplings, ruptures, and other physical breakage and/or defects? YES [X] NO [ ]

Is deformation or bending of the installed well screen and casing minimized to the point of allowing the insertion and retrieval of a 1.0-inch bailer throughout the entire length of the completed well? YES [X] NO [ ]

QUANTITY OF APPROVED WATER USED FOR FILTER PACK ENPLACEMENT: None.

RECORDED BY: [signature] 11/20/06
(Signature & Date)

QA CHECK BY: _____
(Signature & Date)

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MONITORING WELL

PROJECT: Bulk Fuel Facility

DELIVERY ORDER NO: 0066

WELL NUMBER: FP-4Φ

BEGIN: 11/12/Φ6

END: 11/12/Φ6

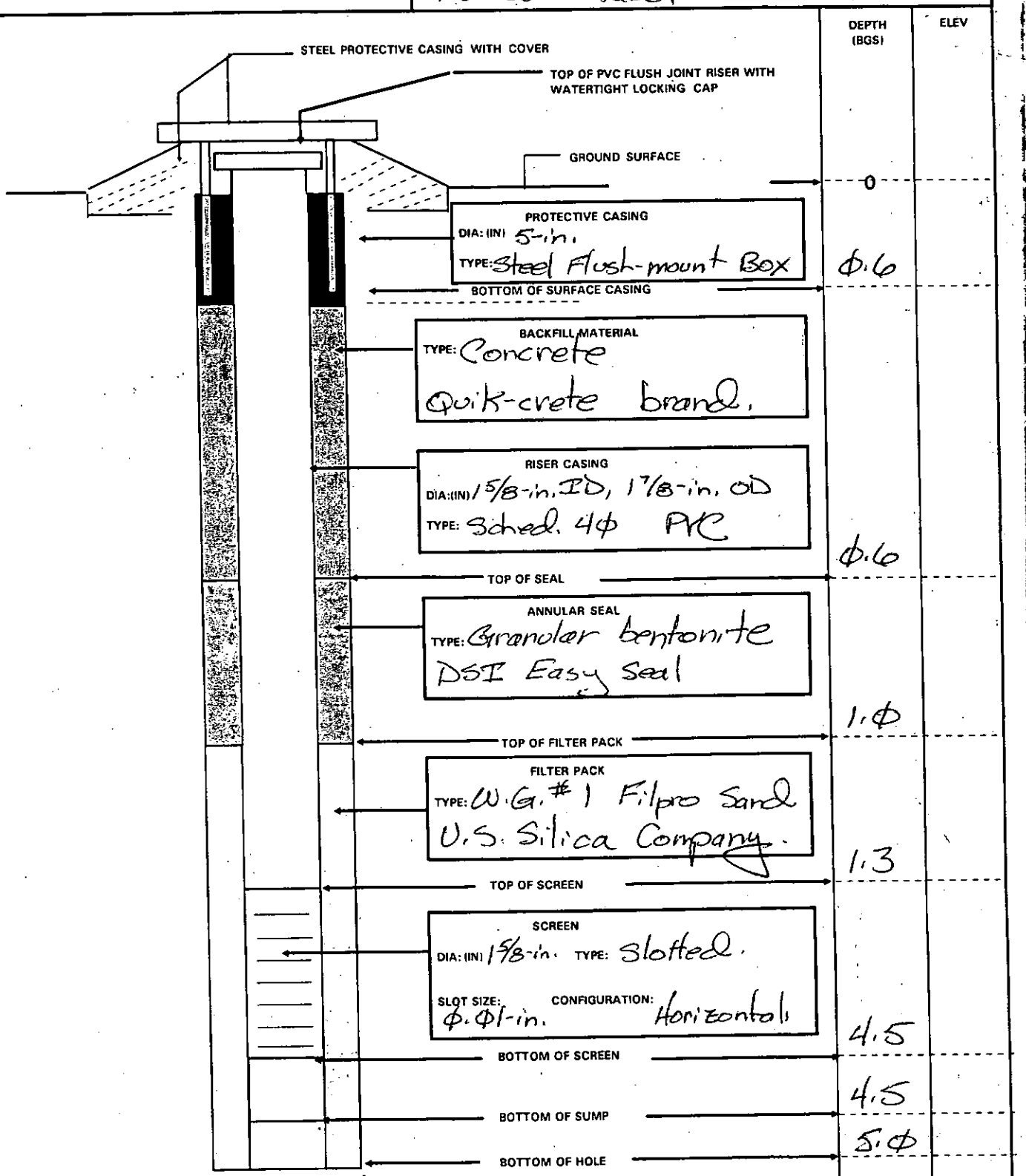
COORDINATES: N:
E:

DATUM/UNITS:

REFERENCE POINT: Ground Surface,

ELEVATION:

DATUM/UNITS:



MONITORING WELL INSTALLATION LOG

PROJECT: Bulk Fuel Facility **DELIVERY ORDER:** 0066

MONITORING WELL ID: FP-41

INSTALLATION START: DATE: 11/12/06 TIME: 1452

INSTALLATION FINISH: DATE: 11/12/06 TIME: 1458

ANNULAR SPACE MATERIALS INVENTORY:

- **GRANULAR FILTER PACK:** TYPE: W.G.#1 QUANTITY: 5 lbs
- **BENTONITE SEAL:** TYPE: DSI Easy Seal QUANTITY: 1-2 lbs
- **GROUT:** TYPE: N/A QUANTITY: N/A

DESCRIPTION OF WELL SCREEN:

- **SLOT SIZE (inches):** .01 **SLOT CONFIGURATION:** Horizontal.
- **TOTAL OPEN AREA PER FOOT OF SCREEN:** N/A
- **OUTSIDE DIAMETER:** 1 7/8-in. **NOMINAL INSIDE DIAMETER:** 1 5/8-in.
- **SCHEDULE/THICKNESS:** Sched. 40 **COMPOSITION:** PVC
- **MANUFACTURER:** ECT Manufacturing.

TYPE OF MATERIAL BETWEEN BOTTOM OF BORING AND SCREEN: Native Formations.

DESCRIPTION OF WELL CASING:

- **OUTSIDE DIAMETER:** 1 7/8-in. **NOMINAL INSIDE DIAMETER:** 1 5/8-in.
- **SCHEDULE/THICKNESS:** Sched. 40 **COMPOSITION:** PVC
- **MANUFACTURER:** ECT Manufacturing.

JOINT DESIGN AND COMPOSITION: Flush-threaded/slip-cap on bottom.

CENTRALIZERS DESIGN AND COMPOSITION: N/A

DESCRIPTION OF PROTECTIVE CASING:

- **NOMINAL INSIDE DIAMETER:** 6-in. **COMPOSITION:** Steel.

SPECIAL PROBLEMS ENCOUNTERED DURING WELL CONSTRUCTION AND THEIR RESOLUTION:

None.

Was all well screen and casing material used for construction free of foreign matter (e.g., adhesive tape, labels, soil, etc.)? YES [X] NO [ ]

Was all well screen and casing material used for construction free of unsecured couplings, ruptures, and other physical breakage and/or defects? YES [X] NO [ ]

Is deformation or bending of the installed well screen and casing minimized to the point of allowing the insertion and retrieval of a 1.0-inch bailer throughout the entire length of the completed well? YES [X] NO [ ]

QUANTITY OF APPROVED WATER USED FOR FILTER PACK ENPLACEMENT: None

RECORDED BY: [signature] 11/20/06 (Signature & Date) **QA CHECK BY:** [signature] 11/27/06 (Signature & Date)

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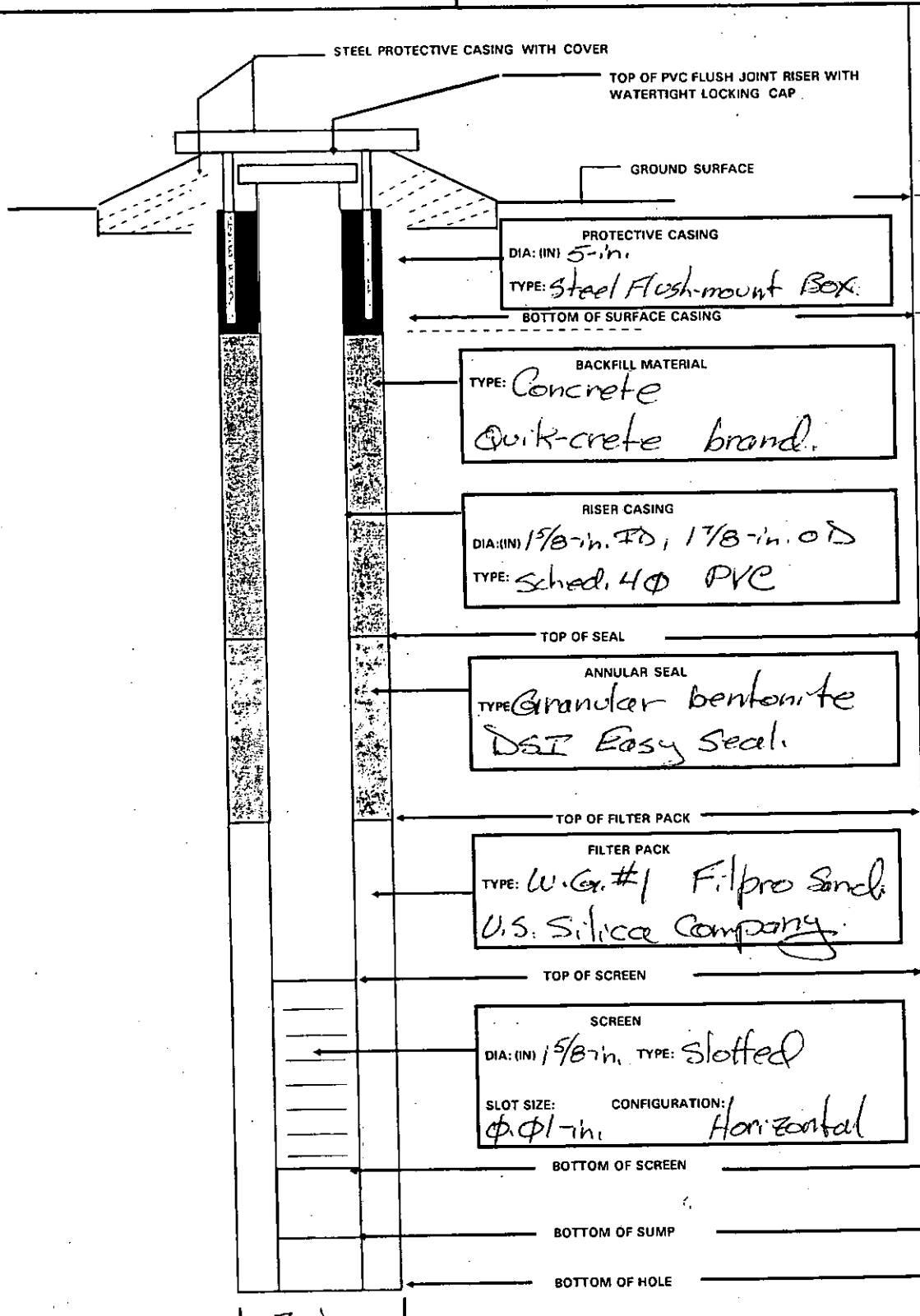
MONITORING WELL

PROJECT: Bulk Fuel Facility

DELIVERY ORDER NO: 0066

WELL NUMBER: FP-41	BEGIN: 11/12/96	END: 11/12/96
COORDINATES: N: E:	REFERENCE POINT: Ground Surface	ELEVATION:
DATUM/UNITS:		DATUM/UNITS:



MONITORING WELL INSTALLATION LOG

PROJECT: Bulk Fuel Facility **DELIVERY ORDER:** 0066

MONITORING WELL ID: FP-4Z

INSTALLATION START: DATE: 11/12/06 TIME: 1507

INSTALLATION FINISH: DATE: 11/12/06 TIME: 1520

ANNULAR SPACE MATERIALS INVENTORY:

- **GRANULAR FILTER PACK:** TYPE: WG. #1 QUANTITY: 5 lbs
- **BENTONITE SEAL:** TYPE: DSI Easy Seal QUANTITY: 1-2 lbs.
- **GROUT:** TYPE: N/A QUANTITY: N/A

DESCRIPTION OF WELL SCREEN:

- **SLOT SIZE (inches):** 0.01 **SLOT CONFIGURATION:** Horizontal
- **TOTAL OPEN AREA PER FOOT OF SCREEN:** N/A
- **OUTSIDE DIAMETER:** 1 7/8-in. **NOMINAL INSIDE DIAMETER:** 1 5/8-in.
- **SCHEDULE/THICKNESS:** Sched. 40 **COMPOSITION:** PVC
- **MANUFACTURER:** ECT Manufacturing.

TYPE OF MATERIAL BETWEEN BOTTOM OF BORING AND SCREEN: Native Formations.

DESCRIPTION OF WELL CASING:

- **OUTSIDE DIAMETER:** 1 7/8-in. **NOMINAL INSIDE DIAMETER:** 1 5/8-in.
- **SCHEDULE/THICKNESS:** Sched. 40 **COMPOSITION:** PVC
- **MANUFACTURER:** ECT Manufacturing.

JOINT DESIGN AND COMPOSITION: Flush-threaded/slip-cap on bottom.

CENTRALIZERS DESIGN AND COMPOSITION: N/A

DESCRIPTION OF PROTECTIVE CASING:

- **NOMINAL INSIDE DIAMETER:** 5-in. **COMPOSITION:** Steel.

SPECIAL PROBLEMS ENCOUNTERED DURING WELL CONSTRUCTION AND THEIR RESOLUTION:

None.

Was all well screen and casing material used for construction free of foreign matter (e.g., adhesive tape, labels, soil, etc.)? YES [X] NO [ ]

Was all well screen and casing material used for construction free of unsecured couplings, ruptures, and other physical breakage and/or defects? YES [X] NO [ ]

Is deformation or bending of the installed well screen and casing minimized to the point of allowing the insertion and retrieval of a 1.0-inch bailer throughout the entire length of the completed well? YES [X] NO [ ]

QUANTITY OF APPROVED WATER USED FOR FILTER PACK ENPLACEMENT: None.

RECORDED BY: [signature] 11/24/06
(Signature & Date)

QA CHECK BY: _____
(Signature & Date)

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MONITORING WELL

PROJECT: Bulk Fuel Facility

DELIVERY ORDER NO: 0066

WELL NUMBER: FP-42

BEGIN: 11/12/96

END: 11/14/96

COORDINATES: N:
E:

DATUM/UNITS:

REFERENCE POINT: Ground Surface

ELEVATION:

DATUM/UNITS: